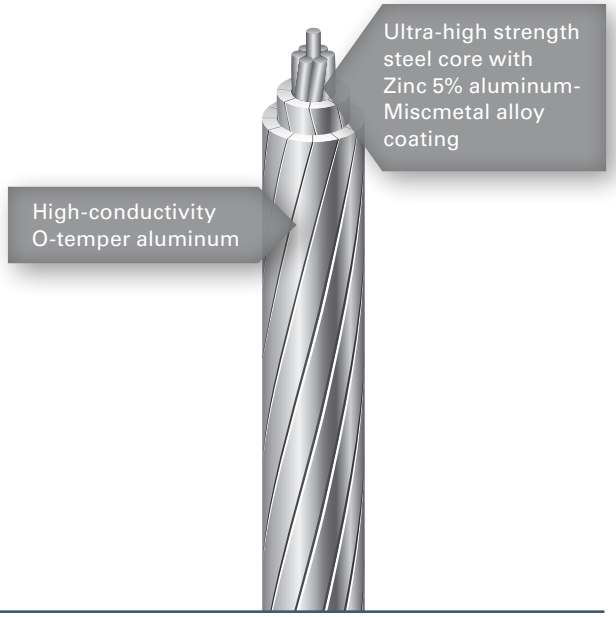
HS285® Ultra-High Strength ACSS Conductor

The industry standard that's anything but standard.

Stronger to the core. HS285 is the most popular high temperature low sag (HTLS) conductor in use today because of its versatility and strength. The multipurpose conductor is up to 21 percent stronger than standard ACSS, reducing sag while allowing for additional line capacity. Developed at Southwire's D.B. Cofer Technology Center, HS285 has been proven in the field for capacity up to 95 percent higher than ACSR, lowering reconductoring costs. HS285 can be strung tighter to operate with more clearance at higher temperatures. It also allows for easy installation using existing rights of way, structures and methods.



HS285 provides higher line capacity and lower reconductoring costs

Can be strung tighter with less sag, allowing for a 60 to 95% increase in current-carrying capacity.

Proven in the field for immediate and contingency capacity

Easy installation using the same products and accessories as ACSS.

Simple reconductoring using existing rights of way, no changes to structures and familiar methods.

Increased line design options due to superior strength and improved corrosion properties.

New lines: Reduce new line costs by saving on structure and foundation costs. Build for the future with higher system ratings while maintaining line clearances. Increase your line capacity with lower line losses and a lower cost premium.

Reconductoring: Double the capacity of existing ACSR lines. HS285 can be strung tighter for more clearance at higher temperatures. It also allows for easy installation using existing rights of way, structures and methods.

Southwire®

Technical Specifications

HS285® Ultra-High Strength ACSS Conductor

Construction

ACSS is a composite concentric-lay-stranded conductor. Steel strands form the central core of the conductor with one or more layers of 63% minimum average conductivity aluminum 1350-0 wire stranded around it. The steel core carries most or all of the mechanical load of the conductor due to the "0" (fully annealed or soft) temper aluminum. Ultra high-strength steel core wires are protected from corrosion by Galfan® , zinc-5% aluminum-mischmetal alloy coating.

ACSS/TW Diameter Equal to Standard ACSR Sizes

			Cross Sectional Area (in^2)		Stranding			Diameter (in)		Weight (lbs/1000 ft)			Rated Breaking	Resistance (ohms/mile)		Ampacity (amps)				
Code Word	Size (kcmil)	Type No	Alum	Total	No of Layers of Alum	No of Alum Wires	No & Diameter Indv Steel	Steel Core	Complete Cable	Alum	Steel	Total	HS-285	DC @ 20°C	AC @ 75°C	@ 75°C	@ 100°C	@ 150°C	@ 200°C	@ 250°C
Mohawk/ACSS/TW	571.7	13	0.4490	0.5074	2	18	7 x 0.1030	0.3090	0.850	537.0	197.5	734.5	19,700	0.1527	0.1884	725	889	1121	1294	1441
Calumet/ACSS/TW	565.3	16	0.4439	0.5162	2	20	7 x 0.1146	0.3438	0.860	531.2	244.5	775.7	23,500	0.1540	0.1898	725	890	1122	1295	1442
Mystic/ACSS/TW	666.6	13	0.5236	0.5914	2	20	7 x 0.1244	0.3732	0.913	630.4	230.3	860.7	22,900	0.1310	0.1619	798	980	1238	1431	1595
Oswego/ACSS/TW	664.8	16	0.5221	0.6072	2	20	7 x 0.1244	0.3732	0.927	628.7	288.7	917.4	27,200	0.1309	0.1616	802	985	1244	1439	1604
Maumee/ACSS/TW	768.2	13	0.6034	0.6819	2	20	7 x 0.1195	0.3585	0.977	721.1	265.9	987.0	26,500	0.1137	0.1407	872	1072	1356	1569	1750
Wabash/ACSS/TW	762.8	16	0.5992	0.6966	2	20	7 x 0.1331	0.3993	0.990	716.7	329.8	1046.5	31,200	0.1141	0.1411	873	1074	1359	1573	1755
Kettle/ACSS/TW	957.2	7	0.7518	0.8038	3	32	7 x 0.0973	0.2919	1.060	901.6	176.2	1078.0	20,400	0.0922	0.1180	973	1197	1514	1753	1955
Columbia/ACSS/TW	966.2	13	0.7589	0.8573	2	21	7 x 0.1338	0.4014	1.092	906.9	333.2	1240.0	32,800	0.0904	0.1124	1005	1239	1571	1822	2035
Suwannee/ACSS/TW	959.6	16	0.7537	0.8762	2	22	7 x 0.1493	0.4479	1.110	901.6	415.0	1316.6	38,600	0.0907	0.1127	1008	1243	1576	1828	2042
Genesee/ACSS/TW	1158.0	7	0.9095	0.9733	3	34	7 x 0.1078	0.3234	1.165	1092.0	216.0	1308.0	25,000	0.0762	0.0981	1094	1350	1712	1985	2218
Hudson/ACSS/TW	1158.4	13	0.9098	1.0281	2	24	7 x 0.1467	0.4401	1.196	1087.3	400.7	1488.0	38,800	0.0754	0.0943	1124	1389	1766	2051	2295
Yukon/ACSS/TW	1233.6	13	0.9689	1.0925	3	38	19 x 0.0910	0.4550	1.245	1166.7	419.3	1586.0	41,900	0.0712	0.0914	1154	1425	1810	2101	2350
Mackenzie/ACSS/TW	1359.7	7	1.0679	1.1418	3	36	7 x 0.1159	0.3477	1.259	1281.0	250.0	1531.0	29,000	0.0649	0.0842	1206	1490	1895	2202	2465
Thames/ACSS/TW	1334.6	13	1.0480	1.1809	3	38	19 x 0.0944	0.4720	1.290	1260.1	451.2	1711.3	45,100	0.0658	0.0847	1210	1495	1902	2209	2472
Merrimack/ACSS/TW	1433.6	13	1.1250	1.2677	3	39	19 x 0.0978	0.4890	1.340	1355.8	484.3	1840.1	48,400	0.0613	0.0791	1277	1584	2021	2354	2595
Potomac/ACSS/TW	1557.4	7	1.2232	1.3079	3	36	7 x 0.1241	0.3723	1.350	1466.9	288.1	1755	32,800	0.0567	0.0741	1321	1639	2094	2441	2694
Rio Grande/ACSS/TW	1533.3	13	1.2043	1.3571	3	38	19 x 0.1012	0.5060	1.380	1449.0	519.0	1968.0	51,900	0.0573	0.0742	1329	1650	2108	2456	2710
Pecos/ACSS/TW	1622.0	13	1.2739	1.4429	3	39	19 x 0.1064	0.5320	1.420	1533.7	573.2	2106.9	56,900	0.0541	0.0703	1377	1710	2187	2551	2816
Athabaska/ACSS/TW	1949.6	7	1.5312	1.6377	3	44	7 x 0.1392	0.4176	1.504	1836	360.7	2197	41,300	0.0453	0.0595	1505	1873	2403	2808	3157
Cumberland/ACSS/TW	1926.9	13	1.5134	1.7049	3	42	19 x 0.1133	0.5665	1.550	1821	650.0	2471	65,000	0.0456	0.0600	1508	1875	2400	2802	3148
Santee/ACSS/TW	2627.3	8	2.0630	2.2268	4	64	19 x 0.1062	0.5310	1.761	2491.5	571.1	3062.6	63,100	0.0338	0.0459	1784	2237	2894	3403	3846

1) Data based on a nominal cable manufactured in accordance with ASTM B 857.
2) Resistance and ampacity based on an aluminum conductivity of 63% IACS at 20°C and a steel conductivity of 8% IACS at 20°C.
3) Ampacity based on referenced conductor temperature, 25°C ambient temperature, 2 ft/sec wind, in sun, with an emmisivity of 0.5 and a coefficient of solar absorption of 0.5, at sea level.
4) Rated breaking strength for standard core based on Class A Galfan coated steel core wire in accordance with ASTM B 802.
5) Rated strength for high strength core based on Class A Galfan coated high strength steel core wire in accordance with ASTM B 803.
6) The final design of a shaped wire compact conductor is contingent upon several factors such as: layer diameter, wire width and wire thickness. The actual configuration of a given size may vary between manufacturers. This may result in a slight variation in the number of wires, number of layers and dimensions of individual wires from that shown in the chart.

