



## CSA TECK 90 AL 3/C 5000V NON-SHIELDED TRXLPE POWER CABLE

5000V, Non-Shielded, TRXLPE Insulated, FT4, -40°C, HL (Hazardous Locations), AG14 & 90°C

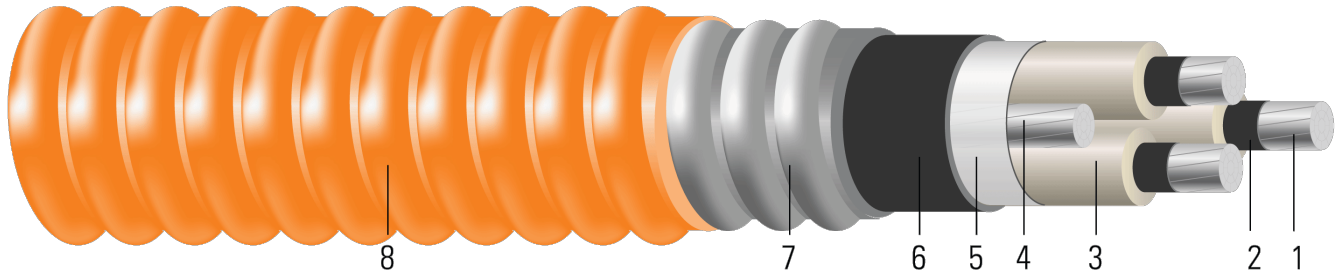


Image not to scale. See Table 1 for dimensions.

### CONSTRUCTION:

1. **Conductor:** Class B compact stranded 8000 Series Aluminum ACM, in accordance with ASTM B801
2. **Conductor Shield:** Extruded semi-conducting thermosetting polymeric layer
3. **Insulation:** TRXLPE - Tree Retardant Cross-Linked Polyethylene, Thickness: 0.090" (2.3 mm) - nominal, 90°C
4. **Grounding Conductor:** Class B compact stranded 8000 Series, Bare Aluminum
5. **Binder:** Polypropylene tape
6. **Inner Jacket:** Black PVC, Thickness: No. 2 AWG to No. 3/0 AWG = 0.080" (2.0 mm), No. 4/0 AWG to 500 kcmil = 0.110" (2.8 mm), 750 kcmil to 1000 kcmil = 0.140" (3.6 mm)
7. **Aarmor:** Aluminum Interlocked Armour (AIA)
8. **Overall Jacket:** Orange PVC (optional colours available), Thickness: No. 2 AWG to 250 kcmil = 0.060" (1.5 mm), 350 kcmil to 750 kcmil = 0.075" (1.9 mm), 1000 kcmil = 0.090" (2.3 mm)

### APPLICATIONS AND FEATURES:

Southwire's 5KV TECK 90, 5000V, non-shielded, TRXLPE insulated power cable is a CSA approved armoured cable for industrial and commercial medium voltage applications. FT4, -40°C, HL, AG14 and 90°C rated for use in harsh Canadian environments. Rated for installation in cable trays, duct banks, direct burial, troughs, hazardous locations, continuous rigid cable supports, and is concrete encaseable.

- -40°C - CSA Cold Bend and Impact Temperature
- -25°C - Min. Installation Temperature
- 90°C - Max. Continuous Operating Temperature
- 140°C for Emergency Overload Temperature
- 250°C for Short Circuit Temperature

### SPECIFICATIONS:

- CSA C22.2 No. 174 Cables in Hazardous Locations
- CSA C22.2 No. 131 Type TECK 90 Cable
- CSA C22.2 No. 2556 & No. 0.3 Wire and Cable Test Methods
- CSA LTGG [-40°C] - as per C68.10 - for Cold Bend and Impact rating
- CSA HL - for Hazardous Locations rating
- CSA SUN RES - for Sunlight Resistant rating
- CSA AG14 - Acid Gas Compliance





