

AWSP150-12

Description:

The AWSP150-12 is a single output power supply. This power supply is designed for a wide variety applications where high reliability is desired, including applications for the industrial and telecommunications markets. Excellent performance specifications are provided, together with compliance to European EMC (EN55022, Class B and EN61000-3-2), and Low Voltage directive (TUV EN60950).

Specifications (@25C)

Input Characteristics:

| | |
|------------------------|--------------------------------------|
| Input Voltage: | 88-264Vac |
| Input Frequency Range: | 47-63Hz |
| Max Input Current: | 2.7A @ Vin (rated) |
| Max Inrush Current: | 20A@110Vac, 40A@220Vac at cold start |
| Power Factor: | >0.92 |
| Leakage Current: | <3.5mA/240Vac |

Output Characteristics:

| | |
|--------------------------|--|
| Output Voltage: | 12Vdc |
| Output Current: | 12.5A |
| Output Power: | 150W |
| Adjustable Output Range: | ±10% |
| Ripple & Noise: | 180mV |
| Load Regulation: | ±0.5% |
| Line Regulation: | ±0.5% |
| Efficiency: | 80% |
| Temperature Drift: | <0.03%/°C (10-50°C) |
| Start-up Time: | 300ms max @ 230VAc |
| Hold-up Time: | 20ms min, 100% Load@230VAc |
| Rise-up Time: | 600ms max, 100% Load@230VAc |
| Over Current Protection: | At 105%<Load<150% |
| Over Voltage Protection: | At 125%<Load<145%@I/P:115/230VAC. Reset by recycle AC ON/OFF |

General Specifications:

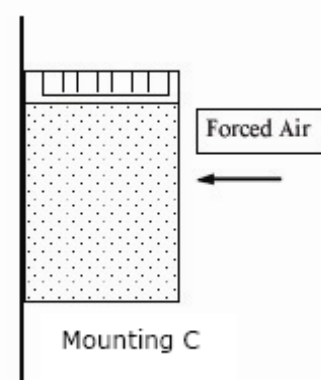
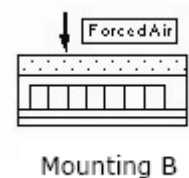
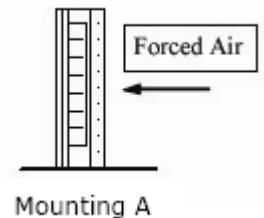
| | |
|-----------------------|--|
| Switching Frequency: | 134kHz (PWM) / 67kHz (PFC) |
| Dimension (LxWxH): | 199x98x42 |
| Weight: | 560g net, 610g gross |
| Cooling: | Natural Convection |
| Isolation Resistance: | I/P—O/P, I/P—FG, O/P—FG: 500VDC/100Mohms |
| Dielectric Strength: | I/P—O/P: 3kVAc; I/P—FG: 2.5kVAc; O/P—FG: 0.5kVAc 1 min |
| Warranty: | 2 years |

Environmental Specifications:

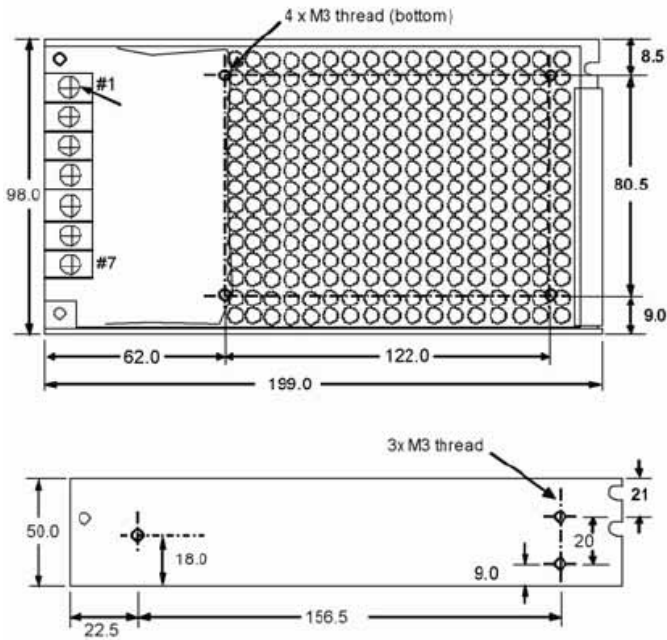
| | |
|------------------------|---|
| Operating Temperature: | -10° to 60°C |
| Operating Humidity: | 20 to 90% RH, non-condensing |
| Storage Temperature: | -25 to 75°C |
| Storage Humidity: | 10 to 95% RH, non-condensing |
| Vibration: | 10-55Hz, 2G 1min/cycle, period of 60min, each X, Y & Z axis |

