

Fast-response thermocouple



Standard thermocouple



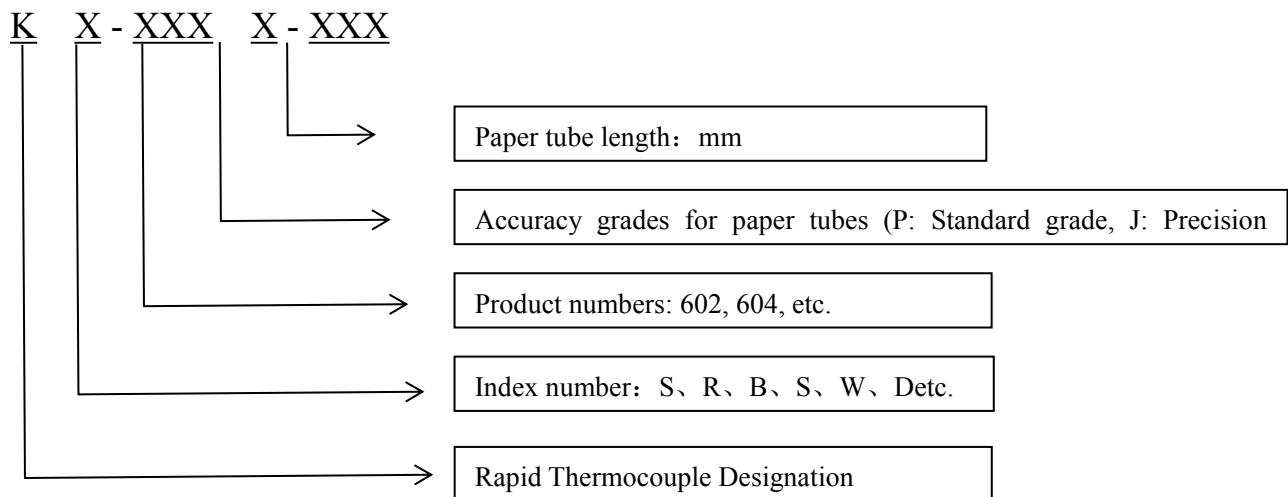
High-precision thermocouple

➤ 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:

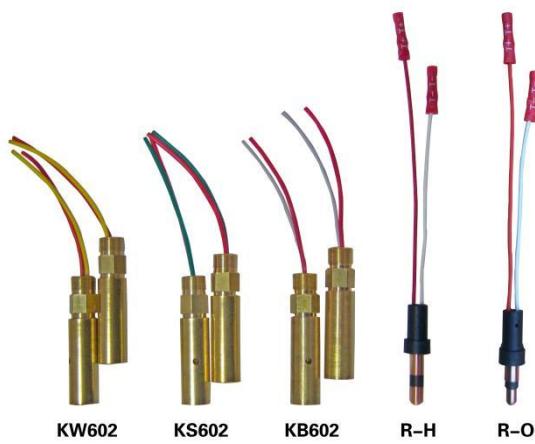
Based on the thermoelectric effect of metals, the temperature difference-induced thermoelectric power generated at both ends of a thermocouple is utilised to measure the temperature of molten steel and other high-melting-point metals. Specifically, two conductors of differing composition are welded together 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 m 3/25	D (W)	KD (KW3/25)	±7	1750°C	4-6S
Platinum-rhodium m 10-platinum	S	KS	±5	1650°C	4-6S
Platinum-rhodium m 13-platinum	R	KR	±5	1650°C	4-6S
Platinum-Rhodium 30-Platinum-Rhodium 6	B	KB	±5	1750°C	4-6S

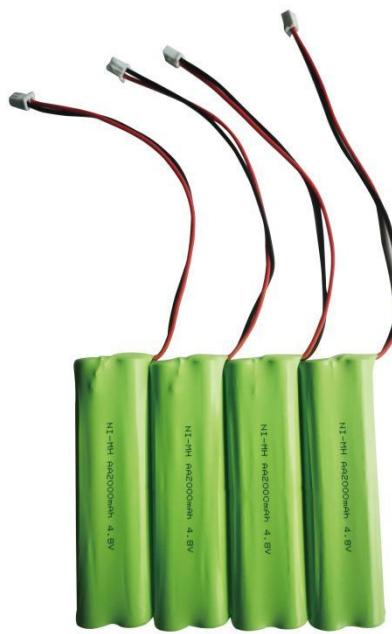
➤ Technical Specifications:

Index number	WRe3/25	R	S	B
Maximum temperature	1820°C	1760°C	1760°C	1800°C
Permissible error	Standard Grade (P) $\pm 5^\circ\text{C}$ Precision grade (J) $\pm 2^\circ\text{C}$			
Wire precision	palladium point (1554°C) (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