

# SPN50 Series

## 50 WATT, Universal Input Fully Enclosed Switching Power Supply



### FEATURES

- 50 WATT OUTPUT POWER
- UNIVERSAL INPUT
- OVERVOLTAGE PROTECTION
- OVERCURRENT PROTECTION
- LIGHTWEIGHT CONSTRUCTION
- METAL CHASSIS WITH COVER
- COMPACT, LOW-PROFILE PACKAGES
- 3 YEAR WARRANTY

### SAFETIES/APPROVALS

UL/cUL  
CE  
CB

### ELECTRICAL SPECIFICATIONS

All specifications are typical at nominal input, full load

### INPUT SPECIFICATIONS

|                      |                  |
|----------------------|------------------|
| Input Voltage.....   | 85 ~ 264VAC      |
| Input Frequency..... | 47 ~ 63Hz        |
| Input Current.....   | 0.55 ~ 1.0A Typ. |
| Inrush Current.....  | 16A ~ 39A Typ    |

### OUTPUT SPECIFICATIONS

|                                   |                               |
|-----------------------------------|-------------------------------|
| Output Voltage .....              | See Chart                     |
| Voltage Adjustment.....           | ±10%                          |
| Minimum Load.....                 | 0A                            |
| Efficiency.....                   | 75 ~ 80%                      |
| Over-Voltage Protection.....      | 115 ~ 150% Manual Reset       |
| Over-Current Protection.....      | Automatic Recovery (105% min) |
| Ripple and Noise.....             | 100mVp-p max.                 |
| Hold-Up Time.....                 | 40 ~ 50 mS                    |
| Line/Load Regulation.....         | See Chart                     |
| Rise Time.....                    | 800 ~ 1700 mS                 |
| Leakage Current (100/230VAC)..... | 0.75mA                        |

### GENERAL SPECIFICATIONS

|                           |                 |
|---------------------------|-----------------|
| MTBF.....                 | >160,000 Hours  |
| Isolation Voltage         |                 |
| Primary to Secondary..... | 3000VAC         |
| Primary to Case.....      | 1500VAC         |
| Secondary to Case.....    | 500VAC          |
| Isolation Resistance..... | 100 M-Ohms min. |

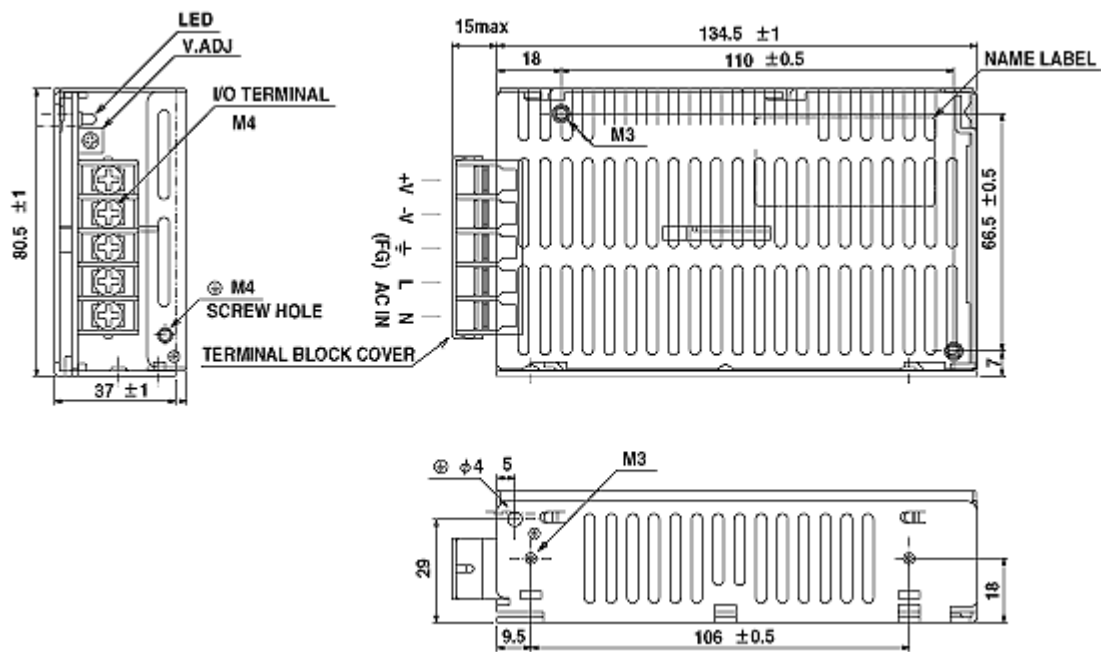
### ENVIRONMENTAL SPECIFICATIONS

|                              |                                                               |
|------------------------------|---------------------------------------------------------------|
| Operating Temperature .....  | 0°C ~ +60°C                                                   |
| Cooling.....                 | Convection                                                    |
| Temperature Coefficient..... | 0.02% / °C                                                    |
| Humidity.....                | 20 ~ 85%Rh (non-condensing)                                   |
| Storage Temperature.....     | -20°C ~ +85°C                                                 |
| Shock Vibration.....         | Shock: 20G(3 Directions each 3 times)<br>Vibration: 10 ~ 55Hz |

### PHYSICAL SPECIFICATIONS

Metal Enclosed – Terminal Block

| MODEL     | Output Voltage | Output Current<br>(85 ~ 264 VAC) | Efficiency<br>(%) | Load Regulation<br>(mV max) |
|-----------|----------------|----------------------------------|-------------------|-----------------------------|
| SPN50-05S | 5VDC           | 10A                              | 75%               | 10mV max                    |
| SPN50-12S | 12VDC          | 4.2A                             | 78%               | 10mV max                    |
| SPN50-15S | 15VDC          | 3.4A                             | 79%               | 10mV max                    |
| SPN50-24S | 24VDC          | 2.1A                             | 80%               | 20mV max                    |
| SPN50-48S | 48VDC          | 1.1A                             | 80%               | 40mV max                    |



**Note:**

- Mounting screws not to exceed max penetration of 6mm
- Screw thread size is M3 (Metric) or 6/32<sup>nd</sup> (Inch)
- Weight 200g typ.
- Measurements in millimeter (mm) unless otherwise specified
- Tolerance  $\pm 1$ mm

**NOTE:**

All specifications typical and nominal / full load and 25°C unless otherwise noted.  
 Avoid sustained operation in overload or dead short conditions.  
 Specifications subject to changes without notice.