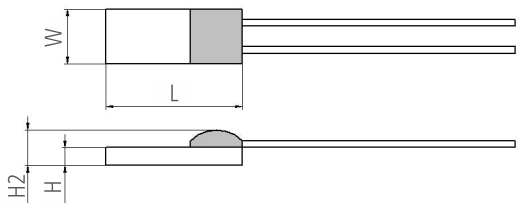
600 °C series
Platinum sensor with wires
For high temperatures

INNOVATIVE SENSOR TECHNOLOGY

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[1)]



Dimension tolerances:	W ±0.2 mm, L ±0.2 mm, H ±0.1 mm, H2 ±0.3 mm, L_W (up to 30 mm) ±1 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	
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:[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:*	Housed in round ceramics (for dry environments only) - see data sheet DTP_Round_Housing_E	
	Grouped and paired	
	Substrate thickness	

* Customer-specific alternatives available

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Order Information - 6W (Pt-cladded Ni-wire, Ø 0.2 mm)

Size	Dimensions (L x W x H / H2; L_W in mm)	F0.1 (class Y)	F0.15 (class A)	F0.3 (class B)
Nominal resistance: 100 Ω at 0 °C				
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		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		010.00066	010.00064	010.00062
202	2.0 x 2.0 x 0.65 / 1.3; 7.0	Upon request	P0K1.202.6W.A.007	P0K1.202.6W.B.007
Order code			010.02019	010.02020
202	2.0 x 2.0 x 0.65 / 1.3; 10.0	P0K1.202.6W.Y.010	P0K1.202.6W.A.010	P0K1.202.6W.B.010
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		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		010.00652	010.00620	010.00627
232	2.3 x 2.0 x 0.65 / 1.3; 7.0	P0K1.232.6W.Y.007	P0K1.232.6W.A.007	P0K1.232.6W.B.007
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		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		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			010.01942	010.01943
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		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		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			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		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		010.00182	010.00181	010.00180
202	2.0 x 2.0 x 0.65 / 1.3; 7.0	Upon request	Upon request	P0K5.202.6W.B.007
Order code				010.02516
232	2.3 x 2.0 x 0.65 / 1.3; 10.0	P0K5.232.6W.Y.010	P0K5.232.6W.A.010	P0K5.232.6W.B.010
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		010.00193	010.00192	010.00191

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Size	Dimensions (L x W x H / H2; L_W in mm)	F0.1 (class Y)	F0.15 (class A)	F0.3 (class B)
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		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			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		010.00222	010.00221	010.00220
202	2.0 x 2.0 x 0.65 / 1.3; 7.0	Upon request	P1K0.202.6W.A.007	P1K0.202.6W.B.007
Order code			010.02232	010.02250
202	2.0 x 2.0 x 0.65 / 1.3; 10.0	Upon request	P1K0.202.6W.A.010	P1K0.202.6W.B.007
Order code			010.02078	010.02079
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		010.02391	010.01109	010.01018
232	2.3 x 2.0 x 0.65 / 1.3; 7.0	P1K0.232.6W.Y.007	P1K0.232.6W.A.007	P1K0.232.6W.B.007
Order code		010.01007	010.01937	010.01008
232	2.3 x 2.0 x 0.65 / 1.3; 10.0	P1K0.232.6W.Y.010	P1K0.232.6W.A.010	P1K0.232.6W.B.010
Order code		010.00238	010.00237	010.00236
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			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			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				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			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		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		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				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				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		010.00309	010.00753	010.00306

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

Size	Dimensions (L x W x H / H2; L_W in mm)	F0.1 (class Y)	F0.15 (class A)	F0.3 (class B)
Nominal resistance: 1000 Ω at 0 °C				
232	2.3 x 2.0 x 0.65 / 1.3; 10.0	Upon request	Upon request	PU1K0.232.6W.B.010
Order code				010.00244

Order Information - 7W[2)] (Pt-wire, Ø 0.2 mm, (161) (232) / Ø 0.15 mm (308))

Size	Dimensions (L x W x H / H2; L_W in mm)	F0.1 (class Y)	F0.15 (class A)	F0.3 (class B)
Nominal resistance: 100 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			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		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		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			010.00107	010.00106
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			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			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			010.01791	010.00239
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		010.01681	010.00955	010.00656

[2)] Operating temperature range of -200 °C to +600 °C

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

Size	Dimensions (L x W x H / H2; L_W in 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 0.4 / 1.05; 10.0	Upon request	P0K1.232.6W.A.010.D	P0K1.232.6W.B.010.D
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			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			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			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		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			010.00313	010.00311

Order Information - 7W[3] (Pt-wire, Ø 0.2 mm), D (substrate thickness, 0.4 mm)

Size	Dimensions (L x W x H / H2; L_W in mm)	F0.1 (class Y)	F0.15 (class A)	F0.3 (class B)
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			010.02023	010.02039

[3] *Operating temperature range of -200 °C to +600 °C*

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

Size	Dimensions (L x W x H / H2; L_W in 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 0.25 / 0.9; 10.0	P0K1.232.6W.Y.010.T	P0K1.232.6W.A.010.T	P0K1.232.6W.B.010.T
Order code		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			010.00086	010.00085

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Size	Dimensions (L x W x H / H2; L_W in mm)	F0.1 (class Y)	F0.15 (class A)	F0.3 (class B)
520	5.0 x 2.0 x 0.4 / 1.05; 10.0	Upon request	P0K1.520.6W.A.010.T	P0K1.520.6W.B.010.T
Order code			010.00102	010.00104
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			010.03211	010.03204

Additional Documents

	Document name:
Application Note:	ATP_E

Order Information
Platinum Sensor
Secondary reference

INNOVATIVE SENSOR TECHNOLOGY

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

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	0K1.	520.	6	W.	A.	007.	D

INNOVATIVE SENSOR TECHNOLOGY
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