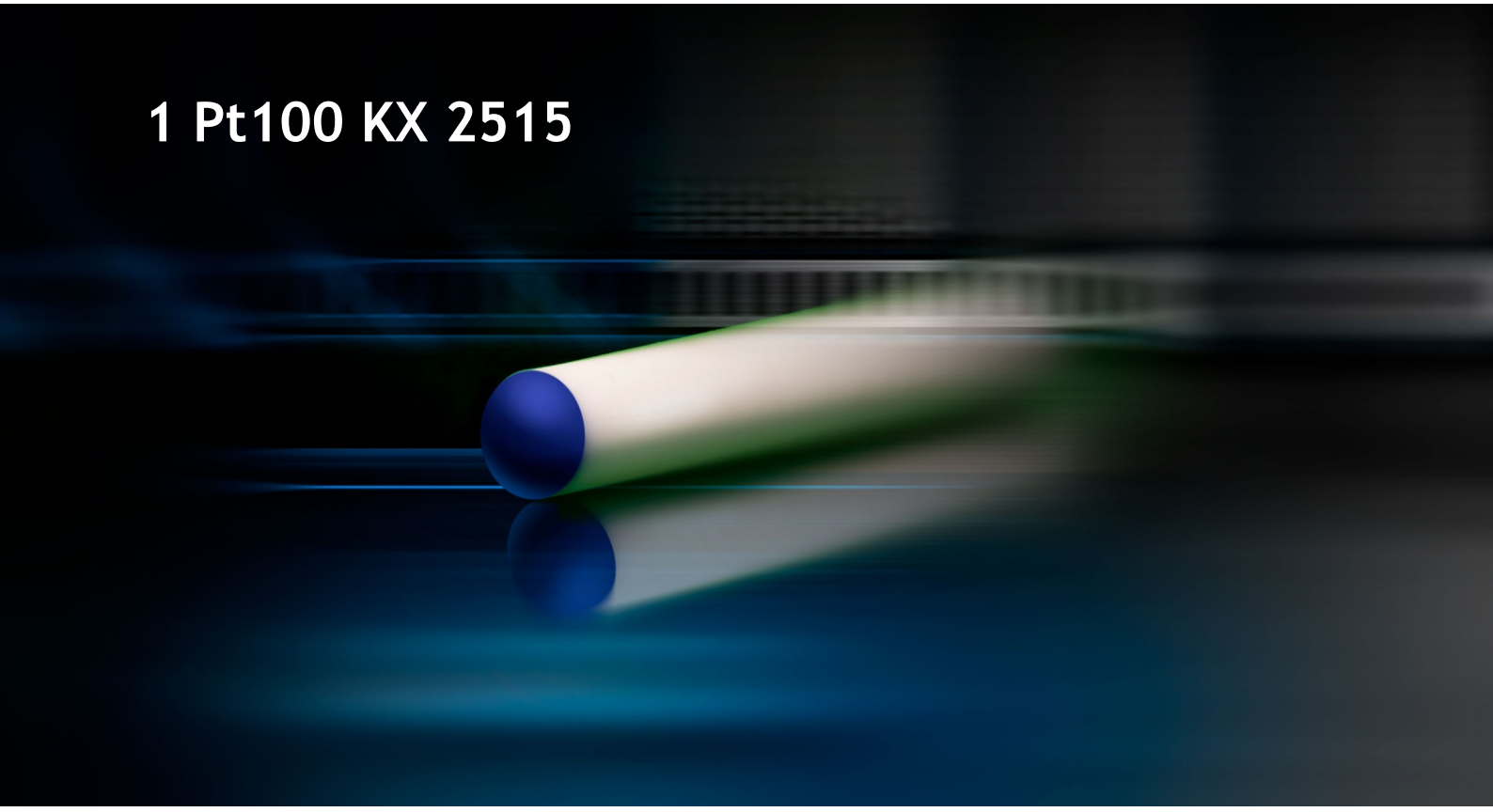
Sensor Technology



1 Pt100 KX 2515

The KX Series Ceramic Wire Wound PRTDs are suitable for general applications requiring temperature stability.

Applications: Industrial resistance thermometers, especially in 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.

Types

Product	Tolerance	Order No.	Dimensions in mm L	D	d	l	Self Heating	Response time Water: V=0.4m/s $t_{0.5}$	$t_{0.9}$	Air: V=3m/s $t_{0.5}$	$t_{0.9}$
1Pt100 KX 2515	W0.3	32.206.028	25^{+2}_{-0}	1.5±0.15	0.20±0.01	10.0±0.5	0.07	0.2	0.4	5.3	16.0
	W0.15	32.206.029									
	W0.1	32.206.030									
	W0.03	32.206.031				See Remark					

Technical Specification

Nominal resistance: 100 Ohm @ 0°C

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
W0.03 (Class 1/10 B) = -50°C to +300°C
(Special ST Class proportional to W0.3)

Temperature coefficient: Tc = 3850 ppm/K

Leads: Palladium-gold alloy

Measuring current: 1 mA

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

Tolerance class:
- According to IEC 60751:2008
- Other standards and narrower tolerances are available on request

Temperature stability: Excellent long-term stability

Also available:
- Platinum-gold alloy
- Different temperature coefficients (3916 ppm/K - old JIS)
- Extension leads
- Two separated coils can be embedded in one ceramic body

Remark:

Class	Working Temperature	Lead Length (l)
W0.03 (1/10 DIN)	<=150°C 150°C to 300°C	10 mm 8 to 9 mm

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

Long Term Stability Test (according to IEC 60751)

		Initial Values			Values at 0°C after 250h @ 660°C			0°C Drift after 250 h	
Type	Piece	R @ 0°C	R @ 100°C	TK	R @ 0°C	R @ 100°C	Drift	Drift %	Average
1Pt 100 KX 2515	1	100,028	138,507	3846,9	100,035	138,520	0,007	0,007%	
	2	100,027	138,515	3847,8	100,036	138,530	0,009	0,009%	
	3	100,030	138,544	3850,3	100,036	138,555	0,006	0,006%	0,0092
	4	99,997	138,488	3849,2	100,011	138,508	0,014	0,014%	
	5	100,088	138,604	3848,2	100,096	138,619	0,008	0,008%	Std. deviation
	6	100,084	138,584	3846,8	100,088	138,594	0,003	0,003%	
	7	100,008	138,495	3848,5	100,024	138,522	0,016	0,016%	0,0042
	8	100,104	138,613	3847,0	100,114	138,631	0,010	0,010%	

		Initial Values			Values after more 750h @ 660°C			0°C Drift after 1000 h	
Type	Piece	R @ 0°C	R @ 100°C	TK	R @ 0°C	R @ 100°C	Drift	Drift %	Average
1Pt 100 KX 2515	1	100,028	138,507	3846,9	100,039	138,532	0,012	0,012%	
	2	100,027	138,515	3847,8	100,041	138,541	0,013	0,013%	
	3	100,030	138,544	3850,3	100,040	138,565	0,011	0,011%	0,0136
	4	99,997	138,488	3849,2	100,012	138,516	0,015	0,015%	
	5	100,088	138,604	3848,2	100,102	138,630	0,014	0,014%	Std. deviation
	6	100,084	138,584	3846,8	100,093	138,599	0,009	0,009%	
	7	100,008	138,495	3848,5	100,033	138,537	0,025	0,025%	0,0051
	8	100,104	138,613	3847,0	100,115	138,638	0,011	0,011%