ELECTRICAL MODULAR BUILDING/E-HOUSE

Description

JRS offers fully integrated electrical and automation systems. Our products include prefabricated, modular, skid-mounted enclosures for switchgear and auxiliary equipment. We deliver self-contained units, which are completely coordinated, assembled and tested inside our controlled factory environment. The primary switchgear and control applications include low- and/or medium-voltage switchgear and motor control centre enclosures; relay panel enclosures; and RTU and SCADA enclosures.

Roof System

- R20 or more fibreglass insulation (mineral wool is optional)
- 26 gauge white steel liner panel
- 6 mill vapour barrier

Wall System

- Doors, receptacles, assemblies, walls, and other major components are 22 gauge pre-painted panels
- R20 or more fibreglass insulation (mineral wool is optional)
- 26 gauge white steel liner panel
- 6 mill vapour barrier

General Specifications

Self framing or rigid framing structure
Pad mounted or mounted on piles
The E-House can be up to 75 feet in length, 17 feet in width and 14.5 feet in height. Other dimensions are available upon request
Flat, gabled, or single slope roof
Modular construction that allows for the building to be split
Stackable design available
Fully insulated
Fire proofing upon request
Custom design for application: switchgear, VFD or other equipment
Bottom lift
HVAC and ancillary services
Fully wired and tested

Wall System

- Welded I-beam perimeter
- Welded C-Channel joists
- ¼” checker floor plate
- SP-6 sandblast
- Epoxy coat paint including one coat primer
- 2” spray form urethane foam insulation to the underside
- Lifting lugs

Doors

- Single doors are 36” wide 16-gauge steel construction with stainless steel hinges, outside handle with thumb piece and key lock, low profile panic hardware on the inside with a hydraulic door closer.
- Double doors are 72” wide, with optional removable wall panels above the door.
- All doors are 96” high
- Doors are standard ULC listed fire doors in ULC listed steel frames. Rated doors in listed frames comply explicitly with the VBBL 2007.

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Wiring and Grounding

All wiring and bus work is copper

Cable trays are provided for power, control and communication cables

Lighting and receptacle wires are installed in EMT conduit

Low-voltage wiring is 600-V-rated RW90. Minimum size is #12 AWG per 15 A circuits

Grounding bus bar is provided. All equipment and tray are tied to the common grounding bus

The E-House has four grounding lugs, one on each corner of the building

The lugs are 5/8” x 2.0” x 3.5” stainless steel ground pad with 2 ½-13 holes on 1.75” centers. Two lugs on the opposite corners of the building are tied to the internal ground bus

Ancillary Equipment

Interior lighting will include Industrial grade vapour-proof fixtures with fluorescent bulbs. LED fixtures are optional

Emergency exit signs and battery-backed lighting installed at each exit.

Fire Alarm panel with battery backup, with:

- Ceiling mounted smoke detector
- Manual pull station at each door
- Exterior mounted multi-tone horn/strobe light
- CO2 fire extinguisher canister at each door

Power panels: One three-phase, 42 circuit station service panel plus a smaller single-phase panel supplied from a UPS unit with batteries; panels equipped with circuit breakers. Other voltages and configurations are available upon request

Basic ventilation is achieved through an exhaust fan and intake filtered air controlled by a thermostat

Optional HVAC (cooling & heating):
Can either be wall mount BARD type units or Pad/Roof mount units depending on requirements

Optional positive pressurization
Typical station service transformer is 600 Volt to 120/208 Volt in a 25-125 kVA configuration; other sizes and voltages are available upon request

Components

- JRS will work with the customer to procure and install the required components and switchgear.
- JRS is able to work with many different suppliers of equipment to meet various applications.
- Alternatively, JRS will install any equipment that is free issued by the customer.

Nameplates

Doors, receptacles, assemblies, and major components are labelled with Lamicoid nameplates, including the customer equipment numbers if required. All high-voltage compartments are labeled with appropriate warning labels.

Documentation

Complete documentation is included with each E-House. Documentation includes three sets of prints and three sets of manuals containing schematics, layouts, wiring diagrams, bill of material, spare-parts list, and technical information on any purchased equipment. The drawings are available in AutoCAD format.

Testing and Warranty

A test plan is provided for each E-House for customer approval. Warranty is 12 months from date of placement in service or 18 months from date of shipping.

Codes, Standards & Regulations

JRS E-Houses are designed to meet the requirements of the National Building Code of Canada. They are manufactured and certified to CSA A-660 standards. Other applicable North American standards can be met as well.

Electrical services such as HVAC, light and receptacles are wired as per the requirements of the CEC part one and the installation is inspected and certified by an approved third party agency.

Ordering Information

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