PICO-GUARD™ Fiber Optic Emergency Stop Button

Models SFS-EBM-01E1 and SFS-EBM-01E2

Features

- Certified for use in potentially explosive environments (see PICO-GUARD Application and Design Guide, p/n 69763)
- Fibers “enter” and “exit” either from one side or opposite sides of the enclosure, depending on model
- Simple, quick means of connecting and disconnecting the fiber
- For use with Banner 2.2 mm OD (1 mm core) plastic fiber optic cable (purchased separately)
- Designed to meet Safety Category 4 applications (per ISO13849-1), when used with PICO-GUARD controller model SFCDT-4A1..
- Up to 3 E-stops can be connected in series on a single channel
- Complies with ANSI NFPA 79 and IEC 60204-1 emergency stop requirements
- Enclosure constructed of impact-resistant polycarbonate resin, rated IEC IP65

Warning . . . Avoid Misapplication of this Product

PICO-GUARD optical elements must be properly installed and interfaced with a PICO-GUARD Fiber Optic Controller to comply with relevant regulations. See the PICO-GUARD Controller Instruction Manual (p/n 69761) and the PICO-GUARD Application and Design Guide (p/n 69763) for complete installation instructions, maintenance instructions, and application limitations.

Use of a Banner PICO-GUARD Fiber Optic Emergency Stop Button is generally not allowed for:

- Safeguarding purposes (see Section 8 of the Application and Design Guide)
- Applications in which a Category 0 Stop creates additional hazards (see ANSI NFPA 79 or IEC 60204-1)

Follow all installation and maintenance instructions with extreme care. **The user is responsible for following all local, state, and national laws, rules, codes, and regulations relating to the use of this safety system in any particular application.**

Models

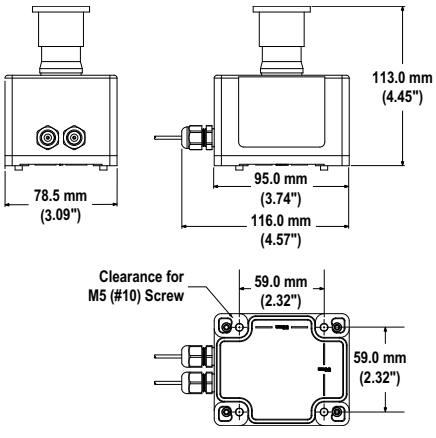
Models	Housing Description
SFS-EBM-01E1	One-sided fiber connection
SFS-EBM-01E2	Two-sided fiber connection (opposite sides)

Specifications

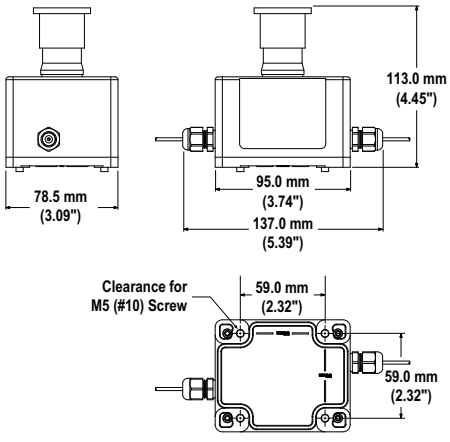
Mounting	Holes (x4) for M5 screws (mounting hardware not included)
Construction	**Enclosure and Base:** Polycarbonate **Button:** Polymide **Button Base:** Aluminum/Zinc alloy
Environmental Rating	IEC IP65
Operating Conditions	**Temperature:** 0° to +70° C (+32° to 158° F) **Max. Relative Humidity:** 95% (non-condensing)

Dimensions

SFS-EBM-01E1



SFS-EBM-01E2



PICO-GUARD™ Fiber Optic Emergency Stop Button

Mounting and Fiber Connection

1. Locate the position for the Emergency Stop Button and mount the black plastic base with four M5 mounting screws (not included), with the gasket facing away from the mounting surface.
2. Route the fibers from the PICO-GUARD controller per Sections 3 and 8.5 of the Application and Design Guide. Ensure that the amount of fiber corresponding to the number of serially connected SFS E-stop buttons complies with the table in Section 8.4 of that document. The excess gain is dependent on number of buttons, fiber length, fiber bend radius, and other loss factors, which may result in a weak signal or beam break condition.

To use a fiber with unpolished ends (PIU4 series), cut the optical fiber to length (see Section 3.2 of the Guide for fiber cutting procedure) or trim a short length off the end. A new cut ensures a flat termination of the fiber for good optical coupling. *Do not cut the end of a polished fiber (PW.. series) unless the end has been damaged or contaminated or if it must be cut to length.* If a polished end is cut, the excess gain will be reduced and the advantage of polishing will be lost. Model SFA-FFP Field Polishing Kit is available to polish the end of a field-cut fiber.

