

Thermocouple Extension Type	ANSI	BS	DIN	NFC	JIS	IEC
JX + Iron - Constantan						
KX + Chromel - Alumel						
TX + Copper - Constantan						
EX + Chromel - Constantan						
NX + Nicrosil - Nisil						
RX/SX + Copper - Alloy II						
VX + Copper - Constantan <i>compensating for type K</i>						

Thermocouple Wire: Twin, single conductor, having a temperature/E.M.F. relationship to the appropriate standard over the complete temperature range.

Extension Cable: Twin, single or stranded conductors for connection between measuring thermocouple and instrument (or external) reference junction of the same materials as the thermocouple, and having the same E.M.F./temperature characteristics over a limited temperature range.

Material	Temp. Range	Application
PVC	-20 ~ +105°C	General Purpose including wet areas
PVC with Mylar Shield + Drain Wire	-20 ~ +105°C	High electrical noise environments. Earth one end only.
Fibreglass	-60 ~ +450°C	Furnaces, work piece thermocouples. Avoid wet or oily areas.
Fibreglass with Stainless Steel Overbraid	-60 ~ +450°C	Overbraid adds mechanical protection to cable e.g. Plastic extruders;
Silicone Rubber	-100 ~ +180°C	Where ever greater flexibility is required e.g. packaging machines
PTFE (Teflon)	-200 ~ +260°C	Pharmaceutical, Food Industry
Nylon	-10 ~ +150°C	Food Industry, Research
Ceramic Fibre	-0 ~ +1200°C	Inside Furnaces, High Temperature applications.

Connection of Thermocouples to Measuring Instruments: Ordinary copper wires should never be used, as the error will be equal to the difference in temperature between the connecting point of the thermocouple and the instrument (or external reference junction).

Extension or compensating wire or cable must be employed, and is essential that the same polarity is maintained. If the polarity is reversed, the error is equal to twice the temperature difference between the connecting point of the thermocouple and the instrument (or external reference junction).

For maximum accuracy extension cable should be used, terminals and connectors should be of thermocouple materials to maintain continuity.