

Semiconductor Industry Expertise

Leading the Way in SEMI S2 Safety Compliance



The SEMI S2 compliant and certified EMO button offers a choice of standard or narrow flange guard in accordance with GS3 Document Number 200234F.

Introduction

Electrical and safety standards are often subjected to individual interpretation, creating the potential for confusion. As a global manufacturer of electrical equipment for the semiconductor industry and the world's largest supplier of 22 mm push buttons and operators, Schneider Electric has a long history of providing products that meet the intent of guidelines such as SEMI S2.

SEMI S2, Guarding, and EMO Buttons

Nearly every type of machine in the semiconductor manufacturing process requires a method for emergency shutdown. Section 12 of the SEMI S2-0200 guidelines states: "The equipment should have an 'emergency off' (EMO) circuit...[which,] when activated, should place the equipment into a safe shutdown condition." Section 12 further states, "All emergency off buttons should be clearly labeled as 'EMO' 'Emergency Off' ...[and] located to minimize accidental activation."

The Solution

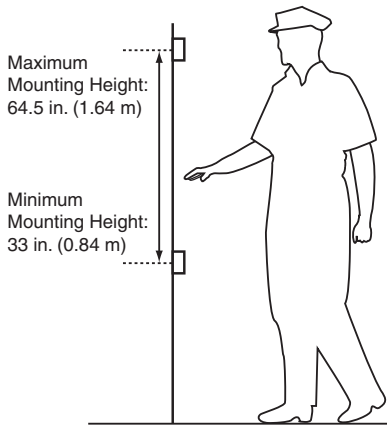
Schneider Electric has worked with some of the industry's largest manufacturers, as well as one of the industry's most respected SEMI S2 certification agencies, to provide an EMO solution that takes the guesswork out of meeting the guidelines. Our EMO button and guards have been certified SEMI S2-compliant when installed according to the installation procedures that accompany each product. The EMO design provides protection from inadvertent activation while providing easy access for palm operation. And the high-performance materials used to manufacture our EMOs provide negligible particle generation when in use, a must for clean-room environments.

For semiconductor application solutions, rely on a company who knows the business.

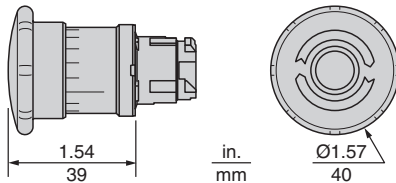
Schneider Electric USA
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Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

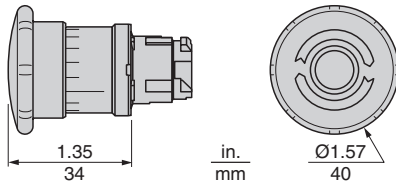
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Trigger Action Button, ZB4BS84430



Standard Action Button, ZB4BS5430



Panel Knockout: 0.875 in. (22.3–22.7 mm)
Panel Thickness: 0.1 in. (2.5 mm)

EMO Button Characteristics

- Part Number:** ZB4BS84430 (Trigger Action)
ZB4BS5430 (Standard)
- Description:** 22 mm mounting, turn-to-release mushroom operator with 40 mm head diameter. For use with ZB4BZ contact blocks (sold separately)
- Material:** Operator: Polyamide 6 +20% glass filled
- Bezel:** Zamak (die-cast zinc), bright chrome plated
- Engraving:** EMO at center of button face, 0.36 in. condensed block letters, white filled (0.040 in. line width)
- Approvals:** UL, CSA, CE Marked
- Compliance:** EN60947-5-1 and IEC 947-5-1, SEMI S2-0200* (see below), ZB4BS84430 meets EN418
- Dimensions:** See diagrams above

★ Using the ZB4BS5430 button with the ZB4BZ1905 guard at a mounting height of 33–64.5 in. results in a SEMI S2 compliant installation as certified by Global Semiconductor Safety Services (GS3) Document Number 200234F.

EMO Button Features

- Turn-to-release EMO button helps ensure intentional reactivation of the EMO circuit.
- Letter height and button diameter comply with SEMI S2 guidelines.
- Anti-rotation head ensures that EMO lettering is always readable.
- Knurled button edge provides optimal anti-slip surface for clean-room protective hardware.
- A variety of contact block configurations are available, including ring-tongue compatible contact blocks.
- All normally closed contact blocks are direct acting (positive opening), a requirement for export to Europe.
- Complies with Section 12 of SEMI S2-0200.

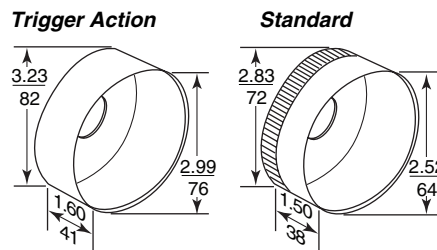
Guard Features

- Choice of standard or narrow-flange guard to fit your specific need.
- Guard design balances requirements for protection from inadvertent activation with easy access for palm operation.
- Safety yellow meets background requirements of EN418.
- Meets UL 746C flame test.
- Complies with Section 12 of SEMI S2-0200.

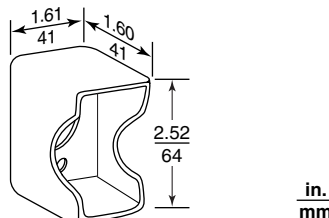
Typical Bill of Materials

| | | |
|--|----------------|------------|
| EMO button | Trigger Action | ZB4BS84430 |
| | Standard | ZB4BS5430 |
| Guard | Trigger Action | ZB4BZ2105 |
| | Standard | ZB4BZ1905 |
| | Narrow Flange | ZB4BZ2005 |
| Contact blocks with mounting base (ring tongue) | N.C. | ZB4BZ1029 |
| | N.O. | ZB4BZ1019 |

Guard Characteristics



Narrow Flange



- Description:** 22 mm mounting, plastic mushroom operator guard
- Material:** ABS
- Color:** PMS 108 C (yellow)
- Flammability:** End product meets 3/4" flame test per UL 746C
- Dimensions:** See diagrams at left

Trigger Action

Part Number: ZB4BZ2105
for use with: ZB4BS84430 EMO button

Standard

Part Number: ZB4BZ1905
for use with: ZB4BS5430 EMO button

Narrow Flange

Part Number: ZB4BZ2005
for use with: ZB4BS5430 or ZB4BS84430 EMO button