CSA TECK 90 1000V PVC 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). Galvanized Steel Interlocked Armour Optional (GSIA)
6. **Overall Jacket:** Black 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. 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
- 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

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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
568605^	8	7	0.142	0.237	45	1x10	10	65	0.61	0.809	45	0.899	135	397
671448	8	7	0.142	0.234	45	1x10	10	65	0.604	0.809	45	0.899	135	397
561963	8	7	0.142	0.234	45	1x10	10	65	0.641	0.846	45	0.936	187	473
561964	8	7	0.142	0.237	45	1x10	10	65	0.71	0.906	55	1.016	238	575
573821^	6	7	0.178	0.304	60	1x8	8	65	0.744	0.949	45	1.039	215	540
671452	6	7	0.178	0.304	60	1x8	8	65	0.744	0.949	45	1.039	215	540
561965	6	7	0.178	0.304	60	1x8	8	65	0.793	1.108	45	1.198	297	717
561966	6	7	0.178	0.304	60	1x8	8	85	0.912	1.226	45	1.316	379	895
582005	4	7	0.225	0.351	60	1x8	8	85	0.878	1.186	55	1.296	312	800
561967	4	7	0.225	0.351	60	1x8	8	85	0.934	1.251	45	1.341	442	961
561968	4	7	0.225	0.351	60	1x8	8	85	1.025	1.34	45	1.43	572	1153
671456	2	7	0.283	0.409	60	1x6	6	85	0.994	1.299	55	1.409	496	1047
571184^	2	7	0.283	0.409	60	1x6	6	85	0.994	1.299	55	1.409	496	1047
561972	2	7	0.283	0.409	60	1x6	6	85	1.059	1.363	45	1.453	703	1283
561973	2	7	0.283	0.409	60	1x6	6	85	1.166	1.465	45	1.555	910	1563
561974	1	19	0.322	0.489	80	1x6	6	85	1.232	1.549	55	1.659	865	1606
561975	1	19	0.322	0.489	80	1x6	6	85	1.359	1.673	55	1.783	1126	1977
561976	1/0	19	0.362	0.528	80	1x6	6	85	1.316	1.633	55	1.743	1070	1863
561978	1/0	19	0.362	0.528	80	1x6	6	85	1.454	1.767	55	1.877	1399	2310
561948	2/0	19	0.405	0.572	80	1x6	6	85	1.412	1.728	55	1.838	1327	2187
561949	2/0	19	0.405	0.572	80	1x6	6	85	1.56	1.885	55	1.995	1742	2789
586400	3/0	19	0.456	0.622	80	1x4	4	85	1.42	1.738	65	1.87	1177	2045
561950	3/0	19	0.456	0.622	80	1x4	4	85	1.52	1.814	55	1.924	1700	2623
561952	3/0	19	0.456	0.622	80	1x4	4	115	1.741	1.989	55	2.099	2223	3344
561953	4/0	19	0.512	0.666	80	1x4	4	85	1.615	1.943	65	2.075	2110	3207
561954	4/0	19	0.512	0.666	80	1x4	4	115	1.848	2.175	65	2.307	2770	4150
561955	250	37	0.558	0.731	90	1x4	4	115	1.815	2.146	55	2.256	2469	3762
561956	250	37	0.558	0.731	90	1x4	4	115	2.005	2.332	65	2.464	3249	4775
561957	300	37	0.611	0.8	90	1x4	4	115	1.964	2.295	65	2.427	2937	4389
561958	300	37	0.611	0.8	90	1x4	4	115	2.172	2.499	65	2.631	3872	5529
561959	350	37	0.661	0.83	90	1x3	3	115	2.029	2.36	65	2.492	3439	4940
561960	350	37	0.661	0.83	90	1x3	3	115	2.245	2.571	65	2.703	4530	6244
561961	500	37	0.789	0.955	90	1x3	3	115	2.299	2.63	65	2.762	4842	6546
561962	500	37	0.789	0.955	90	1x3	3	115	2.547	2.873	65	3.005	6401	8344
592314	600	61	0.866	1.029	90	1x2	2	115	2.459	2.79	80	2.956	5820	7713
568478	750	61	0.968	1.157	90	1x2	2	145	2.795	3.116	80	3.284	7223	9513
568479	750	61	0.968	1.157	90	1x2	2	145	3.096	3.424	80	3.592	9562	12223
641155	1000	61	1.117	1.306	90	1x1	1	145	3.117	3.451	80	3.619	9616	12221

All dimensions are nominal and subject to normal manufacturing tolerances

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◊ 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.

