

Fast-response thermocouple



Standard thermocouple



High-precision thermocouple

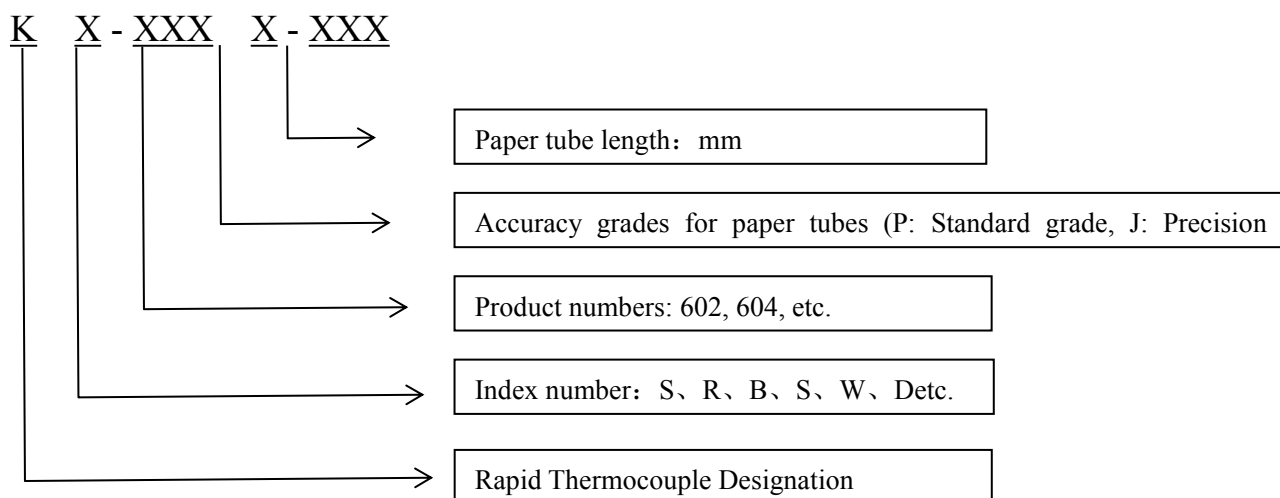
➤ **Scope of Application:**

Rapid thermocouples are disposable devices used to measure the temperature of molten steel and other high-temperature molten metals. These thermocouples require connection to a temperature measuring instrument for operation.

➤ **Working Principle:**

Based on the thermoelectric effect of metals, the temperature difference-induced thermoelectric power generated at both ends of a thermocouple is utilised to measure the temperature of molten steel and other high-melting-point metals. Specifically, two conductors of differing composition are welded together to form a circuit. The end directly exposed to measurement is termed the hot junction, while the terminal end is designated the cold junction. When a temperature differential exists between the hot and cold junctions, a thermoelectric current flows within the circuit. Connecting this to a display instrument reveals the corresponding temperature value of the generated thermoelectric potential, which increases with rising temperature.

Model Explanation:



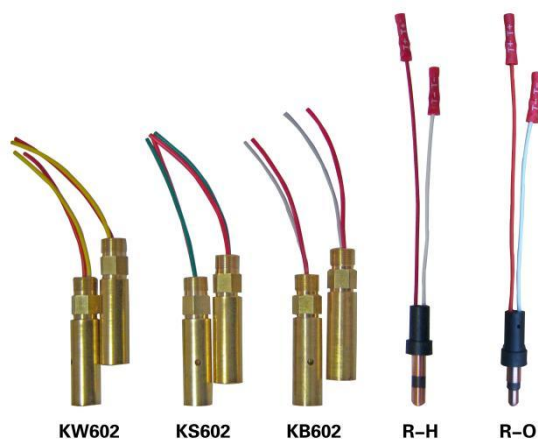
➤ Specifications and Model Numbers:

Name	Product numbers	Model	Permissible error	Operating temperature	Temperature measurement time
Tungsten-Rhenium 3/25	D (W)	KD (KW3/25)	± 7	1750℃	4-6S
Platinum-rhodium 10-platinum	S	KS	± 5	1650℃	4-6S
Platinum-rhodium 13-platinum	R	KR	± 5	1650℃	4-6S
Platinum-Rhodium 30-Platinum-Rhodium 6	B	KB	± 5	1750℃	4-6S

➤ Technical Specifications:

Index number	WRe3/25	R	S	B
Maximum temperature	1820℃	1760℃	1760℃	1800℃
Permissible error	Standard Grade (P) $\pm 5^{\circ}\text{C}$ Precision grade (J) $\pm 2^{\circ}\text{C}$			
Wire precision	palladium point (1554℃) (P) $\pm 3^{\circ}\text{C}$ (J) $\pm 1.5^{\circ}\text{C}$			
Paper tube length	300mm 、 600mm、 900mm			
protective cap	aluminium cap			
Measurement success rate	$\geq 98\%$			
Response time	$\leq 5\text{S}$			

➤ Thermometer accessories



Temperature gun probe



Compensation cable



Thermometer Charger



Thermometer battery