



CSA TECK 90 1000V LSZH POWER CABLE

1000V Multi Conductor, 8AWG -1000 Kcmil 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; For cables larger than No. 2 AWG or more than 4/C, the insulation is black and numbered
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 Low Smoke Zero Halogen (LSZH)

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. Rated for 1000 lbs./FT maximum sidewall pressure.

- -40°C - CSA Cold Bend and Impact Temperature
- -25°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
- UL 1685 FT4-ST1 Vertical-Tray Fire Propagation and Smoke Release Test (1/0 and Larger)
- 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 ST1 Smoke Test - marked FT4-ST1
- 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
- NFPA 130 Standard for Fixed Guideway Transit and Passenger Rail Systems

SAMPLE PRINT LEGEND:

{SQMTR_DUAL} SOUTHWIRE MASTER-DESIGN {CSA} LL90458 TECK 90 XLPE X/X XX AWG CU LSZH JACKET -40{D}C FT4-ST1 SUN RES AG14 90{D}C 1000V HL -- USA



Table 1 – Weights and Measurements

| Stock Number | Cond. Size | Cond. Number | Cond. Strands | Diameter Over Conductor | Insul. Thickness | Inner Jacket Thickness | Dia. Over Armor | Jacket Thickness | Approx. OD | Approx. Weight | Jacket Color |
|--------------|---------------|--------------|---------------|-------------------------|------------------|------------------------|-----------------|------------------|------------|----------------|--------------|
| | AWG/ Kcmil | No. | No. | inch | mil | mil | inch | mil | inch | lb/1000ft | |
| 138929 | 8 | 2 | 7 | 0.141 | 45 | 65 | 0.809 | 45 | 0.899 | 404 | Black |
| TBA | 8 | 3 | 7 | 0.141 | 45 | 65 | 0.846 | 45 | 0.936 | 475 | Black |
| TBA | 8 | 4 | 7 | 0.141 | 45 | 65 | 0.905 | 55 | 1.015 | 578 | Black |
| TBA | 6 | 2 | 7 | 0.177 | 60 | 65 | 0.941 | 45 | 1.031 | 537 | Black |
| TBA | 6 | 3 | 7 | 0.177 | 60 | 65 | 1.099 | 45 | 1.189 | 714 | Black |
| TBA | 6 | 4 | 7 | 0.177 | 60 | 85 | 1.216 | 45 | 1.306 | 889 | Black |
| TBA | 4 | 2 | 7 | 0.225 | 60 | 85 | 1.144 | 55 | 1.254 | 759 | Black |
| TBA | 4 | 3 | 7 | 0.225 | 60 | 85 | 1.242 | 45 | 1.332 | 958 | Black |
| TBA | 4 | 4 | 7 | 0.225 | 60 | 85 | 1.330 | 45 | 1.420 | 1150 | Black |
