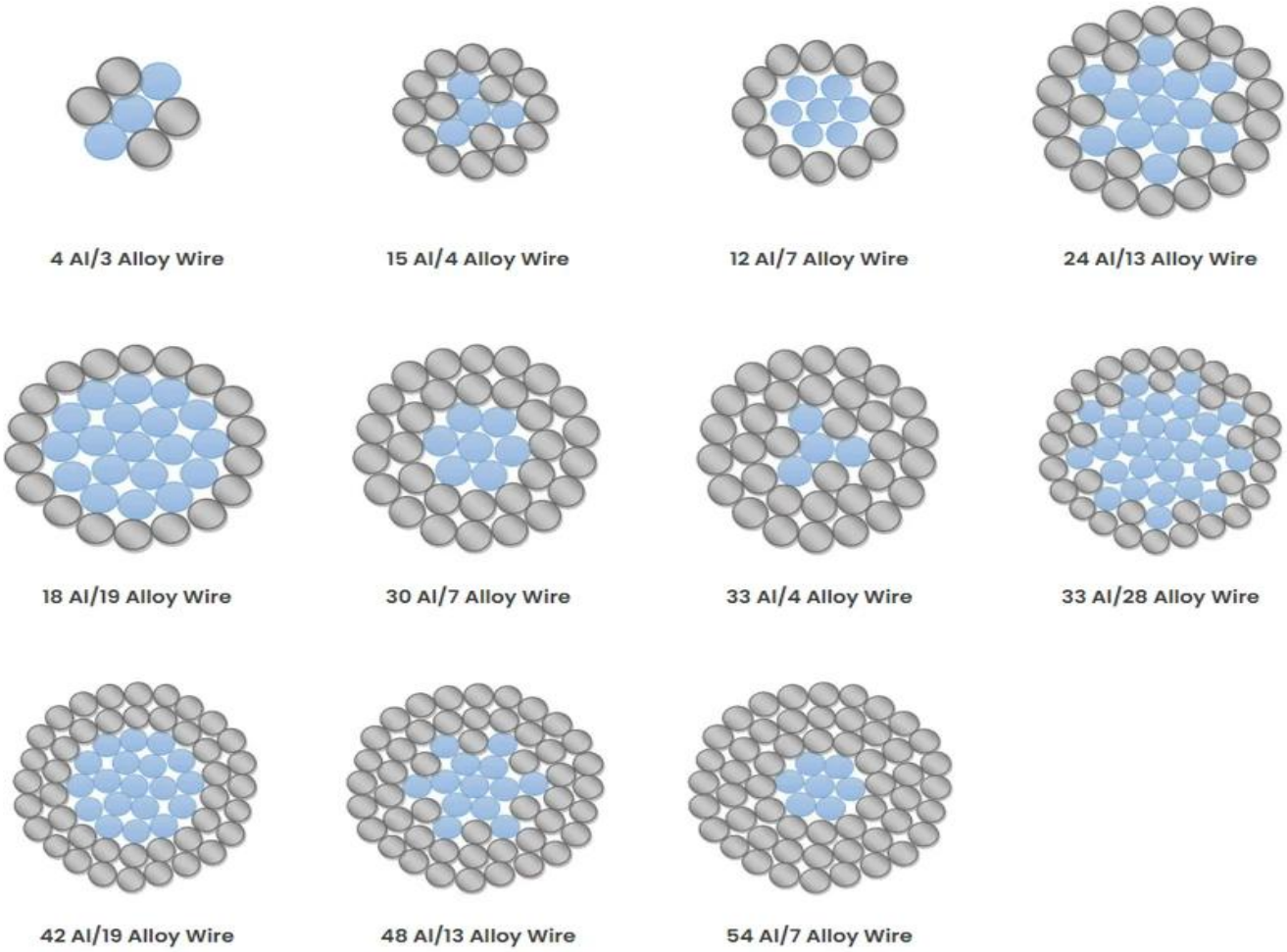
Product Overview

ACAR (Aluminum Conductor, Aluminum-Alloy Reinforced) is a bare overhead conductor designed to provide an excellent balance between electrical conductivity and mechanical strength.

It is manufactured using high-conductivity aluminum 1350-H19 wires combined with high-strength aluminum-alloy 6201-T81 wires. This combination allows ACAR to achieve a balanced combination of current-carrying capacity, tensile strength, and conductor weight.

With its flexible conductor configuration, ACAR can be designed to meet different electrical and mechanical requirements for overhead power transmission and distribution networks. It is suitable for applications where both ampacity and mechanical performance are important considerations.