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HS285® Ultra-High Strength ACSS Conductor

Shaped Wire Concentric-Lay Compact Aluminum Conductors Steel Supported (ACSS/TW) (HS285)
Area Equal to ACSS

			Cross Sectional Area Sq In			Stranding		Diameter		Weight per 1000 feet			Rated Breaking Strength		
Code Word	Conductor Size (kcmil)	Type No.	Alum.	Total	Layers of Alum.	No.of Alum. Wires	No. & Dia. Indv. Steel Wire	Steel Core in	Complete Conductor in	Alum. lb	Steel lb	Total lb	Standard Strength lb	HIgh Strength lb	HS285 Strength lb
Linnet/ACSS/TW	336.4	16	0.2641	0.3070	2	18	7 x 0.0884	0.2652	0.659	315.9	145.5	461.4	11,200	12,300	14,400
Oriole/ACSS/TW	336.4	23	0.2642	0.3258	2	16	7 x 0.1059	0.3177	0.693	316.1	208.7	524.8	14,800	16,300	19,100
Flicker/ACSS/TW	477.0	13	0.3747	0.4233	2	18	7 x 0.0940	0.2820	0.776	447.8	164.5	612.3	13,000	14,200	16,400
Hawk/ACSS/TW	477.0	16	0.3746	0.4356	2	18	7 x 0.1053	0.3159	0.789	448.1	206.4	654.5	15,600	17,100	19,800
Hen/ACSS/TW	477.0	23	0.3747	0.4621	2	16	7 x 0.1261	0.3783	0.825	448.3	296.0	744.3	21,000	22,700	26,700
Parakeet/ACSS/TW	556.5	13	0.4371	0.4937	2	18	7 x 0.1015	0.3045	0.835	522.4	191.8	714.2	15,200	16,600	19,100
Dove/ACSS/TW	556.5	16	0.4371	0.5083	2	20	7 x 0.1138	0.3414	0.852	522.9	241.0	763.9	18,200	19,900	23,100
Rook/ACSS/TW	636.0	13	0.4995	0.5643	2	18	7 x 0.1085	0.3255	0.890	597.0	219.1	816.1	17,300	19,000	21,900
Grosbeak/ACSS/TW	636.0	16	0.4995	0.5808	2	20	7 x 0.1216	0.3648	0.908	597.6	275.2	872.8	20,700	22,400	26,000
Scoter/ACSS/TW	636.0	23	0.4995	0.616	2	18	7 x 0.1456	0.4368	0.953	597.6	394.6	992.2	27,400	29,700	35,000
Tern/ACSS/TW	795.0	7	0.6244	0.6675	2	17	7 x 0.0886	0.2658	0.960	745.2	146.1	891.3	14,200	15,200	17,400
Puffin/ACSS/TW	795.0	10	0.6244	0.6919	2	18	7 x 0.1108	0.3324	0.980	745.9	228.5	974.4	18,900	20,600	23,700
Condor/ACSS/TW	795.0	13	0.6244	0.7053	2	20	7 x 0.1213	0.3639	0.993	746.3	273.9	1020	21,700	23,300	26,900
Drake/ACSS/TW	795.0	16	0.6244	0.7261	2	20	7 x 0.1360	0.4080	1.010	747.0	344.3	1091	25,900	28,000	32,600
Canary/ACSS/TW	900.0	13	0.7069	0.7983	2	20	7 x 0.1291	0.3873	1.055	844.9	310.2	1155	24,600	26,400	30,500
Phoenix/ACSS/TW	954.0	5	0.7493	0.7876	3	30	7 x 0.0837	0.2511	1.044	897.7	130.4	1028	14,200	15,200	17,100
Rail/ACSS/TW	954.0	7	0.7493	0.8011	3	32	7 x 0.0971	0.2913	1.061	898.6	175.5	1074	16,700	18,000	20,400
Cardinal/ACSS/TW	954.0	13	0.7493	0.8464	2	20	7 x 0.1329	0.3987	1.084	895.5	328.7	1224	26,000	28,000	32,300
Snowbird/ACSS/TW	1033.5	5	0.8117	0.8534	3	30	7 x 0.0871	0.2613	1.089	972.5	141.2	1114	15,400	16,400	18,500
Ortolan/ACSS/TW	1033.5	7	0.8117	0.8678	3	32	7 x 0.1010	0.3030	1.102	972.5	189.9	1162	18,100	19,500	22,000
Curlew/ACSS/TW	1033.5	13	0.8117	0.9169	2	20	7 x 0.1383	0.4149	1.129	970.1	356.0	1326	28,200	30,300	35,000
Avocet/ACSS/TW	1113.0	5	0.8742	0.9191	3	30	7 x 0.0904	0.2712	1.129	1047	152.1	1199	16,300	17,500	19,500
Bluejay/ACSS/TW	1113.0	7	0.8742	0.9347	3	33	7 x 0.1049	0.3147	1.143	1048	204.8	1253	19,500	21,000	23,800
Finch/ACSS/TW	1113.0	13	0.8743	0.9852	3	38	19 x 0.0862	0.4310	1.185	1051	376.1	1427	30,400	33,200	38,700
Oxbird/ACSS/TW	1192.5	5	0.9366	0.9848	3	30	7 x 0.0936	0.2808	1.167	1122	163.1	1285	17,500	18,700	20,900
Bunting/ACSS/TW	1192.5	7	0.9366	1.001	3	33	7 x 0.1085	0.3255	1.181	1123	219.1	1342	20,900	22,500	25,400
Grackle/ACSS/TW	1192.5	13	0.9366	1.055	3	38	19 x 0.0892	0.4460	1.225	1126	402.8	1529	32,600	35,500	41,500
Scissortail/ACSS/TW	1272.0	5	0.9991	1.05	3	30	7 x 0.0967	0.2901	1.203	1197	174.0	1371	18,700	20,000	22,300
Bittern/ACSS/TW	1272.0	7	0.9990	1.068	3	35	7 x 0.1121	0.3363	1.220	1198	233.9	1432	22,300	24,000	27,100
Pheasant/ACSS/TW	1272.0	13	0.9990	1.125	3	39	19 x 0.0921	0.4605	1.264	1201	429.4	1630	34,100	37,300	43,000
Dipper/ACSS/TW	1351.5	7	1.0615	1.134	3	35	7 x 0.1155	0.3465	1.256	1273	248.3	1521	23,700	25,500	28,800
Martin/ACSS/TW	1351.5	13	1.0615	1.195	3	39	19 x 0.0949	0.4745	1.300	1276	455.9	1732	36,200	39,600	45,600
Bobolink/ACSS/TW	1431.0	7	1.1236	1.201	3	36	7 x 0.1189	0.3567	1.291	1347	263.1	1611	25,100	27,000	30,500
Plover/ACSS/TW	1431.0	13	1.1239	1.266	3	39	19 x 0.0977	0.4885	1.337	1351	483.2	1834	38,400	41,900	48,300
Lapwing/ACSS/TW	1590.0	7	1.2488	1.335	3	36	7 x 0.1253	0.3759	1.358	1498	292.2	1790	27,900	29,600	33,500
Falcon/ACSS/TW	1590.0	13	1.2488	1.407	3	42	19 x 0.1030	0.5150	1.408	1501	537.0	2038	42,600	46,600	53,700
Chukar/ACSS/TW	1780.0	8	1.3986	1.512	3	37	19 x 0.0874	0.4370	1.445	1675	386.7	2062	35,300	38,200	43,900
Bluebird/ACSS/TW	2156.0	8	1.6933	1.830	4	64	19 x 0.0961	0.4805	1.608	2045	467.5	2512	42,100	45,500	51,700

Notes:
- Rated strengths for standard core based on Class A Galfan coated steel core wire in accordance with ASTM B 802.
- Rated Strength for high strength core based on Class A Galfan coated high strength steel core wire in accordance with ASTM B 803.
- The final design of a shaped wire compact conductor is contingent upon several factors such as: layer diameter, wire width and wire thickness. The actual configuration of a given size may vary between manufacturers. This may result in a slight variation in the number of wires, number of layers and dimensions of individual wires from that shown in the chart.
- Data based on a nominal cable manufactured in accordance with ASTM B 857.

