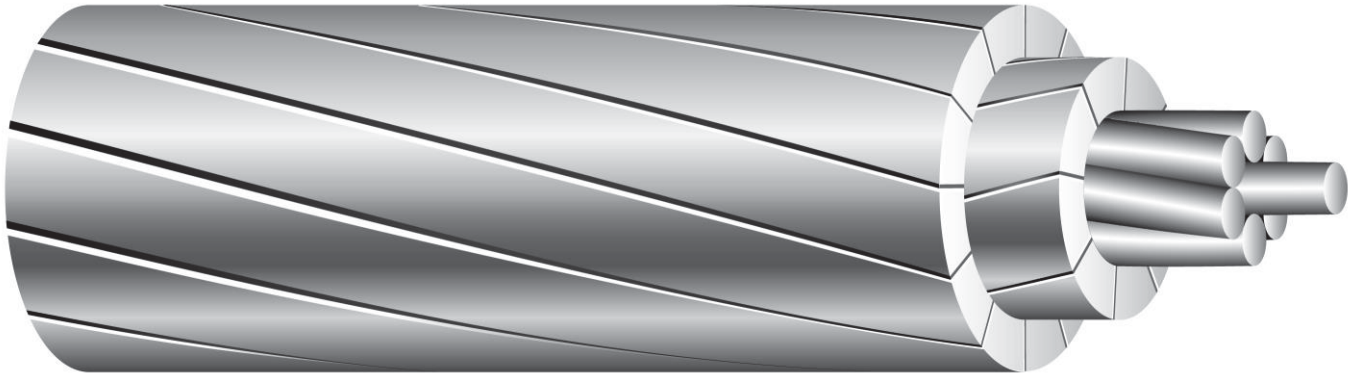


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**Aluminum Conductor, Steel Reinforced.  
Trapezoidal Shaped Aluminum Strands. Bare.**

## APPLICATIONS

Shaped Wire Compact Concentric-Lay-Stranded Aluminum Conductor, Steel-Reinforced(ACSR/TW) is designed for use as a bare overhead conductor. There are two designs of ACSR/TW. One design gives an equal area of aluminum when compared to the standard ACSR conductor sizes. The other design gives an overall outside diameter equal to standard ACSR conductor sizes. Use of this conductor in the equal area design allows equal ampacity in a smaller diameter conductor when compared with standard ACSR conductor. Use of this conductor in the equal diameter design allows more ampacity in an equal diameter conductor when compared with standard ACSR conductor.

## SPECIFICATIONS

Southwire's ACSR/TW conductor meets or exceeds the following ASTM specifications:

- B779 Shaped Wire Compact Concentric-Lay-Stranded Aluminum Conductors, Coated-Reinforced (ACSR/TW).

## CONSTRUCTION

Aluminum alloy 1350-H19 trapezoidal shaped wires, concentrically stranded about a steel core. Core wire for ACSR/TW is available with class A, B, or C galvanizing; "aluminized" aluminum coated (AZ); or aluminum-clad (AW 1). Additional corrosion protection is available through the application of grease to the core or infusion of the complete cable with grease.

<sup>1</sup> For aluminum-clad ACSR/TW, contact you Southwire representative.