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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 Raceway 90°C
AWG/ Kcmil	inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp
8	6.3	264	0.653	0.81	0.052	55
8	6.3	264	0.653	0.81	0.052	55
8	6.6	396	0.653	0.81	0.052	55
8	7.1	528	0.653	0.81	0.052	44
6	7.3	419	0.411	0.51	0.051	75
6	7.3	419	0.411	0.51	0.051	75
6	8.4	629	0.411	0.51	0.051	75
6	9.2	839	0.411	0.51	0.051	60
4	9.1	667	0.258	0.32	0.048	95
4	9.4	1001	0.258	0.32	0.048	95
4	10	1335	0.258	0.32	0.048	76
2	9.9	1061	0.162	0.201	0.045	130
2	9.9	1061	0.162	0.201	0.045	130
2	10.2	1592	0.162	0.201	0.045	130
2	10.9	2123	0.162	0.201	0.045	104
1	11.6	2008	0.128	0.159	0.046	145
1	12.5	2678	0.128	0.159	0.046	116
1/0	12.2	2534	0.102	0.127	0.044	170
1/0	13.1	3379	0.102	0.127	0.044	136
2/0	12.9	3194	0.082	0.102	0.043	195
2/0	14	4259	0.082	0.102	0.043	156
3/0	13.1	2684	0.064	0.079	0.042	225
3/0	13.5	4027	0.064	0.079	0.042	225
3/0	14.7	5369	0.064	0.079	0.042	180
4/0	14.5	5078	0.051	0.063	0.041	260
4/0	16.1	6771	0.051	0.063	0.041	208
250	15.8	6000	0.043	0.053	0.041	290
250	17.2	8000	0.043	0.053	0.041	232
300	17	7200	0.036	0.045	0.041	320
300	18.4	9600	0.036	0.045	0.041	256
350	17.4	8400	0.031	0.039	0.04	350
350	18.9	11200	0.031	0.039	0.04	280
500	19.3	12000	0.021	0.027	0.039	430
500	21	16000	0.021	0.027	0.039	344
600	20.7	14400	0.018	0.024	0.039	475
750	23	18000	0.014	0.019	0.038	535
750	25.1	24000	0.014	0.019	0.038	428
1000	25.3	24000	0.011	0.016	0.037	615

* 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
568605^	8	7	3.61	6.02	1.14	1x10	10	1.65	15.49	20.55	1.14	22.83	201	591
671448	8	7	3.61	5.94	1.14	1x10	10	1.65	15.34	20.55	1.14	22.83	201	591
561963	8	7	3.61	5.94	1.14	1x10	10	1.65	16.28	21.49	1.14	23.77	278	704
561964	8	7	3.61	6.02	1.14	1x10	10	1.65	18.03	23.01	1.40	25.81	354	856
573821^	6	7	4.52	7.72	1.52	1x8	8	1.65	18.90	24.10	1.14	26.39	320	804
671452	6	7	4.52	7.72	1.52	1x8	8	1.65	18.90	24.10	1.14	26.39	320	804
561965	6	7	4.52	7.72	1.52	1x8	8	1.65	20.14	28.14	1.14	30.43	442	1067
561966	6	7	4.52	7.72	1.52	1x8	8	2.16	23.16	31.14	1.14	33.43	564	1332
582005	4	7	5.72	8.92	1.52	1x8	8	2.16	22.30	30.12	1.40	32.92	464	1191
561967	4	7	5.72	8.92	1.52	1x8	8	2.16	23.72	31.78	1.14	34.06	658	1430
561968	4	7	5.72	8.92	1.52	1x8	8	2.16	26.03	34.04	1.14	36.32	851	1716
671456	2	7	7.19	10.39	1.52	1x6	6	2.16	25.25	32.99	1.40	35.79	738	1558
571184^	2	7	7.19	10.39	1.52	1x6	6	2.16	25.25	32.99	1.40	35.79	738	1558
561972	2	7	7.19	10.39	1.52	1x6	6	2.16	26.90	34.62	1.14	36.91	1046	1909
561973	2	7	7.19	10.39	1.52	1x6	6	2.16	29.62	37.21	1.14	39.50	1354	2326
561974	1	19	8.18	12.42	2.03	1x6	6	2.16	31.29	39.34	1.40	42.14	1287	2390
561975	1	19	8.18	12.42	2.03	1x6	6	2.16	34.52	42.49	1.40	45.29	1676	2942
561976	1/0	19	9.19	13.41	2.03	1x6	6	2.16	33.43	41.48	1.40	44.27	1592	2772
561978	1/0	19	9.19	13.41	2.03	1x6	6	2.16	36.93	44.88	1.40	47.68	2082	3438
561948	2/0	19	10.29	14.53	2.03	1x6	6	2.16	35.86	43.89	1.40	46.69	1975	3255
561949	2/0	19	10.29	14.53	2.03	1x6	6	2.16	39.62	47.88	1.40	50.67	2592	4150
586400	3/0	19	11.58	15.80	2.03	1x4	4	2.16	36.07	44.15	1.65	47.50	1752	3043
561950	3/0	19	11.58	15.80	2.03	1x4	4	2.16	38.61	46.08	1.40	48.87	2530	3903
561952	3/0	19	11.58	15.80	2.03	1x4	4	2.92	44.22	50.52	1.40	53.31	3308	4976
561953	4/0	19	13.00	16.92	2.03	1x4	4	2.16	41.02	49.35	1.65	52.71	3140	4773
561954	4/0	19	13.00	16.92	2.03	1x4	4	2.92	46.94	55.24	1.65	58.60	4122	6176
561955	250	37	14.17	18.57	2.29	1x4	4	2.92	46.10	54.51	1.40	57.30	3674	5598
561956	250	37	14.17	18.57	2.29	1x4	4	2.92	50.93	59.23	1.65	62.59	4835	7106
561957	300	37	15.52	20.32	2.29	1x4	4	2.92	49.89	58.29	1.65	61.65	4371	6532
561958	300	37	15.52	20.32	2.29	1x4	4	2.92	55.17	63.47	1.65	66.83	5762	8228
561959	350	37	16.79	21.08	2.29	1x3	3	2.92	51.54	59.94	1.65	63.30	5118	7352
561960	350	37	16.79	21.08	2.29	1x3	3	2.92	57.02	65.30	1.65	68.66	6741	9292
561961	500	37	20.04	24.26	2.29	1x3	3	2.92	58.39	66.80	1.65	70.15	7206	9742
561962	500	37	20.04	24.26	2.29	1x3	3	2.92	64.69	72.97	1.65	76.33	9526	12417
592314	600	61	22.00	26.14	2.29	1x2	2	2.92	62.46	70.87	2.03	75.08	8661	11478
568478	750	61	24.59	29.39	2.29	1x2	2	3.68	70.99	79.15	2.03	83.41	10749	14157
568479	750	61	24.59	29.39	2.29	1x2	2	3.68	78.64	86.97	2.03	91.24	14230	18190
641155	1000	61	28.37	33.17	2.29	1x1	1	3.68	79.17	87.66	2.03	91.92	14310	18187