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HS285® Ultra-High Strength ACSS Conductor

Shaped Wire Concentric-Lay Compact Aluminum Conductors Steel Supported (ACSS/TW) (HS285)
Area Equal to ACSS

			Resistance				Resistance @ 1 ft Spacing 60 HZ			Ampacity				
Code Word	Conductor Size (kcmil)	Stranding (Al/St)	dc @ 20°C, Ω/mile	ac–60 Hz			GMR feet Ω/mile	Inductive Xa, MΩ-mile	Capacitive Xa, MΩ-mile	@ 75°C, amp	@ 100°C, amp	@ 150°C, amp	@ 200°C, amp	@ 250°C, amp
				@ 25°C, Ω/mile	@ 50°C, Ω/mile	@ 75°C, Ω/mile								
Linnet/ACSS/TW	336.4	16	0.2588	0.2647	0.2914	0.3182	0.0221	0.463	0.1066	523	638	801	921	1021
Oriole/ACSS/TW	336.4	23	0.2565	0.2622	0.2887	0.3151	0.0238	0.454	0.1051	533	650	816	940	1043
Flicker/ACSS/TW	477.0	13	0.1831	0.1877	0.2066	0.2255	0.0257	0.444	0.1017	648	793	998	1151	1279
Hawk/ACSS/TW	477.0	16	0.1825	0.1870	0.2059	0.2247	0.0264	0.441	0.1013	652	799	1005	1159	1289
Hen/ACSS/TW	477.0	23	0.1809	0.1853	0.2039	0.2225	0.0283	0.432	0.1000	663	813	1024	1181	1315
Parakeet/ACSS/TW	556.5	13	0.1569	0.1612	0.1774	0.1935	0.0277	0.435	0.0994	713	874	1102	1271	1415
Dove/ACSS/TW	556.5	16	0.1564	0.1606	0.1767	0.1928	0.0286	0.431	0.0991	719	881	1111	1282	1427
Rook/ACSS/TW	636.0	13	0.1373	0.1413	0.1554	0.1696	0.0296	0.427	0.0978	775	951	1200	1386	1544
Grosbeak/ACSS/TW	636.0	16	0.1369	0.1407	0.1548	0.1689	0.0305	0.423	0.0971	781	958	1210	1398	1557
Scoter/ACSS/TW	636.0	23	0.1357	0.1393	0.1533	0.1672	0.0328	0.415	0.0957	795	976	1234	1427	1591
Tern/ACSS/TW	795.0	7	0.1105	0.1147	0.1260	0.1373	0.0312	0.421	0.0955	878	1080	1366	1580	1762
Puffin/ACSS/TW	795.0	10	0.1101	0.1139	0.1252	0.1365	0.0323	0.417	0.0949	886	1090	1378	1595	1778
Condor/ACSS/TW	795.0	13	0.1098	0.1136	0.1248	0.1361	0.0331	0.414	0.0945	890	1095	1386	1604	1789
Drake/ACSS/TW	795.0	16	0.1095	0.1130	0.1243	0.1355	0.0339	0.411	0.0940	896	1103	1396	1616	1803
Canary/ACSS/TW	900.0	13	0.0970	0.1007	0.1106	0.1205	0.0359	0.404	0.0927	962	1185	1501	1739	1942
Phoenix/ACSS/TW	954.0	5	0.0927	0.0970	0.1087	0.1190	0.0343	0.409	0.0928	967	1189	1503	1740	1940
Rail/ACSS/TW	954.0	7	0.0926	0.0967	0.1084	0.1187	0.0349	0.407	0.0925	972	1196	1512	1750	1953
Cardinal/ACSS/TW	954.0	13	0.0915	0.0952	0.1045	0.1138	0.0362	0.403	0.0919	997	1229	1558	1806	2016
Snowbird/ACSS/TW	1033.5	5	0.0856	0.0899	0.1007	0.1101	0.0356	0.405	0.0917	1016	1251	1584	1834	2048
Ortolan/ACSS/TW	1033.5	7	0.0854	0.0896	0.1004	0.1098	0.0363	0.402	0.0914	1021	1257	1592	1843	2058
Curlew/ACSS/TW	1033.5	13	0.0845	0.0881	0.0967	0.1053	0.0377	0.398	0.0906	1048	1293	1641	1903	2126
Avocet/ACSS/TW	1113.0	5	0.0794	0.0838	0.0938	0.1025	0.0369	0.400	0.0906	1063	1310	1661	1925	2150
Bluejay/ACSS/TW	1113.0	7	0.0793	0.0835	0.0935	0.1022	0.0376	0.398	0.0903	1068	1317	1669	1935	2161
Finch/ACSS/TW	1113.0	13	0.0789	0.0826	0.0925	0.1012	0.0399	0.391	0.0891	1084	1336	1695	1965	2196
Oxbird/ACSS/TW	1192.5	5	0.0741	0.0786	0.0879	0.0960	0.0382	0.396	0.0896	1108	1367	1735	2013	2249
Bunting/ACSS/TW	1192.5	7	0.0740	0.0783	0.0875	0.0956	0.0390	0.394	0.0893	1114	1374	1744	2023	2261
Grackle/ACSS/TW	1192.5	13	0.0737	0.0773	0.0866	0.0947	0.0412	0.387	0.0883	1130	1395	1771	2055	2298
Scissortail/ACSS/TW	1272.0	5	0.0695	0.0741	0.0827	0.0902	0.0394	0.392	0.0888	1152	1423	1807	2098	2346
Bittern/ACSS/TW	1272.0	7	0.0694	0.0737	0.0824	0.0899	0.0403	0.390	0.0884	1159	1431	1817	2110	2360
Pheasant/ACSS/TW	1272.0	13	0.0691	0.0728	0.0814	0.0890	0.0426	0.383	0.0874	1176	1452	1846	2143	2398
Dipper/ACSS/TW	1351.5	7	0.0653	0.0697	0.0778	0.0849	0.0415	0.386	0.0874	1202	1485	1888	2194	2455
Martin/ACSS/TW	1351.5	13	0.0650	0.0688	0.0768	0.0839	0.0438	0.377	0.0865	1220	1508	1918	2228	2494
Bobolink/ACSS/TW	1431.0	7	0.0617	0.0662	0.0738	0.0804	0.0427	0.383	0.0867	1243	1538	1958	2276	2549
Plover/ACSS/TW	1431.0	13	0.0614	0.0652	0.0728	0.0795	0.0451	0.376	0.0860	1263	1562	1989	2313	2590
Lapwing/ACSS/TW	1590.0	7	0.0555	0.0602	0.0670	0.0729	0.0449	0.377	0.0851	1324	1640	2092	2435	2730
Falcon/ACSS/TW	1590.0	13	0.0553	0.0592	0.0660	0.0719	0.0476	0.370	0.0841	1346	1668	2127	2477	2777
Chukar/ACSS/TW	1780.0	8	0.0495	0.0542	0.0601	0.0654	0.0482	0.368	0.0832	1421	1764	2255	2630	2952
Bluebird/ACSS/TW	2156.0	8	0.4117	0.0464	0.0503	0.0543	0.0538	0.355	0.0801	1601	1999	2573	3014	3396

Notes:
- Resistance and ampacity based on an aluminum conductivity of 63% IACS at 20°C and a steel conductivity of 8% IACS at 20°C.
- Ampacity based on reference conductor temperature, 25°C ambient temperature, 2 ft/sec wind, in sun, with an emissivity of .5 and a coefficient of solar absorption of .5, at sea level.

