# CSA TECK 90 1000V PVC POWER OR CONTROL CABLE

1000V Multi Conductor, 14-10 AWG Copper, FT4 - Flame Retardancy Rating, XLPE Insulation, Aluminum Interlocked Armour, Sunlight Resistant, -40°C - 90°C, Rated HL, AG14




Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

1. **Conductor:** Class B stranded copper, compressed or compact, in accordance with ASTM B3 and B8
2. **Insulation:** Cross-Linked Polyethylene (XLPE), Colour Code: 2/C black, white; 3/C red, black, blue; 4/C red, black, blue, white
3. **Grounding Conductors:** Uninsulated Class B stranded grounding conductor
4. **Inner Jacket:** Black Polyvinyl Chloride (PVC)
5. **Armor:** Aluminum Interlocked Armour (AIA)
6. **Overall Jacket:** Black Polyvinyl Chloride (PVC) (optional colours available)

## APPLICATIONS AND FEATURES:

For exposed or concealed wiring in wet or dry locations. For use in ventilated, non-ventilated and ladder type cable troughs and ventilated flexible cableway in wet, dry, or hazardous locations. Sunlight Resistant. Typical applications are for control. lighting and power circuits in: pulp and paper mills, steel mills, food processing plants, commercial centers, mines, generating stations, refineries, industrial plants and chemical plants.

- -40°C - CSA Cold Bend and Impact Temperature
- -40°C - Min. Installation Temperature
- 90°C - Max. Continuous Operating Temperature

## SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- 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
- IEEE 383 Flame Test (70,000 btu)
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test


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## SAMPLE PRINT LEGEND:

{SQMTR} SOUTHWIRE {CSA} LL90458 X/C XX AWG CU TECK 90 XLPE -40°C FT4 AG14 SUN RES 90°C 1000V HL USA

## Table 1 – Weights and Measurements

| Stock Number | Cond. Size | Strand | Diameter Over Conductor | Diameter Over Insulation | Insul. Thickness | Ground | Ground Size | Inner Jacket Thickness | Dia. Over Inner Jacket | Dia. Over Armour | Overall Jacket Thickness | Approx. OD | Copper Weight | Approx. Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AWG/ Kcmil | No. | inch | inch | mil | No. x AWG | AWG | mil | inch | inch | mil | inch | lb/ 1000ft | lb/ 1000ft |
| TBA | 14 | 7 | 0.071 | 0.161 | 45 | 1x14 | 14 | 50 | 0.454 | 0.664 | 45 | 0.754 | 52 | 305 |
| 568448◊ | 14 | 7 | 0.071 | 0.166 | 45 | 1x14 | 14 | 50 | 0.508 | 0.69 | 45 | 0.78 | 64 | 279 |
| TBA | 12 | 7 | 0.089 | 0.179 | 45 | 1x14 | 14 | 50 | 0.464 | 0.674 | 45 | 0.764 | 53 | 303 |
| TBA | 12 | 7 | 0.089 | 0.179 | 45 | 1x14 | 14 | 50 | 0.493 | 0.703 | 45 | 0.793 | 73 | 344 |
| 596503 | 12 | 7 | 0.089 | 0.184 | 45 | 1x14 | 14 | 65 | 0.581 | 0.776 | 45 | 0.866 | 94 | 353 |
| 582003◊ | 10 | 7 | 0.113 | 0.208 | 45 | 1x12 | 12 | 50 | 0.522 | 0.728 | 45 | 0.818 | 85 | 307 |
| TBA | 10 | 7 | 0.113 | 0.203 | 45 | 1x12 | 12 | 65 | 0.574 | 0.784 | 45 | 0.874 | 116 | 404 |
| 568611◊ | 10 | 7 | 0.113 | 0.208 | 45 | 1x12 | 12 | 65 | 0.639 | 0.838 | 45 | 0.928 | 150 | 436 |

