MODELS 8101PS and 8201PS

POWER SUPPLIES

The Models 8101PS and 8201PS Power Supplies are components of the IED 8000 Series™. They are dual output, +5 VDC at 10 A, +12 VDC at 25 mA, 50 W, switch mode power supplies. The input voltage range of the 8101PS is 95 VAC to 130 VAC, and of the 8201PS is 200 VAC to 240 VAC. Power limiting prevents damage due to overloads and short circuits. The 8101PS and the 8201PS are used to power the 8101CPU, the 8101HD, and the 8101DRP options in the 8000 Series.

The 8101PS and 8201PS 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 the regulated output voltage is +5.25 VDC. As a backup supply the regulated output voltage is +4.80 VDC. The +12 VDC supply has the same output voltage, regardless of the state of the main/backup function.

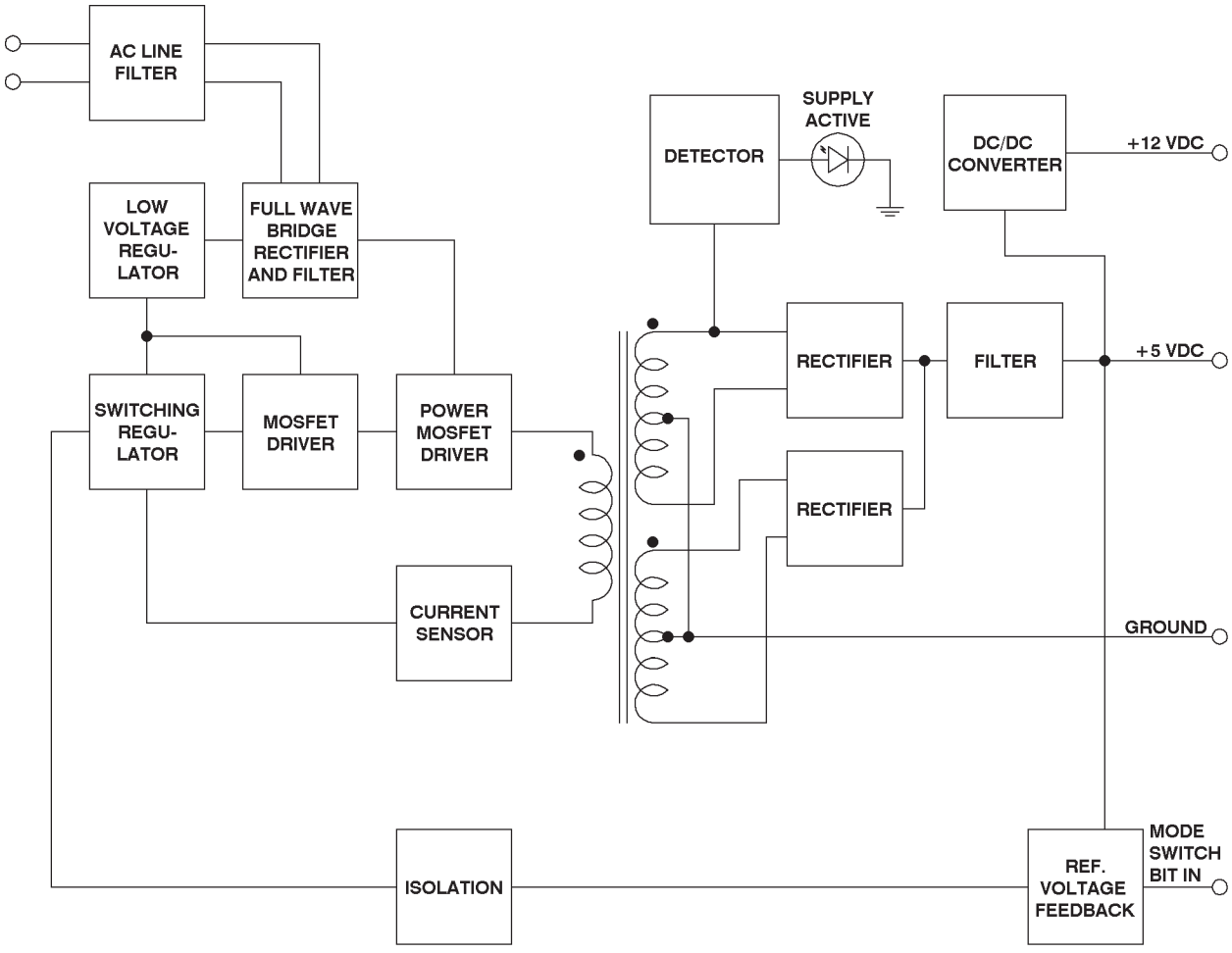

Figure 1 - 8101PS Power Supply Block Diagram

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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.

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 8101PS or 8201PS 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 8101PS and 8201PS assures that there will be zero overshoot of the output voltage during startup.

Test points are provided on the card edge for checking power supply voltages.

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.	+5 VDC
2.	+5 VDC
3.	Ground
4.	Ground
5.	+12 VDC

Table 2 - Output Connector Pin Connections

SPECIFICATIONS

ELECTRICAL, ANALOG

1. AC Input Voltage
   - 8102S . . . . . 5 - 130 VAC
   - 8202PS . . . . . 200 - 240 VAC
2. Input Line Frequency . . . . . 50 - 400 Hz
3. DC Output Voltage
   - Main mode . . . . . +5.25 VDC +12 VDC
   - Backup mode . . . . . +4.80 VDC, +12 VDC
4. Output Voltage Adjustment Range (+5 VDC, only) . . . . . ±10%
   actory preset to voltage in item 3 above, field adjustment not recommended
5. Efficiency, η (min) 70%
6. Output Power Limiting . . . . . 55 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 8101PS or 8201PS is supplying current

CONNECTORS

1. Input . . . . . Molex 2648-1052
2. Output . . . . . Phoenix 1757271

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. torage Temperature Range . . . . . (–40 °F - +158 °F) –40 °C - +0 °C

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