Construction



ACAR conductors are manufactured from:

- **Conducting wires:** Hard-drawn aluminum 1350-H19 wires, providing high electrical conductivity.

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- **Reinforcing wires:** High-strength aluminum-alloy 6201-T81 wires, providing mechanical reinforcement.

The aluminum-alloy wires generally form the central core of the conductor. Depending on the required design, alloy wires may also be distributed in different layers among the aluminum 1350-H19 strands.

This flexible stranding arrangement allows the conductor to be customized according to project requirements for electrical capacity and mechanical strength.

Applications

ACAR conductors are used as bare overhead conductors in:

- Overhead power transmission lines
- Primary and secondary power distribution networks
- Utility grid expansion and upgrading projects
- Overhead lines requiring a balance of electrical conductivity and tensile strength
- Projects where conductor weight, ampacity, and mechanical performance are key design considerations

Key Features & Benefits

- **Balanced Electrical and Mechanical Performance:** Combines high-conductivity aluminum with high-strength aluminum alloy.
- **High Current-Carrying Capacity:** Aluminum 1350-H19 strands provide effective electrical conductivity.
- **Enhanced Mechanical Strength:** Aluminum-alloy 6201-T81 strands improve the conductor's tensile strength.
- **Flexible Conductor Design:** Different proportions and arrangements of aluminum and alloy strands can be specified.
- **Efficient Overhead Line Design:** Offers a favorable strength-to-weight balance for transmission and distribution applications.
- **Customizable Configurations:** Available in different conductor sizes, strand arrangements, and technical specifications.

Applicable Standards

ACAR conductors can be manufactured in accordance with the following ASTM standards:

- **ASTM B230:** Aluminum 1350-H19 Wire for Electrical Purposes
- **ASTM B398:** Aluminum-Alloy 6201-T81 and 6201-T83 Wire for Electrical Purposes
- **ASTM B524:** Concentric-Lay-Stranded Aluminum Conductors, Aluminum-Alloy Reinforced (ACAR, 1350/6201)

Other standards and project-specific requirements can be reviewed upon request.

Technical Specifications

ASTM B 524

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Size of Conductor		Stranding		Outside Diameter in.	Area mm	Wire Diameter mm	Overall Diameter of Conductor mm	Linear Weight Kg/km	Rated	Maximum
AWG or Kcmil	Cross Section in2	1350-H19	6201-T81						Strength daN	DC Resistance at 20°C Ω/km
30.6	0.024	4 x 0.0661	3 x 0.0661	0.198	15.5	1.679	5.03	43	367	1.983
4	0.0328	4 x 0.0772	3 x 0. 0772	0,232	21.2	1.961	5.89	59	498	1.454
48.7	0.0382	4 x 0.0834	3 x 0-0834	0.25	24.7	2.118	6.35	68	573	1.246
2	0.0521	4 x 0.0974	3 x 0.0974	0.292	33.6	2.474	7.42	93	777	0.913
77.5	0.0608	4 x 0.1052	3 x 0.1052	0.316	39.3	2.672	8.03	109	893	0,721
1/0	0.0829	4 x 0.1228	3 x 0,1228	0.368	53.5	3.119	9.35	148	1195	0.575
123.3	0.0968	4 x 0.1327	3 x 0.1327	0.398	62.5	3.371	10.11	173	1395	0.492
2/0	0.1045	4 x 0.1379	3 x 0.1379	0.414	67.4	3.503	10.52	187	1470	0.455
155.4	0.1221	4 x 0.1490	3 x 0.1490	0.447	78.7	3.785	11.35	218	1700	0.39
3/0	0.1317	4 x 0.1548	3 x 0.1548	0.464	85	3.932	11.8	235	1820	0.361
195.7	0.1537	4 x 0.1672	3 x 0.1672	0.502	99.1	4.247	12.74	274	2130	0.31
4/0	0.1663	4 x 0.1739	3 x 0.1739	0.522	107	4.417	13.25	297	2300	0.286
246.9	0.1939	4x0,1878	3 x 0.1878	0.563	125	4.77	14.31	346	2682	0.245
250	0.1963	15 x 0.1147	4 x 0.1147	0.574	127	2.913	14.56	350	2430	0.235
250	0.1963	12 x 0.1147	7 x 0.1147	0.574	127	2.913	14.56	350	2750	0.24
300	0.2358	15 x 0.1257	4 x 0.1257	0.629	152	3.193	15.96	420	2885	0.195
300	0.2358	12 x 0.1257	7 x 0.1257	0.629	152	3.193	15.96	420	3275	0.2
350	0.2748	15 x 0.1357	4 x 0.1357	0.679	177	3.447	17.24	490	3315	0.168