## Shaped Wire Concentric-Lay Compact Aluminum Conductors Steel Reinforced (ACSR/TW) Area Equal to Standard ACSR Sizes

Code Word	Size (kcmil)	Type No.	Cross Sectional Area (in <sup>2</sup> )		Stranding			Diameter (in)		Weight (lbs/1000 ft)			Rated Breaking Strength (lbs)	Resistance (ohms/mile)		Ampacity (amps) @ 75°C
			Aluminum	Total	No of Layers of Aluminum	No of Aluminum Wires	No. & Diameter Individual Steel Wire	Steel Core	Complete Cable	Alum.	Steel	Total		DC @ 20°C	AC @ 75°C	
Partridge/TW	266.8	16	0.2094	0.2435	2	14	7 x 0.0788	0.2364	0.595	250.5	115.6	366.1	11200	0.3356	0.4103	449
Linnet/TW	336.4	16	0.2642	0.3073	2	16	7 x 0.0885	0.2655	0.667	316.1	145.8	461.9	14000	0.2662	0.3255	519
Oriole/TW	336.4	23	0.2642	0.3259	2	16	7 x 0.1059	0.3177	0.693	317.6	208.7	526.4	17100	0.2650	0.3239	525
Merlin/TW	336.4	6	0.2642	0.2788	2	14	1 x 0.1367	0.1367	0.630	315.5	49.5	365.0	8560	0.0510	0.0625	508
Flicker/TW	447.0	13	0.3747	0.4233	2	18	7 x 0.0940	0.2820	0.776	447.8	164.5	612.3	17200	0.0357	0.0437	641
Hawk/TW	447.0	16	0.3746	0.4356	2	18	7 x 0.1054	0.3162	0.790	448.7	206.4	655.1	19400	0.0356	0.0435	645
Hen/TW	477.0	23	0.3745	0.4619	2	20	7 x 0.1261	0.3783	0.820	450.2	296.0	746.1	23600	0.1869	0.2287	653
Parakeet/TW	556.5	13	0.4371	0.4937	2	18	7 x 0.1015	0.3045	0.835	523.2	191.7	714.9	20000	0.0306	0.0375	706
Dove/TW	556.5	16	0.4371	0.5083	2	20	7 x 0.1138	0.3414	0.850	523.4	241.1	764.5	22600	0.0305	0.0374	711
Swift/TW	636.0	3	0.4995	0.5133	3	27	1 x 0.1329	0.1329	0.850	599.2	46.8	646.0	13500	0.0272	0.0335	750
Rook/TW	636.0	13	0.4995	0.5643	2	20	7 x 0.1085	0.3255	0.893	597.0	219.2	816.2	22900	0.0268	0.0329	766
Scoter/TW	636.0	23	0.4994	0.6159	2	22	7 x 0.1456	0.4368	0.942	600.3	394.6	954.9	30400	0.1402	0.1718	782
Grosbeak/TW	636.0	16	0.4995	0.5808	2	20	7 x 0.1216	0.3648	0.909	601.5	275.8	877.3	25400	0.0267	0.0327	772
Terri/TW	795.0	7	0.6244	0.6675	2	17	7 x 0.0886	0.2658	0.960	745.9	146.1	892.0	21000	0.0215	0.0266	869
Puffin/TW	795.0	10	0.6244	0.6919	2	18	7 x 0.1108	0.3324	0.980	746.9	228.4	975.3	25900	0.0215	0.0264	876
Condor/TW	795.0	13	0.6244	0.7053	2	20	7 x 0.1203	0.3639	0.993	747.2	273.8	1021.0	28200	0.0214	0.0264	880
Drake/TW	795.0	16	0.6244	0.7261	2	20	7 x 0.1360	0.4080	1.010	747.0	344.3	1091.3	31800	0.0213	0.0263	887
Canary/TW	900.0	13	0.7066	0.7983	2	20	7 x 0.1291	0.3873	1.055	844.6	310.2	1154.8	31600	0.0998	0.1233	951
Phoenix/TW	954.0	5	0.7493	0.7876	3	30	7 x 0.0837	0.2511	1.044	901.6	130.4	1032.0	23700	0.0181	0.0224	967
Rail/TW	954.0	7	0.7493	0.8011	3	32	7 x 0.0971	0.2913	1.061	898.6	175.5	1074.1	25900	0.0180	0.0224	973

Ampacity based on referenced conductor temperature, 25°C ambient temperature, 2 ft/sec wind, in sun, with an emissivity of 0.5 and a coefficient of solar absorption of 0.5, at sea level.

# ACSR/TW

**Shaped Wire Concentric-Lay Compact Aluminum Conductors Steel Reinforced (ACSR/TW)  
Area Equal to Standard ACSR Sizes**

