



# 600 °C Series

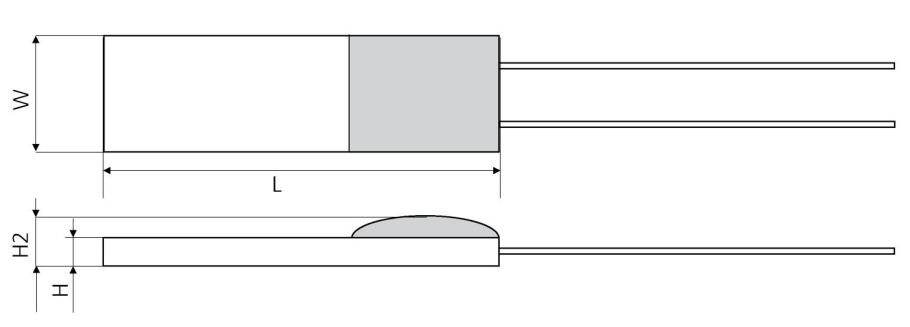
## Platinum sensor with wires

### 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

#### 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)	



Alternative wire construction:*	Inverted wires
Recommended applied current: <sup>1)</sup>	1 mA at 100 Ω
<sup>1)</sup> Self-heating must be considered	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
	Substrate thickness

\* Customer-specific alternatives available

### 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	P0K1.161.6W.Y.007	P0K1.161.6W.A.007	P0K1.161.6W.B.007
Order code		101371	100945	100946
Former order code		010.02938	010.02195	010.02196
161	1.6 x 1.2 x 0.25 / 0.6; 10.0	P0K1.161.6W.Y.010	P0K1.161.6W.A.010	P0K1.161.6W.B.010
Order code		100139	100138	100137
Former order code		010.00066	010.00064	010.00062
202	1.8 x 2.0 x 0.65 / 1.1; 7.0	Upon request	P0K1.202.6W.A.007	P0K1.202.6W.B.007
Order code			100870	100871
Former order code			010.02019	010.02020
202	1.8 x 2.0 x 0.65 / 1.1; 10.0	P0K1.202.6W.Y.010	P0K1.202.6W.A.010	P0K1.202.6W.B.010
Order code		100908	100876	100877
Former order code		010.02094	010.02033	010.02034
216	2.5 x 1.6 x 0.65 / 1.3; 7.0	P0K1.216.6W.Y.007	P0K1.216.6W.A.007	P0K1.216.6W.B.007
Order code		101401	100589	100599
Former order code		010.02977	010.01111	010.01129
216	2.5 x 1.6 x 0.65 / 1.3; 10.0	P0K1.216.6W.Y.010	P0K1.216.6W.A.010	P0K1.216.6W.B.010
Order code		100429	100414	100419
Former order code		010.00652	010.00620	010.00627
232	2.2 x 2.0 x 0.65 / 1.1; 7.0	P0K1.232.6W.Y.007	P0K1.232.6W.A.007	P0K1.232.6W.B.007
Order code		100579	100767	100544
Former order code		010.01089	010.01793	010.01006
232	2.2 x 2.0 x 0.65 / 1.1; 10.0	P0K1.232.6W.Y.010	P0K1.232.6W.A.010	P0K1.232.6W.B.010
Order code		100118	100117	100116
Former order code		010.00032	010.00030	010.00029
232	2.2 x 2.0 x 0.65 / 1.1; 20.0	P0K1.232.6W.Y.020	P0K1.232.6W.A.020	P0K1.232.6W.B.020
Order code		101357	101356	100875
Former order code		010.02910	010.02909	010.02027



516	5.0 x 1.6 x 0.65 / 1.3; 7.0	Upon request	P0K1.516.6W.A.007	P0K1.516.6W.B.007
Order code			100835	100836
Former order code			010.01942	010.01943
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
Former order code		010.00084	010.00083	010.00082

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
Former order code		010.00101	010.00099	010.00098

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
Former order code			010.01826	010.01001

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
Former order code		010.00154	010.00153	010.00152

**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
Former order code		010.00182	010.00181	010.00180

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
Former order code				010.02516

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
Former order code		010.00187	010.00186	010.00185

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
Former order code		010.00193	010.00192	010.00191

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
Former order code		010.00199	010.00198	010.00197

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
Former order code			010.00205	010.00204

**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
Former order code		010.00222	010.00221	010.00220

202	1.8 x 2.0 x 0.65 / 1.1; 7.0	Upon request	P1K0.202.6W.A.007	P1K0.202.6W.B.007
Order code			100963	100972
Former order code			010.02232	010.02250



202	1.8 x 2.0 x 0.65 / 1.1; 10.0	Upon request	P1K0.202.6W.A.010	P1K0.202.6W.B.010
Order code			100896	100897
Former order code			010.02078	010.02079
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)
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
Former order code		010.02391	010.01109	010.01018
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
Former order code		010.01007	010.01937	010.01008
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		100257	100256	100255
Former order code		010.00238	010.00237	010.00236
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
Former order code			n/a	010.01013
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
Former order code			010.02464	010.02488
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
Former order code			010.02813	010.02554
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
Former order code				010.02686
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
Former order code			010.01934	010.01935
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
Former order code		010.00260	010.00258	010.00257
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		100287	100285	100284
Former order code		010.00282	010.00280	010.00279
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
Former order code				010.00396
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
Former order code				010.00754
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
Former order code		010.00309	010.00753	010.00306

**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
Former order code				010.00335

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

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>				
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
Former order code			010.02583	010.02254

Order Information - PU (TCR = 3750 ppm/K)

<b>Nominal resistance: 1000 Ω at 0 °C</b>				
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
Former order code				010.00244

Order Information - 7W<sup>2</sup> (Pt-wire, Ø 0.2 mm, (161) (232) (520) / Ø 0.15 mm (308))

<b>Nominal resistance: 100 Ω at 0 °C</b>				
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
Former order code			010.00738	010.00687
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
Former order code		010.02074	010.00952	010.00402
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
Former order code		010.01037	010.00996	010.00997
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
Former order code				010.00107

<b>Nominal resistance: 1000 Ω at 0 °C</b>				
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
Former order code			010.02530	010.02531
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
Former order code			010.01760	010.01766
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
Former order code		010.01791	010.00239
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)
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
Former order code		010.01681	010.00955      010.00656

<sup>2)</sup> Operating temperature range of -200 °C to +600 °C

### Order Information - 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
Former order code			010.00731	010.00730
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
Former order code			010.00394	010.00393
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
Former order code			010.00105	010.00103
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
Former order code			010.01992	010.00397

#### Nominal resistance: 1000 Ω 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
Former order code		010.00401	010.00675	010.00400
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
Former order code			010.00313	010.00311

### Order Information - 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
Former order code			010.02023	010.02039

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



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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### Order Information - 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
Former order code		010.02243

<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

### Order Information - 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
Former order code		010.00035	010.00034	010.00033
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
Former order code			010.00086	010.00085
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
Former order code				010.00102

**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
Former order code			010.03211	010.03204

### 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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