

EMP/EMPS Barrel Assemblies, Panel Mounted Enclosures Installation & Maintenance Information

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

APPLICATION

EMP/EMPS Barrel Assemblies include, pushbutton switches, selector switches, and combinations. They are used in control stations, panels, and enclosures used in areas made hazardous due to the presence of flammable vapors, gases, or combustible dusts.

EMP's are suitable for use indoor and outdoor. The ATEX and IECEx certifications include all EMP's listed in table 1. EMP's meet the ATEX/IECEX directive and are certified by ETL.

EMP operates have an IP 64 rating. EMP's have the following classifications:

 II 2 G Ex db IIB+H2 and II 2 D Ex tb IIIC Db.

EMP's should be installed, inspected and maintained by qualified and competent personnel.

IMPORTANT NOTE:

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.

STANDARDS:

- IEC 60079-0 edition 6 2011-06
- IEC 60079-1 edition 6 2007-04
- IEC 60079-31 edition 1 2008-11
- EN 60079-0 2012
- EN 60079-1: 2007
- EN 60079-31: 2009

INSTALLATION

WARNING

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

CAUTION

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.

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.

EMP019	EMPS019
EMP029	EMPS029
EMP039	EMPS039
EMP049	EMPS049 -(1,2,3)
EMP059	EMPS059 -(1,2,3)
EMP069	EMPS069 -(1,2,3)
EMP079	EMPS079 -(1,2,3)
EMP089	EMPS089 -(1,2,3)
EMP ATEX PLUG	

Table 1

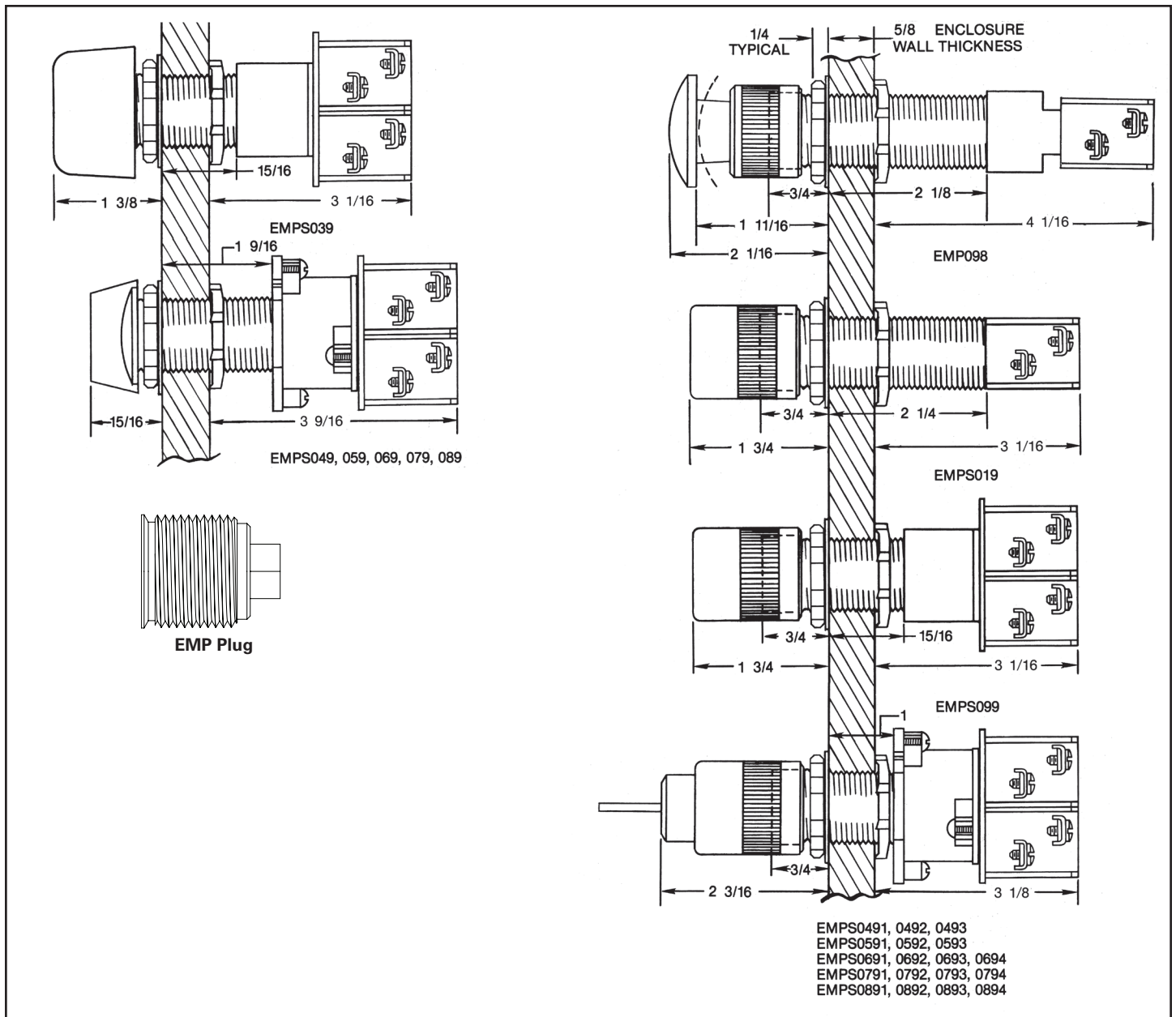


Figure 1
 EMP/EMPS Devices For Surface Mounting Applications

NOTE:

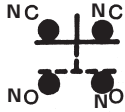
1. Mounting dimensions shown are recommended dimensions only and may be varied. Inside depth of device will vary as enclosure wall thickness changes (inside depths shown based on 5/8 inch enclosure wall thickness).
2. Mushroom button protrusion dimension shown for EMP098 maintained stop pushbutton is 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.

CONNECTION DIAGRAMS

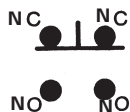
Pushbutton/Selector Switches:

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



Momentary



Catalog #	Position	Position	Position	
	Style	1	2	
Two Position				EMP098, 0090,
Two Circuit				EMP/EMPS019, 039, 049, 0491, 0492, 0493
Two Position				EMP0098,
Four Circuit				EMP/EMPS029, 059, 0591, 0592, 0593
Three Position Two Circuit				EMP/EMPS069, 0691, 0692, 0693, 0694
Three Position Four Circuit				EMP/EMPS079, 0791, 0792, 0793, 0794
Three Position Four Circuit				EMP/EMPS089, 0891, 0892, 0893, 0894

MAINTENANCE

WARNING

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

- 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.
- 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.
- 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

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

EMP/EMPS Barrel Assemblies Only:

- ATEX: ITS07ATEX15652U
- IECEX: ETL14.0005U

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.

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.