Code Word	Size (kcmil)	Type No.	Cross Sectional Area (in <sup>2</sup> )		Stranding			Diameter (in)		Weight (lbs/1000 ft)			Rated Breaking Strength (lbs)	Resistance (ohms/mile)		Ampacity (amps)
			Aluminum	Total	No of Layers of Aluminum	No of Aluminum Wires	No. & Diameter Individual Steel Wires	Steel Core	Complete Cable	Alum.	Steel	Total		DC @ 20°C	AC @ 75°C	
Cardinal/TW	954.0	13	0.7493	0.8464	2	20	7 x 0.1329	0.3987	1.080	895.5	328.8	1224.3	33500	0.0178	0.0221	985
Snowbird/TW	1033.5	5	0.8117	0.8534	3	30	7 x 0.0871	0.2613	1.089	973.8	141.2	1115.0	25700	0.0167	0.0208	1017
Ortolan/TW	1033.5	7	0.8117	0.8678	3	32	7 x 0.1010	0.3030	1.102	975.2	189.8	1165.0	28100	0.0167	0.0207	1021
Curlew/TW	1033.5	13	0.8117	0.9169	2	22	7 x 0.1383	0.4149	1.132	970.1	356.1	1326.2	36300	0.0165	0.0204	1036
Avocet/TW	1113.0	5	0.8742	0.9191	3	30	7 x 0.0904	0.2712	1.129	1048.9	152.1	1201.0	27500	0.0155	0.0193	1063
Bluejay/TW	1113.0	7	0.8742	0.9347	3	33	7 x 0.1049	0.3147	1.143	1052.2	204.8	1257.0	30300	0.0155	0.0193	1069
Finch/TW	1113.0	13	0.8742	0.9851	3	38	19 x 0.0862	0.4310	1.185	1052.6	376.4	1429.0	39100	0.0154	0.0191	1084
Oxbird/TW	1192.5	5	0.9366	0.9848	3	30	7 x 0.0936	0.2808	1.170	1122.9	163.1	1286.0	29500	0.0144	0.0180	1111
Bunting/TW	1192.5	7	0.9366	1.0013	3	34	7 x 0.1085	0.3255	1.181	1123.2	219.6	1342.8	32400	0.0144	0.0181	1114
Grackle/TW	1192.5	13	0.9366	1.0554	3	38	19 x 0.0892	0.4460	1.225	1127.8	402.9	1530.7	41900	0.0144	0.0179	1130
Scissortail/TW	1272.0	5	0.9991	1.0505	3	30	7 x 0.0967	0.2901	1.203	1198.0	174.0	1372.0	31400	0.0135	0.0170	1152
Bittern/TW	1272.0	7	0.9990	1.0681	3	38	7 x 0.1121	0.3363	1.224	1197.6	234.9	1423.5	34600	0.0135	0.0170	1159
Pheasant/TW	1272.0	13	0.9990	1.1256	3	39	19 x 0.0921	0.4605	1.260	1201.0	429.5	1630.5	44100	0.0135	0.0168	1176
Dipper/TW	1351.5	7	1.0615	1.1348	3	35	7 x 0.1155	0.3465	1.256	1274.0	248.0	1522.0	36700	0.0127	0.0160	1202
Martin/TW	1351.5	13	1.0615	1.1959	3	42	19 x 0.0949	0.4745	1.300	1276.0	456.0	1732.0	46800	0.0127	0.0159	1219
Bobolink/TW	1431.0	7	1.1236	1.2017	3	36	7 x 0.1189	0.3567	1.291	1350.0	263.0	1613.0	38900	0.0120	0.0152	1243
Plover/TW	1431.0	13	1.1239	1.2664	3	44	19 x 0.0977	0.4885	1.337	1353.0	483.0	1836.0	49600	0.0120	0.0150	1262
Lapwing/TW	1590.0	7	1.2488	1.3351	3	36	7 x 0.1253	0.3759	1.358	1497.6	292.3	1789.9	42200	0.0183	0.0138	1323
Falcon/TW	1590.0	13	1.2488	1.4071	3	42	19 x 0.1030	0.5150	1.410	1502.8	537.2	2040.0	55100	0.0108	0.0136	1345
Chukar/TW	1780.0	8	1.3986	1.5120	3	38	19 x 0.0874	0.4370	1.445	1680.6	386.8	2067.4	50700	0.0096	0.0124	1420
Bluebird/TW	2156.0	8	1.0934	1.8312	4	64	19 x 0.0961	0.4805	1.608	2047.0	468.0	2515.0	61100	0.0080	0.0105	1586

Ampacity based on referenced conductor temperature, 25°C ambient temperature, 2 ft/sec wind, in sun, with an emissivity of 0.5 and a coefficient of solar absorption of 0.5, at sea level.