EMC & Safety Specifications:

| | |
|--------------------------|--|
| EMC Emissions: | Conforms to EN55022,VCCI,CISPR22 Class B (Conducted & Radiated); IEC-61000-4-2, 61000-4-4, 61000-4-5, 61000-4-11 |
| ESD Susceptibility: | EN61000-4-2 (15kV/8kV) |
| Radiated Susceptibility: | EN61000-4-3 (3Vm ⁻¹) |
| Fast Burst: | EN61000-4-4 (2kV) |
| Surge: | EN61000-4-5 (1kV/2kV) |
| Safety Approval: | UL 60950 (UL File No: E204980) TUV EN60950 (TUV No: 50058679) |



Outline Dimensions (mm):

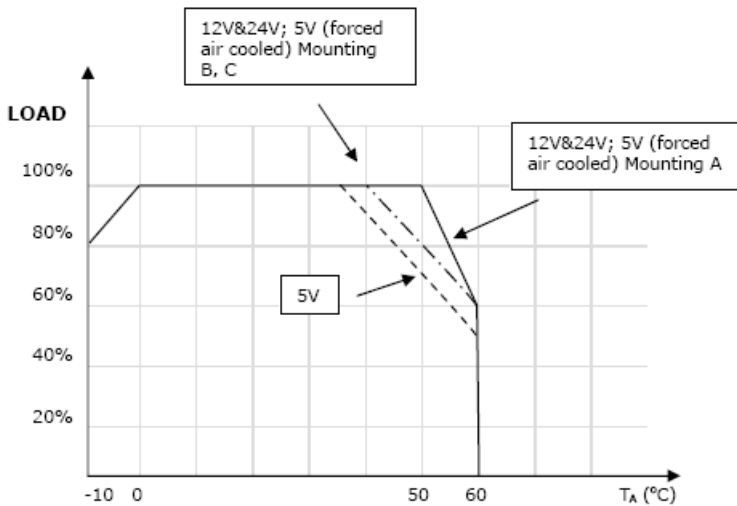


TERMINAL SCREW ASSIGNMENT

- # 1,2 : AC INPUT
- # 3 : FG
- # 4,5 : DC OUTPUT -V
- # 6,7 : DC OUTPUT +V

Unit : mm
Tolerance : +/-1.0mm

Derating Curve:



Connector Types:

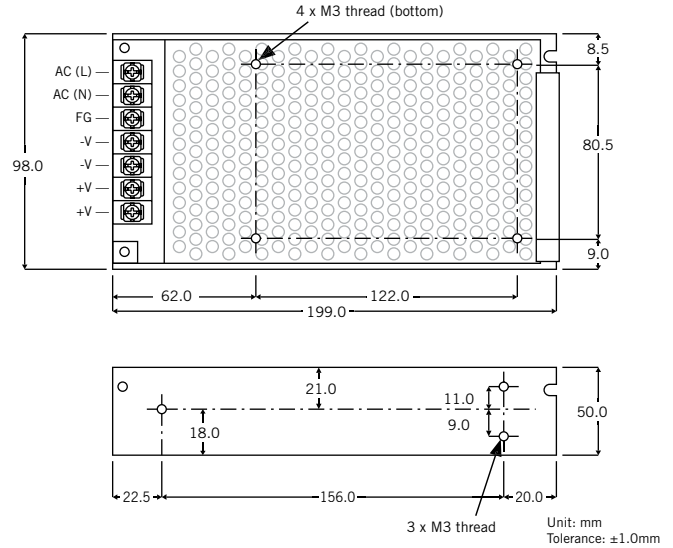
Input: Screw Terminals

Output: Screw Terminals

RoHS Compliance: This power supply meets the requirements 2002/95/EC, known as the RoHS initiative.