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AWG or Kcmil	Cross Section in2	1350-H19	6201-T81						Strength daN	DC Resistance at 20°C Ω/km
350	0.2748	12 x 0.1357	7 x 0.1357	0.679	177	3.447	17.24	490	3735	0.172
400	0.3142	15 x 0.1451	4 x 0.1451	0.726	203	3.685	18.44	560	3745	0.147
400	0.3142	12 x 0.1451	7 x 0.1451	0.726	203	3.685	18.44	560	4230	0.135
450	0.3534	15 x 0.1539	4 x 0.1539	0.77	228	3.909	19.55	630	4150	0.13
450	0.3534	12 x 0.1539	7 x 0.1539	0.77	228	3.909	19.55	630	4710	0.133
500	0.3926	15 x 0.1622	4 x 0.1622	0.811	253	4.12	20.6	700	4620	0.117
500	0.3926	12 x 0.1622	7 x 0.1622	0.811	253	4.12	20.6	700	5240	0.12
500	0.3924	33 x 0.1162	4 x 0.1162	0.813	253	2.951	20.65	700	4440	0.116
500	0.3924	30 x 0.1162	7 x 0.1162	0.813	253	2.951	20.65	700	4795	0.117
500	0.3924	24 x 0.1162	13 x 0.1162	0.813	253	2.951	20.65	700	5285	0.12
500	0.3924	18 x 0.1162	19 x 0.1162	0.813	253	2.951	20.65	700	5860	0.123
550	0.4318	15 x 0.1701	4 x 0.1701	0.851	279	4.321	21.66	770	5060	0.107
550	0,4318	12 x 0.1701	7 x 0.1701	0.851	279	4.321	21.66	770	5770	0.11
550	0.432	33 x 0.1219	4 x 0.1219	0.853	279	2.951	21.66	770	4800	0.105
550	0.432	30 x 0,1219	7 x 0.1219	0.853	279	2.951	21.66	770	5195	0.106
550	0.432	24 x 0.1219	13 x 0.1219	0,853	279	2.951	21.66	770	5730	0.109
550	0.432	18 x 0.1219	19 x 0.1219	0.853	279	2.951	21.66	770	6395	0.111
600	0.4712	15 x 0.1777	4 x 0.1777	0.889	304	4.513	22.58	840	5550	0.097
600	0.4712	12 x 0.1777	7 x 0.1777	0.889	304	4.513	22.58	840	6260	0.1

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AWG or Kcmil	Cross Section in2	1350-H19	6201-T81						Strength daN	DC Resistance at 20°C Ω/km
600	0.4709	33 x 0.1273	4 x 0.1273	0.891	304	3.23	22.63	840	5240	0.096
600	0.4709	30 x 0.1273	7 x 0.1273	0.891	304	3,230	22.63	840	5680	0.097
600	0.4709	24 x 0.1273	13 x 0.1273	0.891	304	3.23	22.63	840	6260	0.1
600	0.4709	18 x 0.1273	19 x 0.1273	0.891	304	3.23	22.63	840	7020	0.102
650	0.5102	33 x 0.1325	4 x 0.1325	0.928	329	3.36	23.57	910	5680	0.089
650	0.5102	30 x 0.1325	7 x 0.1325	0.928	329	3.36	23.57	910	6130	0.09
650	0.5102	24 x 0.1325	13 x 0.1325	0.928	329	3.36	23.57	910	6800	0.092
650	0.5102	18 x 0.1325	19 x 0.1325	0.928	329	3.36	23.57	910	7600	0.095
700	0.5494	33 x 0,1375	4 x 0.1375	0.963	355	3.49	24.46	980	6040	0.083
700	0.5494	30 x 0.1375	7 x 0.1375	0.963	355	3.49	24.46	980	6530	0.084
700	0.5494	24 x 0.1375	13 x 0.1375	0.963	355	3.49	24.46	980	7150	0.086
700	0.5494	18 x 0.1375	19 x 0.1375	0.963	355	3.49	24.46	980	7950	0.088
750	0.5892	33 x 0.1424	4 x 0.1424	0.997	380	3.62	25.32	1050	6400	0.077
750	0.5892	30 x 0.1424	7 x 0.1424	0.997	380	3.62	25.32	1050	6930	0.078
750	0.5892	24 x 0.1424	13 x 0.1424	0.997	380	3.62	25.32	1050	7600	0.08
750	0.5892	18 x 0.1424	19 x 0.1424	0.997	380	3,620	25.32	1050	8440	0.082
800	0.628	33 x 0.1470	4 x 0.1470	1.029	405	3.73	26.15	1120	6800	0.072
800	0.628	30 x 0.1470	7 x 0,1470	1.029	405	3.73	26.15	1120	7370	0.073
800	0.628	24 x 0.1470	13 x 0.1470	1.029	405	3.73	26.15	1120	8080	0.075

