

Sensor Technology

KN Series



KN Series Ceramic Wire Wound PRTD

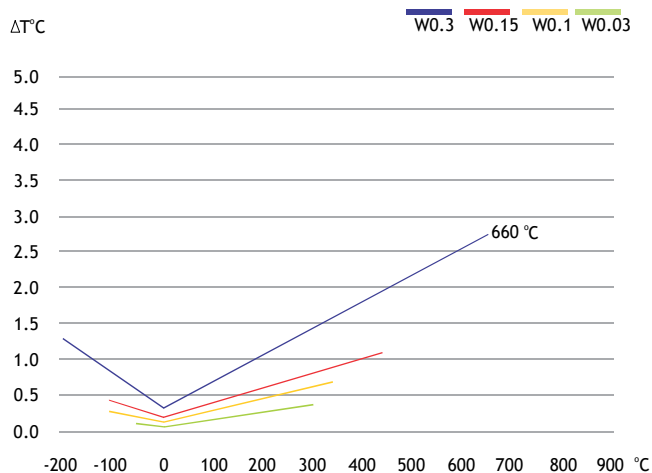
The KN Series Ceramic Wire Wound PRTDs are suitable for general applications requiring temperature stability and accuracy.

Applications: Industrial resistance thermometers, for industrial process like chemical, power generation plants and analytical equipment.

Construction: A platinum coil is sealed inside a high purity aluminum oxide ceramic body. Lead wires are shear force resistant and assure proper connection to extension leads and cables. Two separate coils can be embedded in one ceramic body.

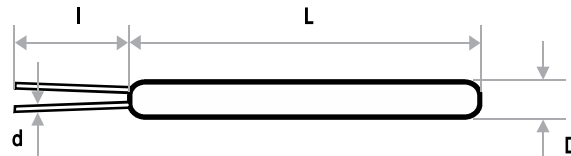
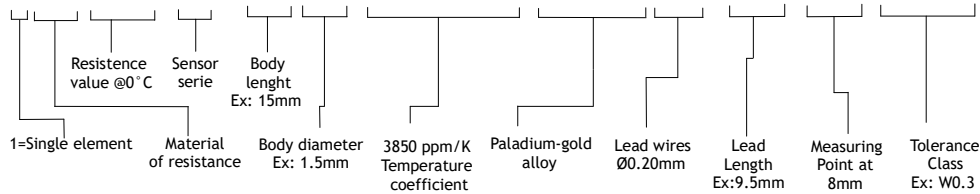
On demand: In addition to the standard products, we are also producing on demand products. In order to offer the best solution to the market, we are able to design element sensors considering different diameters, lengths, classes and coefficients.

Class tolerance chart



KN Series specifications 1 Pt Models (Single elements)