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HS285® Ultra-High Strength ACSS Conductor

Shaped Wire Concentric-Lay Compact Aluminum Conductors Steel Supported (ACSS/TW) (HS285)
Diameters Equal to ACSR

			Size & Stranding of ACSR with Equal Diameter		Cross Sectional Area Sq In			Stranding		Diameter		Weight per 1000 feet			Rated Breaking Strength		
Code Word	Conductor Size (kcmil)	Type No.	kcmil	Stranding	Alum.	Total	Layers of Alum.	No. & Alum. Wires	No. & Dia. Indv. Steel Wire	Steel Core in	Complete Conductor in	Alum. lb	Steel lb	Total lb	Standard Strength lb	High Strength lb	HS285 Strength lb
	403.4	16	336.4	26/7	0.3168	0.3681	2	18	7 x 0.0966	0.2898	0.720	378.7	173.7	552.4	13,100	14,400	16,700
Mohawk/ACSS/TW	571.7	13	477.0	24/7	0.4490	0.5074	2	18	7 x 0.1030	0.3090	0.846	536.6	197.5	734.1	15,600	17,100	19,700
Calumet/ACSS/TW	565.3	16	477.0	26/7	0.4439	0.5162	2	20	7 x 0.1146	0.3441	0.858	531.2	244.4	775.6	18,400	20,200	23,500
Mystic/ACSS/TW	666.6	13	556.5	24/7	0.5236	0.5914	2	20	7 x 0.1111	0.3333	0.913	625.7	229.7	855.4	18,200	19,900	22,900
Oswego/ACSS/TW	664.8	16	556.5	26/7	0.5221	0.6072	2	20	7 x 0.1244	0.3732	0.927	624.6	288.0	912.6	21,700	23,400	27,200
Maumee/ACSS/TW	768.2	13	636.0	24/7	0.6034	0.6819	2	20	7 x 0.1195	0.3585	0.977	721.1	265.8	986.9	21,000	23,000	26,500
Wabash/ACSS/TW	762.8	16	636.0	26/7	0.5992	0.6966	2	20	7 x 0.1331	0.3993	0.990	716.7	329.7	1046	24,900	26,800	31,200
Kettle/ACSS/TW	957.2	7	795.0	45/7	0.7518	0.8038	3	32	7 x 0.0973	0.2919	1.060	901.6	176.2	1078	16,800	18,100	20,400
Fraser/ACSS/TW	946.7	10	795.0	22/7	0.7436	0.8168	3	35	7 x 0.1154	0.3462	1.077	892.6	247.9	1141	21,100	22,900	26,200
Columbia/ACSS/TW	966.2	13	795.0	54/7	0.7589	0.8573	2	21	7 x 0.1338	0.4014	1.092	906.9	333.2	1240	26,400	28,300	32,800
Suwannee/ACSS/TW	959.6	16	795.0	26/7	0.7537	0.8762	2	22	7 x 0.1493	0.4479	1.108	901.6	414.9	1317	30,700	33,100	38,600
Cheyenne/ACSS/TW	1168.1	5	954.0	42/7	0.9175	0.9646	3	30	7 x 0.0926	0.2778	1.155	1099	159.6	1259	17,200	18,300	20,500
Genesee/ACSS/TW	1158.0	7	954.0	45/7	0.9095	0.9733	3	33	7 x 0.1078	0.3234	1.165	1091	216.3	1307	20,500	22,100	25,000
Hudson/ACSS/TW	1158.4	13	954.0	54/7	0.9098	1.028	2	25	7 x 0.1467	0.4401	1.196	1087	400.6	1488	31,100	33,500	38,800
Catawba/ACSS/TW	1272.0	5	1033.5	42/7	0.9991	1.050	3	30	7 x 0.0967	0.2901	1.203	1197	174.0	1371	18,700	20,000	22,300
Nelson/ACSS/TW	1257.1	7	1033.5	45/7	0.9874	1.055	3	35	7 x 0.1115	0.3345	1.213	1184	231.4	1415	22,100	23,800	26,900
Yukon/ACSS/TW	1233.6	13	1033.5	54/7	0.9689	1.092	3	38	19 x 0.0910	0.4550	1.245	1165	419.2	1584	33,200	36,300	41,900
Truckee/ACSS/TW	1372.5	5	1113.0	42/7	1.078	1.133	3	30	7 x 0.1004	0.3012	1.248	1292	187.6	1479	20,200	21,500	24,000
Mackenzie/ACSS/TW	1359.7	7	1113.0	45/7	1.067	1.141	3	36	7 x 0.1159	0.3477	1.259	1281	250.0	1531	23,900	25,700	29,000
Thames/ACSS/TW	1334.6	13	1113.0	54/19	1.048	1.180	3	39	19 x 0.0944	0.4720	1.290	1260	451.1	1711	35,800	39,100	45,100
St. Croix/ACSS/TW	1467.8	5	1192.5	42/7	1.152	1.212	3	33	7 x 0.1041	0.3123	1.292	1381	201.7	1583	21,600	23,100	25,800
Miramichi/ACSS/TW	1455.3	7	1192.5	45/7	1.143	1.222	3	36	7 x 0.1200	0.3600	1.302	1371	268.0	1639	25,600	27,100	30,700
Merrimack/ACSS/TW	1433.6	13	1192.5	54/19	1.125	1.267	3	39	19 x 0.0978	0.4890	1.340	1354	484.2	1838	38,400	42,000	48,400
Platte/ACSS/TW	1569.0	5	1272.0	42/7	1.232	1.295	3	33	7 x 0.1074	0.3222	1.334	1476	214.7	1691	23,100	24,600	27,500
Potomac/ACSS/TW	1557.4	7	1272.0	45/7	1.223	1.307	3	36	7 x 0.1241	0.3723	1.345	1467	286.7	1754	27,300	29,000	32,800
Rio Grande/ACSS/TW	1533.3	13	1272.0	54/19	1.204	1.357	3	39	19 x 0.1012	0.5060	1.382	1448	518.4	1966	41,200	45,000	51,900
Schuylkill/ACSS/TW	1657.4	7	1351.5	45/7	1.302	1.392	3	36	7 x 0.1280	0.3840	1.386	1561	305.0	1866	29,100	30,900	34,900
Pecos/ACSS/TW	1622.0	13	1351.5	54/19	1.273	1.442	3	39	19 x 0.1064	0.5320	1.424	1532	573.1	2105	45,000	49,300	56,900
Pee Dee/ACSS/TW	1758.6	7	1431.0	45/7	1.381	1.477	3	37	7 x 0.1319	0.3957	1.427	1656	323.8	1980	30,900	32,800	37,100
James/ACSS/TW	1730.6	13	1431.0	54/19	1.359	1.531	3	39	19 x 0.1075	0.5375	1.470	1634	585.0	2219	46,400	50,800	58,500
Athabaska/ACSS/TW	1949.6	7	1590.0	45/7	1.531	1.637	3	42	7 x 0.1392	0.4176	1.504	1836	360.7	2197	34,300	36,500	41,300
Cumberland/ACSS/TW	1926.9	13	1590.0	54/19	1.513	1.704	3	42	19 x 0.1133	0.5665	1.545	1819	649.8	2469	51,600	56,400	65,000
Powder/ACSS/TW	2153.8	8	1780.0	84/19	1.691	1.829	4	64	19 x 0.0961	0.4805	1.602	2043	467.5	2510	42,100	45,500	51,700
Santee/ACSS/TW	2627.3	8	2156.0	84/19	2.063	2.226	4	64	19 x 0.1062	0.5310	1.762	2492	570.9	3062	51,300	55,600	63,100

Notes:
- Rated strengths for standard core based on Class A Galfan coated steel core wire in accordance with ASTM B 802.
- Rated Strength for high strength core based on Class A Galfan coated high strength steel core wire in accordance with ASTM B 803.
- The final design of a shaped wire compact conductor is contingent upon several factors such as: layer diameter, wire width and wire thickness. The actual configuration of a given size may vary between manufacturers. This may result in a slight variation in the number of wires, number of layers and dimensions of individual wires from that shown in the chart.
- Data based on a nominal cable manufactured in accordance with ASTM B 857.

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HS285® Ultra-High Strength ACSS Conductor

Shaped Wire Concentric-Lay Compact Aluminum Conductors Steel Supported (ACSS/TW) (HS285)
Diameters Equal to ACSR

