

**SPECIFICATION FOR -GANG MOUNTED
SAFETY-INTERLOCKED REEFER OUTLET ASSEMBLIES**

STANDARD SPECIFICATIONS

I. Description of Work

- A. Provide -Gang, -mounted ROAs with Safety-Interlocked Modules as shown on drawings. ROAs shall be as manufactured by ESL Power Systems, Inc. (Tel: (800) 922-4188) or approved equivalent.

II. Quality Assurance

- A. Manufacturer of ROAs must have produced and sold multi-gang ROAs for at least the past 5 years upon engineer's request. Contractor shall submit list of 3 customers who can verify that they are currently using multi-gang ROAs produced by the ROA manufacturer at the specified Short Circuit Rating.
- B. ROAs shall be UL Listed as an assembly and labeled as such. The individual Modular Safety-Interlocked Reefer Outlets within each ROA shall also be UL Listed. The UL Listing and UL Labeling of the Multi-Gang Assemblies shall be for A RMS Symmetrical Short Circuit Rating @ 440/480VAC.

III. Reefer Outlet Assemblies (ROAs):

- A. ROA Enclosures shall be Type 4X, constructed of continuous seam-welded, 304 stainless steel. Access for the mounted ROAs shall be through a 304 stainless steel, hinged, gasketed cover with a watertight seal. All hardware shall be 304 or 316 stainless steel. Enclosures shall be powder-coated after fabrication. Modular Safety-interlocked Reefer Outlets (Modules) within the enclosures shall be factory-prewired to a single molded case UL recognized Circuit Breaker. Size and location of opening for conduit fitting and the feeder size, phase and ground, shall be as specified on the drawings.
- B. Each ROA shall include a provision for moisture absorption within the enclosure.
- C. All installation hardware shall be stainless steel or as shown on the Drawings.

IV. Individual Modular Safety-Interlocked Reefer Outlets:

- A. Modular Safety-Interlocked Reefer Outlets (Modules) shall be 32 ampere 480VAC (IEC 309-2, CEE-17 3h), ESL Cat. No. R32-480-30-22SNDUÚ-SP*. Each safety-interlocked Module shall include a UL 489 Listed molded-case circuit breaker with 30-ampere trip rating and ampere interrupting capacity at 480VAC. The 32A receptacle housing shall be manufactured out of impact resistance and chemical resistant polyamide material. The receptacle insert shall be a high-temperature Rynite® insert. The Module frame and mechanism interlock shall be constructed of stainless steel and shall include a spring loaded, self-aligning, stainless steel snap cover and a ½" minimum O.D. stainless steel on/off control rod.

* ESL Cat. No. R32-480-30-22SNDPP-SP is used as an example. Please contact ESL for appropriate catalog number for your custom project.

- B. The Module interlocking mechanism shall be _____ in design. The mechanism shall prevent the Outlet from being energized unless a mating plug is fully inserted and the on/off control rod engaged. The mechanism shall allow manual de-energizing but must also automatically de-energize the Outlet if the mating plug is partially or fully withdrawn. The mechanism must be fully operational if the plug nose key is damaged or missing. The mechanism must not operate if the ground pin is missing from the mating plug.

V. Installation:

- A. Prior to installation of ROAs, Contractor shall examine the areas and conditions under which the ROAs are to be installed and notify the Engineer in writing if unsatisfactory conditions exist.
- B. ROAs 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 NEC and National Electrical Contractors Association's "Standard of Installation".
- C. Gasketed Conduit Hubs shall be used at all conduit entries into the ROAs. Hubs shall be of same material as conduit and shall be properly installed and tightened to maintain NEMA Type 4 integrity of the ROA Enclosure.
- D. All ROA field wiring connections shall be per the specifications and as shown on the ROAs. This includes size, number and material of conductors in addition to torque requirements.
- E. Contractor shall furnish and install UL approved *Polycel[®] Expanding Foam* or approved equal for sealing all conduit entries in each ROA Enclosure. The sealing product must permanently seal around all wires in the conduit (common "Duct Seal" is not acceptable for this application). Failure to properly seal all conduit entries may allow moisture into the ROA and cause internal corrosion problems. The sealing shall be done at the entry into the enclosure so the seal can be verified and inspected by removal of the access cover.
- F. The moisture-absorbing system (MAS) provided by the ROA manufacturer must only be unwrapped and installed immediately before the enclosure is closed for the last time (after all wiring, sealing, and inspections have been completed). The enclosure interior must be free of all dirt, debris and moisture and the access cover must be secured tightly once the MAS has been installed.

(End of Section)