

SSA-EB3 Series Emergency Stop Button



Datasheet

22 mm Panel Mount Electro-Mechanical Buttons



- Push-to-lock, Pull/Turn-to-reset operation
- Rugged, modular design; easy assembly and installation
- Choice of normally closed (safety) or combination normally closed/normally open (non safety) contacts
- Panel mount through 22 mm mounting hole



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** or hazards.

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 device for it to function, these devices do not fit the definition of a safeguarding device and cannot be substituted for required safeguarding. Refer to the relevant standards to determine those requirements.

Models

Models	Description	Lamp	Contact
SSA-EB3P-01	Push-to-Lock; Pull/Turn-to-Reset Operation Non-Illuminated; 40 mm Mushroom	No Lamp	1 NC
SSA-EB3P-02			2 NC
SSA-EB3P-03			3 NC
SSA-EB3P-11			1 NO, 1 NC
SSA-EB3P-12			1 NO, 2 NC
SSA-EB3P-21			2 NO, 1 NC
SSA-EB3PLX-01	Push-to-Lock; Pull/Turn-to-Reset Operation Illuminated; 40 mm Mushroom	Without Lamp	1 NC
SSA-EB3PLX-02			2 NC
SSA-EB3PLX-11			1 NO, 1 NC
SSA-EB3PL1-01		LED, 24 V ac/dc	1 NC
SSA-EB3PL1-02			2 NC
SSA-EB3PL1-11			1 NO, 1 NC

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 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 US and **International** Standards

Applicable U.S. Standards	Applicable International Standards
ANSI B11 Standards for Machine Tools Safety Contact: Safety Director, AMT – The Association for Manufacturing Technology, 7901 Westpark Drive, McLean, VA 22102, Tel.: 703-893-2900	EN ISO 12100 Safety of Machinery – Basic Concepts, General Principles for Design
ANSI NFPA 79 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	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, P.O. Box 3724, Ann Arbor, MI 48106, Tel.: 734-994-6088	EN ISO 13849-1 Safety-Related Parts of Control Systems ISO 13856-1, Safety of Machinery – Pressure-Sensitive Protective Devices
	Design and Compliance: EN/IEC 60947-5-1 EN/IEC 60947-5-5 UL 508 CSA C22.2 No. 14 GB/T14048.5

Overview

Models SSA-EB3 series are illuminated or Non-illuminated "mushroom-style" mechanical emergency stop buttons that 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.

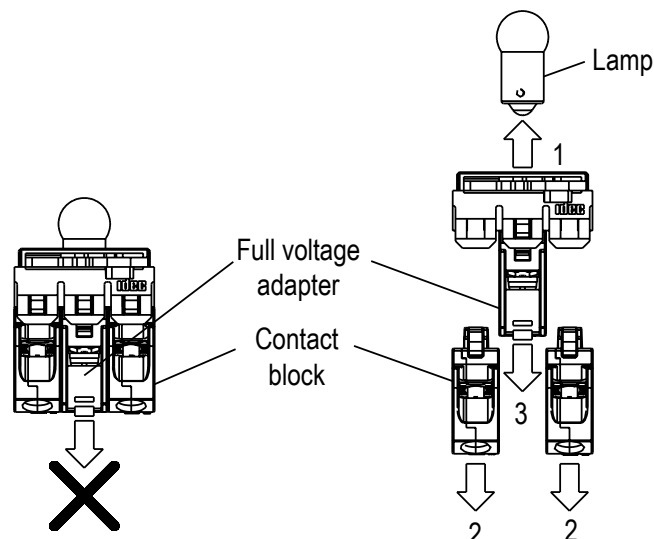
To manually rearm, twist or pull the push button. These emergency stop buttons are not safeguarding devices. They do not automatically protect personnel from injury.

Installation and Maintenance

The device must not be affected by environmental conditions. Install the device so that **operation** is not impeded, but should be protected against inadvertent **operation** (for example, accidental actuation by being bumped or leaned against). Do not operate the switch using a tool. Do not expose the switch to excessive shocks and vibrations, otherwise the switch may be deformed or damaged, causing malfunction or operation failure.

Electrical installation must be made by qualified personnel and must comply with NEC (National Electrical Code), ANSI/NFPA 79 or IEC/EN 60204-1, and all applicable local standards. It is not possible to give exact wiring instructions for a device that interfaces to a multitude of machine control configurations. The following is general in nature; it is recommended to perform a risk assessment to ensure appropriate application, interfacing/hookup, and risk reduction (see ISO 12100 or ANSI B11.0).

Mount the SSA-EB3 on a Panel



1. Remove the contact block from the operator. (See [Remove the Contact Block](#) on page 3)
2. For pilot lights, remove the transformer or full voltage adapter from the pilot light. If you do not have a pilot light, skip this step.
3. Remove the locking ring from the operator.
4. Insert the operator into the panel cut-out from the front and tighten the locking ring from the back.
5. Install the contact block to the operator.

Use the optional locking ring wrench (SSA-EB3-LRW) to mount the operator onto a panel. Tightening torque must not exceed 2.0 N-m. Do not use pliers. Excessive tightening will damage the locking ring.

For contact blocks and transformers housing LED and incandescent lamps, do not press the lamps too hard or the lamp socket may be damaged.