			Resistance				Resistance @ 1 ft Spacing 60 HZ			Ampacity				
Code Word	Conductor Size (kcmil)	Type No.	dc @ 20°C, Ω/mile	ac–60 Hz			GMR feet Ω/mile	Inductive Xa, MΩ-mile	Capacitive Xa, MΩ-mile	@ 75°C, amp	@ 100°C, amp	@ 150°C, amp	@ 200°C, amp	@ 250°C, amp
				@ 25°C, Ω/mile	@ 50°C, Ω/mile	@ 75°C, Ω/mile								
	403.4	16	0.2158	0.2209	0.2432	0.2655	0.0241	0.452	0.1040	586	716	900	1036	1151
Mohawk/ACSS/TW	571.7	13	0.1527	0.1570	0.1727	0.1884	0.0281	0.433	0.0991	725	889	1121	1294	1441
Calumet/ACSS/TW	565.3	16	0.1540	0.1581	0.1739	0.1898	0.0288	0.430	0.0988	725	890	1122	1295	1442
Mystic/ACSS/TW	666.6	13	0.1310	0.1349	0.1484	0.1619	0.0304	0.424	0.0970	798	980	1238	1431	1595
Oswego/ACSS/TW	664.8	16	0.1309	0.1347	0.1482	0.1617	0.0310	0.421	0.0964	802	985	1244	1439	1604
Maumee/ACSS/TW	768.2	13	0.1137	0.1174	0.1291	0.1407	0.0325	0.416	0.0949	872	1072	1356	1569	1750
Wabash/ACSS/TW	762.8	16	0.1141	0.1177	0.1294	0.1411	0.0330	0.413	0.0946	873	1074	1359	1573	1755
Kettle/ACSS/TW	957.2	7	0.0923	0.0964	0.1081	0.1183	0.0350	0.407	0.0925	973	1197	1514	1753	1955
Fraser/ACSS/TW	946.7	10	0.0930	0.0969	0.1087	0.1190	0.0358	0.404	0.0919	974	1199	1517	1756	1959
Columbia/ACSS/TW	966.2	13	0.0904	0.0940	0.1032	0.1124	0.0364	0.402	0.0917	1005	1239	1571	1822	2035
Suwannee/ACSS/TW	959.6	16	0.0907	0.0941	0.1034	0.1127	0.0373	0.399	0.0913	1008	1243	1576	1828	2042
Cheyenne/ACSS/TW	1168.1	5	0.0757	0.0801	0.0896	0.0979	0.0378	0.397	0.0901	1095	1350	1712	1986	2219
Genesee/ACSS/TW	1158.0	7	0.0762	0.0805	0.0900	0.0983	0.0384	0.395	0.0897	1094	1350	1712	1985	2218
Hudson/ACSS/TW	1158.4	13	0.0754	0.0790	0.0866	0.0943	0.0400	0.391	0.0889	1124	1389	1766	2051	2295
Catawba/ACSS/TW	1272.0	5	0.0695	0.0741	0.0827	0.0902	0.0394	0.392	0.0889	1152	1423	1807	2098	2346
Nelson/ACSS/TW	1257.1	7	0.0702	0.0745	0.0833	0.0909	0.0400	0.390	0.0886	1150	1420	1804	2094	2342
Yukon/ACSS/TW	1233.6	13	0.0712	0.0749	0.0838	0.0916	0.0420	0.385	0.0877	1154	1425	1810	2101	2350
Truckee/ACSS/TW	1372.5	5	0.0644	0.0691	0.0770	0.0840	0.0409	0.388	0.0877	1206	1491	1896	2203	2466
Mackenzie/ACSS/TW	1359.7	7	0.0649	0.0694	0.0774	0.0844	0.0420	0.386	0.0874	1206	1490	1895	2202	2465
Thames/ACSS/TW	1334.6	13	0.0658	0.0696	0.0777	0.0849	0.0436	0.380	0.0866	1210	1495	1902	2209	2472
St. Croix/ACSS/TW	1467.8	5	0.0602	0.0650	0.0724	0.0789	0.0424	0.840	0.0867	1256	1554	1979	2302	2578
Miramichi/ACSS/TW	1455.3	7	0.0607	0.0652	0.0726	0.0792	0.0431	0.382	0.0867	1256	1554	1979	2301	2577
Merrimack/ACSS/TW	1433.6	13	0.0613	0.0651	0.0727	0.0793	0.0450	0.376	0.0856	1265	1565	1992	2317	2595
Platte/ACSS/TW	1569.0	5	0.0564	0.0613	0.0681	0.0742	0.0439	0.379	0.0858	1306	1618	2063	2402	2692
Potomac/ACSS/TW	1557.4	7	0.0567	0.0613	0.0682	0.0743	0.0445	0.378	0.0853	1308	1620	2065	2403	2694
Rio Grande/ACSS/TW	1533.3	13	0.0573	0.0612	0.0682	0.0744	0.0466	0.372	0.0847	1316	1630	2078	2418	2710
Schuylkill/ACSS/TW	1657.4	7	0.0533	0.0581	0.0645	0.0702	0.0459	0.374	0.0845	1357	1682	2147	2501	2805
Pecos/ACSS/TW	1622.0	13	0.0541	0.0580	0.0646	0.0705	0.0481	0.368	0.0839	1363	1690	2157	2511	2816
Pee Dee/ACSS/TW	1758.6	7	0.0502	0.0551	0.0611	0.0665	0.0473	0.370	0.0837	1405	1743	2228	2598	2916
James/ACSS/TW	1730.6	13	0.0508	0.0549	0.0610	0.0664	0.0494	0.365	0.0829	1416	1758	2245	2617	2937
Athabaska/ACSS/TW	1949.6	7	0.0453	0.0505	0.0550	0.0595	0.0500	0.363	0.0822	1505	1873	2403	2808	3157
Cumberland/ACSS/TW	1926.9	13	0.0456	0.0499	0.0553	0.0602	0.0523	0.358	0.0815	1508	1875	2400	2802	3148
Powder/ACSS/TW	2153.8	8	0.0412	0.0464	0.0504	0.0543	0.0538	0.355	0.0803	1599	1996	2569	3009	3391
Santee/ACSS/TW	2627.3	8	0.0338	0.0396	0.0427	0.0459	0.0594	0.343	0.0775	1784	2237	2894	3403	3846

Notes:
- Resistance and ampacity based on an aluminum conductivity of 63% IACS at 20°C and a steel conductivity of 8% IACS at 20°C.
- Ampacity based on reference conductor temperature, 25°C ambient temperature, 2 ft/sec wind, in sun, with an emissivity of .5 and a coefficient of solar absorption of .5, at sea level.

