

# 500 Watt – IP67IPS Series, Industrial Grade Power Supply Product Specification

## Product Description

This product is a 500 watt, single output, industrial grade power supply designed for electronic systems operating in demanding environments with adverse temperature conditions. It is a single phase, AC input power supply in an IP67 rated enclosure designed for remote operations requiring the highest degree of reliability.

## Product Features

- Designed to meet IECEX/ATEX/NRTL/CE
- Operating Temperature Range: -40° to +85°C
- Baseplate Mounting, Conduction Cooled



## AC Input

- Voltage Input Range: 90-264Vac
- Frequency: 50/60/400Hz (47-440Hz)
- Phase: Single Phase, 2 wire plus ground
- Typical Input Current: 5.1A at 115Vac input, full load
- Power Factor Correction: 0.95 min @ 115Vac, full load
- Input Transient Protection: Designed to meet MIL-STD-704A/D (80Vdc for 100mSec)
- Input Surge Protection: Designed to meet MIL-STD-1275A/D (100Vdc for 50mSec)

## Output Selection Guide

Model #:	Voltage	Max Current	Regulation	Ripple
IP67IPS500-12	12Vdc	41.6 Amps	±3%	120mV pk-pk
IP67IPS500-15	15Vdc	33.3 Amps	±3%	150mV pk-pk
IP67IPS500-24	24Vdc	20.8 Amps	±3%	240mV pk-pk
IP67IPS500-28	28Vdc	17.8 Amps	±3%	240mV pk-pk
IP67IPS500-36	36Vdc	13.8 Amps	±3%	240mV pk-pk
IP67IPS500-48	48Vdc	10.4 Amps	±3%	240mV pk-pk

Note: Alternate output voltages are available, consult factory for availability.

## DC Output Characteristics (floating)

- Output Power: 500 watts (maximum continuous power, may require derating for some low voltage outputs)
- Line Regulation: ±2.0% Typical
- Load Regulation: ±2.0% Typical (No load to full load; nominal input)
- Output Ripple/Noise: 1% Typical (pk-pk; nominal input; full load; 20MHz bandwidth)
- Set Point Accuracy: ±1.0% of Output Voltage (Nominal input; full load; 25°C)
- Transient Response: Output voltage returns to within 1% in less than 2.5mS for a 50% load change and the peak transient does not exceed 5%
- Overshoot: Turn-on and turn-off overshoot should not exceed 5% over nominal voltage
- Holdup Time: 16mS

## Electrical Characteristics

- Switching Frequency: 300KHz Fixed
- Efficiency: 88% Typical (Measuring at 115Vac and at full load)
- Turn On Delay: 250 to 500mS (To nominal output voltage)
- Isolation Voltage:
  - Input to Output: 2000Vrms
  - Input to Chassis: 1000Vrms
  - Output to Chassis: 1000Vrms
- Isolation Resistance: 100Mohms (Input to output)
- Temperature Regulation:  $\pm 2.0\%/^{\circ}\text{C}$  ( $\pm .005\%/^{\circ}\text{C}$  max; over operating temp range)

## Protection

- Over Current Limit: 115 to 130%. Auto-recovery after removal of overload condition
- Over-Voltage Setpoint: 108 to 125% of output voltage. Unit latched 1 minute, recycle AC input to reset
- Short Circuit: Auto-recovery after short circuit condition is removed
- Over Temperature Protection: The power supply is protected for over temperature conditions with thermal shutdown. Auto-Recovery when temperature returns to normal

## Environmental

- Operating Temperature:  $-40^{\circ}$  to  $+85^{\circ}\text{C}$  (baseplate)
- Storage Temperature:  $-50^{\circ}$  to  $100^{\circ}\text{C}$
- Operating Humidity: 5% to 90% RH, Non-condensing
- Storage Humidity: 5% to 95% RH, Non-condensing
- Operating Altitude: Sea-level to 10,000 ft.
- Shock & Vibration: Designed to meet MIL-STD-810G
- EMC Radiated & Conducted EMI: Designed to meet EN55022 Level B, CISPR 22 Class B, FCC Part J Class B

## Cooling

- Conduction Cooling: Baseplate not to exceed  $85^{\circ}\text{C}$  for full rated output

## Mechanical

- Enclosure: Metal chassis, Aluminum baseplate and enclosure, non-finish.
- Outline Dimensions: 6.5" X 7.8" X 3.0" (W X L X H) – not including I/O connector
- Weight:  $\sim 3.5$  lbs. ( $\sim 1587$  grams)
- AC Input Connector (J1): Amphenol PN RT07144PNH
- DC Output Connector (J2): Amphenol PN RT07144SNH

## Optional Features, Controls or Alarms

- Consult Factory

## Note

- Product specifications subject to change without notice