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Size of Conductor		Stranding		Outside Diameter in.	Area mm	Wire Diameter mm	Overall Diameter of Conductor mm	Linear Weight Kg/km	Rated	Maximum
AWG or Kcmil	Cross Section in2	1350-H19	6201-T81						Strength daN	DC Resistance at 20°C Ω/km
800	0.628	18 x 0.1470	19 x 0.1470	1.029	405	3.73	26.15	1120	9010	0.077
850	0,6679	33 x 0.1516	4 x 0.1516	1,061	431	3.85	26.95	1190	7100	0.068
850	0.6679	30 x 0.1516	7 x 0.1516	1.061	431	3.85	26.95	1190	7720	0.069
850	0.6679	24 x 0.1516	13 x 0.1516	1-061	431	3.85	26.95	1190	8530	0.071
850	0.6679	18 x 0.1516	19 x 0.1516	1-061	431	3.85	26.95	1190	9500	0.072
900	0.7072	33 x 0.1560	4 x 0.1560	1-092	456	3.96	27.75	1260	7550	0.064
900	0.7072	30 x 0.1560	7 x 0.1560	1.092	456	3.96	27.75	1260	8170	0.065
900	0.7072	24 x 0.1560	13 x 0.1560	1.092	456	3.96	27.75	1260	9015	0.067
900	0.7072	18 x 0.1560	19 x 0,1560	1.092	456	3.96	27.75	1260	9950	0.068
950	0.7458	33 x 0. 1602	4 x 0.1602	1.121	481	4.07	28.5	1330	7950	0.061
950	0.7458	30 x 0.1602	7 x 0.1602	1.121	481	4.07	28.5	1330	8610	0.062
950	0.7458	24 x 0.1602	13 x 0.1602	1.121	481	4.07	28.5	1330	9500	0.063
950	0.7458	18 x 0.1602	19 x 0.1602	1.121	481	4.07	28.5	1330	10610	0.065
1000	0.7853	33 x 0.1644	4 x 0.1644	1.151	507	4.17	29.3	1400	8390	0.058
1000	0.7853	30 x 0.1644	7 x 0.1644	1.151	507	4.17	29.3	1400	9060	0.059
1000	0.7853	24 x 0.1644	13 x 0.1644	1.151	507	4.17	29.3	1400	10030	0.06
1000	0.7853	18 x 0.1644	19 x 0.1644	1.151	507	4.17	29.3	1400	11190	0.061
1000	0.7849	54 x 0.1280	7 x 0.1280	1.152	507	3.25	29.32	1397	8750	0.058
1000	0.7849	48 x 0.1280	13 x 0.1280	1.152	507	3.25	29.32	1397	9370	0.059

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Size of Conductor		Stranding		Outside Diameter in.	Area mm	Wire Diameter mm	Overall Diameter of Conductor mm	Linear Weight Kg/km	Rated	Maximum
AWG or Kcmil	Cross Section in2	1350-H19	6201-T81						Strength daN	DC Resistance at 20°C Ω/km
1000	0.7849	42 x 0.1280	19 x 0.1280	1.152	507	3.25	29.32	1397	10170	0.06
1000	0.7849	33 x 0.1280	28 x 0.1280	1.152	507	3.25	29.32	1397	12210	0.061
1100	0.8637	33 x 0.1724	4 x 0.1724	1.207	557	4.38	30.65	1540	9190	0.053
1100	0.8637	30 x 0.1724	7 x 0.1724	1.207	557	4.38	30.65	1540	9990	0.053
1100	0.8637	24 x 0.1724	13 x 0.1724	1.207	557	4.38	30.65	1540	11010	0.054
1100	0.8637	18 x 0.1724	19 x 0.1724	1.207	557	4.38	30.65	1540	12300	0.056
1100	0.8641	54 x 0.1343	7 x 0.1343	1.209	557	3.41	30.7	1540	9590	0.053
1100	0.8641	48 x 0.1343	13 x 0.1343	1.209	557	3.41	30.7	1540	10170	0.054
1100	0.8641	42 x 0.1343	19 x 0.1343	1.209	557	3.41	30.7	1540	11010	0.055
1100	0.8641	33 x 0.1343	28 x 0.1343	1.209	557	3.41	30.7	1540	11810	0.055
1200	0.9426	33 x 0.1801	4 x 0.1801	1.261	608	4.57	32-00	1680	10030	0.048
1200	0.9426	30 x 0.1801	7 x 0.1801	1.261	608	4.57	32	1680	10880	0.049
1200	0.9426	24 x 0.1801	13 x 0.1801	1.261	608	4.57	32	1680	12035	0.05
1200	0.9426	18 x 0.1801	19 x 0.1801	1.261	608	4.57	32	1680	13400	0.051
1200	0.943	54 x 0.1403	7 x 0.1403	1.263	608	3.56	32.1	1680	10260	0.048
1200	0.943	48 x 0.1403	13 x 0.1403	1.263	608	3.56	32.1	1680	10970	0.049
1200	0.943	42 x 0.1403	19 x 0.1403	1.263	608	3.56	32.1	1680	11860	0.05
1200	0.943	33 x 0.1403	28 x 0.1403	1.263	608	3.56	32.1	1680	12790	0.051
1250	0.9817	33 x 0.1838	4 x 0.1838	1.287	633	4.67	32.7	1750	10480	0.046

