



Thermocouple Wire EPR/CPE Multi Pair

Flexible Thermocouple Extension Cable, TC 600V 90°C



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Thermocouple wire per ANSI MC 96.1 & ASTM E230 (Solid or stranded available)
2. **Insulation:** Extruded EPR
3. **Twisted Pair:** Conductors twisted together with a drain wire and alum/mylar shield
4. **Overall Shielded:** Aluminum / mylar shield and drain wire is applied over the core
5. **Overall Jacket:** Extruded CPE

APPLICATIONS AND FEATURES:

For use as a 600 volt, multi pair thermocouple cable where flame retardance, moisture/chemical resistance, and sunlight resistance are critical. Cable can be installed in free air, in raceways or direct burial. The cable is also approved for damp or dry locations as well as Class 1 Division II industrial hazardous locations per NEC 501-4(b) for (UL) Type Tray Cables (TC). Per ASTM E20 & ANSI MC 96.1. Positive conductor is numbered.

UL Type TC. Excellent physical properties and electrical properties. Resistance to flame, crush, compression and cuts. Good chemical resistance and mechanical strength. Flexible.

SPECIFICATIONS:

- ASTM E230 Temperature-Electromotive Force (emf) Tables for Standardized Thermocouples
- UL 1277 Vertical Cable Tray Flame Tests (70,000 BTU/Hr)
- ICEA T-29-520 Flame Test (210,000 BTU/Hr)
- IEEE 383 Flame Test (70,000 btu)
- IEEE 1202/FT4 Flame Test (70,000 BTU/hr) 350kcmil and Larger
- ANSI MC 96.1 Temperature Measurement Thermocouples





Table 1 – Weights and Measurements

| Stock Number | Cond. Size | Number of Pairs | Insul. Thickness | Jacket Thickness | Approx. OD | Approx. Weight | Temp. Rating | Standard (UL or other) |
|--------------|------------|-----------------|------------------|------------------|------------|----------------|--------------|------------------------|
| | AWG/Kcmil | No. | mil | mil | inch | lb/1000ft | °C | Style/Type |
| C4E_20 | 20 | 1 | 31 | 45 | 0.270 | 39 | 90 | Type TC |
| C4E_22 | 20 | 2 | 31 | 45 | 0.415 | 75 | 90 | Type TC |
| C4E_24 | 20 | 4 | 31 | 45 | 0.480 | 120 | 90 | Type TC |
| C4E_28 | 20 | 8 | 31 | 60 | 0.645 | 230 | 90 | Type TC |
| C4E_30 | 20 | 12 | 31 | 60 | 0.760 | 320 | 90 | Type TC |
| C4E_32 | 20 | 16 | 31 | 80 | 0.895 | 440 | 90 | Type TC |
| C4E_34 | 20 | 24 | 31 | 80 | 1.055 | 650 | 90 | Type TC |
| C4E_36 | 20 | 36 | 31 | 80 | 1.255 | 880 | 90 | Type TC |
| C4E_40 | 16 | 1 | 31 | 45 | 0.310 | 48 | 90 | Type TC |
| C4E_42 | 16 | 2 | 31 | 45 | 0.485 | 105 | 90 | Type TC |
| C4E_44 | 16 | 4 | 31 | 60 | 0.600 | 195 | 90 | Type TC |
| C4E_48 | 16 | 8 | 31 | 60 | 0.760 | 340 | 90 | Type TC |
| C4E_50 | 16 | 12 | 31 | 80 | 0.940 | 515 | 90 | Type TC |
| C4E_52 | 16 | 16 | 31 | 80 | 1.055 | 660 | 90 | Type TC |
| C4E_54 | 16 | 24 | 31 | 80 | 1.250 | 940 | 90 | Type TC |
| C4E_56 | 16 | 36 | 31 | 100 | 1.525 | 1400 | 90 | Type TC |

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

0=Type E // 1=Type J // 2=Type K // 3=Type T

Table 2 – Weights and Measurements (Metric)

| Stock Number | Cond. Size | Number of Pairs | Insul. Thickness | Jacket Thickness | Approx. OD | Approx. Weight | Temp. Rating | Standard (UL or other) |
|--------------|------------|-----------------|------------------|------------------|------------|----------------|--------------|------------------------|
| | AWG/Kcmil | No. | mm | mm | mm | kg/km | °C | Style/Type |
| C4E_20 | 20 | 1 | 0.79 | 1.14 | 6.86 | 58 | 90 | Type TC |
| C4E_22 | 20 | 2 | 0.79 | 1.14 | 10.54 | 112 | 90 | Type TC |
| C4E_24 | 20 | 4 | 0.79 | 1.14 | 12.19 | 179 | 90 | Type TC |
| C4E_28 | 20 | 8 | 0.79 | 1.52 | 16.38 | 342 | 90 | Type TC |
| C4E_30 | 20 | 12 | 0.79 | 1.52 | 19.30 | 476 | 90 | Type TC |
| C4E_32 | 20 | 16 | 0.79 | 2.03 | 22.73 | 655 | 90 | Type TC |
| C4E_34 | 20 | 24 | 0.79 | 2.03 | 26.80 | 967 | 90 | Type TC |
| C4E_36 | 20 | 36 | 0.79 | 2.03 | 31.88 | 1310 | 90 | Type TC |
| C4E_40 | 16 | 1 | 0.79 | 1.14 | 7.87 | 71 | 90 | Type TC |
| C4E_42 | 16 | 2 | 0.79 | 1.14 | 12.32 | 156 | 90 | Type TC |
| C4E_44 | 16 | 4 | 0.79 | 1.52 | 15.24 | 290 | 90 | Type TC |
| C4E_48 | 16 | 8 | 0.79 | 1.52 | 19.30 | 506 | 90 | Type TC |
| C4E_50 | 16 | 12 | 0.79 | 2.03 | 23.88 | 766 | 90 | Type TC |
| C4E_52 | 16 | 16 | 0.79 | 2.03 | 26.80 | 982 | 90 | Type TC |
| C4E_54 | 16 | 24 | 0.79 | 2.03 | 31.75 | 1399 | 90 | Type TC |
| C4E_56 | 16 | 36 | 0.79 | 2.54 | 38.73 | 2083 | 90 | Type TC |