| 138930 | 3 | 2 | 7 | 0.247 | 60 | 85 | 1.239 | 45 | 1.329 | 911 | Black |
| TBA | 2 | 2 | 7 | 0.282 | 60 | 85 | 1.298 | 55 | 1.408 | 1047 | Black |
| TBA | 2 | 3 | 7 | 0.282 | 60 | 85 | 1.363 | 45 | 1.453 | 1286 | Black |
| TBA | 2 | 4 | 7 | 0.282 | 60 | 85 | 1.465 | 45 | 1.555 | 1561 | Black |
| 138931 | 1 | 2 | 19 | 0.322 | 80 | 85 | 1.471 | 45 | 1.561 | 1245 | Black |
| TBA | 1 | 3 | 19 | 0.322 | 80 | 85 | 1.548 | 55 | 1.658 | 1604 | Black |
| TBA | 1 | 4 | 19 | 0.322 | 80 | 85 | 1.672 | 55 | 1.782 | 1981 | Black |
| TBA | 1/0 | 3 | 19 | 0.361 | 80 | 85 | 1.632 | 55 | 1.742 | 1859 | Black |
| TBA | 1/0 | 4 | 19 | 0.361 | 80 | 85 | 1.766 | 55 | 1.876 | 2315 | Black |
| 138932 | 2/0 | 2 | 19 | 0.405 | 80 | 85 | 1.636 | 55 | 1.746 | 1681 | Black |
| 668221 | 2/0 | 3 | 19 | 0.405 | 80 | 85 | 1.727 | 55 | 1.838 | 2200 | Black |
| TBA | 2/0 | 4 | 19 | 0.405 | 80 | 85 | 1.885 | 55 | 1.995 | 2787 | Black |
| TBA | 3/0 | 2 | 19 | 0.456 | 80 | 85 | 1.738 | 65 | 1.870 | 2042 | Black |
| TBA | 3/0 | 3 | 19 | 0.456 | 80 | 85 | 1.814 | 55 | 1.924 | 2621 | Black |
| TBA | 3/0 | 4 | 19 | 0.456 | 80 | 115 | 1.989 | 55 | 2.099 | 3342 | Black |
| TBA | 4/0 | 3 | 19 | 0.512 | 80 | 85 | 1.943 | 65 | 2.075 | 3205 | Black |
| TBA | 4/0 | 4 | 19 | 0.512 | 80 | 115 | 2.175 | 65 | 2.307 | 4149 | Black |
| TBA | 250 | 3 | 37 | 0.558 | 90 | 115 | 2.146 | 55 | 2.256 | 3761 | Black |
| TBA | 250 | 4 | 37 | 0.558 | 90 | 115 | 2.332 | 65 | 2.464 | 4773 | Black |
| TBA | 300 | 3 | 37 | 0.610 | 90 | 115 | 2.295 | 65 | 2.427 | 4388 | Black |
| TBA | 300 | 4 | 37 | 0.610 | 90 | 115 | 2.498 | 65 | 2.630 | 5527 | Black |
| TBA | 350 | 3 | 37 | 0.661 | 90 | 115 | 2.360 | 65 | 2.492 | 4939 | Black |
| TBA | 350 | 4 | 37 | 0.661 | 90 | 115 | 2.571 | 65 | 2.703 | 6242 | Black |
| TBA | 500 | 3 | 37 | 0.789 | 90 | 115 | 2.630 | 65 | 2.762 | 6545 | Black |
| TBA | 500 | 4 | 37 | 0.789 | 90 | 115 | 2.872 | 65 | 3.004 | 8351 | Black |
| TBA | 600 | 3 | 61 | 0.865 | 90 | 115 | 2.846 | 80 | 3.012 | 7779 | Black |
| TBA | 750 | 3 | 61 | 0.968 | 90 | 115 | 3.115 | 80 | 3.283 | 9512 | Black |
| TBA | 750 | 4 | 61 | 0.968 | 90 | 145 | 3.423 | 80 | 3.591 | 12223 | Black |
| TBA | 1000 | 3 | 61 | 1.117 | 90 | 145 | 3.451 | 80 | 3.619 | 12221 | Black |