**Southwire**<sup>®</sup>

MADE IN THE USA

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770/832-4242  
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## Shaped Wire Concentric-Lay Compact Aluminum Conductors Steel Reinforced (ACSR/TW) Diameters Equal to Standard ACSR Sizes

Code Word	Size (kcmil)	Type No.	Cross Sectional Area (in <sup>2</sup> )		Stranding			Diameter (in)		Weight (lbs/1000 ft)			Rated Breaking Strength (lbs)	Resistance (ohms/mile)		Ampacity (amps)
			Aluminum	Total	No of Layers of Aluminum	No. of Aluminum Wires	No. & Diameter Individual Steel Wire	Steel Core	Complete Cable	Alum.	Steel	Total		DC @ 20°C	AC @ 75°C	
Monongahela/TW	405.1	6	0.3181	0.3362	2	14	1 x 0.1520	0.1520	0.680	379.8	61.2	441.0	10200	0.0423	0.0519	569
Mohawk/TW	571.7	13	0.4490	0.5074	2	18	7 x 0.1030	0.3090	0.850	537.0	197.5	734.5	20700	0.0298	0.0365	718
Calumet/TW	565.3	16	0.4439	0.5165	2	20	7 x 0.1146	0.3438	0.860	531.2	244.5	775.7	22900	0.0300	0.0368	718
Mystic/TW	666.6	13	0.5236	0.5914	2	20	7 x 0.1244	0.3732	0.913	630.4	230.3	860.7	24000	0.0255	0.0314	790
Oswego/TW	664.8	16	0.5221	0.6072	2	20	7 x 0.1244	0.3732	0.927	628.7	288.7	917.4	26600	0.0255	0.0313	794
Nechako/TW	768.9	3	0.6039	0.6220	3	27	1 x 0.1520	0.1520	0.930	720.7	61.2	781.9	16400	0.0255	0.0278	843
Maumee/TW	768.2	13	0.6034	0.6819	2	20	7 x 0.1195	0.3585	0.977	721.1	265.9	987.0	27700	0.0222	0.0273	862
Wabash/TW	762.8	16	0.5992	0.6966	2	20	7 x 0.1331	0.3993	0.990	716.7	329.8	1046.5	30500	0.0222	0.0274	863
Kettle/TW	957.2	7	0.7518	0.8038	3	32	7 x 0.0973	0.2919	1.060	902.8	176.2	1079.0	26000	0.0180	0.0223	974
Fraser/TW	946.7	10	0.7436	0.8168	3	35	7 x 0.1154	0.3462	1.077	894.0	248.0	1142.0	29600	0.0180	0.0223	978
Columbia/TW	966.2	13	0.7589	0.8573	2	21	7 x 0.1338	0.4014	1.092	908.0	333.0	1241.0	34000	0.0176	0.0218	993
Suwannee/TW	959.6	16	0.7537	0.8762	2	22	7 x 0.1493	0.4479	1.110	901.6	415.0	1316.6	37000	0.0177	0.0218	996
Cheyenne/TW	1168.1	5	0.9175	0.9646	3	30	7 x 0.0926	0.2778	1.155	1100.4	159.6	1260.0	28900	0.0148	0.0185	1095
Genesee/TW	1158.0	7	0.9095	0.9733	3	34	7 x 0.1078	0.3234	1.165	1092.0	216.0	1308.0	31600	0.0149	0.0186	1095
Hudson/TW	1158.4	13	0.9098	1.0281	2	24	7 x 0.1467	0.4401	1.196	1087.3	400.7	1488.0	39600	0.0147	0.0183	1111
Catawba/TW	1272.0	5	0.9991	1.0505	3	30	7 x 0.0967	0.2901	1.203	1198.0	174.0	1372.0	31400	0.0135	0.0170	1152
Nelson/TW	1257.1	7	0.9874	1.0557	3	35	7 x 0.1115	0.3345	1.213	1185.7	231.3	1417.0	34200	0.0137	0.0172	1150
Yukon/TW	1233.6	13	0.9689	1.0925	3	38	19 x 0.0910	0.4550	1.245	1166.7	419.3	1586.0	42900	0.0139	0.0173	1154
Truckee/TW	1372.5	5	1.0780	1.1334	3	30	7 x 0.1004	0.3012	1.248	1293.4	187.6	1481.0	33400	0.0126	0.0159	1206

Ampacity based on referenced conductor temperature, 25°C ambient temperature, 2 ft/sec wind, in sun, with an emissivity of 0.5 and a coefficient of solar absorption of 0.5, at sea level.