All dimensions are nominal and subject to normal manufacturing tolerances

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◊ 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.

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Table 4 – Electrical and Engineering Data (Metric)

Cond. Size	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 90°C	Inductive Reactance @ 60Hz	Allowable Ampacity In Raceway 90°C
AWG/ Kcmil	mm	newton	Ω/km	Ω/km	Ω/km	Amp
8	160.02	1175	2.1424	2.66	0.1706	55
8	160.02	1175	2.1424	2.66	0.1706	55
8	167.64	1762	2.1424	2.66	0.1706	55
8	180.34	2350	2.1424	2.66	0.1706	44
6	185.42	1865	1.3484	1.67	0.1673	75
6	185.42	1865	1.3484	1.67	0.1673	75
6	213.36	2799	1.3484	1.67	0.1673	75
6	233.68	3734	1.3484	1.67	0.1673	60
4	231.14	2968	0.8465	1.05	0.1575	95
4	238.76	4454	0.8465	1.05	0.1575	95
4	254.00	5941	0.8465	1.05	0.1575	76
2	251.46	4721	0.5315	0.66	0.1476	130
2	251.46	4721	0.5315	0.66	0.1476	130
2	259.08	7084	0.5315	0.66	0.1476	130
2	276.86	9447	0.5315	0.66	0.1476	104
1	294.64	8936	0.4199	0.52	0.1509	145
1	317.50	11917	0.4199	0.52	0.1509	116
1/0	309.88	11276	0.3346	0.42	0.1444	170
1/0	332.74	15037	0.3346	0.42	0.1444	136
2/0	327.66	14213	0.2690	0.33	0.1411	195
2/0	355.60	18953	0.2690	0.33	0.1411	156
3/0	332.74	11944	0.2100	0.26	0.1378	225
3/0	342.90	17920	0.2100	0.26	0.1378	225
3/0	373.38	23892	0.2100	0.26	0.1378	180
4/0	368.30	22597	0.1673	0.21	0.1345	260
4/0	408.94	30131	0.1673	0.21	0.1345	208
250	401.32	26700	0.1411	0.17	0.1345	290
250	436.88	35600	0.1411	0.17	0.1345	232
300	431.80	32040	0.1181	0.15	0.1345	320
300	467.36	42720	0.1181	0.15	0.1345	256
350	441.96	37380	0.1017	0.13	0.1312	350
350	480.06	49840	0.1017	0.13	0.1312	280
500	490.22	53400	0.0689	0.09	0.1280	430
500	533.40	71200	0.0689	0.09	0.1280	344
600	525.78	64080	0.0591	0.08	0.1280	475
750	584.20	80100	0.0459	0.06	0.1247	535
750	637.54	106800	0.0459	0.06	0.1247	428
1000	642.62	106800	0.0361	0.05	0.1214	615

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

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