HS285® Ultra-High Strength ACSS Conductor

Aluminum Conductor Steel Supported (ACSS) (HS285)
Round Wire Construction

			Cross Sectional Area Sq In			Diameter				Weight per 1000 feet			Rated Breaking Strength		
Code Word	Conductor Size (kcmil)	Stranding (Al/St)	Alum.	Total	Layers of Alum.	No.of Alum. Wires	No. & Dia. Indv. Steel Wire	Steel Core in	Complete Conductor in	Alum. lb	Steel lb	Total lb	Standard Strength lb	HIgh Strength lb	HS285 Strength lb
Partridge/ACSS	266.8	26/7	0.2095	0.2436	2	0.1013	0.0788	0.2364	0.642	251.3	115.6	366.9	8,880	9,730	11,400
Junco/ACSS	266.8	30/7	0.2095	0.2584	2	0.0943	0.0943	0.2829	0.660	251.3	165.5	416.8	11,700	13,000	15,200
Ostrich/ACSS	300.0	26/7	0.2355	0.2738	2	0.1074	0.0835	0.2505	0.680	282.5	129.8	412.3	10,000	10,900	12,800
WoodCock/ACSS	336.4	22/7	0.2644	0.2903	2	0.1237	0.0687	0.2061	0.701	317.1	87.8	404.9	7,610	8,260	9,560
Linnet/ACSS	336.4	26/7	0.2640	0.3070	2	0.1137	0.0884	0.2652	0.720	316.6	145.5	462.1	11,200	12,300	14,400
Oriole/ACSS	336.4	30/7	0.2642	0.3259	2	0.1059	0.1059	0.3177	0.741	317.7	208.7	526.4	14,800	16,300	19,100
Ptarmigan/ACSS	397.5	20/7	0.3123	0.3339	2	0.1410	0.0627	0.1881	0.752	374.5	73.2	447.7	7,090	7,630	8,710
Brant/ACSS	397.5	24/7	0.3122	0.3527	2	0.1287	0.0858	0.2574	0.772	374.4	137.0	511.4	11,000	12,100	14,100
Ibis/ACSS	397.5	26/7	0.3120	0.3628	2	0.1236	0.0961	0.2883	0.783	374.1	171.9	546.0	13,000	14,200	16,500
Lark/ACSS	397.5	30/7	0.3121	0.3849	2	0.1151	0.1151	0.3453	0.806	375.3	246.6	621.9	17,500	19,300	22,600
Tailorbird/ACSS	477.0	20/7	0.3745	0.4004	2	0.1544	0.0686	0.2058	0.824	449.1	87.6	536.7	8,490	9,140	10,400
Flicker/ACSS	477.0	24/7	0.3747	0.4233	2	0.1410	0.0940	0.2820	0.846	449.4	164.5	613.9	13,000	14,200	16,400
Hawk/ACSS	477.0	26/7	0.3744	0.4354	2	0.1354	0.1053	0.3159	0.858	449.0	206.4	655.4	15,600	17,100	19,800
Hen/ACSS	477.0	30/7	0.3747	0.4621	2	0.1261	0.1261	0.3783	0.883	450.4	296.0	746.4	21,000	22,700	26,700
Sapsucker/ACSS	556.5	22/7	0.4368	0.4797	2	0.1590	0.0883	0.2649	0.901	523.9	145.1	669.0	12,600	13,600	15,800
Parakeet/ACSS	556.5	24/7	0.4372	0.4938	2	0.1523	0.1015	0.3045	0.914	524.3	191.8	716.1	15,200	16,600	19,200
Dove/ACSS	556.5	26/7	0.4371	0.5083	2	0.1463	0.1138	0.3414	0.927	524.2	241.0	765.2	18,200	19,900	23,200
Eagle/ACSS	556.5	30/7	0.4371	0.5391	2	0.1362	0.1362	0.4086	0.953	525.5	345.3	870.8	24,50	26,500	31,100
Peacock/ACSS	605.0	24/7	0.4753	0.5370	2	0.1588	0.1059	0.3177	0.953	570.0	208.7	778.7	16,500	18,100	20,800
Squab/ACSS	605.0	26/7	0.4749	0.5522	2	0.1525	0.1186	0.3558	0.966	569.5	261.8	831.3	19,700	21,700	25,200
Wood Duck/ACSS	605.0	30/7	0.4751	0.5860	2	0.1420	0.1420	0.4260	0.994	571.2	375.3	946.5	26,000	28,300	33,300
Teal/ACSS	605.0	30/19	0.4751	0.5834	2	0.1420	0.0852	0.4260	0.994	571.2	367.5	938.7	26,600	29,300	34,800
Goldfinch/ACSS	636.0	22/7	0.4994	0.5484	2	0.1700	0.0944	0.2832	0.963	598.9	165.9	764.8	14,100	15,300	17,500
Rook/ACSS	636.0	24/7	0.4996	0.5643	2	0.1628	0.1085	0.3255	0.977	599.1	219.1	818.2	17,300	19,000	21,900
Grosbeak/ACSS	636.0	26/7	0.4995	0.5808	2	0.1564	0.1216	0.3648	0.991	599.0	275.2	874.2	20,700	22,400	26,000
Scoter/ACSS	636.0	30/7	0.4995	0.6160	2	0.1456	0.1456	0.4368	1.019	600.5	394.6	995.1	27,400	29,700	35,000
Egret/ACSS	636.0	30/19	0.4995	0.6135	2	0.1456	0.0874	0.4370	1.019	600.5	386.7	987.2	28,000	30,900	36,600
Flamingo/ACSS	666.6	24/7	0.5238	0.5917	2	0.1667	0.1111	0.3333	1.000	628.2	229.7	857.9	18,200	19,900	22,900
Gannet/ACSS	666.6	26/7	0.5234	0.6086	2	0.1601	0.1245	0.3735	1.014	627.7	288.5	916.2	21,700	23,400	27,300
Stilt/ACSS	715.5	24/7	0.5622	0.6350	2	0.1727	0.1151	0.3453	1.036	674.2	246.6	920.8	19,500	21,300	24,600
Starling/ACSS	715.5	26/7	0.5620	0.6535	2	0.1659	0.1290	0.3870	1.051	674.0	309.7	983.7	23,300	25,200	29,800
Redwing/ACSS	715.5	30/19	0.5617	0.6897	2	0.1544	0.0926	0.4630	1.081	675.3	434.1	1109.4	30,800	34,000	39,800
Puffin/ACSS	795.0	22/7	0.6244	0.6857	2	0.1901	0.1056	0.3168	1.077	748.8	207.6	956.4	17,700	19,200	22,000
Cuckoo/ACSS	795.0	24/7	0.6244	0.7053	2	0.1820	0.1213	0.3639	1.092	748.8	273.9	1022.7	21,700	23,300	26,900
Drake/ACSS	795.0	26/7	0.6247	0.7264	2	0.1749	0.1360	0.4080	1.108	749.1	344.3	1093.4	25,900	28,000	32,600
Macaw/ACSS	795.0	42/7	0.6246	0.6567	3	0.1376	0.0764	0.2292	1.055	749.0	108.6	857.6	11,800	12,600	14,300
Tern/ACSS	795.0	45/7	0.6242	0.6674	3	0.1329	0.0886	0.2658	1.063	748.6	146.1	894.7	14,200	15,200	17,400
Condor/ACSS	795.0	54/7	0.6240	0.7049	3	0.1213	0.1213	0.3639	1.092	748.4	273.9	1022.3	21,700	23,300	26,900
Mallard/ACSS	795.0	30/19	0.6245	0.7669	2	0.1628	0.0977	0.4885	1.140	750.7	483.2	1233.9	34,300	37,900	44,300

Notes:
- Rated strengths for standard core based on Class A Galfan coated steel core wire in accordance with ASTM B 802.7.
- Rated Strength for high strength core based on Class A Galfan coated high strength steel core wire in accordance with ASTM B 803.
- The final design of a shaped wire compact conductor is contingent upon several factors such as: layer diameter, wire width and wire thickness. The actual configuration of a given size may vary between manufacturers. This may result in a slight variation in the number of wires, number of layers and dimensions of individual wires from that shown in the chart.
- Data based on a nominal cable manufactured in accordance with ASTM B 856.

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HS285® Ultra-High Strength ACSS Conductor

Aluminum Conductor Steel Supported (ACSS) (HS285)
Round Wire Construction

			Cross Sectional Area Sq In			Diameter				Weight per 1000 feet			Rated Breaking Strength		
Code Word	Conductor Size (kcmil)	Stranding (Al/St)	Alum.	Total	Layers of Alum.	No.of Alum. Wires	No. & Dia. Indv. Steel Wire	Steel Core in	Complete Conductor in	Alum. lb	Steel lb	Total lb	Standard Strength lb	HIgh Strength lb	HS285 Strength lb
Ruddy/ACSS	900.0	45/7	0.7066	0.7555	3	0.1414	0.0943	0.2829	1.131	847.4	165.5	1012.9	15,800	17,000	19,200
Canary/ACSS	900.0	54/7	0.7069	0.7985	3	0.1291	0.1291	0.3873	1.162	847.7	310.2	1157.9	24,600	26,400	30,500
Corncrake/ACSS	954.0	20/7	0.7492	0.8010	2	0.2184	0.0971	0.2913	1.165	898.5	175.5	1074.0	16,700	18,000	20,400
Redbird/ACSS	954.0	24/7	0.7495	0.8466	2	0.1994	0.1329	0.3987	1.196	898.8	328.7	1227.5	26,000	28,000	32,300
Rail/ACSS	954.0	45/7	0.7492	0.8010	3	0.1456	0.0971	0.2913	1.165	898.5	175.5	1074.0	16,700	18,000	20,400
Towhee/ACSS	954.0	48/7	0.7495	0.8157	3	0.1410	0.1097	0.3291	1.175	898.8	224.0	1122.8	19,700	21,300	24,300
Cardinal/ACSS	954.0	54/7	0.7491	0.8462	3	0.1329	0.1329	0.3987	1.196	898.3	328.7	1227.0	26,000	28,000	32,300
Canvasback/ACSS	954.0	30/19	0.7491	0.9199	2	0.1783	0.1070	0.5350	1.248	900.5	579.6	1480.1	41,100	45,400	53,100
Snowbird/ACSS	1033.5	42/7	0.8121	0.8539	3	0.1569	0.0872	0.2616	1.203	973.9	141.5	1115.4	15,400	16,500	18,500
Ortolan/ACSS	1033.5	45/7	0.8112	0.8673	3	0.1515	0.1010	0.3030	1.212	972.8	189.9	1162.7	18,100	19,500	22,000
Curlew/ACSS	1033.5	54/7	0.8112	0.9164	3	0.1383	0.1383	0.4149	1.245	972.8	356.0	1328.8	28,200	30,300	35,000
Bluejay/ACSS	1113.0	45/7	0.8745	0.9350	3	0.1573	0.1049	0.3147	1.258	1048	204.8	1253.5	19,500	21,100	23,800
Finch/ACSS	1113.0	54/19	0.8746	0.9855	3	0.1436	0.0862	0.4310	1.292	1053	376.1	1430.0	30,400	33,200	38,700
Bunting/ACSS	1192.5	45/7	0.9367	1.001	3	0.1628	0.1085	0.3255	1.302	1123	219.1	1342.5	21,400	23,500	25,400
Grackle/ACSS	1192.5	54/19	0.9365	1.055	3	0.1486	0.0892	0.4460	1.337	1128	402.8	1531.4	32,600	35,500	41,500
Bittern/ACSS	1272.0	45/7	0.9987	1.067	3	0.1681	0.1121	0.3363	1.345	1197	233.9	1431.6	22,300	24,000	27,200
Diver/ACSS	1272.0	48/7	0.9992	1.087	3	0.1628	0.1266	0.3798	1.357	1198	298.3	1496.6	26,200	28,000	31,900
Pheasant/ACSS	1272.0	54/19	0.9993	1.125	3	0.1535	0.0921	0.4605	1.381	1204	429.4	1633.7	34,100	37,300	43,000
Dipper/ACSS	1351.5	45/7	1.061	1.134	3	0.1733	0.1155	0.3465	1.386	1272	248.3	1521.2	23,700	25,500	28,800
Martin/ACSS	1351.5	54/19	1.061	1.195	3	0.1582	0.0949	0.4745	1.424	1279	455.9	1735.0	36,200	39,600	45,600
Bobolink/ACSS	1431.0	45/7	1.123	1.201	3	0.1783	0.1189	0.3567	1.427	1347	263.1	1610.6	25,100	27,000	30,500
Plover/ACSS	1431.0	54/19	1.124	1.266	3	0.1628	0.0977	0.4885	1.465	1354	483.2	1837.8	38,400	41,900	48,300
Nuthatch/ACSS	1510.5	45/7	1.186	1.268	3	0.1832	0.1221	0.3663	1.466	1422	277.5	1700.0	26,500	28,100	31,800
Parrot/ACSS	1510.5	54/19	1.185	1.335	3	0.1672	0.1003	0.5015	1.505	1428	509.2	1938.0	40,400	44,200	51,000
Ratite/ACSS	1590.0	42/7	1.249	1.313	3	0.1946	0.1081	0.3243	1.492	1498	217.5	1715.6	23,400	25,000	27,900
Lapwing/ACSS	1590.0	45/7	1.249	1.335	3	0.1880	0.1253	0.3759	1.504	1498	292.2	1790.3	27,900	29,600	33,500
Falcon/ACSS	1590.0	54/19	1.248	1.407	3	0.1716	0.1030	0.5150	1.544	1505	537.0	2042.0	42,600	46,600	53,700
Chukar/ACSS	1780.0	84/19	1.398	1.512	4	0.1456	0.0874	0.4370	1.601	1685	386.7	2072.1	35,400	38,200	43,900
Mockingbird/ACSS	2034.5	72/7	1.597	1.66	4	0.1681	0.1121	0.3363	1.681	1925	233.9	2159.6	27,200	28,900	32,000
Roadrunner/ACSS	2057.0	76/19	1.615	1.703	4	0.1645	0.0768	0.3840	1.700	1946	298.6	2245.1	31,700	33,900	38,300
Bluebird/ACSS	2156.0	84/19	1.693	1.830	4	0.1602	0.0961	0.4805	1.762	2040	467.5	2507.9	42,100	45,500	51,700
Kiwi/ACSS	2167.0	72/7	1.702	1.775	4	0.1735	0.1157	0.3471	1.735	2051	249.2	2300.6	29,000	30,800	34,100
Thrasher/ACSS	2312.0	76/19	1.815	1.914	4	0.1744	0.0814	0.4070	1.802	2187	335.4	2523.3	35,600	38,100	43,000
Joree/ACSS	2515.0	76/19	1.975	2.082	4	0.1819	0.0849	0.4245	1.880	2380	364.9	2745.0	38,700	41,400	46,800

