



If an individual branch exceeds 25% of the total Trunk wire length, that branch shall be designed with the same gauge wire as the Trunk wire. Other branches less than 25% can be designed with a wire size no more than 1 size smaller than the Trunk wire size.

Wire Sizing Charts – (last updated April 2013)

Number of Units	Wire distance in feet														
	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	11000	12000	13000	14000	15000
50	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG
100	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG
150	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG
200	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG
250	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	12 AWG
300	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	12 AWG	12 AWG	12 AWG	12 AWG
350	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG
400	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG
450	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG
500	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	10 AWG
550	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	10 AWG	10 AWG	10 AWG
600	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	10 AWG	10 AWG	10 AWG	10 AWG
650	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	12 AWG	12 AWG	12 AWG	12 AWG	12 AWG	10 AWG	10 AWG	10 AWG	-	-
700	14 AWG	14 AWG	14 AWG	14 AWG	14 AWG	12 AWG	12 AWG	12 AWG	12 AWG	10 AWG	10 AWG	10 AWG	-	-	-
750	14 AWG	14 AWG	14 AWG	14 AWG	12 AWG	12 AWG	12 AWG	12 AWG	10 AWG	10 AWG	10 AWG	10 AWG	-	-	-

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Number of Units	Wire distance in meters														
	1000	1250	1500	1750	2000	2250	2500	2750	3000	3250	3500	3750	4000	4250	4500
50	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²
100	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²
150	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²
200	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²
250	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²
300	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	4.0mm ²	4.0mm ²
350	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²
400	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²
450	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²
500	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²
550	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	6.0mm ²
600	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	6.0mm ²	6.0mm ²
650	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	6.0mm ²	6.0mm ²	6.0mm ²	6.0mm ²
700	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	6.0mm ²	6.0mm ²	6.0mm ²	6.0mm ²	-
750	2.5mm ²	2.5mm ²	2.5mm ²	2.5mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	4.0mm ²	6.0mm ²	6.0mm ²	6.0mm ²	6.0mm ²	-	-

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Initial Length of Run from Interface to First ICM

In addition to the above wire sizing chart, if the chart recommends 14 AWG (2.5 mm²) wire path and the initial run of wire between the Interface and the first ICM on the wire path is greater than 2,500 feet (750m) then the initial length of wire (from interface to the first ICM) should be upsized by one additional wire size to 12 AWG (4.0mm²). This is only necessary when 14 AWG (2.5 mm²) is the recommended wire size. If the chart recommends 12 AWG (4.0 mm²) based on number of units and total length of run of the wire path, then additional upsizing in a long initial run of wire is not necessary.