## Shaped Wire Concentric-Lay Compact Aluminum Conductors Steel Reinforced (ACSR/TW) Diameters Equal to Standard ACSR Sizes

Code Word	Size (kcmil)	Type No.	Cross Sectional Area (in <sup>2</sup> )		Stranding			Diameter (in)		Weight (lbs/1000 ft)			Rated Breaking Strength (lbs)	Resistance (ohms/mile)		Ampacity (amps) @ 75°C
			Aluminum	Total	No of Layers of Aluminum	No. of Aluminum Wires	No. & Diameter Individual Steel Wire	Steel Core	Complete Cable	Alum.	Steel	Total		DC @ 20°C	AC @ 75°C	
Mackenzie/TW	1359.7	7	1.0679	1.1418	3	36	7 x 0.1559	0.3477	1.259	1280.0	250.0	1530.0	36900	0.0127	0.0159	1206
Thames/TW	1334.6	13	1.3480	1.1809	3	38	19 x 0.0944	0.4720	1.290	1260.1	451.2	1711.3	46300	0.0128	0.0160	1210
St. Croix/TW	1467.8	5	1.1529	1.2124	3	33	7 x 0.1041	0.3123	1.292	1383.0	202.0	1585.0	35800	0.0117	0.0149	1256
Miramichi/TW	1455.3	7	1.1430	1.2222	3	36	7 x 0.1200	0.3600	1.302	1372.0	268.0	1640.0	39200	0.0118	0.0150	1256
Merrimack/TW	1433.6	13	1.1250	1.2677	3	39	19 x 0.0978	0.4890	1.340	1355.8	484.3	1840.1	49700	0.0119	0.0150	1264
Platte/TW	1569.0	5	1.2323	1.2957	3	33	7 x 0.1074	0.3222	1.334	1478.0	215.0	1693.0	38200	0.0110	0.0140	1306
Potomac/TW	1557.4	7	1.2232	1.3079	3	36	7 x 0.1241	0.3723	1.350	1466.9	288.1	1755.0	41900	0.0111	0.0140	1307
Rio Grande/TW	1533.3	13	1.2043	1.3571	3	38	19 x 0.1012	0.5060	1.380	1449.0	519.0	1968.0	53200	0.0112	0.0141	1316
Schuykill/TW	1657.4	7	1.3020	1.3920	3	36	7 x 0.1280	0.3840	1.386	1563.0	305.0	1868.0	44000	0.0104	0.0133	1356
Pecos/TW	1622.0	13	1.2739	1.4429	3	39	19 x 0.1064	0.5320	1.420	1533.7	573.2	2106.9	57500	0.0106	0.0133	1363
Pee Dee/TW	1758.6	7	1.3810	1.4770	3	38	7 x 0.1319	0.3957	1.427	1656.4	323.9	1980.3	46700	0.0098	0.0126	1404
James/TW	1730.6	13	1.3590	1.5314	3	34	19 x 0.1075	0.5375	1.470	1636.0	585.0	2221.0	59400	0.0099	0.0126	1415
Athabaska/TW	1949.6	7	1.5312	1.6377	3	44	7 x 0.1392	0.4176	1.504	1838.0	361.0	2199.0	51900	0.0088	0.0115	1491
Cumberland/TW	1926.9	13	1.5134	1.7049	3	42	19 x 0.1133	0.5665	1.550	1821.0	650.0	2471.0	65300	0.0089	0.0114	1507
Powder/TW	2153.8	8	1.6912	1.8290	4	64	19 x 0.0961	0.4805	1.602	2042.5	396.1	2438.6	61100	0.0080	0.0105	1584
Santee/TW	2627.3	8	2.0630	2.2268	4	64	19 x 0.1062	0.5310	1.761	2491.5	571.1	3062.6	74500	0.0066	0.0089	1768

Ampacity based on referenced conductor temperature, 25°C ambient temperature, 2 ft/sec wind, in sun, with an emissivity of 0.5 and a coefficient of solar absorption of 0.5, at sea level.