- ICEA S-96-659 (NEMA WC 71) 2001-5000 V Nonshielded Cables
- IEEE 383 Flame Test (70,000 btu)
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- FT1 Flame Test (1,706 BTU/Hr nominal - Vertical Wire Flame Test)

**SAMPLE PRINT LEGEND:**

SOUTHWIRE [symbol - lightning bolt] #P# CSA LL90458 3/C [AWG 2 to 1000 kcmil] CPT AL TECK 90 TR-XLPE CDRS WITH GROUND 40°C FT4 SUN. RES. AG14 5000V HL YEAR SEQUENTIAL METER MARKS

**Table 1 – Weights and Measurements**

| Stock Number | Cond. Size | Strand | Diameter Over Conductor | Insul. Thickness | Ground    | Inner Jacket Thickness | Dia. Over Armour | Overall Jacket Thickness | Approx. OD | Approx. Weight |
|--------------|------------|--------|-------------------------|------------------|-----------|------------------------|------------------|--------------------------|------------|----------------|
|              | AWG/ Kcmil | No.    | inch                    | mil              | No. x AWG | mil                    | inch             | mil                      | inch       | lb/1000ft      |
| 669241       | 2          | 6      | 0.268                   | 90               | 1x6       | 85                     | 1.565            | 55                       | 1.675      | 1031           |
| 669248       | 350        | 35     | 0.615                   | 90               | 1x2       | 115                    | 2.402            | 65                       | 2.534      | 2691           |
| TBA          | 500        | 35     | 0.736                   | 90               | 1x1       | 115                    | 2.627            | 65                       | 2.757      | 3480           |

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

\* Strand count meets minimum number per ASTM

TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

**Table 2 – Electrical and Engineering Data**

| Cond. Size | Min Bending Radius | Max Pull Tension | DC Resistance @ 25°C | AC Resistance @ 90°C | Inductive Reactance @ 60Hz | Allowable Ampacity In Air 90°C |
|------------|--------------------|------------------|----------------------|----------------------|----------------------------|--------------------------------|
| AWG/ Kcmil | inch               | lb               | Ω/1000ft             | Ω/1000ft             | Ω/1000ft                   | Amp                            |
| 2          | 11.7               | 1194             | 0.267                | 0.321                | 0.035                      | 135                            |
| 350        | 17.7               | 6300             | 0.050                | 0.062                | 0.029                      | 363                            |
| 500        | 19.2               | 9000             | 0.035                | 0.046                | 0.030                      | 447                            |

\* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.

**Table 3 – Weights and Measurements (Metric)**

| Stock Number | Cond. Size | Strand | Diameter Over Conductor | Insul. Thickness | Ground    | Inner Jacket Thickness | Dia. Over Armour | Overall Jacket Thickness | Approx. OD | Approx. Weight |
|--------------|------------|--------|-------------------------|------------------|-----------|------------------------|------------------|--------------------------|------------|----------------|
|              | AWG/ Kcmil | No.    | mm                      | mm               | No. x AWG | mm                     | mm               | mm                       | mm         | kg/km          |
| 669241       | 2          | 6      | 6.81                    | 2.29             | 1x6       | 2.16                   | 39.75            | 1.40                     | 42.55      | 1534           |
| 669248       | 350        | 35     | 15.62                   | 2.29             | 1x2       | 2.92                   | 61.01            | 1.65                     | 64.36      | 4005           |
| TBA          | 500        | 35     | 18.69                   | 2.29             | 1x1       | 2.92                   | 66.73            | 1.65                     | 70.03      | 5179           |

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

\* Strand count meets minimum number per ASTM

TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

**Table 4 – Electrical and Engineering Data (Metric)**

|     |        |       |        |      |        |     |
|-----|--------|-------|--------|------|--------|-----|
| 2   | 297.18 | 5313  | 0.8760 | 1.05 | 0.1148 | 135 |
| 350 | 449.58 | 28035 | 0.1640 | 0.20 | 0.0951 | 363 |
| 500 | 487.68 | 40050 | 0.1148 | 0.15 | 0.0984 | 447 |





\* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.