1Pt100 KN 1515 TC3850 PDAU20-9.5 M8W0.3



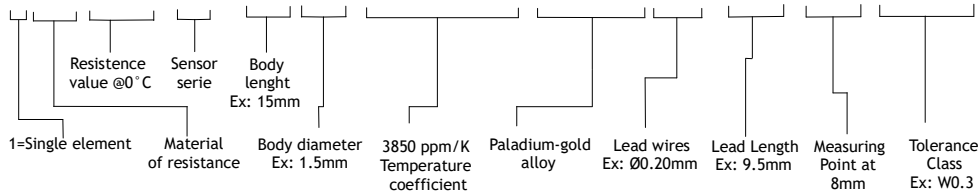
1Pt Types

Product				Order No.	Dimensions in mm				Self Heating 0 °C (K/mW)	Response time			
Description	Tolerance Class	Class	Temperature range (°C)		L	D	d	I		Water: V= 0.4m/s		Air: V= 3m/s	
										t _{0.5}	t _{0.9}	t _{0.5}	t _{0.9}
1Pt100 KN 0815	W0.3	B	-196 ~+660	32.206.463	8 ⁺² ₋₀	1.5±0.15	0.20±0.01	9.5±0.5	0.28	0.2	0.5	6.7	21.8
	W0.15	A	-100 ~+450	32.206.464				9.5±0.5					
	W0.1	1/3	-100 ~+350	32.206.465				9.5±0.5					
	W0.06	1/5	-50 ~+300	32.206.000				9.5±0.5					
	W0.03L	1/10	-50 ~+150	32.206.432				9.5±0.5					
	W0.03	1/10	-50 ~+300	32.206.024				8.5±0.5					
1Pt100 KN 1510	W0.3	B	-196 ~+660	32.206.913	15 ⁺² ₋₀	1.0±0.1	0.20±0.01	9.5±0.5	0.14	0.2	0.3	3.0	9.0
	W0.15	A	-100 ~+450	32.206.914				9.5±0.5					
	W0.1	1/3	-100 ~+350	32.206.915				9.5±0.5					
	W0.03L	1/10	-50 ~+150	32.206.433				9.5±0.5					
	W0.03	1/10	-50 ~+300	32.206.185				8.5±0.5					
1Pt100 KN 1515	W0.3	B	-196 ~+660	32.206.455	15 ⁺² ₋₀	1.5±0.15	0.20±0.01	9.5±0.5	0.08	0.2	0.4	5.0	15.7
	W0.15	A	-100 ~+450	32.206.456				9.5±0.5					
	W0.1	1/3	-100 ~+350	32.206.457				9.5±0.5					
	W0.06	1/5	-50 ~+300	32.206.171				9.5±0.5					
	W0.03L	1/10	-50 ~+150	32.206.424				9.5±0.5					
	W0.03	1/10	-50 ~+300	32.206.112				8.5±0.5					
1Pt100 KN 1515 TC3916 Leads Ø0,27mm	W0.3	B	-196 ~+660	32.206.907	15 ⁺² ₋₀	1.5±0.15	0.27±0.01	9.5±0.5	0.08	0.2	0.4	5.0	15.7
	W0.15	A	-100 ~+450	32.206.908				9.5±0.5					
	W0.1	1/3	-100 ~+350	32.206.909				9.5±0.5					
1Pt100 KN 1515 Leads Ø0,27mm	W0.3	B	-196 ~+660	32.206.901	15 ⁺² ₋₀	1.5±0.15	0.27±0.01	9.5±0.5	0.08	0.2	0.4	5.0	15.7
	W0.15	A	-100 ~+450	32.206.902				9.5±0.5					
	W0.1	1/3	-100 ~+350	32.206.903				9.5±0.5					
	W0.06	1/5	-50 ~+300	32.206.956				9.5±0.5					
	W0.03L	1/10	-50 ~+150	32.206.423				9.5±0.5					
	W0.03	1/10	-50 ~+300	32.206.057				8.5±0.5					
1Pt100 KN 1526	W0.3	B	-196 ~+660	32.206.925	15 ⁺² ₋₀	2.6±0.15	0.27±0.01	9.5±0.5	0.6	0.3	0.6	10.2	33.8
	W0.15	A	-100 ~+450	32.206.926				9.5±0.5					
	W0.1	1/3	-100 ~+350	32.206.927				9.5±0.5					
1Pt100 KN 2510	W0.3	B	-196 ~+660	32.206.362	25 ⁺² ₋₀	1.0±0.15	0.20±0.01	9.5±0.5	0.07	0.2	0.4	3.0	8.8
	W0.15	A	-100 ~+450	32.206.365				9.5±0.5					
	W0.1	1/3	-100 ~+350	32.206.368				9.5±0.5					
	W0.03L	1/10	-50 ~+150	32.206.434				9.5±0.5					
	W0.03	1/10	-50 ~+300	32.206.044				8.5±0.5					

Sensor Technology reserves the right to make changes without notice in the specifications of this products

KN Series specifications

1Pt100 KN 1515 TC3850 PDAU20-9.5 M8W0.3



1Pt Types (continuation)

Product				Order No.	Dimensions in mm				Self Heating 0 °C (K/mW)	Response time			
Description	Tolerance Class	Class	Temperature range (°C)		L	D	d	l		Water: V= 0.4m/s		Air: V= 3m/s	
1Pt100 KN 2515	W0.3	B	-196 ~+660	32.206.370	25 ⁺² ₋₀	1.5±0.15	0.20±0.01	9.5±0.5	0.07	0.2	0.4	5.3	16.0
	W0.15	A	-100 ~+450	32.206.372				9.5±0.5					
	W0.1	1/3	-100 ~+350	32.206.374				9.5±0.5					
	W0.03L	1/10	-50 ~+150	32.206.435				9.5±0.5					
	W0.03	1/10	-50 ~+300	32.206.099				8.5±0.5					
1Pt100 KN 3026	W0.3	B	-196 ~+660	32.206.520	30 ⁺² ₋₀	2.6±0.15	0.27±0.01	9.5±0.5	0.4	0.3	0.6	10.5	34.0
	W0.15	A	-100 ~+450	32.206.544				9.5±0.5					
	W0.1	1/3	-100 ~+350	32.206.557				9.5±0.5					
	W0.03L	1/10	-50 ~+150	32.206.436				9.5±0.5					
	W0.03	1/10	-50 ~+300	32.206.082				8.5±0.5					

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2 Pt Models (Dual element)