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AWG or Kcmil	Cross Section in2	1350-H19	6201-T81						Strength daN	DC Resistance at 20°C Ω/km
1250	0.9817	30 x 0.1838	7 x 0.1838	1.287	633	4.67	32.7	1750	11370	0.047
1250	0.9817	24 x 0.1838	13 x 0.1838	1.287	633	4.67	32.7	1750	12520	0.048
1250	0.9817	18 x 0.1838	19 x 0.1838	1.287	633	4.67	32.7	1750	13990	0.049
1250	0.981	54 x 0.1431	7 x 0.1431	1,288	633	3.63	32.72	1750	10700	0.046
1250	0.981	48 x 0.1431	13 x 0.1431	1.288	633	3.63	32.72	1750	11400	0.047
1250	0.981	42 x 0.1431	19 x 0.1431	1.288	633	3.63	32.72	1750	12340	0.048
1250	0.981	33 x 0.1431	28 x 0.1431	1.288	633	3.63	32.72	1750	13320	0.049
1300	1.0205	33 x 0.1874	4 x 0.1874	1.312	659	4.76	33.33	1820	10880	0.044
1300	1.0205	30 x 0.1874	7 x 0.1874	1.312	659	4.76	33.33	1820	11810	0.045
1300	1.0205	24 x 0.1874	13 x 0.1874	1.312	659	4.76	33.33	1820	13000	0.046
1300	1.0205	18 x 0.1874	19 x 0,1874	1.312	659	4.76	33.33	1820	14520	0.047
1300	1.0212	54 x 0.1460	7 x 0.1460	1.314	659	3.71	33.38	1825	11150	0.044
1300	1.0212	48 x 0.1460	13 x 0.1460	1.314	659	3.71	33.38	1825	11900	0,045
1300	1.0212	42 x 0.1460	19 x 0.1460	1.314	659	3.71	33.38	1825	12830	0.046
1300	1.0212	33 x 0.1460	28 x 0.1460	1.314	659	3.71	33.38	1825	13850	0.047
1400	1.0996	54 x 0.1515	7 x 0.1515	1.364	709	3.85	34.65	1960	11770	0.041
1400	1.0996	48 x 0.1515	13 x 0.1515	1.364	709	3.85	34.65	1960	12600	0.042
1400	1.0996	42 x 0.1515	19 x 0.1515	1.364	709	3.85	34.65	1960	13670	0.043
1400	1.0996	33 x 0.1515	28 x 0.1515	1.364	709	3.85	34.65	1960	14790	0.044

