

B100 Quick Start Manual



full manual

Description

This Quick Install manual gives the basic information needed to install a B100 board. For more complete information get the full B100 manual here:

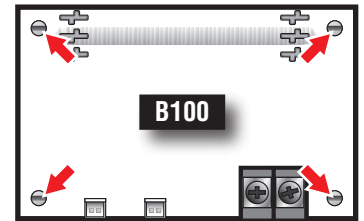
www.lifesafetypower.com/tools/installation-manuals

The B100 provides an additional voltage in a FlexPower system. This voltage can either be accessed directly via the B100's terminals or through other FlexPower Accessory Boards. The B100's input is typically supplied by the B1 buss in the system, allowing the FPO's battery set to back up the B100's output voltage without the need for a second battery set. Output settings for the B100 include a fixed 12V setting and an adjustable setting of 5 to 18V. Multiple B100s can be added to a system for virtually unlimited voltage combinations.

Mounting the B100 Secondary Power Supply

Mounting of the B100 Board to an enclosure is via the four snap-in standoffs supplied.

1. Locate the appropriate mounting holes in the enclosure and snap the standoffs into the holes.
2. Align the board mounting holes with the standoffs (be sure the PC board is properly oriented) and snap the board onto the standoffs.



B100 Current Loading

Power drawn from the B100 subtracts from the power available from the FPO supplying the B100. The most accurate way to determine the draw from the FPO is to calculate the actual power draw and factor in the efficiency of the B100.

$$P_i = P_o * 1.15$$

Where:

