

# SPECIFICATIONS FOR THE COMPANY SWITCH

## SECTION 1 – GENERAL

### 1.01 **Scope:**

- A. Furnish, deliver, install and test company switches in accordance with these specifications and the drawings.

### 1.02 **Codes and Quality Assurance:**

- A. Company switch manufacturer must have produced and sold company switches for the past (2) two years. Contractor shall submit a list of at least (3) three customers who are currently using company switches produced by the proposed manufacturer.
- B. Company switch shall comply with the requirements of the NFPA 70.
- C. Company switch shall be UL Listed as an assembly and labeled as such. The individual cam-style receptacles and the main circuit breaker within the company switch shall also be UL Listed.
- D. Company switch shall be Hi-Pot tested at 1500VAC by the manufacturer for a period of not less than 60 seconds.
- E. Company switch manufacturer shall provide a completely factory assembled, wired, and tested company switch.

### 1.03 **Submittals:**

- A. Contractor shall submit manufacturer's drawings and data of company switches for Engineer's approval prior to start of company switch fabrication. Drawings and data shall include, as a minimum, dimensioned general arrangement drawings and wiring diagrams, list of (3) customers, verification of UL Listing, mounting provisions, and conduit entry provisions.
- B. Upon installation of company switches, and as a requirement before payment is made, Contractor shall submit (x) sets of complete manufacturer's Operating & Maintenance Manuals which shall include:
  - 1. As-built dimensioned General Arrangement drawings and Wiring Diagram.
  - 2. Materials / Component List including part numbers.
  - 3. Maintenance, service requirements and methods.
  - 4. Certificate of Compliance, documenting UL Listing and hi-pot test data.

### 1.04 **Warranty:**

- A. All equipment 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. 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.

### 2.02 **Company Switches:**

- A. Company switch enclosures shall be NEMA 3R-type, constructed of continuous seam-welded, powder coated 14-gauge steel. Access shall be through an interlocked, hinged door that extends the full height of the enclosure. Enclosures shall be powder coated matte black wrinkle finish after fabrication. Each phase shall have a color-coded cam-style receptacle within the enclosure which is factory-wired to a molded case main circuit breaker. The current interrupt rating of the main circuit breaker shall be as shown on the drawings, and the short-circuit interrupt rating shall be a minimum of 65KAIC at 240VAC. The ground cam-style receptacle shall factory wired and bonded to the enclosure. A ground lug shall be provided for the connection of the facility ground conductor. The terminals for the feeder conductors shall be as required to accommodate conductor sizes as shown on the drawings.
- B. Company switch safety-interlocking mechanism shall be integrated with the access door, preventing the cam-style receptacles from being energized unless A) a mating plug is properly connected into each of the phase and ground cam-style receptacles, and B) the access door is closed. The mechanism shall allow manual de-energizing but must also automatically de-energize the company switch if an attempt is made to partially or fully open the access door while the company switch is energized.
- C. Pilot Lights for each phase and for ground shall be located behind a clear window in the access door. Lights shall illuminate only when mating plugs are properly connected to the respective cam-style receptacles. Lights shall illuminate when mating plugs are properly connected the cam-style receptacles. Pilot Lights shall be full voltage red colored LEDs with replaceable LED lamps. An additional white colored LED Pilot Light to indicate Power Available shall also be located behind the window.
- D. Cam-style receptacles for each phase and ground shall be single-pole separable connectors, UL Listed and rated 400-ampere 600VAC. The cam-style receptacle housing shall be manufactured out of Santoprene or approved equivalent thermoplastic elastomer (TPE) and shall be color coded. The contacts shall be brass.

- E. The bottom of the company switch enclosure shall have a hinged door to cover the cable entry openings when cables are not connected. The cable entry openings shall allow portable cables with male connectors to pass through.
- F. Company switch shall be configured to allow for conduit entry on the top of the enclosure.
- G. Company switches shall be [ESL Power Systems, Inc.](#) ShowSwitch or approved equal.

## SECTION 3 - EXECUTION

### 3.01 **Installation:**

- A. Prior to installation of the company switch, Contractor shall examine the areas and conditions under which the company switch is to be installed and notify the Engineer in writing if unsatisfactory conditions exist.
- B. Contractor shall install the company switch as shown on the Drawings and per the manufacturer's written instructions. In addition, the installation shall meet the requirements of local codes, the NEC, and shall conform with the National Electrical Contractors Association's "Standards of Installation".
- C. Conduit entry into the company switch shall be by Contractor; Contractor shall furnish and install conduit hubs, as manufactured by MYERS or T&B, for each conduit entry on the company switch. The hub size shall match the conduit size for feeders and ground as shown on the drawings for feeders and ground.
- D. Contractor shall terminate feeder conductors and ground per the manufacturer's instructions. A corrosion inhibitor shall be used on all field wiring terminations in the company switch. All field wiring terminations shall be torqued as required per the instructions on the terminal block.

### 3.02 **Testing:**

- A. Refer to Section (x) for site testing requirements.