



TEMPERATURE



FLOW



HUMIDITY



CONDUCTIVITY

PW series

Platinum sensor with wires



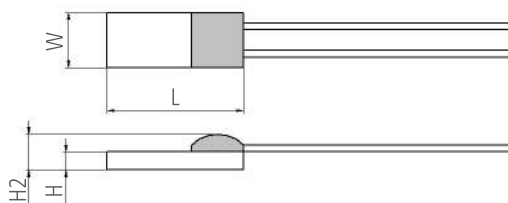
INNOVATIVE SENSOR TECHNOLOGY

For extended operating temperature range in class A

Benefits & Characteristics

- Capable of measuring in class A up to +600 °C
- Increased long-term stability
- Alternative to wire-wound sensors
- Short-term applicable up to +750 °C
- Very stable characteristics curve
- Available with same dimensions as a wire-wound sensor
- Very low hysteresis
- Customer specific sensor available upon request

Illustration¹⁾



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:*	IST AG reference		
	DIN EN 60751 F0.15	A	-200 °C to +600 °C
	DIN EN 60751 F0.3	B	-200 °C to +600 °C
	DIN EN 60751 F0.6	C	-200 °C to +600 °C
	DIN EN 60751 F0.1	Y	-200 °C to +500 °C
	1/5 DIN EN 60751 F0.3	K*	-100 °C to +300 °C
Connection:*	Pt-wire, Ø 0.2 mm (solderable, weldable, crimpable, brazeable)		
Alternative wire construction:*	Inverted wires		
Recommended applied current: ¹⁾	0.2 mA at 100 Ω ^{1) Self-heating must be considered} 0.09 mA at 500 Ω 0.06 mA at 1000 Ω		
Other alternatives:*	Housed in round ceramics (for dry environments only) Grouped and paired		

* Customer specific alternatives available



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Order Information - 7W (Pt-wire, Ø 0.2 mm)

Size	Dimensions (L x W x H / H2 in mm)	F0.1 (class Y)	F0.15 (class A)	F0.3 (class B)
Nominal resistance: 100 Ω at 0 °C				
216	2.5 x 1.5 x 0.65 / 1.1	PW0K1.216.7W.Y.007	PW0K1.216.7W.A.007	PW0K1.216.7W.B.007
Order code		310.00113	310.00112	310.00111

Nominal resistance: 500 Ω at 0 °C				
216	2.5 x 1.5 x 0.65 / 1.1	PW0K5.216.7W.Y.007	PW0K5.216.7W.A.007	PW0K5.216.7W.B.007
Order code		310.00246	310.00245	310.00161

Nominal resistance: 1000 Ω at 0 °C				
216	2.5 x 1.5 x 0.65 / 1.1	PW1K0.216.7W.Y.007	PW1K0.216.7W.A.007	PW1K0.216.7W.B.007
Order code		310.00177	310.00182	310.00183

Order Information - R (in round ceramic housing, Pt-wire, Ø 0.2 mm)

Size	Dimensions (Ø x L in mm)	F0.1 (class Y)	F0.15 (class A)	F0.3 (class B)
Nominal resistance: 100 Ω at 0 °C				
281	2.8 x 13	PW0K1.281.7W.Y.004.R	PW0K1.281.7W.A.004.R	PW0K1.281.7W.B.004.R
Order code		310.00263	310.00255	310.00408

Additional Documents

Application note:	Document name: ATP_E
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Order Information

Platinum Sensor

Secondary reference



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Material

P = Platin

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 = DIN EN 60751 F0.15 K = customer specific

B = DIN EN 60751 F0.3 P = pair

C = DIN EN 60751 F0.6 G = group

Y = DIN EN 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. 6 W. A. 010. U



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Innovative Sensor Technology IST AG, Stegrütistrasse 14, CH-9642 Ebnat-Kappel, Switzerland,
Phone: +41 (0) 71 992 01 00 | Fax: +41 (0) 71 992 01 99 | E-mail: info@ist-ag.com | Web: www.ist-ag.com



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