MODELS 8012PS

POWER SUPPLY

The Models 8012PS is a component of the IED 8000 Series™. The standard unit is a dual output, +15 VDC and –15 VDC at 150 W per voltage, switch mode power supply. The input voltage range is 95 VAC to 240 VAC. Power limiting prevents damage due to overloads and short circuits, including overvoltage and overtemperature. This protection by limiting or shutdown is contained within each module which makes up the 8012PS.

The 8011MF Mainframe power system has two modes of operation. In the case of an 8011MF with one 8012PS, the power supply functions in the main mode. If the 8011MF contains two 8012PS Power Supplies. The supplies function as a power sharing pair. In the power sharing mode, each 8012PS supplies 1/2 of the load current. If one should shut down, the other will supply the full load current. The 8012PS Power Supplies are “hot-swappable”.

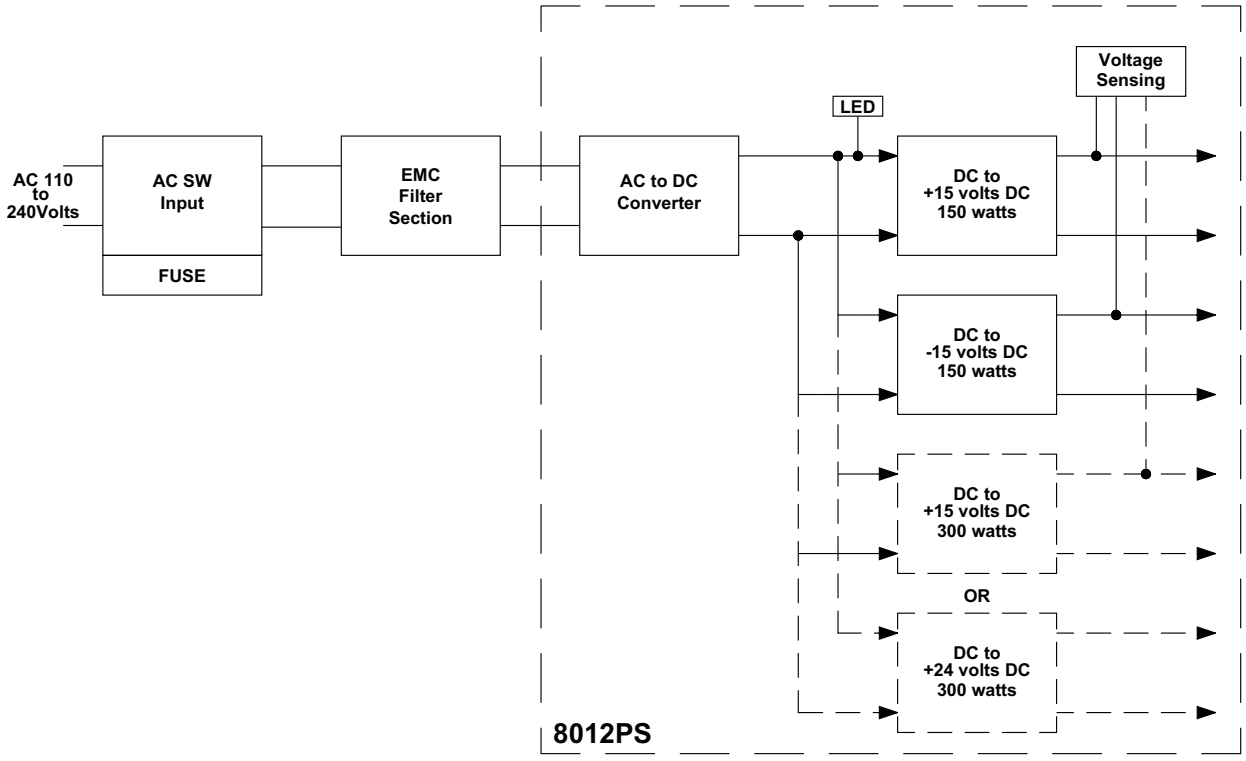

Figure 1 - 8012PS Power Supply Block Diagram

The 8001CPU will switch between the supplies and check the voltages to ensure that both supplies are operating properly. This ensures that eithr supply is ready to handle the full system load if one supply should fail or be removed.

Green LED Supply Active indicators shows the status of the power supply. The LEDs are located on the 8012PS mounting plate, have appropriate labels, and are viewable from the rear of the frame.

The soft start feature of the 8012PS assures that there will be zero overshoot of the output voltage during startup.

Test points are provided on the card edge of the 8001CPU for checking the system supply voltages of +15 VDC and –15 VDC.

All input and output connections are made via the motherboard.

The 8001CPU monitors the logic status output from the supply modules for conditions of overcurrent, over or under voltage, and temperature rise. If any out-of-tolerance condition occurs, the 8001CPU will shut down the supply module and provide an indication.

SPECIFICATIONS

ELECTRICAL, ANALOG

1. AC Input Voltage . . . . . 90 - 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 voltage in item 3 above, field adjustment not available
5. Efficiency, η (min) 70%
6. Output Power Limiting . . . . . 150 W per voltage
7. Output Voltage Overshoot at Startup . . . . . 0 V
   Soft start
8. Peak Noise, Ripple and Spikes, (max) . . . . . 150 mV

INDICATORS

1. Supply Active . . . . . Green LED

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 . . . . . (0.907 kg) 2.0 lb

ENVIRONMENTAL

1. Operating Temperature Range . . . . . (+32 °F - +122 °F) 0 °C - +50 °C
2. torage Temperature Range . . . . . (–40 °F - +158 °F) –40 °C - +0 °C

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