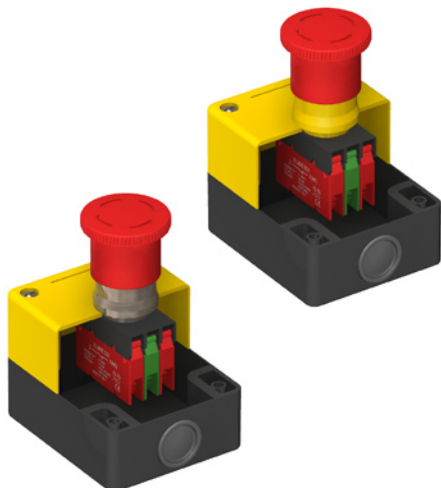




SSA-EB Series Emergency Stop Push Buttons

Push-to-Stop, Twist-to-Release Electro-Mechanical Push Buttons

Features



- Push-to-stop, twist-to-release operation
- Rugged, modular design; easy assembly and installation
- Kits available for easy selection; see Models
- Choice of metal or plastic button 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/IEC 60947-5-1

Models

Model	Button Base Material	Contacts	Enclosure
SSA-EBM-02L	Metal	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-EBP-02L	Plastic	2 normally closed	No
SSA-EBP-11L		1 normally closed and 1 normally open	
SSA-EBP-12L		2 normally closed and 1 normally open	
SSA-EBM-02E	Metal	2 normally closed	Yes
SSA-EBM-11E		1 normally closed and 1 normally open	
SSA-EBM-12E		2 normally closed and 1 normally open	
SSA-EBP-02E	Plastic	2 normally closed	Yes
SSA-EBP-11E		1 normally closed and 1 normally open	
SSA-EBP-12E		2 normally closed and 1 normally open	

⚠ WARNING... Not a Safeguarding Device.

An Emergency Stop Device is not considered a safeguarding device because it requires an overt action by an individual to stop machine motion.

(A safeguarding device limits or eliminates an individual's exposure to a hazard, *without action by the individual or others.*)

Because an individual must actuate the E-Stop button for it to function, these devices do not fit the definition of a safeguarding device.

An Emergency Stop Device cannot be substituted for required safeguarding. Refer to the relevant standards to determine those requirements.



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Important... read this before proceeding!

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 very effort to provide complete application, installation, operation, and maintenance instructions. Please direct any questions regarding the use or installation of this product to the factory applications department at the telephone numbers or address shown on the back cover.

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 below. 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

ANSI B11 Standards for Machine Tools

Contact: Safety Director, AMT – The Associations for Manufacturing Technology,
7901 Westpark Drive, McLean, VA 22102, Tel: 703-893-2900

NFPA79 Electrical Standard for Industrial Machinery

Contact: National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101,
Quincy, MA 02269-9101, Tel: 800-344-3555

ANSI/RIA R15.06 Safety Requirements for Industrial Robots and Robot Systems

Contact: Robotic Industries Association, 900 Victors Way, P.O. Box 3724, Ann
Arbor, MI 48106, Tel: 734-994-6088

Applicable International Standards

ISO 12100-1 Safety of Machinery – Basic Concepts, General Principles for Design,
Part 1: Basic Terminology, Methodology

ISO 12100-2 Safety of Machinery – Basic Concepts, General Principles for Design,
Part 2: Technical Principles and Specifications

EN/IEC 60204-1 Electrical Equipment of Machines: Part 1: General Requirements.
(Also request a type “C” standard for specific machinery.)

ISO 13849-1 (EN954-1) Safety of Machinery – Related Parts of Control Systems:
Part 1 General Principles for Design

ISO 13856-1 (EN1760-1) Safety of Machinery – Pressure-Sensitive Protective
Devices: General Principles for Design and Testing

Contact: Global Engineering Documents, 15 Inverness Way East, Englewood, CO
80112-5704, Tel: 800-854-7179

Overview

Models SSA-EB series are metal or plastic “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.

Mechanical Installation

1. **Metal models:** Latch the push button onto the mounting adapter by rotating it.
2. **All Models:** 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.

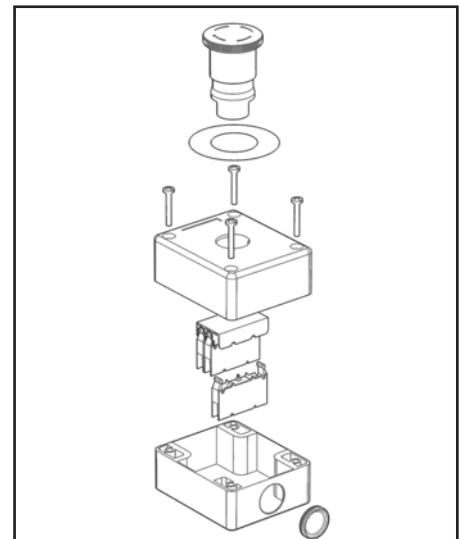


Figure 1. Assembly

SSA-EB Series Emergency Stop Push Buttons

Electrical Installation

Access to the Wiring Chamber

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

Maintenance

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

A *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).

