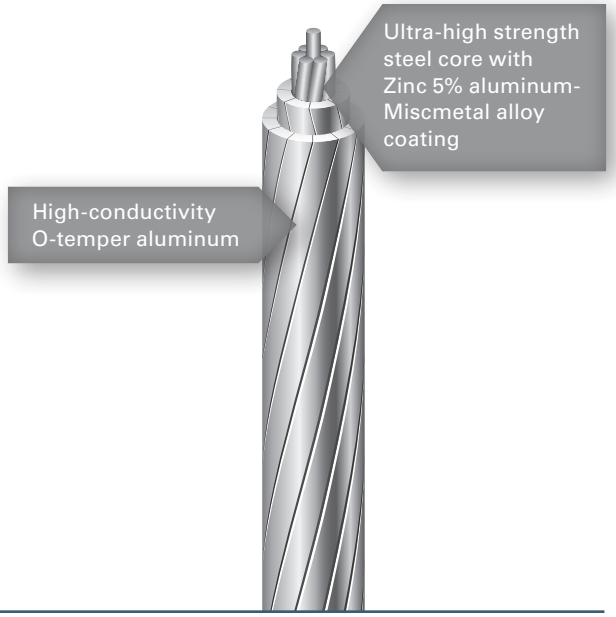
HS285® Ultra-High Strength ACSS Conductor

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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