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AWG or Kcmil	Cross Section in2	1350-H19	6201-T81						Strength daN	DC Resistance at 20°C Ω/km
1500	1.1779	54 x 0.1568	7 x 0.1568	1.411	760	3.98	35.85	2100	12610	0.039
1500	1.1779	48 x 0.1568	13 x 0.1568	1.411	760	3.98	35.85	2100	13500	0.0395
1500	1.1779	42 x 0.1568	19 x 0,1568	1.411	760	3.98	35.85	2100	14650	0.04
1500	1.1779	33 x 0.1568	28 x 0.1568	1.411	760	3.98	35.85	2100	15850	0.041
1600	1.2573	54 x 0.1620	7 x 0.1620	1.458	811	4.11	37.05	2240	13500	0.036
1600	1.2573	48 x 0.1620	13 x 0.1620	1.458	811	4.11	37.05	2240	14430	0.037
1600	1.2573	42 x 0.1620	19 x 0.1620	1.458	811	4.11	37.05	2240	15630	0.037
1600	1.2573	33 x 0.1620	28 x 0.1620	1.458	811	4.11	37.05	2240	16920	0.038
1700	1.3345	54 x 0.1669	7 x 0.1669	1.502	861	4.24	38.15	2380	14300	0.034
1700	1.3345	48 x 0.1669	13 x 0.1669	1.502	861	4.24	38.15	2380	15320	0.0345
1700	1.3345	42 x 0.1669	19 x 0.1669	1.502	861	4.24	38.15	2380	16610	0.035
1700	1.3345	33 x 0.1669	28 x 0.1669	1.502	861	4.24	38.15	2380	17990	0.036
1750	1.375	54 x 0.1694	7 x 0.1694	1.525	887	4.3	38.75	2450	14750	0.033
1750	1.375	48 x 0.1694	13 x 0.1694	1-525	887	4.3	38.75	2450	15760	0.0335
1750	1.375	42 x 0.1694	19 x 0.1694	1-525	887	4.3	38.75	2450	17100	0-034
1750	1.375	33 x 0.1694	28 x 0.1694	1-525	887	4.3	38.75	2450	18520	0.035
1800	1.414	54 x 0,1718	7 x 0.1718	1.546	912	4.36	39.3	2520	15140	0.032
1800	1.414	48 x 0.1718	13 x 0.1718	1.546	912	4.36	39.3	2520	16210	0.0325
1800	1.414	42 x 0.1718	19 x 0.1718	1.546	912	4.36	39.3	2520	17590	0.033

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Size of Conductor		Stranding		Outside Diameter in.	Area mm	Wire Diameter mm	Overall Diameter of Conductor mm	Linear Weight Kg/km	Rated	Maximum
AWG or Kcmil	Cross Section in2	1350-H19	6201-T81						Strength daN	DC Resistance at 20°C Ω/km
1800	1.414	33 x 0.1718	28 x 0.1718	1.546	912	4.36	39.3	2520	19050	0.034
1900	14,924	54 x 0.1765	7 x 0.1765	1.589	963	4.48	40.35	2660	15990	0.0305
1900	1.4924	48 x 0.1765	13 x 0.1765	1.589	963	4.48	40.35	2660	17140	0.031
1900	1.4924	42 x 0.1765	19 x 0.1765	1.589	963	4.48	40.35	2660	18560	0.0315
1900	1.4924	33 x 0.1765	28 x 0.1765	1.589	963	4.48	40.35	2660	20120	0.032
2000	1.5713	54 x 0.1811	7 x 0.1811	1.63	1013	4.6	41.4	2800	16830	0.029
2000	1.5713	48 x 0.1811	13 x 0.1811	1-630	1013	4.6	41.4	2800	18030	0.0295
2000	1.5713	42 x 0.1811	19 x 0,1811	1.63	1013	4.6	41.4	2800	19540	0.03
2000	1.5713	33 x 0.1811	28 x 0.1811	1.63	1013	4.6	41.4	2800	21140	0.0305
2000	1.57	72 x 0.1482	19 x 0.1482	1.63	1013	3.76	41.4	2795	18210	0.0295
2000	1.57	63 x 0.1482	28 x 0.1482	1.63	1013	3.76	41.4	2795	19275	0.03
2000	1.57	54 x 0.1482	37 x 0.1482	1.63	1013	3.76	41.4	2795	20695	0.0305
2250	1.766	72 x 0.1572	19 x 0.1572	1.729	1140	3.99	43.9	3175	20200	0.0265
2250	1.766	63 x 0.1572	28 x 0.1572	1.729	1140	3.99	43.9	3175	21450	0.0267
2250	1.766	54 x 0.1572	37 x 0.1572	1.729	1140	3.99	43.9	3175	23050	0.027
2500	1.962	72 x 0.1657	19 x 0.1657	1.823	1267	4.21	46.3	3530	22470	0.023
2500	1.962	63 x 0.1657	28 x 0.1657	1.823	1267	4.21	46.3	3530	23850	0.024
2500	1.962	54 x 0.1657	37 x 0.1657	1-823	1267	4.21	46.3	3530	25625	0.0245
2750	2.159	72 x 0.1738	19 x 0.1738	1.912	1393	4.41	48.55	3880	24690	0.0215

