Solar Combiner Box Specifications
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SECTION 16XXX

COMBINER BOX - SOLAR

PART 1  GENERAL

1.1  SUMMARY
A. Furnish and install solar combiner box and accessories for DC circuits as shown on the drawings.

1.2  RELATED SECTIONS
A. Section 16XXX- Enclosures
B. Section 16491 – Fuses

1.3  REFERENCES
A. Fused Combiner Box shall comply with:
   1. UL 1741
   2. NEC® 690

1.4  SUBMITTALS
A. Drawings:
   1. Submit enclosure dimensional sizing and conduit entry/exit locations.
B. Product Data: Submit manufacturer's product data sheets including:
   1. Assembly (including switching, switches, control wiring and accessories) ratings (voltage, current, and short-circuit current rating).
   2. Conductor termination temperature ratings for conductors terminated in the field.
   3. Fuse ratings and type.
C. Provide 10 copies of above.

1.5  CLOSEOUT SUBMITTALS - PROVIDE
A. Final as-built drawings and product data information.
B. Operation, instruction, and maintenance manuals including replacement parts list.
C. 10 copies of 1.5A and 1.5B must be provided to the owner or the owner’s designated representative.

1.6  QUALIFICATIONS
A. The equipment manufacturer shall have a minimum five years experience in producing electrical distribution system panels.

1.7  DELIVERY, STORAGE AND HANDLING
A. Equipment shall be handled and stored in a manner that avoids damage.
B. Equipment shall be inspected prior to installation for damage. Damaged equipment must not be installed.

1.8  MAINTENANCE MATERIALS
A. A minimum of 10% or 3 three spare fuses of each size and type installed shall be included.

PART 2  PRODUCTS

2.1  GENERAL
A. Manufacturer:
   1. Cooper Bussmann

2.2  CONSTRUCTION
A. Combiner Box with Integral finger-safe non-fused Disconnect Switch (600VDC).
   Provide combiner box(s) complete with circuitry as necessary to protect the equipment including disconnect switch with finger-safe fuse holders having all necessary fusing and other options, as shown on drawings and listed below:
   1. The manufacturer shall be Cooper Bussmann. The series shall be BCBD.
   2. A finger-safe, non-fused disconnect is required and it shall be interlocked to prevent the opening of the cover when the switch is in the ON position. Interlock shall be defeatable for testing purposes. Handle must be lockable in OFF position.
   3. The combiner box shall be arranged to have between 4 and 24 input circuits with a 28A, 55A, 75A, 150A or 245A non-fused disconnect switch rating.
   4. Individual ampere rating of the fuses shall be as indicated on the drawing. Manufacturer of 600 VDC fuses shall be Cooper Bussmann. Series shall be KLM or DCM.
   5. All fuse holders shall be finger-safe and shall have local open-fuse indication. Manufacturer of the fuse holders shall be Cooper Bussmann. The fuseholder shall be the CHM1D Series.
   6. The enclosure shall be NEMA 3, 3R, 4 or 4X with seamless door gaskets for combiner boxes with an integral disconnect rated 28, 55, 75, 150, or 245 amperes.
   7. All busing shall be copper.
   8. The combiner box shall have 90°C field wireable output terminations.
B. Standard Combiner Box (600VDC).

Provide combiner box(s) complete with circuitry as necessary to protect the equipment including fuse holders with all necessary fusing and other options, as shown on drawings and listed below:

1. The manufacturer shall be Cooper Bussmann. The series shall be BCBS.
2. The combiner box shall be arranged to have between 4 and 24 input circuits.
3. Individual ampere rating of the fuses shall be as indicated on the drawing. Manufacturer of 600 VDC fuses shall be Cooper Bussmann. Series shall be KLM or DCM.
4. All fuse holders shall be finger-safe and shall have local open-fuse indication. Manufacturer of the fuse holders shall be Cooper Bussmann. The fuseholder shall be the CHM1D Series.
5. The enclosure shall be NEMA 3, 3R, 4 or 4X with seamless door gaskets.
6. All busing shall be copper.
7. The combiner box shall have 90°C field wireable output terminations.

C. Compact Combiner Box (600 VDC).

Provide compact combiner box(s) complete with circuitry as necessary to protect the equipment including fuse holders with all necessary fusing and other options, as shown on drawings and listed below:

1. The manufacturer shall be Cooper Bussmann. The series shall be BCBC.
2. The compact combiner box shall be arranged to have between 2 and 6 input circuits.
3. Individual ampere rating of the fuses shall be as indicated on the drawing. Manufacturer of 600 VDC fuses shall be Cooper Bussmann. Series shall be KLM or DCM.
4. All fuse holders shall be finger-safe and shall have local open-fuse indication. Manufacturer of the fuse holders shall be Cooper Bussmann. The fuseholder shall be the CHM1D Series.
5. The enclosure shall be NEMA 4X with seamless door gaskets.
6. All busing shall be copper.
7. The combiner box shall have 90°C field wireable output terminations.

PART 3 EXECUTION

3.1 INSTALLATION

A. Equipment shall be installed and handled in accordance with the manufacturer’s recommendations.

B. Equipment shall have a nameplate installed and mounted to the front cover and indicate, at a minimum: number of input circuits, ampere rating of input circuits, voltage rating, short-circuit current rating, and integrated disconnect ampere rating if provided.