

SUGGESTED SPECIFICATION
For
Quick Connect Input and Output Power Panels

1. GENERAL

- 1.1. Quick Connect Input Power panels shall provide a convenient, reliable and economical way to connect temporary emergency power from portable generators to a facility in conjunction with an ASCO transfer switch. Quick Connect Output Panels shall provide a convenient way to connect load banks to a facility.
- 1.2. The Quick Connect Power panels shall be available in rating configurations from 400 Amp to 4000 Amp Service. Input Panels shall be listed to UL 1008 as a transfer switch accessory; Output Panels shall be listed to UL 891 for Switchboards.
- 1.3. Quick Connect Power Panels shall be ASCO 300 Series (3QC). Any alternate shall be submitted for approval to the consulting engineer at least 10 days prior to bid. Alternate bids must list any deviations from this specification.

2. MECHANICAL

- 2.1. All quick connect power panels shall be Type 3R compliant and constructed of aluminum, mild steel or Stainless Steel. The Type 3R rating shall be maintained with the temporary cables installed.
- 2.2. Cables shall enter and exit the wiring chamber via access holes specifically designed for conductors and shall be provided with a bushing or shall be formed so that there are no sharp edges with which conductor insulation may come in contact.
- 2.3. Connections shall be arranged so that cables drape downward when connected.
- 2.4. 400-800 Amp Models
 - 2.4.1. The quick connect panel shall have an enclosure manufactured of aluminum and painted ANSI 61 gray or Grade 316 stainless steel.
 - 2.4.2. The quick connect panel enclosure dimensions shall be 24" wide x 32" high x 11" deep.
 - 2.4.3. The quick connect panel shall include four (4) integral mounting tabs for wall mounting.
 - 2.4.4. The quick connect panel shall be divided into an upper termination chamber and a lower wiring chamber.
 - 2.4.5. The upper termination chamber shall have a dead front panel covering all exposed electrical parts.
 - 2.4.6. The lower chamber shall have individual cable holes to restrict access and reducing the possibility of theft.

- 2.4.7. The cable access holes shall have a hinged cover held closed by springs inherently resistant to corrosion in order to securely cover the cable access holes when the temporary cables are not installed.
- 2.4.8. The quick connect panel shall have an additional cable lock plate to reduce risk of cable theft. This lock plate will also serve to lock the hinged cable access door(s) when the temporary power cables are not installed.
- 2.4.9. The quick connect panel shall have an outer single hinged access door restricting access to both wiring chambers for safety and security.
- 2.4.10. The outer access door shall have a padlock hasp preventing unauthorized entry.

2.5. 1200 and 1600 Amp Models

- 2.5.1. The quick connect panel shall have an enclosure manufactured of 12 gauge galvanized steel painted ANSI 61 gray or 316 stainless steel..
- 2.5.2. The quick connect panel enclosure dimensions shall be 35" wide x 56" high x 28" deep.
- 2.5.3. The quick connect panel shall include four (4) feet for floor or concrete pad mounting. Holes in the bottom of the feet shall be available for anchoring the enclosure to the floor or pad.
- 2.5.4. The quick connect panel shall be divided into an upper termination chamber and a lower wiring chamber.
- 2.5.5. The upper termination chamber shall have a key lock handle door covering all exposed electrical parts.
- 2.5.6. The lower chamber main door shall have a key lock handle main door covering all exposed camlock connectors.
 - 2.5.6.1. The lower chamber main door shall have a smaller trap door for cable egress. This trap door shall have a key lock handle to preventing unauthorized entry.

2.6. 2000A-4000A Amp Models

- 2.6.1. The quick connect power panel shall have an enclosure manufactured of aluminum or 316 stainless steel.
- 2.6.2. The quick connect panel shall not have enclosure dimensions that exceed 39.00" H x 31.00" W x 50.00"D for 2000A and 39.00" H x 48.00" W x 50.00"D for 2400A and above.
- 2.6.3. The quick connect panel shall be able to accommodate rear, side and bottom cable entry.
- 2.6.4. Multiple Chamber style design to isolate permanent connections and camlock connections.
- 2.6.5. Pad-lockable tamper resistant door preventing access to temporary connections while unit is in use.
- 2.6.6. Trap door for cable egress.

- 2.6.6.1. 45 degree camlocks for hassle free connection eliminating stress on cables during operation.
- 2.6.7. Provisions for Trap Key interlock prevent access to temporary connections while cables are energized.
- 2.6.8. Slotted fingers to restrict cable access reducing theft.