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Size of Conductor		Stranding		Outside Diameter in.	Area mm	Wire Diameter mm	Overall Diameter of Conductor mm	Linear Weight Kg/km	Rated	Maximum
AWG or Kcmil	Cross Section in2	1350-H19	6201-T81						Strength daN	DC Resistance at 20°C Ω/km
2750	2.159	63 x 0.1738	28 x 0.1738	1.912	1393	4.41	48.55	3880	26200	0.022
2750	2.159	54 x 0.1738	37 x 0.1738	1.912	1393	4.41	48.55	3880	28200	0.0222
3000	2.357	72 x 0.1816	19 x 0.1816	1.998	1520	4.61	50.75	4240	26950	0.0197
3000	23,570	63 x 0.1816	28 x 0.1816	1.998	1520	4.61	50.75	4240	28640	0.02
3000	2.357	54 x 0,1816	37 x 0.1816	1.998	1520	4.61	50.75	4240	30770	0.0203

IEC 61089

A1/A2 Conductors IEC 61089 Standard

Code Number	Nominal cross sectional area		Conductor construction		Approx. overall diameter	Approx. overall weight	Max DC Resistance at 20 °C	Rated strength
	Al	Alloy	Al	Alloy				
	mm2		No. x Ø (mm)		mm	Kg / km	Ω / km	KN
16	9.73	7.3	4 x 1.76	3 x 1.76	5.28	46.6	1.7896	3.85
25	15.2	11.4	4 x 2.20	3 x 2.20	6.6	72.8	1.1453	5.93
40	24.3	18.3	4 x 2.78	3 x 2.78	8.35	116.5	0.7158	9.25
63	38.3	28.7	4 x 3.49	3 x 3.49	10.5	183.5	0.4545	14.38
100	60.8	45.6	4 x 4.40	3 x 4.40	13.2	291.2	0.2863	22.52
125	83.3	48.6	12 x 2.97	7 x 2.97	14.9	362.7	0.2302	27.79
160	107	62.2	12 x 3.36	7 x 3.36	16.8	464.2	0.1798	35.04
200	133	77.8	12 x 3.76	7 x 3.76	18.8	580.3	0.1439	43.13
250	167	97.2	12 x 4.21	7 x	21	725.3	0.1151	53.92

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Code Number	Nominal cross sectional area		Conductor construction		Approx. overall diameter	Approx. overall weight	Max DC Resistance at 20 °C	Rated strength
	Al	Alloy	Al	Alloy				
	mm2		No. x Ø (mm)		mm	Kg / km	Ω / km	KN
				4.21				
250	131	138	18 x 3.04	19 x 3.04	21.3	742.2	0.1154	60.39
315	263	61.3	30 x 3.34	7 x 3.34	23.4	892.6	0.0916	60.52
315	165	174	18 x 3.42	19 x 3.42	23.9	935.1	0.0916	76.09
400	334	77.8	30 x 3.76	7 x 3.76	26.3	1133.5	0.0721	75.19
400	210	221	18 x 3.85	19 x 3.85	27	1187.5	0.0721	95.58
450	375	87.6	30 x 3.99	7 x 3.99	27.9	1275.2	0.0641	84.59
450	236	249	18 x 4.08	19 x 4.08	28.6	1335.9	0.0641	107.52
500	417	97.3	30 x 4.21	7 x 4.21	29.4	1416.9	0.0577	93.98
500	262	277	18 x 4.31	19 x 4.31	30.1	1484.3	0.0577	119.47
560	467	109	30 x 4.45	7 x 4.45	31.2	1586.9	0.0515	105.26
560	504	65.4	54 x 3.45	7 x 3.45	31	1571.9	0.0516	101.54
630	454	205	42 x 3.71	19 x 3.71	33.4	1820	0.0458	130.25
630	271	417	24 x 3.79	37 x 3.79	34.1	1897.5	0.0458	160.19
710	512	232	42 x 3.94	19 x 3.94	35.5	2051.2	0.0407	146.78
710	305	470	24 x 4.02	37 x 4.02	36.2	2138.4	0.0407	180.53
800	577	261	42 x 4.18	19 x 4.18	37.6	2311.2	0.0361	165.39
800	344	530	24 x 4.27	37 x 4.27	38.4	2409.5	0.0361	203.41
900	649	294	42 x 4.43	19 x 4.43	39.9	2600.1	0.0321	186.06
900	567	388	54 x 3.66	37 x 3.66	40.2	2638.4	0.0321	199.54