Specifications

Emergency Stop Push Button

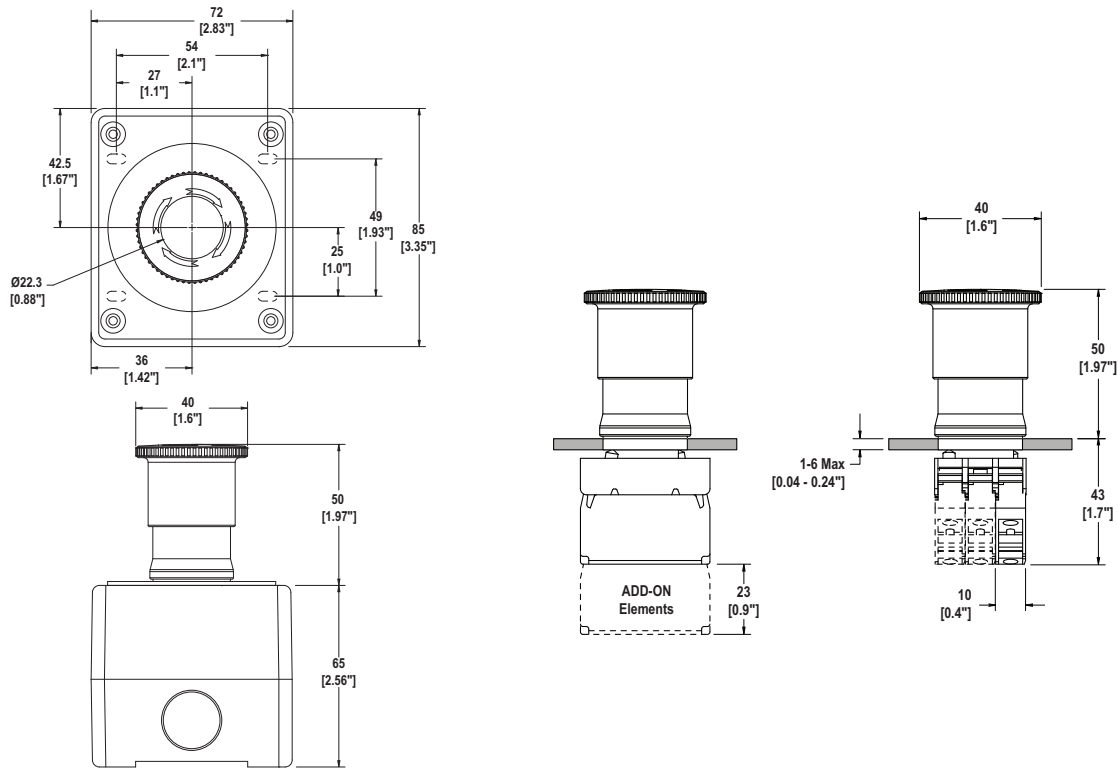
Mechanical Life	300,000 operations
Operating Force	0.8 kg
Mounting Adapter	Plastic button: The adapter is fixed to the mounting surface using incorporated screws (Tmax = 0.6 Nm) Metal button: The adapter is fixed to the mounting surface using incorporated screws (Tmax = 0.8 Nm)
Construction	Plastic parts: Polyamide and polycarbonate Metal parts: Aluminum and zinc alloy
Environmental rating	IP65; NEMA 4, 13
Operating Temperature	-25° to +60° C (-13° to +140° F)
Certifications	 US Compliant with EN/IEC 60497-1; -5-1

Contacts








European Rating	Utilization categories: AC15 and DC13 $U_i = 690V$ ac $I_{th} = 10A$ UL designation = A 600 Q600
Mechanical Life	1,000,000 operations
Connections	(1 or 2) 12 AWG (2.5 mm ²) maximum wire size
Construction	Polyamide and polycarbonate
Environmental rating	IP20
Operating Temperature	-25° to +60° C (-13° to +140° F)
Certifications	 US Compliant with EN/IEC 60497-1; -5-1

SSA-EB Series Emergency Stop Push Buttons

Dimensions



Replacement Parts/Components

Model	Description		Model	Description	
8-LP2T-B6644 (see note*)	22.5 mm plastic button (mounting adapter included)		8-LM2T-C10	Normally open (NO) auxiliary contact element	
8-LM2T-B6644 (see note*)	22.5 mm metal button (mounting adapter sold separately)		8-L2PP-1A5	One-button enclosure— control stations have wire entry through the top or bottom; IP65 rating	
8-LM2T-AU120	Metal mounting adapter (for metal button)		8-LM2T-AU115	60 mm diameter, non- adhesive plastic legend with "Emergency Stop" inscription	
8-LM2T-C01 (see note**)	Normally closed (NC) positively driven contact element		<p>* Twist to release, mechanical latching ISO 13850 compliant. Diameter 40 mm (without mounting adapter).</p> <p>** Direct (positive) opening operation per EN/IEC 60947-5-1.</p>		



WARRANTY: Banner Engineering Corp. warrants its products to be free from defects for one year. Banner Engineering Corp. will repair or replace, free of charge, any product of its manufacture found to be defective at the time it is returned to the factory during the warranty period. This warranty does not cover damage or liability for the improper application of Banner products. This warranty is in lieu of any other warranty either expressed or implied.