20A Non-Metallic Explosion Proof E-Stop Key Lock Switch w/ Lockout Device Class I, II, III - Mushroom Head, Label/NEMA Instruction Manual

Thank you for your purchase of the Larson Electronics HLSW-PB20-ES-LCK-M3.

WARNING

TO AVOID THE RISK OF FIRE, EXPLOSION OR ELECTRIC SHOCK, THIS PRODUCT SHOULD BE INSTALLED, INSPECTED AND MAINTAINED BY A QUALIFIED ELECTRICIAN ONLY, IN ACCORDANCE WITH ALL APPLICABLE ELECTRICAL CODES.

TO AVOID ELECTRIC SHOCK:

- BE CERTAIN ELECTRICAL POWER IS OFF BEFORE AND DURING INSTALLATION AND MAINTENANCE.
- PRODUCT MUST BE CONNECTED TO A WIRING SYSTEM WITH AN EQUIPMENT-GROUNDING CONDUCTOR.

TO AVOID EXPLOSION:

- MAKE SURE THE SUPPLY VOLTAGE IS WITHIN THE VOLTAGE RATING.
- ENSURE THE MARKED T RATING IS LESS THAN THE IGNITION TEMPERATURE OF THE HAZARDOUS ATMOSPHERE.
- DO NOT OPERATE IN AMBIENT TEMPERATURES ABOVE THOSE INDICATED ON THE PRODUCT NAMEPLATE.
- DO NOT OPERATE IF THE LENS, CORD, SEALS, HOUSING, RECEPTACLES, ETC. IS CRACKED OR DAMAGED. IF SO, DISCONTINUE USE AND CONTACT MANUFACTURER FOR REPLACEMENT PARTS.
- ALL FASTENERS SHOULD BE PROPERLY SEATED.

The HLSW-PB20-ES-KS-LCK-M3 from Larson Electronics is a Non-Metallic Explosion Proof Emergency Stop Key Lock Switch w/ Lockout Device that is rated for Class I, Division 2 Groups A, B, C & D, Class II, Division 2, Groups E, F & G and Class III, Divisions 1 & 2 hazardous environments. This ATEX certified single mushroom head emergency stop push button switch has a din rail mount design and is constructed of impact resistant glass reinforced non-metallic material with silicone gaskets. The unit has a black housing color with a red button and boasts a compact size for convenient mounting and use. The HLSW-PB20-ES-KS-LCK-M3 is equipped with an emergency stop shroud and lockout device. The key lock switch is constructed from aluminum and protects the button from being pushed or activated accidentally. The emergency stop shroud is also equipped with a through-hole that allows a lockout pin to be used and a red label with the message "MASTER EMERGENCY STOP".

1. General Safety Information:

CAUTION:

Before installing, make sure you are compliant with area classifications, failure to do so may result in bodily injury, death and property damage. Do not attempt installation until you are familiar with the following procedures. All installation must comply with the applicable Electrical Code.

Make sure that the circuit is De-energized before starting installation or maintenance.

Verify that the installation is grounded. Failure to ground will create electrical shock hazards, which can cause serious injury and or death.

IMPORTANT:

Please read these instructions carefully before installing or maintaining this equipment. Good electrical practices should be followed at all times and this data should be used as a guide only.

Technical information, advice and recommendations contained in these documents is based upon information that Larson Electronics believes to be reliable. All the information and advice contained in these documents is intended for use only by persons having been trained and possessing the requisite skill and know-how and to be used by such persons only at their own discretion and risk. The nature of these instructions is informative only and does not cover all of the details, variations or combinations in which this equipment may be used, its storage, delivery, installation, check out, safe operation and maintenance.

Since conditions of use of the product are outside of the care, custody and control of Larson Electronics, the purchaser should determine the suitability of the product for his intended use, and assumes all risk and liability whatsoever in connection therewith.

2. Installation Instructions:

A: Using a screwdriver with a #2 Phillips Head, a Standard Slotted or Robertson style head, unscrew the retained cover screws. Install the back box of the control station securely on a flat surface using mounting screws that shall fit the hole or slot (see dimensional drawing) and shall not damage supplied hole or slot. The use of a washer is allowed. Mounting dimensions are shown on this document. Also for convenience the non-metallic enclosures have this information molded into the back surface.

The non-metallic enclosures are identified with “TOP” molded on the inside of the cover and the back of the box. The stainless steel enclosures have the slots located at the bottom.

B: Install the conduit or cable to the box using fittings that are Certified as suitable for the area classification and service environment.

C: Connect conductors to the component terminals. Follow all wire stripping and terminal torque instructions for each component as described below.

Grounding connections are available at the din rail, earth continuity plate and internal external ground stud, if supplied* and hub locknut.

Bonding connections are available on covers and boxes of all stainless steel enclosures. All exposed metal should be bonded per applicable local electrical codes.

* An Internal - External ground stud with securement hardware is supplied on all stainless steel enclosures, and is offered as an option for installing into non-metallic (polymeric) enclosures.

D: Perform a continuity check to ensure the circuit is wired properly for the intended use.

E: Replace the enclosure cover making note of “TOP” molded inside the non-metallic covers and the orientation of the actuators for the stainless steel enclosures. Thread each cover screw half way into the threaded insert without completely tightening in a diagonal pattern. Then complete installation of cover by tightening screws in the same diagonal pattern to a minimum torque of 2.9 Nm (26 lb-in) to a maximum of 3.4 Nm (30 lb-ins.).
Before replacing cover, ensure all wires are neatly installed within the control station base and are well away from the lid base joint and gasketing area.

DO NOT OVERTIGHTEN OR USE AN IMPACT TOOL.

A consistent fit over the entire length of the cover joint should be verified at the time of installation.

F: Turn ON the supply circuit and test the system.

WARNING: Electrical shock or personal injury can result from device misalignment. Be sure actuators align with each control module.

Requirements for proper installation
For US/CAN Applications:

Series HLSW Contact Blocks and E-Stops shall be mounted to provide a minimum clearance of 14 mm and min. creepage of 21.6 mm.

For ATEX/IECEx Applications:

Series HLSW Contact Blocks and E-Stops shall be mounted to provide a minimum clearance of 10 mm and minimum creepage of 16 mm.

For DIN-rail mounting and removal of Contact Blocks and Pilot Lights, care should be taken not to damage the integral flexible clip.

To maintain the IP66 rating or Dust Protection method "tb", all actuator / enclosure sealing gaskets must be installed in accordance with these installation instructions.

Series HLSW Control Stations are provided without cable glands / conduit entries. When installing glands or entries, the cable glands / conduit entries must be certified as increased safety or flameproof, for protection type "tb", and have a minimum IP66 rating. ***To assure the IP ratings are not compromised, Cable Gland and Conduit Entry holes must not exceed the maximum dimensions noted in the gland/ entry manufacturer's installation instuctions.***

The end user shall provide bonding means as necessary. For IECEx and ATEX applications, the polymeric enclosures may be supplied with an optional internal/external IP66-rated Earthing Lug Kit.

All unused wiring terminals shall be tightened.

All conductors shall be suitable for the minimum ambient and maximum temperature achieved in service - use 90°C Conductors (minimum) for T6 applications, and 105°C conductors (minimum) for T5 and T4 applications. All conductors shall be sized per the National or Local Electrical Codes for the maximum continuous current or max. motor load of the installation.

All installations must comply with Electrical Installations design, selections, and erection standard IEC/EN 60079-14 and be maintained in accordance with Electrical installations inspection and maintenance standard IEC/EN 60079-17.