Notes:
- Rated strengths for standard core based on Class A Galfan coated steel core wire in accordance with ASTM B 802.7.
- Rated Strength for high strength core based on Class A Galfan coated high strength steel core wire in accordance with ASTM B 803.
- The final design of a shaped wire compact conductor is contingent upon several factors such as: layer diameter, wire width and wire thickness. The actual configuration of a given size may vary between manufacturers. This may result in a slight variation in the number of wires, number of layers and dimensions of individual wires from that shown in the chart.
- Data based on a nominal cable manufactured in accordance with ASTM B 856.

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HS285® Ultra-High Strength ACSS Conductor

Aluminum Conductor Steel Supported (ACSS) (HS285)
Round Wire Construction

			Resistance				Resistance @ 1 ft Spacing 60 HZ			Ampacity				
Code Word	Conductor Size (kcmil)	Stranding (Al/St)	dc @ 20°C, Ω/mile	ac–60 Hz			GMR feet Ω/mile	Inductive Xa, MΩ-mile	Capacitive Xa, MΩ-mile	@ 75°C, amp	@ 100°C, amp	@ 150°C, amp	@ 200°C, amp	@ 250°C, amp
				@ 25°C, Ω/mile	@ 50°C, Ω/mile	@ 75°C, Ω/mile								
Partridge/ACSS	266.8	26/7	0.3270	0.3343	0.3681	0.4019	0.0217	0.465	0.1074	463	564	707	813	901
Junco/ACSS	266.8	30/7	0.3249	0.3320	0.3655	0.3991	0.0227	0.459	0.1066	468	571	715	823	913
Ostrich/ACSS	300.0	26/7	0.2908	0.2974	0.3275	0.3575	0.0230	0.458	0.1057	498	608	763	877	974
WoodCock/ACSS	336.4	22/7	0.2615	0.2677	0.2947	0.3218	0.0232	0.457	0.1048	529	646	811	933	1036
Linnet/ACSS	336.4	26/7	0.2594	0.2654	0.2922	0.3190	0.0243	0.451	0.1040	535	654	821	961	1050
Oriole/ACSS	336.4	30/7	0.2577	0.2635	0.2901	0.3167	0.0255	0.445	0.1031	541	662	831	958	1064
Ptarmigan/ACSS	397.5	20/7	0.2221	0.2277	0.2507	0.2737	0.0246	0.450	0.1027	584	715	898	1035	1150
Brant/ACSS	397.5	24/7	0.2204	0.2258	0.2486	0.2714	0.0259	0.444	0.1019	591	723	909	1048	1165
Ibis/ACSS	397.5	26/7	0.2195	0.2248	0.2474	0.2701	0.0265	0.441	0.1015	594	727	915	1055	1173
Lark/ACSS	397.5	30/7	0.2181	0.2232	0.2457	0.2681	0.0277	0.435	0.1007	601	736	926	1069	1188
Tailorbird/ACSS	477.0	20/7	0.1851	0.1901	0.2093	0.2284	0.0270	0.439	0.1000	655	803	1011	1166	1297
Flicker/ACSS	477.0	24/7	0.1837	0.1885	0.2074	0.2264	0.0283	0.433	0.0992	663	812	1023	1181	1314
Hawk/ACSS	477.0	26/7	0.1829	0.1876	0.2064	0.2253	0.0290	0.430	0.0988	667	817	1030	1189	1323
Hen/ACSS	477.0	30/7	0.1817	0.1862	0.2049	0.2236	0.0304	0.424	0.0980	674	827	1043	1204	1341
Sapsucker/ACSS	556.5	22/7	0.1581	0.1626	0.1789	0.1952	0.0298	0.426	0.0974	725	890	1123	1298	1445
Parakeet/ACSS	556.5	24/7	0.1574	0.1618	0.1780	0.1943	0.0306	0.423	0.0969	730	896	1131	1307	1456
Dove/ACSS	556.5	26/7	0.1568	0.1610	0.1772	0.1933	0.0313	0.420	0.0965	734	902	1138	1316	1466
Eagle/ACSS	556.5	30/7	0.1558	0.1598	0.1758	0.1919	0.0328	0.415	0.0957	743	912	1152	1332	1485
Peacock/ACSS	605.0	24/7	0.1448	0.1490	0.1639	0.1789	0.0319	0.418	0.0957	769	945	1194	1380	1539
Squab/ACSS	605.0	26/7	0.1442	0.1483	0.1631	0.1780	0.0327	0.415	0.0953	774	951	1201	1390	1549
Wood Duck/ACSS	605.0	30/7	0.1433	0.1471	0.1619	0.1766	0.0342	0.410	0.0944	783	962	1217	1408	1570
Teal/ACSS	605.0	30/19	0.1434	0.1472	0.1620	0.1767	0.0342	0.410	0.0945	782	962	1216	1407	1570
Goldfinch/ACSS	636.0	22/7	0.1383	0.1426	0.1568	0.1711	0.0319	0.418	0.0954	789	969	1225	1416	1579
Rook/ACSS	636.0	24/7	0.1378	0.1419	0.1561	0.1702	0.0327	0.415	0.0950	793	975	1233	1426	1590
Grosbeak/ACSS	636.0	26/7	0.1372	0.1412	0.1553	0.1694	0.0335	0.412	0.0946	798	982	1241	1436	1602
Scoter/ACSS	636.0	30/7	0.1363	0.1401	0.1541	0.1681	0.0351	0.407	0.0937	807	993	1257	1455	1623
Egret/ACSS	636.0	30/19	0.1364	0.1402	0.1542	0.1682	0.0351	0.407	0.0937	807	993	1256	1454	1623
Flamingo/ACSS	666.6	24/7	0.1314	0.1355	0.1490	0.1625	0.0335	0.412	0.0943	817	1005	1271	1471	1641
Gannet/ACSS	666.6	26/7	0.1309	0.1348	0.1482	0.1617	0.0343	0.409	0.0939	822	1011	1279	1481	1652
Stilt/ACSS	715.5	24/7	0.1225	0.1264	0.1390	0.1516	0.0347	0.408	0.0932	854	1051	1330	1541	1719
Starling/ACSS	715.5	26/7	0.1219	0.1258	0.1383	0.1508	0.0355	0.405	0.0928	859	1058	1340	1552	1732
Redwing/ACSS	715.5	30/19	0.1212	0.1248	0.1372	0.1497	0.0372	0.399	0.0920	869	1070	1356	1571	1755
Puffin/ACSS	795.0	22/7	0.1107	0.1147	0.1260	0.1374	0.0357	0.405	0.0921	906	1116	1415	1640	1831
Cuckoo/ACSS	795.0	24/7	0.1102	0.1141	0.1254	0.1367	0.0365	0.402	0.0917	912	1124	1424	1651	1844
Drake/ACSS	795.0	26/7	0.1097	0.1135	0.1247	0.1359	0.0375	0.399	0.0912	918	1131	1434	1663	1858
Macaw/ACSS	795.0	42/7	0.1113	0.1157	0.1271	0.1395	0.0346	0.408	0.0927	895	1101	1394	1614	1800
Tern/ACSS	795.0	45/7	0.1111	0.1153	0.1273	0.1390	0.0352	0.406	0.0925	898	1105	1399	1620	1808
Condor/ACSS	795.0	54/7	0.1102	0.1141	0.1284	0.1406	0.0368	0.401	0.0917	900	1107	1400	1620	1807
Mallard/ACSS	795.0	30/19	0.1091	0.1125	0.1237	0.1349	0.0392	0.393	0.0904	928	1145	1452	1684	1882