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
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 | DC Resistance @ 25°C | AC Resistance @ 90°C | Inductive Reactance @ 60Hz | Allowable Ampacity In Raceway 90°C |
|---|---|---|---|---|---|
| AWG/Kcmil | inch | Ω/1000ft | Ω/1000ft | Ω/1000ft | Amp |
| 14 | 5.3 | 2.631 | 3.265 | 0.058 | 25 |
| 14 | 5.5 | 2.631 | 3.265 | 0.058 | 20 |
| 12 | 5.3 | 1.662 | 2.063 | 0.054 | 30 |
| 12 | 5.5 | 1.662 | 2.063 | 0.054 | 30 |
| 12 | 6.1 | 1.662 | 2.063 | 0.054 | 24 |
| 10 | 5.7 | 1.04 | 1.291 | 0.05 | 40 |
| 10 | 6.1 | 1.04 | 1.291 | 0.05 | 40 |
| 10 | 6.5 | 1.04 | 1.291 | 0.05 | 32 |

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


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## Table 3 – Weights and Measurements (Metric)

| Stock Number | Cond. Size | Strand | Diameter Over Conductor | Diameter Over Insulation | Insul. Thickness | Ground | Ground Size | Inner Jacket Thickness | Dia. Over Inner Jacket | Dia. Over Armour | Overall Jacket Thickness | Approx. OD | Copper Weight | Approx. Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AWG/ Kcmil | No. | mm | mm | mm | No. x AWG | AWG | mm | mm | mm | mm | mm | kg/km | kg/km |
| TBA | 14 | 7 | 1.80 | 4.09 | 1.14 | 1x14 | 14 | 1.27 | 11.53 | 16.87 | 1.14 | 19.15 | 77 | 454 |
| 568448◊ | 14 | 7 | 1.80 | 4.22 | 1.14 | 1x14 | 14 | 1.27 | 12.90 | 17.53 | 1.14 | 19.81 | 95 | 415 |
| TBA | 12 | 7 | 2.26 | 4.55 | 1.14 | 1x14 | 14 | 1.27 | 11.79 | 17.12 | 1.14 | 19.41 | 79 | 451 |
| TBA | 12 | 7 | 2.26 | 4.55 | 1.14 | 1x14 | 14 | 1.27 | 12.52 | 17.86 | 1.14 | 20.14 | 109 | 512 |
| 596503 | 12 | 7 | 2.26 | 4.67 | 1.14 | 1x14 | 14 | 1.65 | 14.76 | 19.71 | 1.14 | 22.00 | 140 | 525 |
| 582003◊ | 10 | 7 | 2.87 | 5.28 | 1.14 | 1x12 | 12 | 1.27 | 13.26 | 18.49 | 1.14 | 20.78 | 126 | 457 |
| TBA | 10 | 7 | 2.87 | 5.16 | 1.14 | 1x12 | 12 | 1.65 | 14.58 | 19.91 | 1.14 | 22.20 | 173 | 601 |
| 568611◊ | 10 | 7 | 2.87 | 5.28 | 1.14 | 1x12 | 12 | 1.65 | 16.23 | 21.29 | 1.14 | 23.57 | 223 | 649 |

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
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)

| Cond. Size | Min Bending Radius | DC Resistance @ 25°C | AC Resistance @ 90°C | Inductive Reactance @ 60Hz | Allowable Ampacity In Raceway 90°C |
|---|---|---|---|---|---|
| AWG/Kcmil | mm | Ω/km | Ω/km | Ω/km | Amp |
| 14 | 134.62 | 8.6319 | 10.71 | 0.1903 | 25 |
| 14 | 139.70 | 8.6319 | 10.71 | 0.1903 | 20 |
| 12 | 134.62 | 5.4528 | 6.77 | 0.1772 | 30 |
| 12 | 139.70 | 5.4528 | 6.77 | 0.1772 | 30 |
| 12 | 154.94 | 5.4528 | 6.77 | 0.1772 | 24 |
| 10 | 144.78 | 3.4121 | 4.24 | 0.1640 | 40 |
| 10 | 154.94 | 3.4121 | 4.24 | 0.1640 | 40 |
| 10 | 165.10 | 3.4121 | 4.24 | 0.1640 | 32 |

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


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