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Allowable Amperage of Conductors of 50 Volts or More

The current values shown in Table F and also on Table D do not consider voltage drop for conductors under 50 volts. The values shown on the ampacity table are the maximum safe amperages which the conductor can carry on a continuous basis. They do not apply to intermittent starting loads such as motor start currents. Since all Ancor™ Boat Cable is 105°C insulated, only that temperature rating is shown.

Due to the higher ambient temperatures in engine spaces and the heat retention of large wire bundles, a "correction factor" must be used to derate the wire by increasing conductor size. Table F takes into consideration these factors and should be used to select conductor sizes for circuits over 50 volts. Note that for electrical systems under 50 volts, voltage drop is the controlling factor and the tables on 195 and 196 should be used.

Conductor Size AWG	2 Conductors 221°F (105°C) Engine Space		3 Conductors 221°F (105°C) Engine Space		4–6 Conductors 221°F (105°C) Engine Space		7–24 Conductors 221°F (105°C) Engine Space	
	Outside	Inside	Outside	Inside	Outside	Inside	Outside	Inside
18	20	17.0	14.0	11.9	12.0	10.2	10.0	8.5
16	25	21.3	17.5	14.9	15.0	12.8	12.5	10.6
14	35	29.8	24.5	20.8	21.0	17.9	17.5	14.9
12	45	38.3	31.5	26.8	27.0	23.0	22.5	19.1
10	60	51.0	42.0	35.7	36.0	30.6	30.0	25.5
8	80	68.0	56.0	47.6	48.0	40.8	40.0	34.0
6	120	102.0	84.0	71.4	72.0	61.2	60.0	51.0
4	160	136.0	112.0	95.2	96.0	81.6	80.0	68.0
3	180	153.0	126.0	107.1	108.0	91.8	90.0	76.5
2	210	178.5	147.0	125.0	126.0	107.1	105.0	89.3
1	245	208.3	171.5	145.8	147.0	125.0	122.5	104.1
1/0	285	242.3	199.5	169.6	171.0	145.4	142.5	121.1
2/0	330	280.5	231.0	196.4	198.0	168.3	165.0	140.3
3/0	385	327.3	269.5	229.1	231.0	196.4	192.5	163.6
4/0	445	378.3	311.5	264.8	267.0	227.0	222.5	189.1

Number of current carrying conductors:	Correction Factor
3	0.70
4 to 6	0.60
7 to 24	0.50
25 and above	0.40

Table F is supplied to eliminate the need for calculating the corrections for multi-conductor cable bundles to Table E. The values are already corrected.

Note: These tables only apply for 221°F (105°C) wire and other premium wire and should not be used for lesser grades of wire and cable.

Reprinted at the courtesy of the United States Coast Guard Electrical System Compliance Guideline.

* There is NO LIMIT on conductors in a bundle under 50 volts.

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