Notes:
- Resistance and ampacity based on an aluminum conductivity of 63% IACS at 20°C and a steel conductivity of 8% IACS at 20°C.
- Ampacity based on reference conductor temperature, 25°C ambient temperature, 2 ft/sec wind, in sun, with an emissivity of .5 and a coefficient of solar absorption of .5, at sea level.

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HS285® Ultra-High Strength ACSS Conductor

Aluminum Conductor Steel Supported (ACSS) (HS285)
Round Wire Construction

			Resistance				Resistance @ 1 ft Spacing 60 HZ			Ampacity				
Code Word	Conductor Size (kcmil)	Stranding (Al/St)	dc @ 20°C, Ω/mile	ac–60 Hz			GMR feet Ω/mile	Inductive Xa, MΩ-mile	Capacitive Xa, MΩ-mile	@ 75°C, amp	@ 100°C, amp	@ 150°C, amp	@ 200°C, amp	@ 250°C, amp
				@ 25°C, Ω/mile	@ 50°C, Ω/mile	@ 75°C, Ω/mile								
Ruddy/ACSS	900.0	45/7	0.0981	0.1023	0.1129	0.1232	0.0374	0.399	0.0906	970	1196	1516	1757	1963
Canary/ACSS	900.0	54/7	0.0974	0.1012	0.1137	0.1245	0.0392	0.393	0.0898	972	1198	1518	1759	1964
Corncrake/ACSS	954.0	20/7	0.0926	0.0968	0.1062	0.1156	0.0381	0.396	0.0897	1008	1245	1581	1835	2052
Redbird/ACSS	954.0	24/7	0.0918	0.0956	0.1050	0.1144	0.0400	0.391	0.0890	1021	1261	1602	1860	2081
Rail/ACSS	954.0	45/7	0.0926	0.0968	0.1067	0.1164	0.0385	0.395	0.0897	1006	1241	1574	1826	2041
Towhee/ACSS	954.0	48/7	0.0923	0.0964	0.1058	0.1152	0.0391	0.393	0.0895	1010	1246	1581	1834	2050
Cardinal/ACSS	954.0	54/7	0.0918	0.0956	0.1074	0.1176	0.0404	0.390	0.0890	1008	1243	1576	1827	2041
Canvasback/ACSS	954.0	30/19	0.0909	0.0942	0.1035	0.1128	0.0430	0.382	0.0877	1040	1285	1634	1898	2125
Snowbird/ACSS	1033.5	42/7	0.0856	0.0901	0.0988	0.1074	0.0395	0.392	0.0888	1052	1299	1651	1916	2143
Ortolan/ACSS	1033.5	45/7	0.0854	0.0897	0.0988	0.1077	0.0401	0.390	0.0886	1056	1304	1657	1924	2152
Curlew/ACSS	1033.5	54/7	0.0848	0.0886	0.0994	0.1087	0.0420	0.385	0.0878	1059	1308	1660	1926	2153
Bluejay/ACSS	1113.0	45/7	0.0793	0.0837	0.0921	0.1003	0.0416	0.386	0.0874	1105	1367	1738	2019	2260
Finch/ACSS	1113.0	54/19	0.0791	0.0830	0.0930	0.1017	0.0436	0.380	0.0867	1106	1367	1737	2017	2257
Bunting/ACSS	1192.5	45/7	0.0740	0.0785	0.0863	0.0939	0.0431	0.382	0.0864	1153	1427	1817	2112	2366
Grackle/ACSS	1192.5	54/19	0.0739	0.0777	0.0870	0.0951	0.0451	0.376	0.0856	1154	1427	1816	2111	2363
Bittern/ACSS	1272.0	45/7	0.0694	0.0739	0.0812	0.0884	0.0448	0.378	0.0855	1199	1485	1893	2203	2469
Diver/ACSS	1272.0	48/7	0.0692	0.0736	0.0808	0.0880	0.0452	0.376	0.0852	1204	1492	1902	2214	2481
Pheasant/ACSS	1272.0	54/19	0.0692	0.0732	0.0818	0.0894	0.0466	0.372	0.0847	1201	1487	1893	2202	2466
Dipper/ACSS	1351.5	45/7	0.0653	0.0699	0.0768	0.0835	0.0459	0.374	0.0846	1243	1542	1968	2291	2569
Martin/ACSS	1351.5	54/19	0.06520	.0692	0.0773	0.0844	0.0480	0.368	0.0838	1246	1544	1969	2291	2568
Bobolink/ACSS	1431.0	45/7	0.0617	0.0664	0.0728	0.0791	0.0472	0.371	0.0837	1287	1597	2041	2378	2669
Plover/ACSS	1431.0	54/19	0.0615	0.0656	0.0732	0.0799	0.0494	0.365	0.0829	1290	1600	2042	2378	2667
Nuthatch/ACSS	1510.5	45/7	0.0585	0.0633	0.0693	0.0752	0.0485	0.367	0.0829	1329	1651	2112	2463	2765
Parrot/ACSS	1510.5	54/19	0.0583	0.0624	0.0696	0.0759	0.0508	0.362	0.0821	1333	1655	2114	2464	2764
Ratite/ACSS	1590.0	42/7	0.0557	0.0608	0.0663	0.0718	0.0490	0.366	0.0824	1364	1696	2171	2534	2847
Lapwing/ACSS	1590.0	45/7	0.0555	0.0605	0.0662	0.0718	0.0497	0.364	0.0822	1370	1704	2181	2546	2860
Falcon/ACSS	1590.0	54/19	0.0554	0.0596	0.0664	0.0724	0.0521	0.359	0.0814	1375	1708	2184	2547	2860
Chukar/ACSS	1780.0	84/19	0.0498	0.0547	0.0596	0.0645	0.0534	0.355	0.0803	1469	1832	2353	2752	3097
Mockingbird/ACSS	2034.5	72/7	0.0438	0.0498	0.0539	0.0581	0.0553	0.351	0.0789	1568	1960	2526	2962	3340
Roadrunner/ACSS	2057.0	76/19	0.0432	0.0490	0.0531	0.0573	0.0562	0.349	0.0785	1584	1980	2553	2994	3376
Bluebird/ACSS	2156.0	84/19	0.0411	0.0466	0.0505	0.0544	0.0588	0.344	0.0775	1640	2053	2649	3108	3507
Kiwi/ACSS	2167.0	72/7	0.0411	0.0473	0.0512	0.0551	0.0570	0.348	0.0779	1624	2033	2625	3082	3478
Thrasher/ACSS	2312.0	76/19	0.0385	0.0447	0.0483	0.0519	0.0595	0.342	0.0768	1690	2119	2740	3221	3638
Joree/ACSS	2515.0	76/19	0.0353	0.0419	0.0451	0.0484	0.0621	0.337	0.0755	1770	2223	2882	3393	3838

Notes:
- Resistance and ampacity based on an aluminum conductivity of 63% IACS at 20°C and a steel conductivity of 8% IACS at 20°C.
- Ampacity based on reference conductor temperature, 25°C ambient temperature, 2 ft/sec wind, in sun, with an emissivity of .5 and a coefficient of solar absorption of .5, at sea level.