3. ELECTRICAL

- 3.1. The quick connect panel shall be have input and output connections rated up to 600 VAC, as specified in the contract documents.
 - 3.1.1. Input Panels - Recessed male connectors
 - 3.1.2. Output Panels - Female connectors with flip covers.
- 3.2. All electrical connectors shall be cam type single pole connectors compatible with Marinco or Leviton 16 Series CAM Locks™ and available color coded as per industry standard practice:
 - 3.2.1. 240V and below: phase 1 = black, phase 2 = red, phase 3 = blue (if required).
 - 3.2.2. 440 to 480V: phase 1 = brown, phase 2 = orange, phase 3 = yellow.
 - 3.2.3. Ground shall always be green.
 - 3.2.4. Neutral shall always be white.
- 3.3. 400-800 Amp Models
 - 3.3.1. The upper termination chamber shall be provided with lug terminals for the permanently installed conductors.
 - 3.3.2. The lower chamber shall have the cam type single pole connectors as specified above:
 - 3.3.2.1. For 400A models, there shall be one (1) row of up to five (5) series single pole connections.
 - 3.3.2.2. For 800A models, there shall be two (2) rows of up to five (5) single pole connections.
 - 3.3.3. Withstand Current Rating (WCR) shall be no less than 10kA verified by testing supervised by a Nationally Recognized Testing Laboratory, not by calculation.
- 3.4. 1200-1600A Amp Models
 - 3.4.1. The upper termination chamber shall have copper buss bars:
 - 3.4.1.1. Designed for a current density not to exceed 725 amps per square inch cross sectional area
 - 3.4.1.2. With holes to accommodate standard ½” hardware drilled on 1.95” centers.

- 3.4.2. The lower chamber shall have the cam type single pole connectors as specified above:
 - 3.4.2.1. For 1200A, there shall be three (3) rows of up to 5 single pole connections.
 - 3.4.2.2. For 1600A, there shall be four (4) rows of up to 5 single pole connections.
- 3.4.3. Withstand Current Rating (WCR) shall be no less than 22kA verified by testing supervised by a Nationally Recognized Testing Laboratory, not by calculation.

3.5. 2000A-4000A Amp Models

- 3.5.1. The rear chamber which houses the permanent connections will have mechanical lugs.
 - 3.5.1.1. For 2000A, there shall be six (6) single (#2 AWG to 600 MCM) mechanical lugs.
 - 3.5.1.2. For 2400A, there shall be eight (8) single (#2 AWG to 600 MCM) mechanical lugs.
 - 3.5.1.3. For 2800A, there shall be nine (9) single (#2 AWG to 600 MCM) mechanical lugs.
 - 3.5.1.4. For 3200A, there shall be ten (10) single (#2 AWG to 600 MCM) mechanical lugs.
 - 3.5.1.5. For 3600A, there shall be eleven (11) single (#2 AWG to 600 MCM) mechanical lugs.
 - 3.5.1.6. For 4000A, there shall be twelve (12) single (#2 AWG to 600 MCM) mechanical lugs.
- 3.5.2. The front of the panel shall have the cam type single pole connectors as specified above:
 - 3.5.2.1. For 2000A, there shall be three (5) rows of up to 5 single pole connections.
 - 3.5.2.2. For 2400A, there shall be four (6) rows of up to 5 single pole connections.
 - 3.5.2.3. For 2800A, there shall be three (7) rows of up to 5 single pole connections.
 - 3.5.2.4. For 3200A, there shall be four (8) rows of up to 5 single pole connections.
 - 3.5.2.5. For 3600A, there shall be three (9) rows of up to 5 single pole connections.
 - 3.5.2.6. For 4000A, there shall be four (10) rows of up to 5 single pole connections.
- 3.5.3. Withstand Current Rating (WCR) shall be no less than 100kA verified by testing supervised by a Nationally Recognized Testing Laboratory, not by calculation.
- 3.5.4. Phase Rotation Monitor
- 3.5.5. Two wire auto start

4. COMPLIANCE

- 4.1. The 400-4000 Amp quick connect Input panel must be listed to UL 1008 under Annex J as a Transfer Switch Accessory. Output Panel must be listed to UL 891 for Panelboards.

4.2. "Built to the standard" shall not be allowed: the quick connect panels shall be tested in accordance with and listed to UL 1008 or UL 891 standards.

4.3. UL 50 Listed enclosures may be used but only listed to UL 50 shall not be acceptable.

5. **Warranty & Service**

5.1. The Quick Connect panel shall come with a warranty of no less than 24 months from date of shipment.

5.2. The Quick Connect Power Panel provider shall maintain a national service organization of company-employed personnel located throughout the contiguous United States.

5.3. The service center's personnel must be factory trained and must be on call 24 hours a day, 365 days a year.