DUAL BUSS SYSTEM OVERVIEW

A common application in the security industry is providing both 12 and 24VDC within a single system.

Traditionally two independent power supplies have been used for this purpose, which although a working solution, is not economical, either in cost, space or labor.

FlexPower utilizes two power busses within a single system to provide both voltages throughout the accessory board structure.

DUAL BUSS ARCHITECTURE BENEFITS

➢ 12 and 24V DC locking devices may be mixed on the same power distribution or lock control module

➢ 12 and 24 volt auxiliary power outputs may be mixed on the same power distribution module

➢ 12V REX devices may be paired up with their respective 24V locks for system clarity

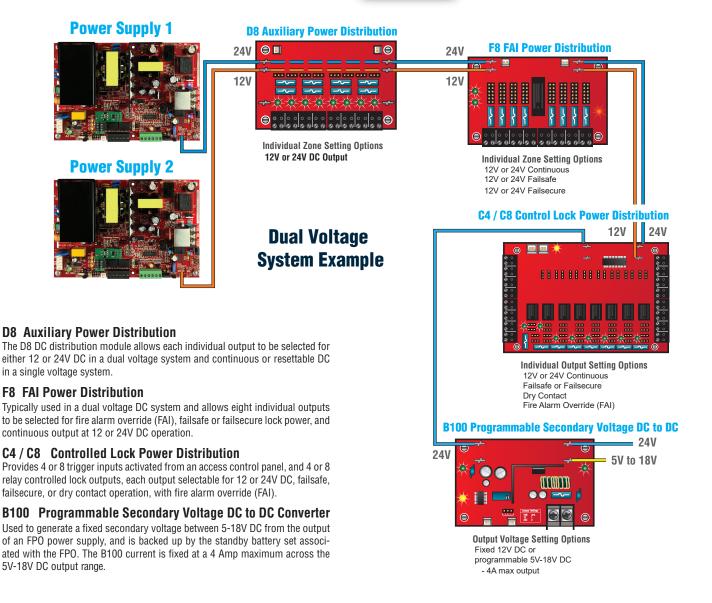## OPERATION WITH DUAL VOLTAGE SUPPLIES

Power supply 1 is connected to Buss 1 of the accessory module and power supply 2 is connected to Buss 2. By using a simple jumper arrangement as a SPDT switch to connect an output to either buss, individual outputs may be selected to operate from either of the two system power supplies.

Dual Voltage System Example

D8 Auxiliary Power Distribution
The D8 DC distribution module allows each individual output to be selected for either 12 or 24V DC in a dual voltage system and continuous or resettable DC in a single voltage system.

F8 FAI Power Distribution
Typically used in a dual voltage DC system and allows eight individual outputs to be selected for fire alarm override (FAI), failsafe or failsecure lock power, and continuous output at 12 or 24V DC operation.

C4 / C8 Controlled Lock Power Distribution
Provides 4 or 8 trigger inputs activated from an access control panel, and 4 or 8 relay controlled lock outputs, each output selectable for 12 or 24V DC, failsafe, failsecure, or dry contact operation, with fire alarm override (FAI).

B100 Programmable Secondary Voltage DC to DC Converter
Used to generate a fixed secondary voltage between 5-18V DC from the output of an FPO power supply, and is backed up by the standby battery set associated with the FPO. The B100 current is fixed at a 4 Amp maximum across the 5V-18V DC output range.

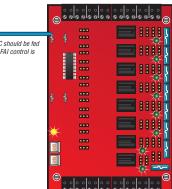## SINGLE VOLTAGE POWER SUPPLY OPERATION

Buss 1 of the accessory module is connected to the continuous DC output of the FPO and Buss 2 is connected to the resettable DC output of the FPO. By using a simple jumper arrangement as a SPDT switch to connect an output to either buss, individual outputs may be programmed to provide either continuous or resettable DC power from any output.

DUAL BUSS ARCHITECTURE BENEFITS

➤ Control egress lock power directly from a simple distribution module, eliminate lock control modules in a simple system
➤ Use to control multiple branches of fire alarm door holders
➤ Use to control smoke damper operation

Power Supply 1

D8 Auxiliary Power Distribution

C4 / C8 Control Lock Power Distribution

Single Voltage System Example

Note: Only Continuous DC should be fed to C4/C8/F8/M8 boards - FAI control is provided on-board.

Individual Zone Setting Options
Continuous or Resettable DC

Individual Zone Setting Options
Continuous FPO Voltage
Failsafe or Failsecure
Dry Contact
Fire Alarm Override (FAI)

ACCESSORY BOARD ORDERING

The specific LifeSafety Power part number is:

Model Number	Description
A8	8 output AC power distribution module, fuse protected
A8P	8 output AC power distribution module, power limited
B100	DC to DC converter provides +12VDC and adjustable voltage of 5 to 18VDC
C4	4 input, 4 output lock controller, fuse protected
C4P	4 input, 4 output lock controller, power limited
C8	8 input, 8 output lock controller, fuse protected
C8P	8 input, 8 output lock controller, power limited
D8	8 output DC power distribution module, fuse protected
D8P	8 output DC power distribution module, power limited
F8	8 output programmable power distribution module, fuse protected
F8P	8 output programmable power distribution module, power limited
NL4	Network module for remote power management
RB2	2A Relay, 12VDC or 24VDC input range, DP/DT
RB5	5A Relay, 12VDC or 24VDC input range, DP/DT
RB8	8A Relay, 12VDC or 24VDC input range, DP/DT