Innovative Sensor Technology

physical. chemical. biological.

PW Series

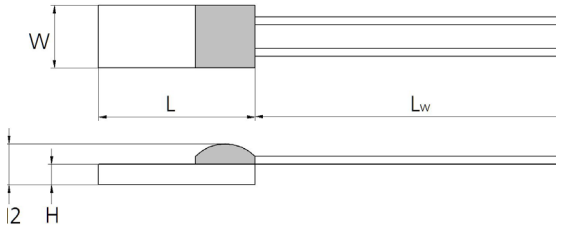
Platinum sensor with wires

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

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:*		IST AG reference	
	IEC 60751 F0.15	A	-200 °C to +600 °C
	IEC 60751 F0.3	B	-200 °C to +600 °C
	IEC 60751 F0.6	C	-200 °C to +600 °C
	IEC 60751 F0.1	Y	-200 °C to +500 °C
	1/5 IEC 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) - see data sheet DTP_Round_Housing_E Grouped and paired

* Customer-specific alternatives available

Product photo

Order Information - 7W (Pt-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				
216	2.4 x 1.4 x 0.45 / 0.8; 7.0	PW0K1.216.7W.Y.007	PW0K1.216.7W.A.007	PW0K1.216.7W.B.007
Order code		101686	101700	101701
Former Order code		*010.03306*	*010.03320*	*010.03321*
Nominal resistance: 500 Ω at 0 °C				
216	2.4 x 1.4 x 0.45 / 0.8; 7.0	PW0K5.216.7W.Y.007	PW0K5.216.7W.A.007	PW0K5.216.7W.B.007
Order code		101702	101703	101704
Former Order code		*010.03322*	*010.03323*	*010.03324*
Nominal resistance: 1000 Ω at 0 °C				
216	2.4 x 1.4 x 0.45 / 0.8; 7.0	PW1K0.216.7W.Y.007	PW1K0.216.7W.A.007	PW1K0.216.7W.B.007
Order code		101716	101720	101721
Former Order code		*010.03339*	*010.03344*	*010.03345*

Additional Documents

	Document name:
Application Note:	ATP_E

Innovative Sensor Technology
physical. chemical. biological.

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 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 W 1K0. 216. 7 W. B. 007

RoHS

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