

# THERMOCOUPLE CABLE

### **Compensating & Extension**

#### Customization

Customized colour option and printing of the outer sheath on request

## RJ1601



### **Application:**

Compensating or Extension Cables are used in temperature measurement to convey information from a thermocouple sensor to the measuring instrument. The conductors are made of different media to provide positive and negative cores to match the emf generated, front the sensor.

Extension wires are having same materials as of thermocouple

#### Approvals





#### **Colour Codes:**

|          | DIN 43710  | IEC60584                    |
|----------|--|-----------------------------|
| Fe/CuNi  | -ve/Sheath +ve Red                                 | +ve/Sheath Black -ve White  |
| Nircr/Ni | -ve/Sheath Green+ve Red +ve/Sheath Green -ve White |                             |
| PtRh/Pt  | -ve/Sheath White +ve Red                           | +ve/Sheath Orange -ve White |

**Note :** Outer colour codes, as per ANSIMC96.1 and IS 8784 can also be provided.

#### Millivolts generated for popular thermocouple cables

| Туре  | Description                                     | (+ve)  | (-ve)      | 100ºC | 200ºC |
|-------|---|--------|------------|-------|-------|
| Kx    | Crome/Alumel                                    | Nicr   | Nial       | 4.10  | 8.13  |
| Jx    | Iron/Constantan                                 | Iron   | Constantan | 5.26  | -     |
| Тх    | Copper/Constantan                               | Copper | Constantan | 4.24  | 9.77  |
| Vx    | Compensating for<br>type Kx                     | Copper | Constantan | 4.10  | -     |
| Rx/Sx | Copper/Cupronic<br>compensating for<br>type R/S | Copper | Curpronic  | 0.645 | -     |

### Make up:

Solid stranded conductor

| Conductor of required thermocouple type |                                    |  |  |  |
|---|------------------------------------|--|--|--|
| Fe/CuNi                                 | Iron constantanJx                  |  |  |  |
| Nircr/Ni                                | Cromel Alumel Kx                   |  |  |  |
| PtRh/Pt                                 | Pt/RH equivalent material          |  |  |  |
| Cu/Constantan                           | Compensating for chromel/Alumel/Vx |  |  |  |
| Cu/Constantan                           | Copper/Constantan Tx               |  |  |  |

#### Insulation

Insulation, as per use **PVC**: for temp. upto 70°C/85°C/105°C **SIL**: Silicon Rubber180°C **FG**: Fibre Glass +200°C **PTFE**: Temperature -65°C +260°C **FEP**: Temperature -65°C +200°C

Sheathing According to use of environment & temperature

## **Technical Data:**

- Based on According to DIN or IEC in According with class 2
- Conductor Stranding As per design
- Minimum bending radius Fixed installation 10xD min Fixing installation 15xD min Shielded Armoured 20xD min
- Test Voltage
  1500 V
- Millivolt generated according to ANSI MC 96.1 and IS 8784



**Thermocouple Compensating & Extension Cable** 

Please mail us following information at info@rjptfe.com to quote -

- **1.** Type of thermocouple i.e. Kx, Vx, Jx, Tx, TCA etc.
- 2. Type of insulation as per operating temperature requirement i.e. PVC, PTFE, FEP, FRPVC, XLPE, ZHLS etc.
- 3. Cable construction i.e. Figure '8', flat twin, twisted, screened, no of pair etc.
- 4. Shielding type i.e. shielded or Unshielded, Individual and/or overall.
- **5.** Shielding type i.e. Al-Mylar tape & drain wire or braiding.
- 6. Inner Sheath i.e. PVC, FRLS, FLS, FR, PTFE etc.
- 7. Armouring i.e. GI wire / strip or SS braiding.
- 8. Outer Jacket i.e. PVC FRLS, FR, PTFE, FEP, ZHLS etc.

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