2Pt Types

Product				Order No.	Dimensions in mm					Self Heating 0 °C (K/mW)	Response time			
Description	Tolerance Class	Class	Temperature range (°C)		L	D	d	l1	l2		Water: V= 0.4m/s		Air: V= 3m/s	
2Pt100 KN 1017	W0.3	B	-196 ~+660	32.206.182	10 ⁺² ₋₀	1.7±0.15	0.20±0.01	10.5±0.5	9.5±0.5	0.28	0.2	0.5	6.7	21.8
	W0.15	A	-100 ~+450	32.206.183				10.5±0.5	9.5±0.5					
	W0.1	1/3	-100 ~+350	32.206.184				10.5±0.5	9.5±0.5					
2Pt100 KN 1517	W0.3	B	-196 ~+660	32.206.157	15 ⁺² ₋₀	1.7±0.1	0.20±0.01	10.5±0.5	9.5±0.5	0.14	0.2	0.3	3.0	9.0
	W0.15	A	-100 ~+450	32.206.158				10.5±0.5	9.5±0.5					
	W0.1	1/3	-100 ~+350	32.206.159				10.5±0.5	9.5±0.5					
2Pt100 KN 2517	W0.3	B	-196 ~+660	32.206.301	25 ⁺² ₋₀	1.7±0.15	0.20±0.01	10.5±0.5	9.5±0.5	0.08	0.2	0.4	5.0	15.7
	W0.15	A	-100 ~+450	32.206.004				10.5±0.5	9.5±0.5					
	W0.1	1/3	-100 ~+350	32.206.302				10.5±0.5	9.5±0.5					
2Pt100 KN 2517 Leads Ø 0,27mm	W0.3	B	-196 ~+660	32.206.931	25 ⁺² ₋₀	1.7±0.15	0.27±0.01	10.5±0.5	9.5±0.5	0.08	0.2	0.4	5.0	15.7
	W0.15	A	-100 ~+450	32.206.932				10.5±0.5	9.5±0.5					
	W0.1	1/3	-100 ~+350	32.206.933				10.5±0.5	9.5±0.5					
2Pt100 KN 3026	W0.3	B	-196 ~+660	32.206.620	30 ⁺² ₋₀	2.6±0.15	0.27±0.01	10.5±0.5	9.5±0.5	0.06	0.3	0.6	10.5	34.0
	W0.15	A	-100 ~+450	32.206.569				10.5±0.5	9.5±0.5					
	W0.1	1/3	-100 ~+350	32.206.647				10.5±0.5	9.5±0.5					

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Technical Specification

Description meaning:

1Pt100 KN 1515 TC3850 PDAU20-9.5 M8W0.3										
1=Single element 2=Dual element	Resistance value @0°C	Sensor serie	Body lenght Ex: 15mm	Body diameter Ex: 1.5mm	3850 ppm/K Temperature coefficient	Palladium-gold alloy	Lead wires Ø0.20mm	Lead Length Ex: 9.5mm	Measuring Point at 8mm	Tolerance Class Ex: W0.3

Temperature range:

W0.3 (Class B)	= -196°C to +660°C
W0.15 (Class A)	= -100°C to +450°C
W0.1 (Class 1/3 B)	= -100°C to +350°C
W0.06 (Class 1/5 B)	= -50°C to +300°C
W0.03L (Class 1/10 B)	= -50°C to +150°C
W0.03 (Class 1/10 B)	= - 50°C to +300°C

Temperature coefficient: Tc = 3850 ppm/K

Leads: Palladium-gold alloy

Length Leads: 9.5 mm ± 0.5 mm

Insulation resistance after assembly: > 100 MOhm @ 25 °C

Measuring current: 1 mA

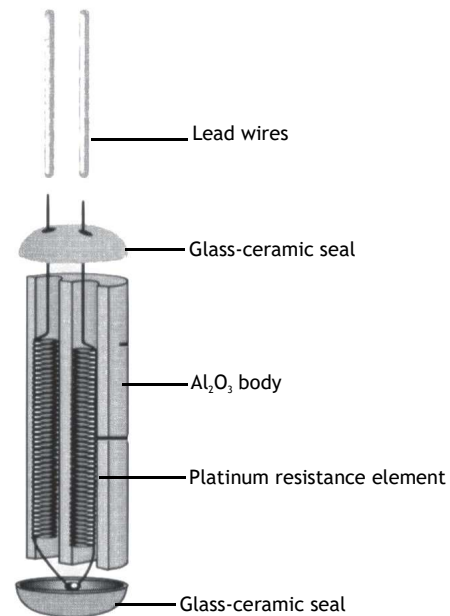
Tolerance class:

- According to IEC 60751:2008
- Other standards, narrower tolerances and other nominal resistances are available on request

Temperature stability: Excellent long-term stability

Also available:

- Platinum-gold alloy
- Different temperature coefficients
- On demand. (3916 ppm/K - old JIS)
- Extension leads



The measuring point is located at 8 mm from the end of the sensor body.

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