



3-wire sensor up to 200 °C

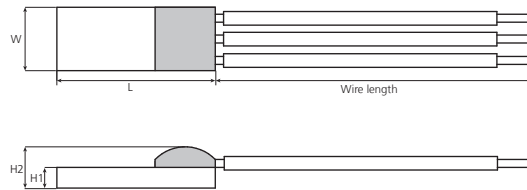
Platinum sensor with wires

For low temperatures

Benefits & Characteristics

- Compensation of the wire resistance by 3-wire construction
- Excellent long-term stability
- Low self-heating
- Long insulated wires
- Well suited for applications with tight tolerances
- Fast response time
- Metallized backside available
- Customer-specific sensor available upon request

Illustration¹⁾



1) For actual size, see dimensions

Technical Data

Operating temperature range:	-50 °C to +200 °C	
Nominal resistance:*	100 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
Connection:*	Cu/Ag-wire, AWG30, PTFE-insulated (solderable, weldable, crimpable), 5 mm stripped	
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:*	Metallized backside	
	Housed in round ceramics (for dry environments only)	
	Grouped and paired	
	Substrate thickness	

* Customer-specific alternatives available



Order Information - 3 wires, 2I (Cu/Ag-wire, AWG30, PTFE-insulated), 5 mm stripped

Chip Size:	Dimensions (L x W x H1 / H2 in mm) L ±0.2 mm, W ±0.2 mm, H1 ±0.1 mm, H2 ±0.3 mm	Wire length	F0.15 (class A)	F0.3 (class B)	F0.6 (class C)
Nominal resistance: 100 Ω at 0 °C					
520	5.0 x 2.2 x 0.65 / 1.2	200	On request	POK1.520.2I.B.200-3 010.02200	On request
520	5.0 x 2.2 x 0.65 / 1.2	220	On request	POK1.520.2I.B.220-3 010.02201	On request
520	5.0 x 2.2 x 0.65 / 1.2	400	On request	POK1.520.2I.B.400-3 010.00983	POK1.520.2I.C.400-3 010.01337
520	5.0 x 2.2 x 0.65 / 1.2	450	POK1.520.2I.A.450-3 010.02231	POK1.520.2I.B.450-3 010.00112	POK1.520.2I.C.450-3 010.01339
520	5.0 x 2.2 x 0.65 / 1.2	600	On request	POK1.520.2I.B.600-3 010.01009	POK1.520.2I.C.600-3 010.01340

Additional Documents

Application Note:	Document name:
	ATP_E



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

Connections

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 (-x: amount of wires if more than 2)

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. 522. 2 I. B. 450-3



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