





Thermocouples are connected to indicators/controllers using special cable which are known as compensating cable. In cases where accuracy of reading is of prime importance cables with original conductor is used such cable is known as extension cable.

The cables are manufactured in various configurations. We are giving below various types of cable constructions available.

OUTER INSULATION		AREA MM2	GAUGE	MAXIMUM TEMP	COLOUR CODING	PAIRS
HR PVC INSULATED CABLE		0.2 mm2 0.5 mm2 1.3 mm2	1 X 25 SWG 1 X 21 SWG 1 X 18 SWG	-25 TO 75 Deg C	BS / ANSI IEC	SIMPLEX OR DUPLICATE
FLAME RETARDANT PVC INSULATED CABLE		1.2 mm2 2.0 mm2	3 X 22 SWG 3 X 20 SWG	-25 TO +85 Deg C.	BS / ANSI IEC	SIMPLEX OR DUPLICATE
TEFLON INSULATED CABLE		0.22 mm2 0.44 mm2 0.75 mm2 1.00 mm2 1.30 mm2 2.00 mm2	7 X 36 SWG 14 X 36 SWG 32 X 36 SWG 24 X 36 SWG 40 X 36 SWG 64 X 36 SWG	0 TO 225 Deg C	BS / ANSI IEC	SIMPLEX OR DUPLICATE
FIBRE GLASS INSULATED CABLE				0 TO 350 Deg C	BS / ANSI IEC	SIMPLEX OR DUPLICATE

Note:

Fibreglass cables are normally supplied with SS wire braiding. Teflon cable can be supplied with SS braiding if required. HRPVC, Flame retardant PVC and Teflon cable can be supplied with Copper drain wire and Aluminium mylar for Noise rejection.

### THERMOCOUPLE EXTENSION AND COMPENSATING CABLE COLOUR CODES, CONDUCTOR COMBINATIONS

TYPE	CABLE TYPE		SHEATH COLOUR	INTERNATIONAL	BRITISH	AMERICAN	GERMAN	Tolerance Values as per IEC 584.3:1989	
	EXTENSION	COMPENSATING		IEC 584.3:1989	BS 1843	ANSI/MC96.1	DIN 43714	CLASS 1	CLASS 2
K	KX		OVERALL	GREEN	RED	YELLOW	GREEN	±60 µV(±1.5 °C)	±100 µV(±2.5 °C)
			POSITIVE	GREEN	BROWN	YELLOW	RED		
			NEGATIVE	WHITE	BLUE	RED	GREEN		
	KCB		OVERALL	GREEN	RED	-	-	---	±100 µV(±2.5 °C)
			POSITIVE	GREEN	WHITE	-	-		
			NEGATIVE	WHITE	BLUE	-	-		
J	JX		OVERALL	BLACK	BLACK	BLACK	BLUE	±85 µV(±1.5 °C)	±140 µV(±2.5 °C)
			POSITIVE	BLACK	YELLOW	WHITE	RED		
			NEGATIVE	WHITE	BLUE	RED	BLUE		
R	RCA		OVERALL	ORANGE	GREEN	GREEN	-	---	±30 µV(±2.5 °C)
			POSITIVE	ORANGE	WHITE	BLACK	-		
			NEGATIVE	WHITE	BLUE	RED	-		
	RCB		OVERALL	ORANGE	GREEN	GREEN	-	---	±60 µV(±5 °C)
			POSITIVE	ORANGE	WHITE	BLACK	-		
			NEGATIVE	WHITE	BLUE	RED	-		
S	SCA		OVERALL	ORANGE	GREEN	GREEN	WHITE	---	±30 µV(±2.5 °C)
			POSITIVE	ORANGE	WHITE	BLACK	RED		
			NEGATIVE	WHITE	BLUE	RED	WHITE		
	SCB		OVERALL	ORANGE	GREEN	GREEN	WHITE	---	±60 µV(±5 °C)
			POSITIVE	ORANGE	WHITE	BLACK	RED		
			NEGATIVE	WHITE	BLUE	RED	WHITE		
T	TX		OVERALL	BROWN	BLUE	BLUE	BROWN	±30 µV(±0.5 °C)	±60 µV(±1.0 °C)
			POSITIVE	BROWN	WHITE	BLUE	RED		
			NEGATIVE	WHITE	BLUE	RED	BROWN		
E	EX		OVERALL	VIOLATE	BROWN	PINK	BLACK	±120 µV(±1.5 °C)	±200 µV(±2.5 °C)
			POSITIVE	VIOLATE	BROWN	PINK	RED		
			NEGATIVE	WHITE	BLUE	RED	BLACK		
B	BC		OVERALL	GREY	-	GREY	GREY	---	---
			POSITIVE	GREY	-	GREY	RED		
			NEGATIVE	WHITE	-	RED	GREY		

#### Compensating Cables:

Compensating cables are manufactured from conductors having composition different from corresponding thermocouples. They are designated by letter "C" following the designation of the thermocouple. Eg: TC

#### Extension Cables:

Extension cables are manufactured from conductors having composition same as that of from corresponding thermocouples. They are designated by letter "X" following the designation of the thermocouple. Eg: TX