



PW Series



4-wire platinum sensor



For high-precision measurements



Benefits & characteristics

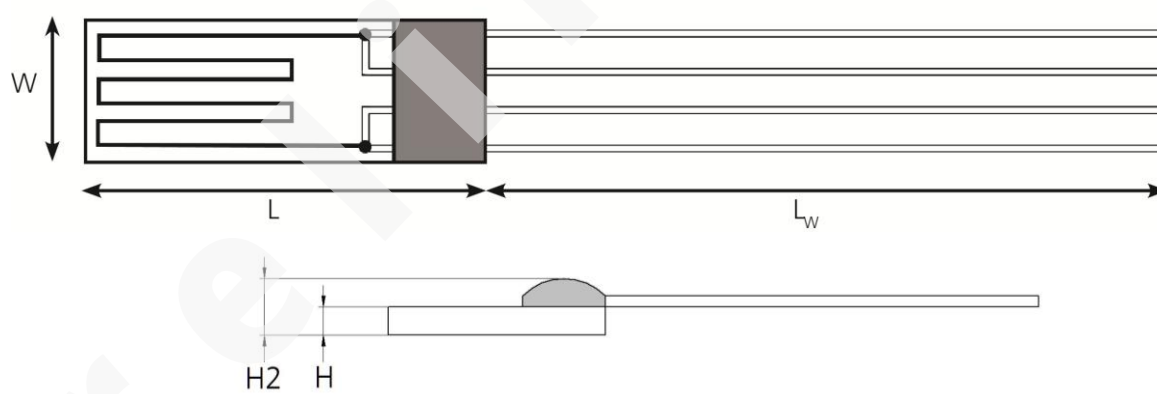


- 4-wire construction on chip
- 5x reduced hysteresis compared to standard platinum sensors ¹⁾
- Capable of measuring in class F0.15 up to +600°C
- Offset independent of extension point
- Very stable characteristics curve
- Excellent long-term stability



¹⁾ tested between -196 °C and +400 °C

Illustration ²⁾



Dimension tolerances:

$W \pm 0.2 \text{ mm}$, $L \pm 0.2 \text{ mm}$, $H \pm 0.1 \text{ mm}$, $H2 \pm 0.3 \text{ mm}$,
 $L_w \text{ (up to 30 mm)} \pm 1 \text{ mm}$

²⁾ for actual size see dimensions in order information



Technical Data



Operating temperature range: -200 °C to +600 °C



Nominal resistance: *
100 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
reference

IEC 60751 F0.15 A -200 °C to +600 °C



Connection: * Pt-wire, Ø 0.2 mm (solderable, weldable, crimpable, brazeable)



Recommended applied current: ³⁾
0.2 mA at 100 Ω
³⁾Self-heating must be considered
0.06 mA at 1000 Ω

* Customer-specific alternatives available

Order Information

Nominal Resistance	Size	Dimensions (L x W x H / H2; LW in mm)	Class*	Order code	Product name (secondary reference)	Wire length in mm	Special
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7W (Pt-wire, Ø 0.2 mm)

100 Ω	5018	5.0 x 1.8 x 0.45 / 0.8; 10.0	F0.15 (class A)	104330	PW0K1.5018.7W.A.0104	10	
1000 Ω	5018	5.0 x 1.8 x 0.45 / 0.8; 10.0	F0.15 (class A)	104331	PW1K0.5018.7W.A.010-4	10	

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	=	Extended wire	L	=	Insulated stranded wire
W	=	Wire	E	=	Enameled Cu-wire
FW	=	Flat wire	SE	=	Perpendicular enamelled CU-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. 5018. 7 W. A. 010-4



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