

Wire Sizing

Measure the distance from the electrical utility panel and Skystream, include the tower height. Refer to the table below and based on the measured distance and system voltage select the appropriate wire size.

Battery charging systems may utilize smaller gauge wire than indicated in the Wire Size Table. Refer to diagrams in Appendix A for wire sizes. The smaller wires are based on allowing 4% voltage line loss for battery charging systems compared to 2% line losses indicated in the Wire Size Table.

Wire Size	Maximum Distance			
	120 V	120/208 V	230 V	120/240 V
4 AWG (25 mm ²)	197 m	270 m	285 m	310 m
6 AWG (16 mm ²)	124 m	170 m	179 m	195 m
8 AWG (10 mm ²)	78 m	93.3 m	113 m	123 m
10 AWG (6 mm ²)	49 m	67.0 m	70.7 m	77 m
12 AWG (4 mm ²)	31 m	42.4 m	44.5 m	48.5 m
14 AWG (2.5 mm ²)	20 m	26.5 m	28 m	30.5 m

Use copper conductors only - Minimum wire temperature rating is 75° C (167° F). Distances and wire sizes are based on 1800 W power production and maximum 2% voltage line loss. Distances for 120 V system based on 3000 W power production and 8% voltage line loss.

The largest wire size that may be connected to Skystream's yaw terminals is 6 mm² (# 8 AWG), refer to Figure 3. If a larger wire is required because of the installation distance; Skystream Energy Europe recommends installing a disconnect switch box close to the base of the tower and running 6 mm² wire between Skystream and the disconnect box. Larger wire may then be run from the switch box to the electrical utility panel.