APPLICATION

The EBMRS Industrial Control Switches are used as a means of disconnecting power from motors, lighting and power circuits. EBMRS series enclosures are suitable for use in Class I, Groups B, C, D, Class II, Groups E, F, G and Class III hazardous (classified) areas as defined by the National Electrical Code* (NEC).

ENCLOSURE INSTALLATION

WARNING
To provide protection against fire or shock hazard, electrical power must be OFF before and during installation and maintenance.

1. It is not necessary nor recommended to remove the cover during enclosure installation. If it becomes necessary, see Removing and Reinstalling Cover on page 1.
2. Select a mounting location that will provide suitable strength and rigidity for supporting the enclosure, all contained wiring and control devices.
3. Install four 1/2” diameter mounting bolts in the mounting surface. Then remove the top two in preparation for placing the enclosure in position.
4. Install detachable mounting feet while enclosure is on the floor or work bench. (See figure 1).
   • Insert four wedge shaped mounting feet into dovetail slots in enclosure body.
   • Tap each foot to securely tighten into slot.
5. Position enclosure on surface with mounting feet on the lower two mounting bolts. While continuing to support the enclosure in position, install the top two bolts. Tighten all four mounting bolts securely in place.
6. Securely fasten enclosure to the mounting location, then attach into conduit system. Install approved conduit sealing fittings as required by the NEC, plus any other applicable codes. Use explosionproof RE reducers for conduit smaller than tapped opening.

CAUTION
Conduit sealing fittings are required on all conduit entrances (within eighteen inches of the enclosure) of EBMRS series enclosures when used in Class I, Div. 1, Groups B, C, D hazardous areas. Use Crouse-Hinds type EYS seals. For other sealing requirements, consult the National Electrical Code.

CAUTION
Sealing fittings must be installed in accordance with the NEC and properly poured. See instructions supplied with sealing fittings. NOTE: Select nipple lengths sufficient to permit sealing fittings and unions to clear the flange.

CAUTION
Hazardous location information specifying class and group is marked on the nameplate of each enclosure.
No conduit openings are to be added in the field.
All unused conduit openings must be plugged with explosionproof plugs. Plugs must be a minimum of 1/8 inch thick, such as Crouse-Hinds type PLG, and engage a minimum of five full threads.

CAUTION

To prevent external fire or explosion, DO NOT connect to a supply circuit capable of delivering more than 10000 RMS symmetrical amperes. DO NOT install on the body it which will produce external temperatures exceeding the ignition temperature of the flammable or combustible materials which may surround this enclosure. Circuit interrupting devices, such as switches, relays and circuit breakers which may be installed in the enclosure, may fail electrically or mechanically unless they have been investigated and found suitable for operation in the hazardous locations involved.

Removing and Reinstalling Cover

Covers and bodies are matched and inspected as a pair at the factory. If more than one enclosure is being installed, take care not to mix covers and bodies. Replace the cover on the body it was shipped with from the factory. If necessary, mark covers and bodies before disassembling to keep them properly matched.

• Place the enclosures on a flat horizontal surface. Loosen all

*National Electrical Code is a Registered Trademark of the National Fire Protection Association
GROUNDING AND BONDING

Grounding and bonding of the conduit and equipment is required by the National Electrical Code. A grounding conductor, when used, must be connected to the grounding lug(s), furnished.

WARNING
EBMRS series enclosures must be securely attached into a permanently grounded system in accordance with Article 501-16, 502-16 of the National Electrical Code.

Determine the type of distribution system to be used that will comply with NEC requirements and ensure grounding continuity. All conductive materials that enclose the electrical conductors or attached equipment or forming part of such equipment must be grounded. A permanent conducting connection must be made between all such equipment and the earth.

OPENING COVER

EBMRS enclosures are furnished with captive triple lead bolts, that utilize a spring to aid in and indicate full retraction of the bolts into the cover when opening and closing. Make sure all cover bolts are fully retracted into the cover before attempting to open or close the cover.

FIGURE 2

When bolts are disengaged from the body flange threads, the bolts will withdraw and be held in this position by the spring and washer under the bolt heads. (See figure 2). After the bolts are fully disengaged, firmly grasp the bottom and right side of the cover and carefully swing cover aside to prevent damage to the ground joint surface. Avoid striking cover, or devices in cover, on neighboring enclosures or structures.

CAUTION
Hammers or prying tools must not be allowed to damage the flat ground joint surfaces. Do not handle cover roughly, or if removed, place it on surfaces that might damage or scratch the flat ground joint surfaces.

CAUTION
Do not use cover bolts as a means to lift the enclosure. Excessive force on the fully retracted cover bolts may damage the bolts/spring assembly.

WIRING

WARNING
In compliance to the NEC, max conductor size for the 100 amp switch in this enclosure is #1 AWG.

1. Pull all phase conductors and grounding conductors into enclosure and make connections to the line pressure connector terminations on the switch following the wiring pattern established for your system. Connect grounding conductors.
2. Pull all load side conductors into enclosure and make connections to the load pressure connector terminations on the switch following the wiring pattern established for your system. Connect grounding conductors.
3. Connect auxiliary contact conductors (if applicable) to the small contact block terminals.
4. Test wiring for correctness with continuity checks and for unwanted grounds with insulation resistance tester. Be certain all exposed metal parts are grounded.

CAUTION
Before closing cover, be certain all bolts are retracted fully into the cover flange and do not project beyond the ground surface. This is important to prevent damage to the ground joint surface by the bolts as the cover is being closed. When closing cover be sure wiring is not pinched between body and cover flanges.

When cover is closed, push cover bolts into body and start thread engagement. Start all threads by hand before wrenching and bolts tight. Torque to 40-45 ft. lbs. Use ONLY bolts supplied with the enclosure. These are special bolts (marked EBM11.45lb. ft.) and substitutes for them may impair the explosionproof safety of the enclosure.

REPLACEMENT PARTS
- RSWP303
- RSWP603
- RSWP1003

MAINTENANCE

WARNING
Always disconnect primary power source before opening enclosure for inspection or service.

1. Frequent inspections should be made. A schedule for maintenance checks should be determined by the environment and frequency of use. It is recommended that it should be at least once a year.
2. Perform visual, electrical and mechanical checks on all components on a regular basis.
   - Visually check for undue heating evidenced by discoloration of wires or other components, damaged or worn parts, or leakage evidenced by water or corrosion in the interior.
   - Electrically check to make sure that all connections are clean and tight and that contacts in the components make or break as required.
   - Mechanically check that all parts are properly assembled and operating mechanisms move freely.
3. Make sure all cover bolts are fully retracted into cover before closing cover on body. Close cover and start cover bolt threads by hand. Torque all cover bolts securely to 40-45 ft. lbs.
4. We recommend an Electrical Preventative Maintenance program as described in the National Fire Protection Association Bulletin NFPA No. 70B.
GROUNDING AND BONDING

Grounding and bonding of the conduit and equipment is required by the National Electrical Code. A grounding conductor, when used, must be connected to the grounding lug(s), furnished.

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CAUTION
Clean both ground joint surfaces of body and cover before closing. Dirt or foreign material must not accumulate on flat ground joint surfaces. Surfaces must seat fully against each other to provide a proper explosionproof joint.

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Figures 1 Mounting Feet

REMOVING AND REINSTALLING COVER

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