3. If the fiber gripper is closed (flush with the body of the interlock switch inside the enclosure), use a small flat screwdriver to carefully pry up the gripper until the fiber can be inserted into the body (see Figure 1). When using PVC-jacketed fiber, strip the PVC jacket approximately 25 mm (see Figure 2). Insert the fiber end into the body until it bottoms out (approximately 60 mm). Then carefully push the fiber gripper tab until flush with the body of the interlock switch. Repeat with the second fiber.
4. Install the SFS enclosure onto the base with the four captive screws (9 to 10 in-lbs.). Tighten the fiber glands until a good seal is made (do not over-tighten).
5. Perform commissioning checkout procedures as described in the appropriate SFCDT controller manual.

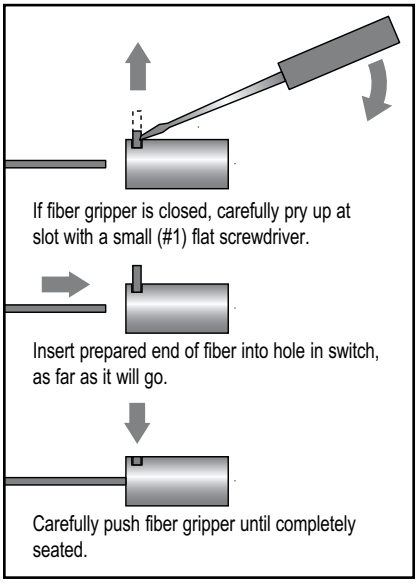


Figure 1. Fiber connections

CAUTION . . . Enclosure Use

The PICO-GUARD Fiber Optic Emergency Stop Button is designed for use within its IP65 PBT resin enclosure to ensure the integrity of the switching action. **After the fibers are installed, the enclosure cover must be assembled to its base.**

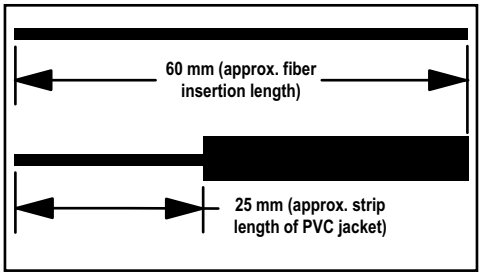


Figure 2. Fiber insertion guide

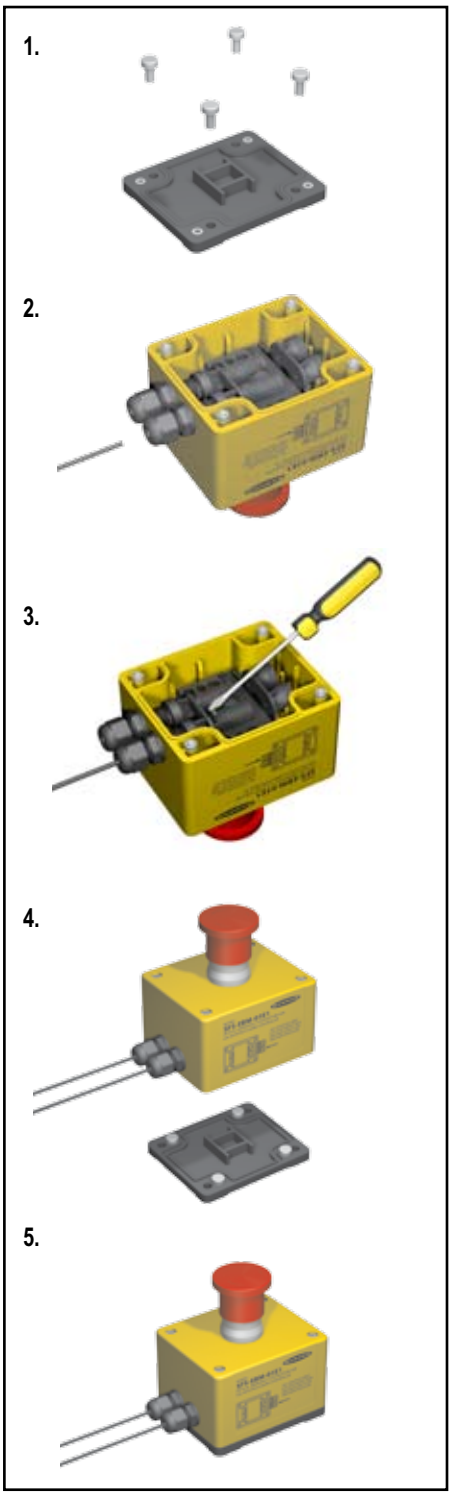


Figure 3. Assembly procedure

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