To avoid damage to equipment or personnel injury, electrical power must be off before and during installation and maintenance.

EMP/EMPS Barrel Assemblies:

1. Prepare explosionproof/dust-ignitionproof junction box (i.e. EJB as shown in Crouse-Hinds catalog) with drilled and tapped openings at planned locations for each barrel assembly. Centerline distances between devices should be arranged to provide sufficient spacing for electrical connections. Recommended centerline spacing between devices is 2-5/8 inches.

2. Remove guards, indicating plates, jewel assemblies, outer locknuts, etc. to enable barrels to be threaded into panel. Leave final locknut on barrel for surface mounting applications.

3. Thread barrel assemblies into drilled and tapped holes from behind so they protrude to the panel front.

4. Adjust length of barrel protrusion and thread inner locknut tightly against inside wall for surface mounting. For panel mounting, thread lock ring with set screw tight to outside of threaded wall, then tighten set screw.

5. Replace guards, indicating plates, jewel assemblies, outer locknuts, etc. The panel is now ready for installation and wiring connection.

To avoid fire or explosion, check for dirt, grit, or other foreign material on the mating surfaces of the cover and body. Be certain that each surface is wiped completely clean before reassembling. Surfaces must seat fully against each other to provide a proper explosionproof seal.

When EMP and EMPS devices are to be installed in Crouse-Hinds equipment, refer to Installation Instruction Sheet that came with that equipment for proper installation.

<table>
<thead>
<tr>
<th>EMP/EMPS Barrel Assemblies</th>
<th>EMP019</th>
<th>EMPS019</th>
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<tbody>
<tr>
<td>EMP029</td>
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<td>EMP039</td>
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<td>EMP079</td>
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<td>EMP089</td>
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</tr>
<tr>
<td>EMP ATEX PLUG</td>
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<td></td>
</tr>
</tbody>
</table>

Table 1
NOTE:

1. Mounting dimensions shown are recommended dimensions only and may be varied. Inside depth of device will vary as enclosure wall thickness changes (inside depths shown based on 5/8 inch enclosure wall thickness).

2. Mushroom button protrusion dimension shown for EMP098 maintained stop pushbutton is minimum recommended and may be varied to suit desired height.

3. All devices are 3/4-14 NPSM thread size.

4. All devices are provided with a locking ring and a locknut for locking from two directions on face of unit.

Figure 1
EMP/EMPS Devices For Surface Mounting Applications
**MAINTENANCE**

**WARNING**

To avoid damage to equipment or personnel injury, electrical power must be **off** before and during installation and maintenance.

1. Regular inspections should be made. A schedule for maintenance check 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.
   - 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.
   - Replacement switches are available from your local Crouse-Hinds distributor.

3. We recommend an Electrical Preventive Maintenance program as described in the National Fire Protection Association Bulletin NFPA No. 70B.

**ELECTRICAL RATINGS**

- **Pushbutton Stations And Selector Switches:**
  - Heavy Duty — 600 VAC max., 125VDC Standard Duty
  - UL Contact Rating — A600, P150

- **EMP/EMPS Barrel Assemblies Only:**
  - ATEX: ITS07ATEX15652U
  - IECEx: ETL14.0005U

**COMPLIANCES**

(When used in an approved hazardous locations enclosure, for Class I, Group B application, 5/8” minimum panel thickness is required.)

- NEC: Class I, Div. 1 & 2, Groups B, C, D
  - Class II, Groups E, F G
  - Class III
- NEMA: 7CD, 9EFG, 12
- UL Standard: 698
- CSA Standard C22.2 No. 30

**CONDITIONS OF USE**

- Operators must be installed to provide a minimum 8 threads of engagement.
- These units have not been evaluated for ambient temperatures outside of -20°C to +60°C.
- The operators may be installed in enclosures where the reference pressure does not exceed 751.5 kPa (109 PSI) without further evaluation.
- Operators must be installed per manufacturer’s instruction sheet IF1702.
- Plug must be installed to provide a minimum 8 threads of engagement.
- Machining of flamepaths is not allowed.
- Earthing of the components must be addressed in the end use.

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**CONNECTION DIAGRAMS**

**Pushbutton/Selector Switches:**

EMP/EMPS Barrel Assemblies use momentary and maintained contact pushbuttons and selector switches whose contacts are either normally open (N.O.) or normally closed (N.C.). Typical contact positions are illustrated below:

![Maintained and Momentary Contact Positions](image)

**Catalog #**

<table>
<thead>
<tr>
<th>Style</th>
<th>Two Position</th>
<th>Two Circuit</th>
<th>Three Position</th>
<th>Four Circuit</th>
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<tr>
<td></td>
<td>EMP098, 0090</td>
<td>EMP/EMPS019, 039, 049, 0491, 0492, 0493</td>
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<td>EMP/EMPS089, 0891, 0892, 0893, 0894</td>
<td>EMP/EMPS098, 0991, 0992, 0993, 0994</td>
</tr>
</tbody>
</table>

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All statements, technical information and recommendations contained herein are based on information and tests we believe to be reliable. The accuracy or completeness thereof are not guaranteed. In accordance with Crouse-Hinds “Terms and Conditions of Sale,” and since conditions of use are outside our control, the purchaser should determine the suitability of the product for his intended use and assumes all risk and liability whatsoever in connection therewith.