Remove the Contact Block



1. Pull up the locking lever.
2. Turn the locking lever to the left.
3. Pull the operator out.
4. To reinstall the contact block:
 - a) Place the TOP marking on the operator and the company logo on the contact block mounting adapter in the same direction.
 - b) Insert the operator into the contact block mounting adapter.
 - c) Turn the locking lever to the right.

Specifications

Dielectric Strength
 Contact block: 2,500 V, 1 minute
 Pilot light: 2,000 V, 1 minute

Insulation Resistance
 100 MΩ minimum

Shock and Vibration
 Shock Operating extremes: 150 m/s² (15G)
 Vibration Operating extremes: 10 to 500 Hz, amplitude 0.35 mm, acceleration 50 m/s²

Operating Conditions
 -20 °C to +55 °C (-4 °F to +131 °F) (no freezing)
 45% to 85% relative humidity (non-condensing)

Environmental Rating
 From panel front: IEC IP65 (IEC 60529)
 Terminal: IEC IP20 (IEC 60529)

Contact Ratings
 Rated Insulation Voltage: 600 V
 Rated Thermal Current: 10 A

Operating Voltage		24 V	120 V	240 V	380 V
AC 50/60 Hz	Resistive Load (AC-12)	10 A	10 A	6 A	2 A
	Inductive Load (AC-15)	10 A	6 A	3 A	1.9 A
DC	Resistive Load (DC-12)	8 A	2.2 A	1.1 A	-
	Inductive Load (DC-13)	4 A	1.1 A	0.55 A	-

Materials
 Polyamide button

LED Color
 Red

Electrical Life
 100,000 operations minimum

Mechanical Life
 250,000 operations minimum

B10d
 100,000 based on ISO 13849-1 (2015)

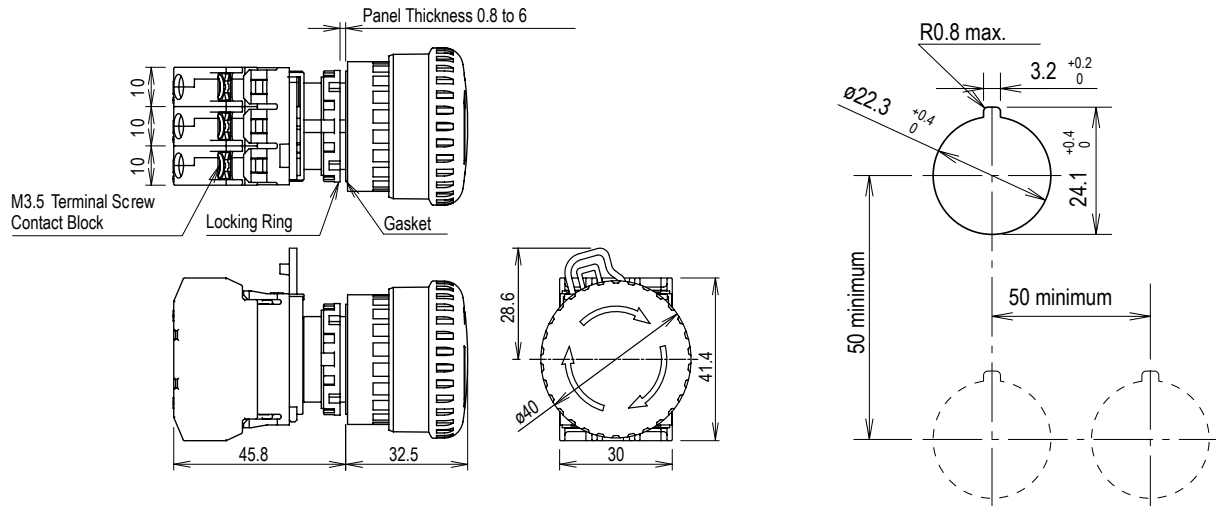
Design and Compliance Standards
 EN/IEC 60497-5-1
 EN/IEC 60947-5-5
 UL 508
 CSA C22.2 No.14
 GB/T14048.5

Certifications



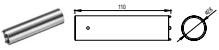

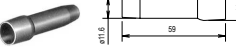



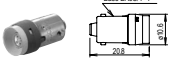


Dimensions and Hole Layout

All measurements are listed in millimeters [inches], unless noted otherwise.



When pressed, the button is locked in the depressed position. To reset, either pulled or turn clockwise.

Accessories

Model		Model	
Locking Ring Wrench SSA-EB3-LRW (Qty 1) Used to tighten the plastic locking ring when installing the SSA-EB3 series on a panel 28 mm OD x 110 mm long		Full Voltage Adapter SSA-EB3-VA (Qty 10)	
Lamp Holder Tool SSA-EB3-LHT (Qty 1) Used for replacing lamps Rubber		Single Contact Block SSA-EB3-C10 (Qty 10) Contact: 1 NO	
Anti-Rotation Ring SSA-EB3-AR-10 (Qty 10) Prevents rotation of switches in panel With waterproof gasket (IP65) Black plastic Applicable panel thickness: 1.2 to 4.5 mm		Single Contact Block SSA-EB3-C01 (Qty 10) Contact: 1 NC	
LED Lamp SSA-EB3-L1R (24 V ac/dc) (Qty 100)		Nameplate ESLP3-22/60-NW (Qty 1) Blank legend Yellow plastic, 1.5 mm thick	
		Nameplate ESLP3-22/60 (Qty 1) Legend: Emergency Stop Yellow plastic, 1.5 mm thick	

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