SB4000 Series Shock Block - GFCI

Installation Guide

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This guide outlines the installation process for the SB4000 Series Shock Block. For further technical information, refer to the product manual found at Littelfuse.com/SB4000. Ensure that the work area is de-energized prior to product installation. Follow your company's safety policy and lockout procedures.

INSTALLATION

The SB4000 is a permanently mounted GFCI and should be attached to a wall or other substrate by using the supplied mounting hardware and brackets.
The SB4000 must be installed on the line side of a variable frequency drive (when those devices are part of the branch circuit).

Drill Knockouts:

- Remove base module from enclosure by unscrewing 4 (#6 Flat) captive screws and set module aside before performing any drilling.
- Cable entry points for dual ½" NPT or single ¾" NPT are marked on opposite ends of the enclosure for quick installation guidelines.
- Any area within the space of NOTE 3 (Figures 1,2, and 3) may be used if internal and external cable gland hardware stays within the defined perimeter.
- Conduit fittings must be Type-4X-rated (and IP69K-rated when required by the application) to maintain the listed environmental ratings of the enclosure.

Mounting:

- The supplied mounting brackets can be installed in vertical or horizontal orientation. Do not overtighten screws beyond 10 lbf·in (1.13 N·m).
- The SB4000 can be installed in any orientation if there is a suitable substrate to mount the rear of the product to.
- Use 4 - M6 or ¼"diameter fasteners of at least 1" in length with ½" pan head for best results.

Wiring:

- Solid or stranded 90°C CU rated wire must be used for all phase and ground conductors

Input Connections:

- Conductor lengths should be cut based on entry point of the enclosure.
    - Top entry conductors will require approximately 178 mm [7"] of length to reach the input side and ground terminals.
- The supply phases are marked as Inputs L1, L2, L3, and N (Neutral) as shown in Figure 4.
- Single-phase (2-pole) applications must be installed on L1, L2 terminal blocks.
- Strip each phase wire (and neutral wire if applicable) to 18 mm [¾"]
- Use a flat blade screwdriver (3mm [⅛"] width is recommended) to release each spring terminal and insert each wire fully, then remove the flat blade screwdriver.
- The input terminals will accept 4 to 18 AWG copper wire conductors.

Output Connections:

- Conductor lengths should be cut based on entry point of the enclosure.
    - Bottom entry conductors will require approximately 178 mm [7"] of length to reach the output side and ground terminals.
    - Top entry phase conductors will be cut shorter than the equipment ground conductor which will need approximately 178 mm [7"] of length.
- Follow same termination guidelines referenced above for supply connections.

Ground Connections:

- Strip each phase wire (and neutral wire if applicable) to 15 mm [⅝"].
- Use a flat blade screwdriver (3mm [⅛"] width is recommended) to release each spring terminal and insert each wire fully, then remove the flat blade screwdriver.
- Connect the supply-side and load-side equipment ground conductors to the chassis bonding point (⏚) as shown in Figure 4.

Secure Base Module:

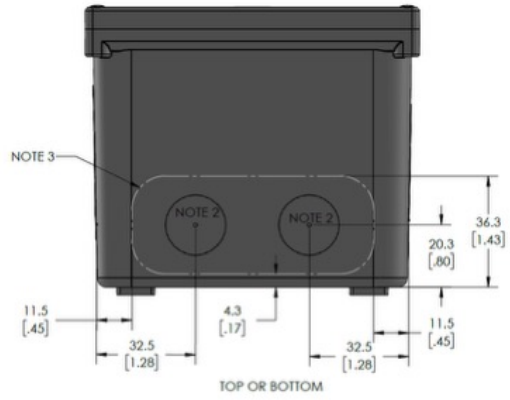
- After all necessary wires are landed the base module can be pushed into place and secured to the front of the enclosure by tightening the 4 (#6 Flat) captive screws to no more than 10 lbf·in (1.13N·m).

OPERATION AND SETUP

After installation is complete, and unit is energized for the first time, the SB4000 will power up and the connected circuit will be energized after a brief system test. If the unit does not power up into a NORMAL state: with POWER, ENABLE, and GC STATUS LEDs illuminated *green*; please review manual or visit Littelfuse.com/gfci-help for more support.

COMISSIONING

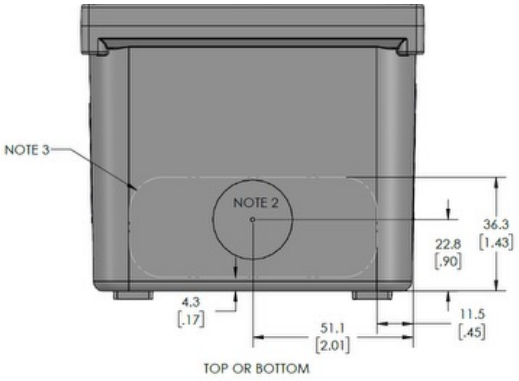
Once the unit is powered into NORMAL condition it is recommended to initiate a test by pressing the TEST button for one second. The device should interrupt power and the GF TRIP LED will illuminate *red*. Pressing RESET momentarily will return the Shock Block to the NORMAL state.



NOTES:

1. Dimension in millimeters [inches].
2. Preferred conduit hole locations for top or bottom access. Suggested conduit size 1/2" NPT.
3. Maximum perimeter for conduit locations. Ensure that internal and external conduit hardware stays within this perimeter.

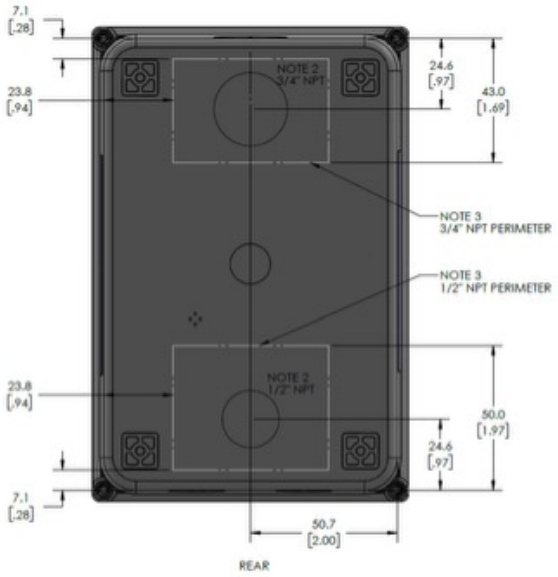
FIGURE 1. SB4000 Knockout Details ½" NPT



NOTES:

1. Dimension in millimeters [inches].
2. Preferred conduit hole locations for top or bottom access. Suggested conduit size 3/4" NPT.
3. Maximum perimeter for conduit locations. Ensure that internal and external conduit hardware stays within this perimeter.

FIGURE 2. SB4000 Knockout Details ¾" NPT



NOTES:

1. Dimension in millimeters [inches].
2. Preferred conduit hole locations for top or bottom access. Suggested conduit size 1/2" NPT or 3/4" NPT.
3. Maximum perimeter for conduit locations. Ensure that internal and external conduit hardware stays within this perimeter.

FIGURE 3. SB4000 Knockout Details Rear

FIGURE 4. SB4000 Model (Enclosure not shown).