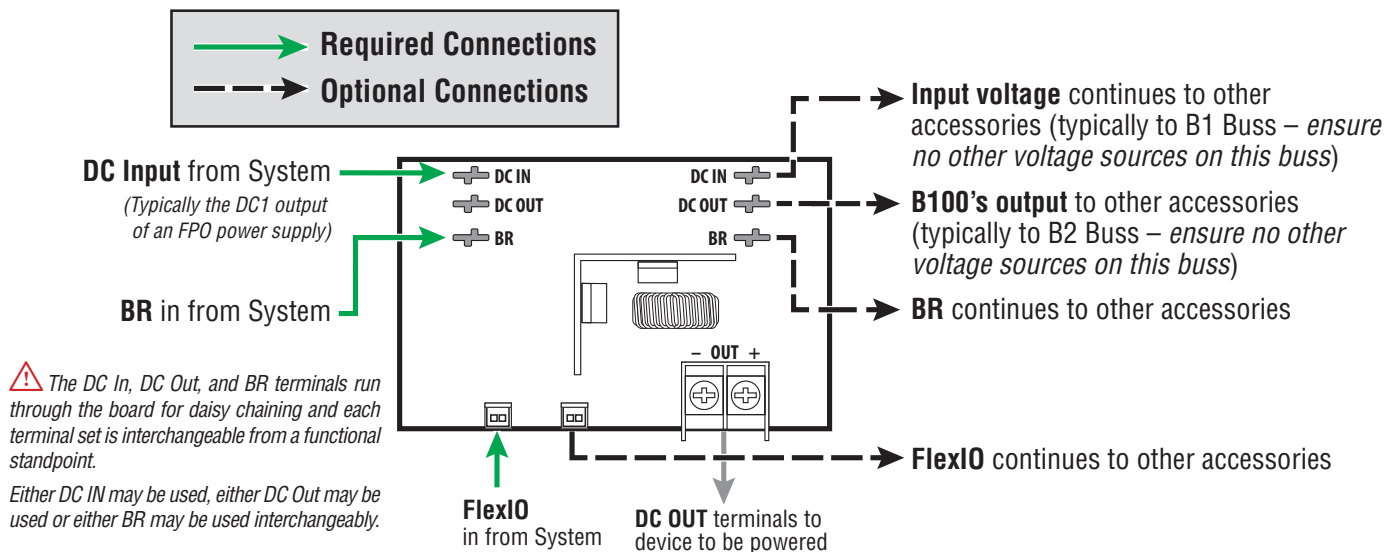
P_i = Input power of the B100

P_o = Output power draw on the B100

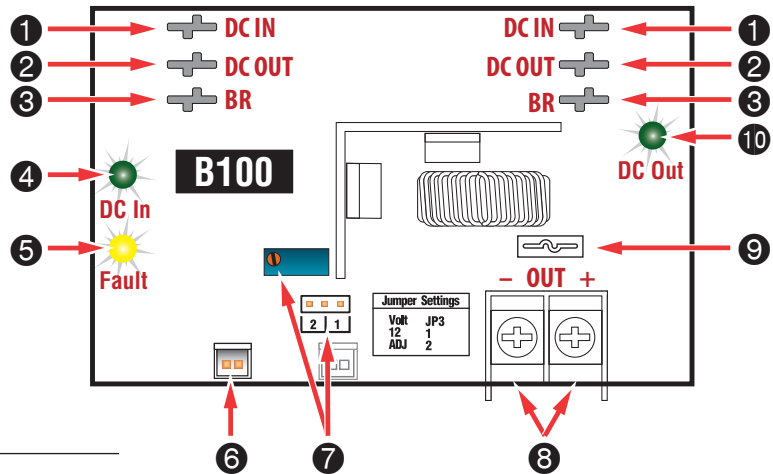
Connecting the B100 Secondary Power Supply

Remove all AC and battery power from the FPO system before adding or replacing a B100 board.

Observe polarity of the DCIN and BR Connections or damage to the system could occur.



The DC In, DC Out, and BR terminals run through the board for daisy chaining and each terminal set is interchangeable from a functional standpoint.
Either DC IN may be used, either DC Out may be used or either BR may be used interchangeably.



① DC IN Connectors (J1 & J4)

These fastons are the input to the B100. Either faston may be used as the input. Two connections are provided to allow this voltage to pass through to other accessory boards in the system. This input voltage must always be at least 3 volts above the output voltage setting for the B100 to maintain its output.

② DC OUT Connectors (J2 & J5)

These fastons are the output of the B100 for connection to other accessories in the system. This output may be considered as an equivalent to the DC1 faston of an FPO power supply. Either or both DC OUT fastons may be used in the system.

⚠ Ensure there are no other voltage sources connected to the buss before powering the system or damage WILL occur.

③ BR Connectors (J3 & J6)

The DC Common buss in the system. All boards in the system must have their BR fastons wired together for proper operation (except for between the DC and AC sections of an FPX hybrid system).

④ DC IN LED (D1) – Green

This LED indicates the availability of voltage on the DC IN Buss. When voltage is available on the buss, the LED is lit.

⑤ FAULT LED (D7) – Yellow

This LED lights when the B100 detects a fault condition. This fault condition also transmits to the FPO power supply.

Fault conditions detected include ruptured output fuse, no output, output overload, or output voltage out of regulation.

⑥ FlexIO Connectors (JP1 & JP2)

These connectors allow the fault status of the B100 to be transmitted to the FPO power supply and pass the FlexIO buss on to other accessory boards in the system.

⑦ Output Voltage Selection (JP3 & VR1)

This jumper selects the output voltage for the B100 and the potentiometer sets the output voltage when in the adjustable range. In adjustable range, voltage may be set from 5 to 18VDC. Possible jumper settings are as follows:

- **12V Out** JP3 Position 1
- **Adjustable Output** JP3 Position 2

⚠ The VR1 potentiometer will have no effect unless the jumper is set for the adjustable range.

Note that the input must be at least 3V above the output voltage setting or the B100 will display a fault condition. It may be helpful to temporarily set the input power supply to 24V (Remove load devices first) before setting the B100 output voltage.

⑧ DC Output

This is the output terminal strip. This terminal strip is non-removable and accepts wire sizes from AWG12 – AWG22. The terminals are labeled on the PC board by the terminal strip.

⚠ CAUTION When powering magnetic loads such as maglocks, door strikes, solenoids, etc, each of these loads must have a reverse protection diode either built-in or external to the device.

⑨ Output Fuse (F1)

This fuse protects the DC Output terminals. It does not protect the DC OUT faston.

⑩ DC OUT LED (D4) – Green

This LED indicates the availability of voltage on the DC OUT Buss. When voltage is available on the buss, the LED is lit.