

ACWU 90 CSA. Silicone Free

Aluminum XLPE Insulated Singles with 8000 series Triple E™ Aluminum Alloy. Bare AlumaFlex™ Aluminum Alloy Grounding Conductor. CSA Listed. 600 Volts. Lightweight Aluminum Interlocked Armor. Overall PVC Jacket. Sunlight Resistant, Direct Burial.

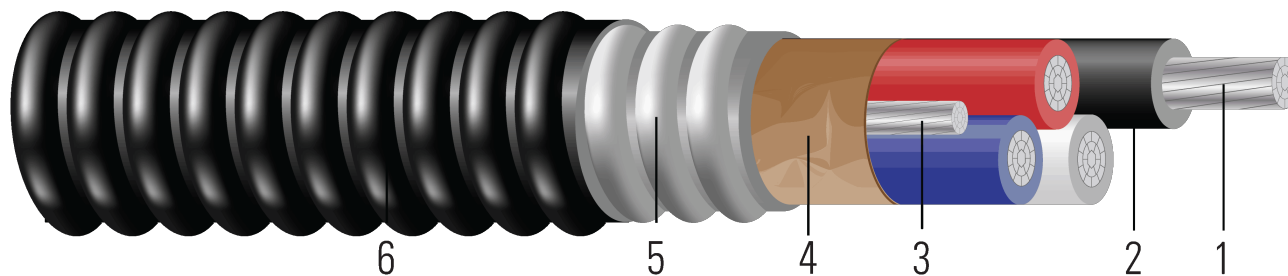


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B compact stranded 8000 Series aluminum per ASTM B800 and ASTM B801
2. **Insulation:** All phases are insulated with cross-linked polyethylene RW90
3. **Ground:** Bare aluminum ground
4. **Binder:** Oil impregnated Kraft paper binder tape
5. **Aarmor:** Aluminum Interlocked Armor
6. **Jacket:** Polyvinyl Chloride (PVC) Jacket, sunlight resistant, corrosion resistant

APPLICATIONS AND FEATURES:

Southwire ACWU 90 Feeder cable is suitable for use as follows:

- Feeder and service power distribution in commercial, industrial, institutional, and multi-residential buildings.
- Where exposed to cinder fills, strong chlorides, caustic alkalis, or vapors of chlorine or of hydrochloric acids.
- Fished or embedded in plaster.
- Concealed or exposed installations.
- CSA Certified File Listing: LL90458, CLASS 581801 - Armoured Cable
- FT-4 - Flame Test Rating.
- Installation in cable tray and approved raceways, or as aerial cable on a messenger.
- CSA Sunlight Resistant
- AG-14 - Acid Gas Test Rating
- Passes CSA -40°C Cold Bend & -40°C Impact Test
- Allows for -25°C Installation Temperature
- XLPE Insulation: +90°C Temperature Rating

Southwire ACWU 90 Feeder cable construction:

- Compact 8000 Series ACM aluminum conductors with low temperature cross-linked polyethylene insulation (XLPE) and bare aluminum bonding wire in multi-conductor cables. Conductor assembly is wrapped and enclosed in interlocked aluminum armour with a low flame spread PVC jacket (FT4 and AG14 rating).

Colour Coding:

- For 3 conductor constructions: black, red and white plus bare bonding conductor.



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UPDATED: March 13, 2024, 2:37 p.m. UTC REVISION: 1.000.004

- For 4 conductor constructions: black, red, blue and white plus bare bonding conductor.

SPECIFICATIONS:

- ASTM B800 8000 Series Aluminum Alloy Wire
- ASTM B801 Concentric-Lay-Stranded Conductors of 8000 Series Aluminum Alloy
- CSA C22.2 No. 38 Thermoset-insulated wires and cables
- CSA C22.2, No. 51 Armored Cables
- CSA C22.2 No. 0-M91 General Requirements
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test

SAMPLE PRINT LEGEND:

