

SSA-EB Series Emergency Stop Buttons



Datasheet

22 mm Panel Mount Electro-Mechanical Push Buttons



- Push-to-stop, twist-to-release operation
- Rugged, modular design; easy assembly and installation
- Kits available for easy selection
- Choice of metal base with or without enclosure; all kits include disc label with “Emergency Stop” legend
- Choice of normally closed (safety) or combination normally closed/normally open (non safety) contacts
- Latching design complies with ISO 13850; direct (positive) opening operation per EN 60947-5-1



WARNING:

- **Not a safeguarding device**
- Failure to follow these instructions could result in serious injury or death.
- This device is not considered a safeguarding device because it requires an overt action by an individual to stop machine motion or hazards. A safeguarding device limits or eliminates an individual's exposure to a hazard without action by the individual or others. This device cannot be substituted for required safeguarding. Refer to the applicable standards to determine those requirements.

Models

Models		Contacts	Enclosure Included
SSA-EBM-02L		2 normally closed	No
SSA-EBM-11L		1 normally closed and 1 normally open	
SSA-EBM-12L		2 normally closed and 1 normally open	
SSA-EBM-02E		2 normally closed	Yes
SSA-EBM-11E		1 normally closed and 1 normally open	
SSA-EBM-12E		2 normally closed and 1 normally open	

Important -- Read This First!

The user is responsible for satisfying all local, state, and national laws, rules, codes, and regulations relating to the use of this product and its application. Banner Engineering Corp. has made every effort to provide complete application, installation, operation, and maintenance instructions. Please contact a Banner Applications Engineer with any questions regarding this product.

The user is responsible for making sure that all machine operators, maintenance personnel, electricians, and supervisors are thoroughly familiar with and understand all instructions regarding the installation, maintenance, and use of this product, and with the machinery it controls. The user and any personnel involved with the installation and use of this product must be thoroughly familiar with all applicable standards, some of which are listed within the specifications. Banner Engineering Corp. makes no claim regarding a specific recommendation of any organization, the accuracy or effectiveness of any information provided, or the appropriateness of the provided information for a specific application.



Applicable U.S. Standards	Applicable International Standards
ANSI B11 Standards for Machine Tools Safety Contact: Safety Director, AMT – The Association for Manufacturing Technology, 7901 Jones Branch Drive, Suite 900, McLean, VA 22102-4206 USA, www.amtonline.org	EN ISO 12100 Safety of Machinery – Basic Concepts, General Principles for Design
NFPA 79 Electrical Standard for Industrial Machinery Contact: National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471 USA, www.nfpa.org/	EN 60204-1 Electrical Equipment of Machines Part 1: General Requirements
ANSI/RIA R15.06 Safety Requirements for Industrial Robots and Robot Systems Contact: Robotic Industries Association, 900 Victors Way, Suite 140, Ann Arbor, MI 48108 USA, www.robotics.org	EN ISO 13849-1 Safety-Related Parts of Control Systems
	ISO 13856-1 (EN1760-1), Safety of Machinery – Pressure-Sensitive Protective Devices
	Contact: IHS Markit (Global Engineering Documents), 15 Inverness Way East, Englewood, CO 80112 USA, https://global.ih.com/

Overview

Models SSA-EB series are metal “mushroom-style” mechanical emergency stop buttons, available with or without a compact enclosure housing, to provide emergency stop actuation.

When the button is armed, the switch’s normally closed contacts are closed and its normally open contacts, if present, are open. When the button is pushed, the switch’s normally closed contacts open and its normally open contacts close. The contacts remain in this condition until the push button is manually rearmed. To manually rearm, twist the push button.

These emergency stop buttons are not safeguarding devices. They do not automatically protect personnel from injury.

Installation

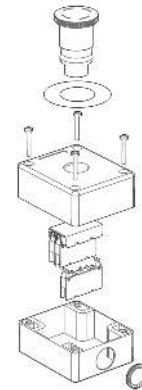
Mechanical Installation

1. Latch the push button onto the mounting adapter by rotating it.
2. Attach the mounting adapter to the mounting surface using the incorporated screws. (Tmax = 7.14 in-lb/0.8 Nm). Snap the auxiliary contacts onto the mounting adapter. Use the disc label with legend at every switch per appropriate standards
3. Mount the E-Stop button on a rigid surface that is easily accessible and visible to operators and other personnel. Refer to appropriate standards for recommendations on number and placement.

Electrical Installation

To access the wiring chamber, remove four screws and the cover. Conduit mounting via removable rubber plug or knockout.

Figure 1. Assembly



Maintenance

At machine set up, a Designated Person [¶] should test each emergency stop push button for proper machine shutdown response.

The Designated Person should check the emergency stop buttons for proper operation, physical damage, button looseness, and excessive environmental contamination. This should take place on a periodic schedule determined by the user, based on the severity of the operating environment and the frequency of switch actuations

Adjust, repair, or replace components as needed. If inspection reveals contamination on the switch, thoroughly clean the switch and eliminate the cause of the contamination. Replace the switch and/or appropriate components when any parts or assemblies are damaged, broken, deformed, or badly worn; or if the electrical/mechanical specifications (for the environment and operating conditions) have been exceeded.

