



150 °C series

Platinum sensor with wires

For low temperatures

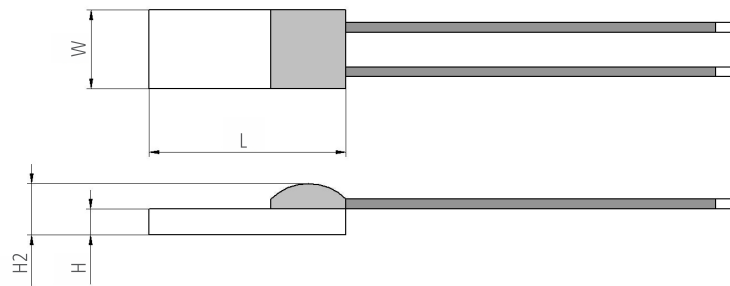


INNOVATIVE SENSOR TECHNOLOGY

Benefits & Characteristics

- Excellent long-term stability
- Low self-heating
- Long isolated wires
- Fast response time
- Metalized backside available
- Customer specific sensor available upon request

Illustration¹⁾



¹⁾ For actual size, see dimensions

Technical Data

Operating temperature range:	-50 °C to +150 °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:*	Enameled Cu wire, Ø 0.2 mm	
Alternative wire construction:*	Inverted wires	
	Extended 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:*	Metalized backside	
	Housed in round ceramics (for dry environments only)	
	Grouped and paired	
	Substrate thickness	

* Customer specific alternatives available



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Order Information - 1E (Enameled Cu wire, Ø 0.2 mm (161) / Ø 0.15 mm (308))

Size	Dimensions (L x W x H / H2 in mm) L ±0.2 mm, W ±0.2 mm, H ±0.1 mm, H2 ±0.3 mm	F0.1 (class Y)	F0.15 (class A)	F0.3 (class B)
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Nominal resistance: 100 Ω at 0 °C

161	1.6 x 1.2 x 0.25 / 0.6	Upon request	Upon request	P0K1.161.1E.B.065
Order code				010.00693
308	3 x 0.8 x 0.25 / 0.6	Upon request	Upon request	P0K1.308.1E.B.100
Order code				010.01672

With metalized backside

232	2.3 x 2 x 0.65 / 1.3			P0K1.232.1E.B.015.M
Order code				010.02444

Nominal resistance: 1000 Ω at 0 °C

161	1.6 x 1.2 x 0.25 / 0.6	Upon request	P1K0.161.1E.A.040	P1K0.161.1E.B.020
Order code			010.01732	010.02327
308	3 x 0.8 x 0.25 / 0.6	Upon request	Upon request	P1K0.308.1E.B.050
Order code				010.01189

Additional Documents

	Document name:
Application Note:	ATP_E



Order Information

Platinum Sensor

Secondary reference



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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 OK1. 232. 1 E. B. 015. M



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All mechanical dimensions are valid at 25 °C ambient temperature, if not differently indicated • All data except the mechanical dimensions only have information purposes and are not to be understood as assured characteristics • Technical changes without previous announcement as well as mistakes reserved • The information on this data sheet was examined carefully and will be accepted as correct; No liability in case of mistakes • Load with extreme values during a longer period can affect the reliability • The material contained herein may not be reproduced, adapted, merged, translated, stored, or used without the prior written consent of the copyright owner • Typing errors and mistakes reserved • Product specifications are subject to change without notice • All rights reserved