{SQMTR} SOUTHWIRE® {CSA} LL90458 X/C XXX AWG AL ACM ACWU90 XLPE -40°C AG14 FT4 SUN. RES. 600V

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Conductor Number	Diameter Over Conductor	Conductor Stranding	Insulation Thickness	Ground Size	Diameter Over Armor	Jacket Thickness	Approx. OD	Overall Weight
	AWG/Kcmil		inch		mils	No. x AWG	inch	mil	inch	lbs/1000ft
564182◇	6	3	0.169	7	45	1x8	0.899	60	1.019	376
564183	4	3	0.212	7	45	1x6	0.983	60	1.103	466
564206	1/0	3	0.336	10	55	1x4	1.295	80	1.455	847
564207	2/0	3	0.376	12	55	1x4	1.388	80	1.548	976
564208	3/0	3	0.422	16	55	1x4	1.490	80	1.650	1122
564209	4/0	3	0.474	19	55	1x4	1.589	95	1.779	1350
564210	250	3	0.520	22	65	1x2	1.751	95	1.941	1597
564212	300	3	0.569	35	65	1x2	1.869	95	2.059	1856
565741	350	3	0.615	35	65	1x2	1.947	95	2.137	2025
564213	400	3	0.659	35	65	1x2	2.040	95	2.230	2218
564214	500	3	0.735	35	65	1x1	2.206	95	2.396	2612
564215	600	3	0.812	58	80	1x1	2.420	110	2.640	3138
564216	750	3	0.908	58	80	1x1/0	2.642	110	2.862	3723
566336	6	4	0.169	7	45	1x8	0.954	60	1.074	434
566340	4	4	0.212	7	45	1x6	1.060	80	1.220	591
566343	2	4	0.268	6	45	1x6	1.193	80	1.353	745
566346	1	4	0.298	8	55	1x4	1.316	80	1.476	895
566357	1/0	4	0.336	10	55	1x4	1.417	80	1.577	1037
566361	2/0	4	0.376	12	55	1x4	1.513	95	1.703	1237
566365	3/0	4	0.422	16	55	1x4	1.612	95	1.802	1419
566368	4/0	4	0.474	19	55	1x4	1.738	95	1.928	1654
565909	250	4	0.520	22	65	1x2	1.905	95	2.119	1830
566129	350	4	0.615	35	65	1x2	2.136	95	2.326	2501
566371	500	4	0.735	35	65	1x1	2.426	110	2.646	3330
566032	750	4	0.908	58	80	1x1/0	2.943	110	3.163	4732

All dimensions are nominal and subject to normal manufacturing tolerances

◇ Cable marked with this symbol is a standard stock item



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UPDATED: March 13, 2024, 2:37 p.m. UTC REVISION: 1.000.004

* Strand count meets minimum number per ASTM

Table 2 – Electrical and Engineering Data

Cond. Size	Conductor Number	Min. Bend Radius	Max Pull Tension	DC Resistance at 25°C	AC Resistance at 75°C	Inductive Reactance @ 60Hz	Allowable Ampacity Raceway 60°C	Allowable Ampacity Raceway 75°C	Allowable Ampacity Raceway 90°C
AWG/Kcmil		Inches	Lbs	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
6	3	7.1	472	0.674	0.812	0.051	40	50	55
4	3	7.7	751	0.424	0.510	0.048	55	65	75
1/0	3	10.2	1900	0.168	0.201	0.044	100	120	135
2/0	3	10.8	2395	0.133	0.160	0.043	115	135	150
3/0	3	11.6	3020	0.105	0.126	0.042	130	155	175
4/0	3	12.5	3808	0.084	0.100	0.041	150	180	205
250	3	13.6	4500	0.071	0.086	0.041	170	205	230
300	3	14.4	5400	0.059	0.071	0.041	195	230	260
350	3	15.0	6300	0.050	0.062	0.040	210	250	280
400	3	15.6	7200	0.044	0.054	0.040	225	270	305
500	3	16.8	9000	0.035	0.044	0.039	260	310	350
600	3	18.5	10800	0.029	0.037	0.039	285	340	385
750	3	20.0	13500	0.024	0.031	0.038	320	385	435
6	4	7.5	503	0.674	0.812	0.051	32	40	44
4	4	8.5	801	0.424	0.510	0.048	44	52	60
2	4	9.5	1274	0.267	0.321	0.045	60	72	80
1	4	10.3	1606	0.211	0.254	0.046	68	80	92
1/0	4	11.0	2027	0.168	0.201	0.044	80	96	108
2/0	4	11.9	2555	0.133	0.160	0.043	92	108	120
3/0	4	12.6	3221	0.105	0.126	0.042	104	124	140
4/0	4	13.5	4062	0.084	0.100	0.041	120	144	164
250	4	14.8	4800	0.071	0.086	0.041	136	164	184
350	4	16.3	6720	0.050	0.062	0.040	168	200	224
500	4	18.5	9600	0.035	0.044	0.039	208	248	280
750	4	22.1	14400	0.024	0.031	0.038	256	308	348

* Ampacities based upon 2023 NEC Table 310.16 and do not take into account the overcurrent protection limitations in NEC 240.4(D) of 15 Amps for 14 AWG CU, 20 Amps for 12 AWG CU, and 30 Amps for 10 AWG CU (independent of the conductor temperature rating and stranding if size is present in table). Also, see NEC sections 310.15 and 110.14(C) for additional requirements.

* Ampacities have been adjusted for more than Three Current-Carrying Conductors.

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

