



## Technical Services Bulletin

### ReadyWatt™ 12x12 Combiner Box for PV Installations

- Intended Use
- Provided Components
- Code Compliant Installation

#### Intended Use

The ETL listed ReadyWatt™ Combiner Box is intended to provide a secure, economical and code compliant method of combining multiple PV source circuits into one or two source circuits. The combiner box also provides a convenient location to begin the necessary conduit run from the PV array to the power conditioning equipment. This 12x12 Combiner Box can accommodate up to 12 low voltage circuits using breakers or up to 8 high voltage circuits using Touchsafe™ fuseholders and fuses.

Low Voltage Option – EO Part#: 600COMB12X12LV

High Voltage Option – EO Part#: 600COMB12X12HV

#### Components

##### Includes the following components:

- NEMA 3R 12"x12" enclosure (grounded)
- DIN rail holding up to (12) low voltage breakers or up to (8) high voltage fuses
- (2) positive terminal fingered bus bars
- (1) 15 position negative terminal bus bar
- (1) 15 position ground terminal bus bar

##### Optional components specified at purchase:

- Cord grips with 2 or 3 conductor inserts
- High voltage option: Up to (8) 30A, 600VDC Touchsafe™ fuse holders and fuses – 10A, 15A or 20A
- Low voltage option: Up to (12) single pole, 125 VDC breakers – 10A, 15A or 20A
- Additional negative bus bar when two output circuits are desired



#### Special Features

The ReadyWatt™ Combiner Box is an elegant, professional solution to the need for combining and staging your photovoltaic array wire runs. It features:

- Extra heavy duty enclosure
- Easy wire terminations
- ETL listed to UL 508A standard

#### Applicable Code Sections

The ReadyWatt™ Combiner Box complies with NEC requirements including but not limited to: 690.8, 314.40 and 690.9.

## Code Compliant Installation

The PV combiner NEMA 3R enclosure must be mounted in an upright orientation since a 1/4" weep hole is pre-drilled in the bottom to drain any moisture that may accumulate inside. Mount the combiner on a flat wall, strut frame or on the side-of-pole.

**Low Voltage Option:** Push the breakers onto the DIN rail. Insert the fingered bus bars into the output ends of the breakers. If using two positive bus bars, overlap two fingers to connect them together. Loosen the DIN rail end brackets and slide them together so they hold the breakers together. Retighten the end brackets.

**High Voltage Option:** Push the fuse holders onto the DIN rail. Insert the fingered bus bars into the output ends of the fuse holders. If using two positive bus bars, overlap two fingers to connect them together. Loosen the DIN rail end brackets and slide them together so they hold the breakers together. Retighten the end brackets.

**Two Outputs Option:** Install the second negative bus bar. Make sure that the positive fingered bus bars do NOT overlap.

**All Options:** Remove the appropriate knockouts on the bottom of the enclosure and install conduit fittings or liquid tight cord grips. Insert the input conductors (USE-2 cable in free-air with quick connects or THHN/THWN-2 in conduit) into the box and strip back enough insulation for proper contact with the terminals. Connect the positive input conductors to the load side of the fuse holder or breaker. Connect the negative conductors to the PV negative bus bar and the ground conductors to the equipment ground bus bar. Connect the output conductors (14 AWG up to 1/0 cable) to the appropriate bus bars. Use the torque table below to correctly torque all connections.

Terminal Torque Specs	
Negative/ Ground bus bars, small lug.	35 in-lbs
Negative/ Ground bus bars, large lug.	50 in-lbs
Positive fingered bus bar, output terminal	50 in-lbs
Fuse Holder	20 in-lbs
Breaker	20 in-lbs