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Code Number	Nominal cross sectional area		Conductor construction		Approx. overall diameter	Approx. overall weight	Max DC Resistance at 20 °C	Rated strength
	Al	Alloy	Al	Alloy				
	mm2		No. x Ø (mm)		mm	Kg / km	Ω / km	KN
1000	816	215	72 x 3.80	19 x 3.80	41.8	2849.1	0.0289	190.94
1000	630	432	54 x 3.85	37 x 3.85	42.4	2931.6	0.0289	221.71
1120	914	241	72 x 4.02	19 x 4.02	44.2	3191	0.0258	213.85
1120	705	483	54 x 4.08	37 x 4.08	44.9	3283.4	0.0258	248.32
1250	1020	269	72 x 4.25	19 x 4.25	46.7	3561.4	0.0231	238.68
1250	787	539	54 x 4.31	37 x 4.31	47.4	3664.5	0.0231	277.14
1400	1143	302	72 x 4.50	19 x 4.50	49.4	3988.8	0.0207	267.32

A1/A3 Conductors IEC 61089 Standard

Code Number	Nominal cross sectional area		Conductor construction		Approx. overall diameter	Approx. overall weight	Max DC Resistance at 20 °C
	Al	Alloy	Al	Alloy			
	mm2		No. x Ø (mm)		mm	Kg / km	Ω / km
16	9.78	7.33	4 x 1.76	3 x 1.76	5.29	46.8	1.7896
25	15.3	11.5	4 x 2.21	3 x 2.21	6.62	73.1	1.1453
40	24.4	18.3	4 x 2.79	3 x 2.79	8.37	117	0.7158
63	38.5	28.9	4 x 3.50	3 x 3.50	10.5	184.3	0.4545
100	61.1	45.8	4 x 4.41	3 x 4.41	13.2	292.5	0.2863
125	83.7	48.8	12 x 2.98	7 x 2.98	14.9	364.1	0.2302
160	107	62.5	12 x 3.37	7 x 3.37	16.9	466	0.1798
200	134	78.1	12 x 3.77	7 x 3.77	18.8	582.5	0.1439
250	167	97.6	12 x 4.21	7 x 4.21	21.1	728.1	0.1151
250	132	139	18 x 3.05	19 x 3.05	21.4	746	0.1154
315	263	61.4	30 x 3.34	7 x 3.34	23.4	894.4	0.0916
315	166	175	18 x 3.43	19 x 3.43	24	940	0.0916
400	334	78	30 x 3.77	7 x 3.77	26.4	1135.8	0.0721
400	211	222	18 x 3.86	19 x	27	1193.7	0.0721

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Code Number	Nominal cross sectional area		Conductor construction		Approx. overall diameter	Approx. overall weight	Max DC Resistance at 20 °C
	Al	Alloy	Al	Alloy			
	mm2		No. x Ø (mm)		mm	Kg / km	Ω / km
				3.86			
450	376	87.7	30 x 3.99	7 x 3.99	28	1277.8	0.0641
450	237	250	18 x 4.10	19 x 4.10	28.7	1342.9	0.0641
500	418	97.5	30 x 4.21	7 x 4.21	29.5	1419.8	0.0577
500	263	278	18 x 4.32	19 x 4.32	30.2	1492.1	0.0577
560	468	109	30 x 4.46	7 x 4.46	31.2	1590.1	0.0515
560	505	65.5	54 x 3.45	7 x 3.45	31.1	1573.9	0.0516
630	456	206	42 x 3.72	19 x 3.72	33.4	1826	0.0458
630	272	420	24 x 3.80	37 x 3.80	34.2	1909	0.0458
710	514	232	42 x 3.95	19 x 3.95	35.5	2057.8	0.0407
710	307	473	24 x 4.03	37 x 4.03	36.3	2151.4	0.0407
800	579	262	42 x 4.19	19 x 4.19	37.7	2318.7	0.0361
800	346	533	24 x 4.28	37 x 4.28	38.5	2424.2	0.0361
900	651	294	42 x 4.44	19 x 4.44	40	2608.5	0.0321
900	569	390	54 x 3.66	37 x 3.66	40.3	2649.5	0.0321
1000	818	216	72 x 3.80	19 x 3.80	41.8	2855.4	0.0289
1000	632	433	54 x 3.86	37 x 3.86	42.5	2943.9	0.0289
1120	916	242	72 x 4.02	19 x 4.02	44.3	3198.1	0.0258
1120	708	485	54 x 4.09	37 x 4.09	45	3297.2	0.0258
1250	1022	270	72 x 4.25	19 x 4.25	46.8	3569.3	0.0231
1250	791	542	54 x 4.32	37 x 4.32	47.5	3679.9	0.0231

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Code Number	Nominal cross sectional area		Conductor construction		Approx. overall diameter	Approx. overall weight	Max DC Resistance at 20 °C
	Al	Alloy	Al	Alloy			
	mm2		No. x Ø (mm)		mm	Kg / km	Ω / km
1400	1145	302	72 x 4.50	19 x 4.50	49.5	3997.6	0.0207

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