AWSP150 Series

150 Watt Single Output Enclosed Switching Power Supply with Power Factor Correction for General Purpose Applications



SPECIFICATIONS (@25°C)

Input Characteristics

| | |
|------------------------|---------------------------------------|
| Input Voltage: | 88 - 264VAC |
| Input Frequency Range: | 47 - 63Hz |
| Power Factor: | > 0.92 |
| Max Input Current: | 2.7A (max) |
| Max Inrush Current: | 20 / 40A @ 110 / 220 VAC (cold start) |
| Leakage Current: | <3.5mA / 240Vac (Should be <750µA?) |

Output Characteristics

| | |
|-----------------------------|-------------------------------|
| Minimum Load: | No minimum load |
| Adjustable Output Range: | ±10% |
| Ripple/Noise (pk-pk 20MHz): | 5/12/24V = 150/180/240mV |
| Regulation: | ±1.0% Load / ±0.5% Line |
| Hold-up Time: | 20ms min, 100% Load @ 220 VAC |
| Rise-up Time: | 600ms max @ 230 VAC |
| Over Current Protection: | >105~150%, Auto-Recovery |
| Over Voltage Protection: | >125% (recycle AC to recover) |

General Specifications

| | |
|----------------------|---------------------------------------|
| Switching Frequency: | 134kHz (PWM) / 687kHz (PFC) |
| Dimension (LxWxH): | 7.83 x 3.86 x 1.65" / 199 x 98 x 42mm |
| Weight: | 560g |
| Warranty: | 2 years |

Environmental Specifications

| | |
|------------------------|--|
| Operating Temperature: | 0~+60°C Full Load (see derating curve) |
| Storage Temperature: | -25~+75°C |
| Cooling: | Convection Cooled Operation |
| Humidity: | 10~95% RH, non-condensing |
| Vibration: | 10 - 55Hz, 2G 1min / cycle, period of 60min, each axis |
| Reliability: | >144,000 Hours MTBF |

EMC & Safety Specifications

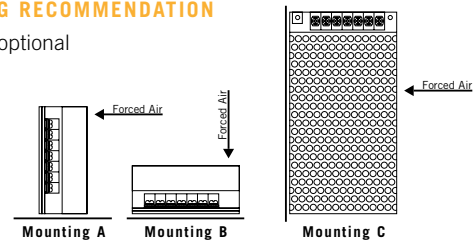
| | |
|------------------------|--|
| EMC Emissions: | EN55022,VCCI,CISPR22 Class B (Conducted & Radiated); IEC-61000-4-2, 61000-4-4, 61000-4-5, 61000-4-11 |
| Safety Approval: | UL 60950 (UL File No: E204980) TUV EN60950 (TUV No: 50067240) |
| Dielectric Strength: | Input-Output 3kVAC / 1min Input-Ground 2.5kVAC / 1min |
| Insulation Resistance: | Output-Ground: >100Mohm / 500VDC |

CONNECTOR TYPES

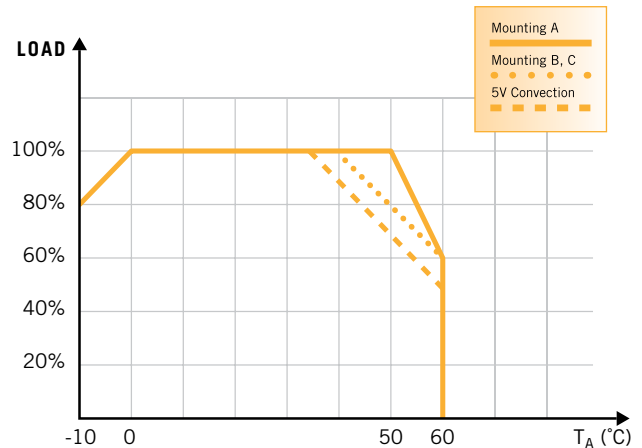
Input: Screw Terminals
Output: Screw Terminals

MOUNTING RECOMMENDATION

Forced air optional



DERATING CURVE



| Part Number | Voltage | Current | Efficiency |
|-------------|---------|---------|------------|
| AWSP150-5 | 5.0V | 30A | 75% |
| AWSP150-12 | 12V | 1.25A | 80% |
| AWSP150-24 | 24V | 6.3A | 83% |