

DISCONNECTS and ARRAY WIRING DEVICES

Array/Controller Disconnect

753-010 15A to 63A, 12 or 24V **\$99**
Extra Breakers \$15 Ea.



You will need to have a fused-disconnect (DC circuit breaker) between the module array and the charge controller and between the charge controller and the battery bank. We now offer both disconnects in one small box and include a negative bus bar. We label the box for you, and best of all, you can even add two DC load circuit breakers if needed. The breakers are available in 15, 20, 30, 40, 50 or 63 amps. The array breaker must be at least 33% greater than the amperage output of your array and at least 50% greater if you will have winter snow reflection in your climate. The controller circuit breaker (battery disconnect) should be sized for the size charge controller you have. Because the included breakers were specifically designed for DC use, no extra fuses are required.

MC4 Module Interconnects

Tyco Module Interconnects

Module interconnects are sold in pairs having one male and one female connector crimped onto 20' of 12 ga USE wire. Each wire is color coded for polarity: red for positive and black for negative. We can supply both MC4 and Tyco type connectors.

310-002 MC4 Pair of 20' Cables **\$39**
Longer than 20' add \$1.40 ft

310-003 Tyco Pair of 20' Cables **\$39**
Longer than 20' add \$1.40 ft



MC4 Type Connectors



AC/DC Lightning Arrestor

757-020 MidNite Lightning Arrestor **\$119**
 Up to 300V DC or 250V AC

The MidNite MNSPD300 can be used anywhere a lightning arrestor is needed: either AC or DC. The three major uses are between a remote generator and inverter, typically at the inverter end, between an array and charge controller at the charge controller end and possibly at the array combiner box to protect imbedded by-pass diodes. One could also be used to protect a submersible pump. Although this lightning arrestor is more expensive than the previous versions we sold, the SPD300 has been tested to actually work. The response time is less than a micro-second. Diagnostic blue LEDs light when voltage is present between L1 & Gnd and L2 & Gnd letting you know the unit is actually functioning. (Please note when protecting an array or the array side of a charge controller, the LEDs will be off when the sun is not present.) We now use the MidNite lightning arrestor in all our pre-wired kits.



DC Lightning Protectors

330-001 12V, 24V or 48V DC **\$16**



Every PV system needs a lightning protector between the module array and the charge controller. This is most conveniently installed in the array disconnect circuit breaker box. This unit is designed to work with 12 or 24 volt systems.

Array Junction Boxes

These are weather-proof plastic UL listed wiring boxes complete with cover and gasket. They are used to make connections between the array wiring and the array down-lead wires. You locate and drill the holes (using an inexpensive 13/16" spade bit) for the weather-tight connectors. Connection can be made using the terminal blocks or split bolt connectors listed below. The boxes can also serve as weather heads on electrical conduit.

355-006 6" x 6" x 4" **\$24.00**
355-008 8" x 8" x 4" **\$46.00**

ARRAY WIRING DEVICES

PV Combiner Boxes

757-103	MidNite MNPV3 10.5"x 5"x 3.25"	\$99.00
757-106	MidNite MNPV6 12.75"x 8"x 3.25"	\$119.00
757-112	MidNite MNPV12 14.5"x12"x3.5"	\$179.00
343-0xx	MNPV Circuit Breakers 10,15 and 20 Amps 10,000A interrupt current	\$15.00



MNPV

354-010	MNTS Fuse Holder 600VDC	\$6.25
344-0xx	MNFUSE 6,10,15,20 Amps	\$6.25

A PV combiner box provides a convenient way to meet the NEC requirements for series fusing of PV modules.

MidNite Solar makes 3, 6 and 12 position PV combiner boxes. They are each housed in a gray aluminum rainproof enclosure and accept three, six or 12

150VDC breakers respectively. The MNPV6 will accept four 600VDC touch safe fuse holders and the MNP12, ten 600VDC fuse holders for grid-tie arrays. Each has both a negative bus and ground bus which accept up to 1/0 AWG wire size. The positive bus also accepts 1/0 AWG wire. Maximum total output current is 120 amps.



MNPV6 & MNPV3



MidNite Solar MNPV6: Open and Inside Views

Weathertight Connectors

Weathertight connectors are used to maintain a weather -or water- tight seal around module interconnect wires as they exit a module or array junction box. They also act as a strain relief. Two types are used when wiring arrays: a plastic connector for #12 USE module interconnects and a plastic connector with a rubber insert for #10 UF array down-lead cable (if used).



Weathertight Connector for Modules

353-001	\$3.00
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Weathertight Connector for #10 UF cable

353-009	\$9.00
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Split Bolt Connectors

These are used to connect two copper wires together in a junction box. They must be covered with several layers of electrical tape afterwards to insulate them.



323-008	8-10 ga. Wire	\$3.75
323-006	6 ga. Wire	\$5.00
323-004	4 ga. Wire	\$7.00
323-002	2 ga. Wire	\$7.60

Solderless Lugs

These wire end connectors can be used when crimped or soldered connectors are not available. However we would not recommend making your own battery cables with these connectors.



324-006	6 to 14 ga. wire, 3/16" ring	\$1.20
324-004	4 to 14 ga. wire, 1/4" ring	\$1.40
324-300	3/0 to 4 ga. wire, 3/8" ring	\$4.50

Terminal Block

325-004	\$11
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This is a four position terminal block rated for 85 amps. It will accept up to 4 AWG wire. It can be used to facilitate wiring between your array and charge controller.

L 2-3/8" D 1-1/4" H 1-1/8"



Terminal Block

325-006	\$8
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This is a six position terminal block rated for 63 amps. It will accept up to 6 AWG wire. It can be used to facilitate wiring between your array and charge controller.

L 3-3/8" D 1-1/16" H 1-1/16"