Always test the control system for proper functioning under machine control conditions after performing maintenance, replacing the emergency stop device, or replacing any component of the device.

[¶] A Designated Person is identified in writing by the employer as being appropriately trained to perform a specified checkout procedure. A Qualified Person possesses a recognized degree or certificate or has extensive knowledge, training, and experience to solve problems relating to the emergency stop installation (reference ANSI B30.2).

Replacement Parts

8-LM2T-B6644

- 22.5 mm metal button (mounting adapter sold separately)
- Twist to release, mechanical latching ISO 13850 (EN 418) compliant
- Diameter 40 mm (without mounting adapter).



8-LM2T-C01

- Normally closed (N.C.) positively driven contact element
- Direct (positive) opening operation per IEC/EN 60947-5-1



8-LM2T-AU120

Metal mounting adapter for metal button



8-LM2T-C10

Normally open (N.O.) auxiliary contact element



LPZP1A5

- Compact size - 70mm x 70mm x 56mm (2.7" x 2.7" x 2.2")
- One 22mm hole (with key way) for installation of emergency stop palm/push button
- Maximum of three contact blocks
- Polycarbonate construction
- Wire entry via three sides (M16, M20 or M25) or the bottom (M16)
- Environmental rating: IP66, IP67 and IP69K (with proper installation and rated button)
- Mounting hole location (x4) - 45mm x 58mm



8-LM2T-AU115

- 60 mm diameter
- Non-adhesive plastic legend with "Emergency Stop" inscription



Specifications

Emergency Stop Push Button

Mechanical Life

300,000 operations

Operating Force

0.8 kg

Environmental Rating

IP65; NEMA 4/13

Operating Temperature

-25 °C to +60 °C (-13 °F to +140 °F)

Mounting Adapter

The adapter is fixed to the mounting surface using incorporated screws (Tmax = 0.8 N·m)

Construction

Plastic parts: Polyamide and polycarbonate
Metal parts: Aluminum and zinc alloy

Certifications



Compliant with EN/IEC 60497-1; -5-1

Contacts

European Rating

Utilization categories: AC15 and DC13
Ui = 690 V AC
Ith = 10 A
UL designation = A 600 Q600

Mechanical Life

1,000,000 operations

Connections

(1 or 2) 12 AWG (2.5 mm²) maximum wire size

Construction

Polyamide and polycarbonate

Environmental Rating

IP20

Operating Temperature

-25 °C to +60 °C (-13 °F to +140 °F)

Certifications



Compliant with EN/IEC 60497-1; -5-1

Dimensions

Figure 2. SSA-EBM-xxE E-Stop Buttons

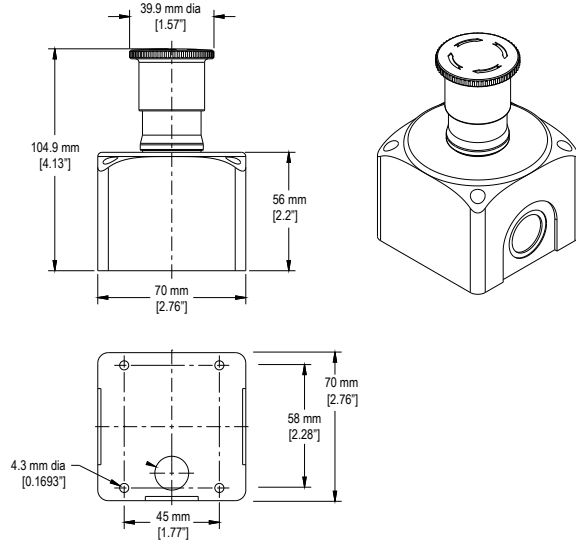
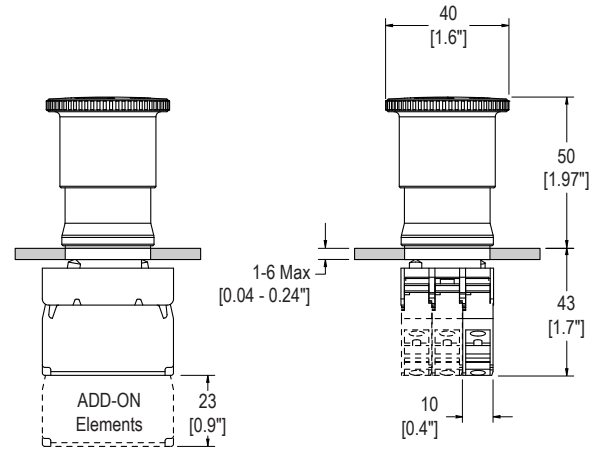


Figure 3. SSA-EBM-xxL E-Stop Buttons



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