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item





^ Colour Code: 2/C black, Red

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 | DC Resistance @ 25°C | AC Resistance @ 90°C | Inductive Reactance | Max Pull Tension | Max Pull Tension | Min Bending Radius | Allowable Ampacity At 75°C | Allowable Ampacity At 90°C |
|---------------|----------------------|----------------------|---------------------|------------------|------------------|--------------------|----------------------------|----------------------------|
| AWG/ Kcmil | Ω/1000ft | Ω/1000ft | Ω/1000ft | lb | lb | inch | Amp | Amp |
| 8 | 0.653 | 0.786 | 0.052 | 264 | 264 | 6.2 | 50 | 55 |
| 8 | 0.653 | 0.786 | 0.052 | 396 | 396 | 6.5 | 50 | 55 |
| 8 | 0.653 | 0.786 | 0.052 | 528 | 528 | 7.1 | 40 | 44 |
| 6 | 0.411 | 0.495 | 0.051 | 419 | 419 | 7.2 | 65 | 75 |
| 6 | 0.411 | 0.495 | 0.051 | 629 | 629 | 8.3 | 65 | 75 |
| 6 | 0.411 | 0.495 | 0.051 | 839 | 839 | 9.1 | 52 | 60 |
| 4 | 0.258 | 0.310 | 0.048 | 667 | 667 | 8.7 | 85 | 95 |
| 4 | 0.258 | 0.310 | 0.048 | 1001 | 1001 | 9.3 | 85 | 95 |
| 4 | 0.258 | 0.310 | 0.048 | 1335 | 1335 | 9.9 | 68 | 76 |
| 3 | 0.205 | 0.267 | 0.031 | 842 | 842 | 9.3 | 100 | 115 |
| 2 | 0.162 | 0.195 | 0.045 | 1061 | 1061 | 9.8 | 115 | 130 |
| 2 | 0.162 | 0.195 | 0.045 | 1592 | 1592 | 10.1 | 115 | 130 |
| 2 | 0.162 | 0.195 | 0.045 | 2123 | 2123 | 10.8 | 92 | 104 |
| 1 | 0.128 | 0.154 | 0.046 | 1339 | 1339 | 10.9 | 130 | 145 |
| 1 | 0.128 | 0.154 | 0.046 | 2008 | 2008 | 11.6 | 130 | 145 |
| 1 | 0.128 | 0.154 | 0.046 | 2678 | 2678 | 12.4 | 104 | 116 |
| 1/0 | 0.102 | 0.122 | 0.044 | 2534 | 2534 | 12.1 | 150 | 170 |
| 1/0 | 0.102 | 0.122 | 0.044 | 3379 | 3379 | 13.1 | 120 | 136 |
| 2/0 | 0.081 | 0.097 | 0.043 | 2130 | 2130 | 12.2 | 175 | 195 |
| 2/0 | 0.081 | 0.097 | 0.043 | 3194 | 3194 | 12.8 | 175 | 195 |
| 2/0 | 0.081 | 0.097 | 0.043 | 4259 | 4259 | 13.9 | 140 | 156 |
| 3/0 | 0.064 | 0.078 | 0.042 | 2684 | 2684 | 13.0 | 200 | 225 |
| 3/0 | 0.064 | 0.078 | 0.042 | 4027 | 4027 | 13.4 | 200 | 225 |
| 3/0 | 0.064 | 0.078 | 0.042 | 5369 | 5369 | 14.6 | 160 | 180 |
| 4/0 | 0.051 | 0.062 | 0.041 | 5078 | 5078 | 14.5 | 230 | 260 |
| 4/0 | 0.051 | 0.062 | 0.041 | 6771 | 6771 | 16.1 | 184 | 208 |
| 250 | 0.043 | 0.053 | 0.041 | 6000 | 6000 | 15.7 | 255 | 290 |
| 250 | 0.043 | 0.053 | 0.041 | 8000 | 8000 | 17.2 | 204 | 232 |
| 300 | 0.036 | 0.045 | 0.041 | 7200 | 7200 | 16.9 | 285 | 320 |
| 300 | 0.036 | 0.045 | 0.041 | 9600 | 9600 | 18.4 | 228 | 256 |
| 350 | 0.031 | 0.039 | 0.040 | 8400 | 8400 | 17.4 | 310 | 350 |
| 350 | 0.031 | 0.039 | 0.040 | 11200 | 11200 | 18.9 | 248 | 280 |
| 500 | 0.022 | 0.029 | 0.039 | 12000 | 12000 | 19.3 | 380 | 430 |
| 500 | 0.022 | 0.029 | 0.039 | 16000 | 16000 | 21.0 | 304 | 344 |
| 600 | 0.018 | 0.025 | 0.039 | 14400 | 14400 | 21.0 | 420 | 475 |
| 750 | 0.014 | 0.022 | 0.038 | 18000 | 18000 | 22.9 | 475 | 535 |
| 750 | 0.014 | 0.022 | 0.038 | 24000 | 24000 | 25.1 | 380 | 428 |
| 1000 | 0.011 | 0.018 | 0.037 | 24000 | 24000 | 25.3 | 545 | 615 |





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

