

## MODELS 8102PS and 8202PS POWER SUPPLIES

The Models 8102PS and 8202PS Power Supplies are components of the IED 8000 Series™. They are dual output, +15 V, 4 A; -15 V, 4 A, 120 W, switch mode power supplies. The input voltage range of the 8102PS is 90 VAC to 130 VAC, and of the 8202PS is 200 VAC to 240 VAC. Power limiting prevents damage due to overloads and short circuits.

The 8102PS and 8202PS have two modes. They can either be main supplies or backup supplies, but only one or the other at any given time. A main/backup switch bit from the 8001CPU sets it in one or the other mode. As a main supply either has regulated output voltages of +15 VDC and -15 VDC. As a backup supply the regulated output voltages are +14.5 VDC and -14.5 VDC.

The main/backup feature is used only in 8000 Series™ systems that have two power supplies. In such systems, the 8001CPU can switch the supplies between Main and Backup modes and check the voltages to ensure that both supplies are operating properly.

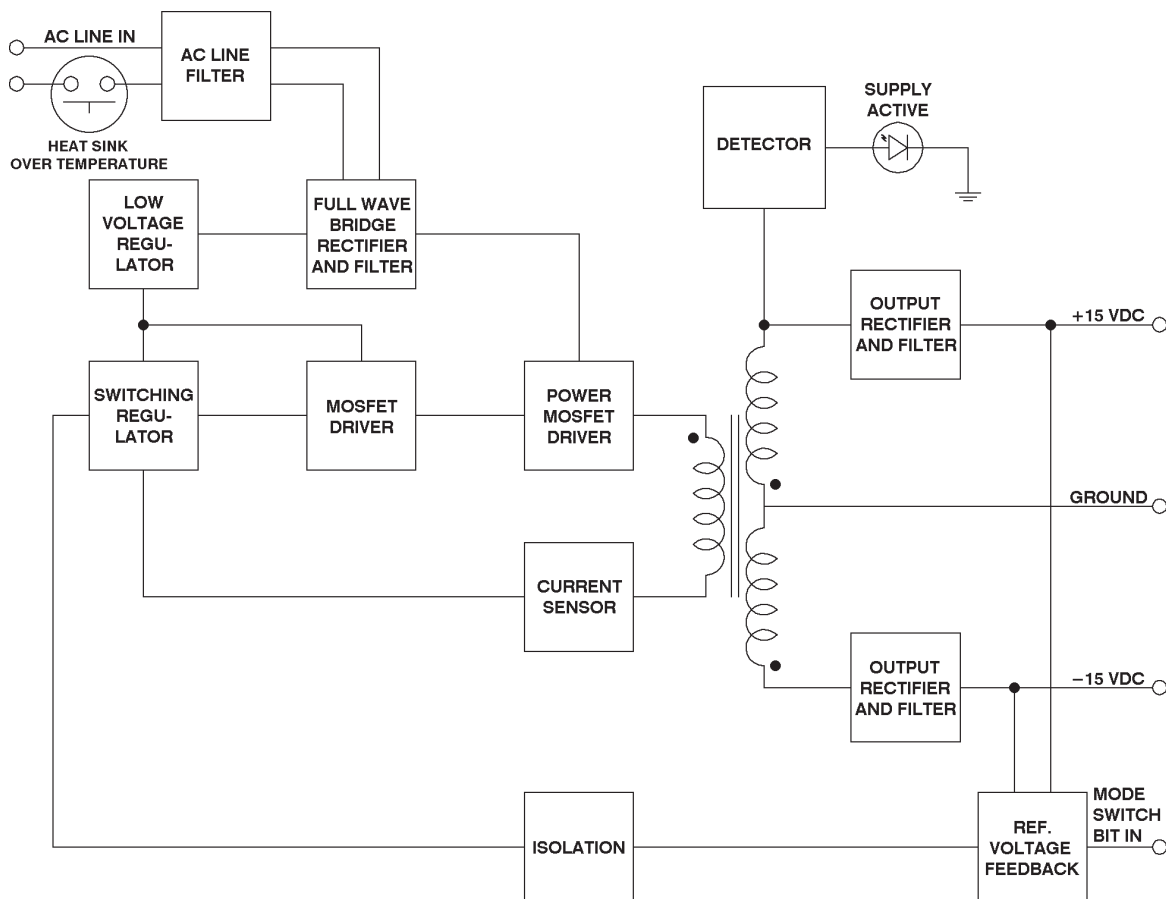


Figure 1 - 8102PS Power Supply Block Diagram



In systems with only one supply, the 8001CPU keeps the power supply in the Main mode.

A green LED Supply Active indicator shows the status of the power supply. It lights only when the 8102PS or 8202PS is supplying current. It will not light when the supply is idling, or when the supply is in the Backup mode. The LED is located approximately in the center of the long edge of the PC board outside the heat sink.

The soft start feature of the 8102PS and 8202PS assures that there will be zero over-shoot of the output voltage during startup.

PIN NO.	FUNCTION
1.	Neutral
2.	No Connection
3.	No Connection
4.	No Connection
5.	Line

Table 1 - Input Connector Pin Connections

PIN NO.	FUNCTION
1.	Ground
2.	Ground
3.	+15 VDC
4.	-15 VDC
5.	Mode Switch Bit

Table 2 - Output Connector Pin Connections

## SPECIFICATIONS

### ELECTRICAL, ANALOG

- |  |                      |
|--|----------------------|
| 1. AC Input Voltage  |                      |
| 8102PS . . . . .   | 90 - 130 VAC         |
| 8202PS . . . . .   | 200 - 240 VAC        |
| 2. Input Line Frequency . . . . .  | 50 - 400 Hz          |
| 3. DC Output Voltage   |                      |
| Main mode . . . . .  | +15 VDC, -15 VDC     |
| Backup mode . . . . .  | +14.5 VDC, -14.5 VDC |
| 4. Output Voltage Adjustment Range . . . . .                                 | ±10%                 |
| Factory preset to voltages in item 3 above, field adjustment not recommended |                      |
| 5. Efficiency, $\eta$ (min) . . . . .  | 70%                  |
| 6. Output Power Limiting . . . . .   | 130 W                |
| 7. Output Voltage Overshoot at Startup . . . . .                             | 0 V                  |
| Soft start   |                      |
| 8. Switching frequency (Fixed) . . . . .                                     | 75 kHz               |
| 9. Peak Noise, Ripple and Spikes, (max) . . . . .                            | 150 mV               |

### INDICATORS

- |   |           |
|---|-----------|
| 1. Supply Active . . . . .                            | Green LED |
| Lights when the 8102PS or 8202PS is supplying current |           |

### CONNECTORS

- |   |                 |
|---|-----------------|
| 1. Input . . . . .                                | Molex 2648-1052 |
| 2. Output . . . . .                               | Molex 2648-1052 |
| See Tables 1 and 2 on page 2 for pin connections. |                 |

### MECHANICAL

- |   |                 |
|---|-----------------|
| 1. Size (maximum overall dimensions as viewed from the front) |                 |
| Height . . . . .  | (4.72 cm) 1.86" |
| Width . . . . .   | (10.7 cm) 4.2"  |
| Depth . . . . .   | (16.5 cm) 6.5"  |
| 2. Weight . . . . .   | (538 gm) 1.2 lb |

### ENVIRONMENTAL

- |  |                                    |
|--|------------------------------------|
| 1. Operating Temperature Range . . . . . | (+32 °F - +104 °F) 0 °C - +40 °C   |
| 2. Storage Temperature Range . . . . .   | (-40 °F - +158 °F) -40 °C - +70 °C |



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