OVERVIEW

A common application in the security industry is providing both 12 and 24VDC within a single system. Traditionally two independent power supplies and dedicated voltage auxiliary power modules have been used for this purpose, which although a working solution, is not economical, either in cost, space or labor.

The FlexPower system utilizes an innovative dual buss structure that runs through the D8 auxiliary power module to make both voltages available on a per zone, user selectable basis. (Fig. 1)

APPLICATION IN A DUAL VOLTAGE SYSTEM

In this example, the 24V FPO power supply is connected to Buss 1 and the 12V FPO power supply is connected to Buss 2.

In this dual voltage system, the D8 module allows each individual output to be selected for either 12 or 24VDC. (Fig. 3)

SYSTEM BENEFITS

- 12 and 24VDC 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
- Multiple D8 auxiliary power modules can be daisy-chained together to increase the number of outputs in increments of 8

D8 ZONE PROGRAMMING OPTIONS

By using a simple jumper arrangement as an SPDT switch to connect an FPO power supply output to either buss, individual D8 outputs may be selected to operate from either of the two system power supplies. (Fig. 2)

APPLICATION NOTE AN-18

D8 DISTRIBUTION - DUAL VOLTAGE

Note:
This example shows 24VDC on Buss 1 and 12V on Buss 2.
The D8 can be used with any combination of DC voltages from FPO or B100 power supplies. Both supplies may also be set for the same voltage for increased power capability at a single voltage.

For D8 programming in single voltage systems see Application Note AN 17.
TYPICAL DUAL VOLTAGE (12V & 24V), 8 ZONES MIXED AUX POWER USING B100

Single 24V battery set on FPO backs up both voltages

Model Number for Application Example:
FPOXXX-B100D8  (xxx = FPO power level i.e. 150 for FPO150)
TYPICAL DUAL VOLTAGE (12V & 24V), 16 ZONES MIXED AUX POWER

Model Number for Application Example:
FP0XXX/XXX-2D8 (xxx = FPO power level i.e. 150 for FP0150)
TYPICAL DUAL SUPPLY, SINGLE VOLTAGE, 16 ZONES AUX POWER - 24V @ 20A

Both FPO250’s may also be set for 12V to output 12V @ 40A

Model Number for Application Example:
FPO250/250-2D8
ACCESSORY BOARD ORDERING

The specific LifeSafety Power part number is:

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Order Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A8</td>
<td>A02-009</td>
<td>8 output AC power distribution module, fuse protected</td>
</tr>
<tr>
<td>A8P</td>
<td>A02-010</td>
<td>8 output AC power distribution module, power limited</td>
</tr>
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<td>B100</td>
<td>A03-009</td>
<td>DC to DC converter provides +12VDC and adjustable voltage of 5 to 18VDC</td>
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<td>C4</td>
<td>A02-005</td>
<td>4 input, 4 output lock controller, fuse protected</td>
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<td>A02-006</td>
<td>4 input, 4 output lock controller, power limited</td>
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<td>C8</td>
<td>A02-007</td>
<td>8 input, 8 output lock controller, fuse protected</td>
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<tr>
<td>C8P</td>
<td>A02-008</td>
<td>8 input, 8 output lock controller, power limited</td>
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<td>D8</td>
<td>A02-001</td>
<td>8 output DC power distribution module, fuse protected</td>
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<td>A02-002</td>
<td>8 output DC power distribution module, power limited</td>
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<td>A02-003</td>
<td>8 output programmable power distribution module, fuse protected</td>
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<td>A02-004</td>
<td>8 output programmable power distribution module, power limited</td>
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<td>RB2</td>
<td>A25-001</td>
<td>2A Relay, 12VDC or 24VDC input range, DP/DT</td>
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<tr>
<td>RB5</td>
<td>A25-002</td>
<td>5A Relay, 12VDC or 24VDC input range, DP/DT</td>
</tr>
<tr>
<td>RB8</td>
<td>A25-003</td>
<td>8A Relay, 12VDC or 24VDC input range, DP/DT</td>
</tr>
</tbody>
</table>

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