

# **SPECIFICATIONS FOR GENERATOR DOCKING STATIONS WITH BREAKER**

## **PART 1 – GENERAL REQUIREMENTS**

### **1.01 Scope:**

- A. Contractor shall furnish, deliver, install and test the generator docking stations as specified herein and in accordance with the drawings.

### **1.02 Quality Assurance:**

- A. Generator docking station shall be UL listed and labeled under the UL 1008 standard.
- B. Generator docking station manufacturer shall provide a complete factory assembled, wired and tested generator docking station.
- C. Generator docking station manufacturer shall submit UL 1008 Certificate of Compliance.
- D. Generator docking station shall be factory Hi-pot tested for a period of not less than 60 seconds.
- E. Generator docking station installation shall meet all applicable NEC standards.

### **1.03 Submittals:**

- A. Contractor shall submit manufacturer's drawings and data of generator docking stations for Engineer's approval prior to start of fabrication. Drawings and data shall include, as a minimum, dimensioned general arrangement drawings and wiring diagrams, UL listing information including UL control or file number, , short circuit rating or withstand rating, component data, mounting provisions, conduit entry locations and installation instructions.
- B. Upon installation of generator docking stations Contractor shall submit manufacturer's Operating & Maintenance Manual which shall include as a minimum:
  - 1. Certified as-built General Arrangement drawings and Wiring Diagram.
  - 2. Materials / Component List including part numbers.
  - 3. Maintenance and service requirements.
  - 4. Certificate of Compliance and hi-pot test data.

### **1.04 Warranty:**

- A. Generator docking stations shall be covered by manufacturer's warranty for a minimum period of (1) one year after shipment from manufacturer.

## SECTION 2 - PRODUCTS

### 2.01 **General:**

- A. All equipment shall be new.
- B. Generator docking stations manufacturer must have produced and sold UL 1008 Listed generator docking stations as a standard product for a minimum of (3) years.
- C. Generator docking stations shall include a molded case circuit breaker; knife switch or fused switches are not acceptable.
- D. Contractor shall be responsible for the equipment until it has been installed and is finally inspected, tested and accepted in accordance with the requirements of this Specification.
- E. Generator docking stations shall be TempTap® as manufactured by ESL Power Systems, Inc. or equal as approved by the Engineer.

### 2.02 Generator Docking Stations:

- A. Generator docking station shall consist of (1) one molded case circuit breaker; cam-style male connectors, power distribution block and grounding terminals, all housed within a padlockable enclosure.
- B. Generator docking station enclosure shall be Type 3R, constructed of continuous seam-welded, powder coated galvanneal steel. The main access shall be through an interlocked, hinged door that extends the full height of the enclosure. Access for portable generator cables with female cam-style plugs shall be via a) drawn flange cable entry openings in the bottom of enclosure for wall mount units, or b) hinged lower door for pad mount units. A hinged flap door shall be provided to cover the cable openings when cables are not connected; the hinged flap door shall allow cable entry only after the main access door has been opened. Enclosure shall be powder coated after fabrication; color shall be wrinkle gray RAL 7035.
- C. Number of male input cams shall not exceed the number as shown on the drawings and must be rated for the specified amperage.
- D. Cam-style male connectors (inlets) shall be UL Listed single-pole separable type and rated 400 amps at 600VAC. Cam-style male connectors shall be color coded. Cam-

style male connectors shall be provided for each phase and for ground, and shall also be provided for neutral if required. Each of the phase cam-style male connectors within the enclosure shall be factory-wired to a molded case circuit breaker. The ground cam-style male connectors shall be bonded to the enclosure, and a ground lug shall be provided for connection of the facility ground conductor. The neutral cam-style male connectors, if required, shall be factory wired to a power distribution block. None of the cam-style male connectors shall be accessible unless the molded case circuit breaker is in the "OFF" position and the main access door is open.

- E. Molded case circuit breaker shall be UL Listed and the short circuit interrupt rating shall be a minimum of 35kAIC at 480VAC. Trip rating of the molded case circuit breaker shall be as shown on the drawings. Molded case circuit breaker shall include UL Listed door-mounted operating mechanism (with provisions for a locking device), preventing the opening of the main access door unless the breaker is in the "OFF" position. Molded case circuit breaker shall be mounted behind a deadfront panel. The molded case circuit breaker shall not be energizable unless the main access door is closed and the molded case circuit breaker is in the "ON" position.
- F. Generator docking station shall be suitable for use as service equipment in the USA as defined by the NEC.
- G. Generator docking stations shall include permanently affixed operation instructions.

## SECTION 3 - EXECUTION

### 3.01 **Installation:**

- A. Prior to installation of generator docking stations, Contractor shall examine the areas and conditions under which the generator docking stations is to be installed and notify the Engineer in writing if unsatisfactory conditions exist.
- B. generator docking stations shall be installed as shown on the drawings and per the manufacturer's written instructions. In addition, the installation shall meet the requirements of local codes, the National Electrical Code and National Electrical Contractors Association's "Standard of Installation".
- C. Conduit entry into the generator docking stations shall be by Contractor; Contractor shall furnish and install UL listed watertight conduit hubs, as manufactured by MYERS, T&B or other, for each conduit entry on the generator docking stations. The incoming hub size shall match the conduit size for feeders and ground as shown on the drawings. The outgoing hub size shall match the conduit size for loads and ground as shown on the drawings.
- D. Any conduit penetrations that are above live parts must be properly sealed to prevent moisture intrusion from the conduit. A UL Listed or Classified expanding foam sealant

(such as Rainbow Quick Seal 79547), or other sealing product meeting local codes and NEC requirements should be used to seal the interior of the conduit around the cables. The product selected must be able to permanently seal around all wires and the conduit (common "Duct Seal" is not acceptable for this application). The sealing shall be done at the entry into the enclosure so the seal can be verified and inspected from inside the enclosure. Failure to seal may allow water to drip on live parts and will void warranty. Hubs shall be properly installed and tightened to maintain Type 3R integrity of the generator docking stations enclosure.

- E. Contractor shall terminate feeder conductors, load conductors and ground per the manufacturer's instructions. All field wiring terminations shall be torqued as required per the instructions on the generator docking station's circuit breaker & ground lug.

### 3.02 **Field Testing:**

- A. Prior to energizing generator docking station, the Contractor shall perform the following checks and tests as a minimum:
  1. Verify mounting and connections are complete and secure.
  2. Verify internal components and wiring are secure.
  3. Perform continuity check of all circuits.
  4. Perform 1,000 VDC megger test on feeder, load and ground cables.
  5. Verify deadfront is secure.
  6. Confirm operation of the generator docking stations ground receptacle by attaching a plug to the generator docking stations ground receptacle and then verify that the plug is grounded to the facility ground.

End of Section