

Features:

1. Wide input range (90-264VAC, 120-370VDC)
2. Size 76.2*50.8*28.0mm, 3"*2"
3. No-load power consumption<0.5W
4. Protection type: short circuit/over temperature/over load/over voltage
5. Operating temperature range -40°C to +85°C
6. 4000V isolation voltage
7. Built-in EMI filter: CLASS B
8. Suitable for CLASS I or CLASS II installations
9. 100% high temperature aging and testing
10. 3 years warranty



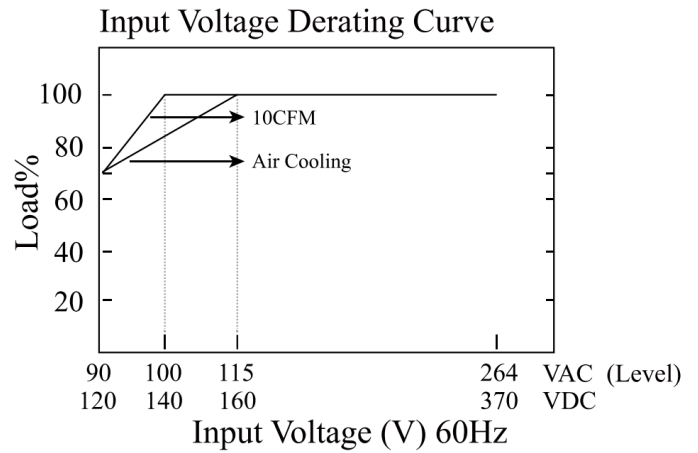
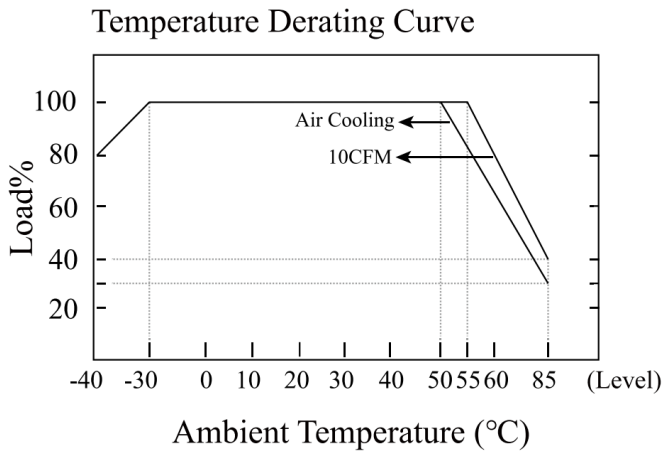
3 years
Warranty

Selection Guide

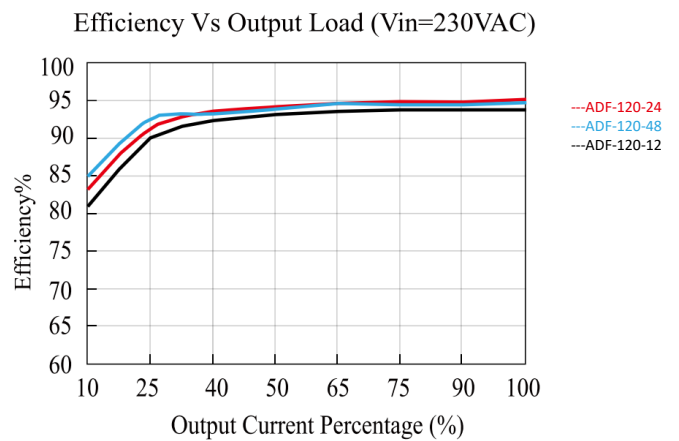
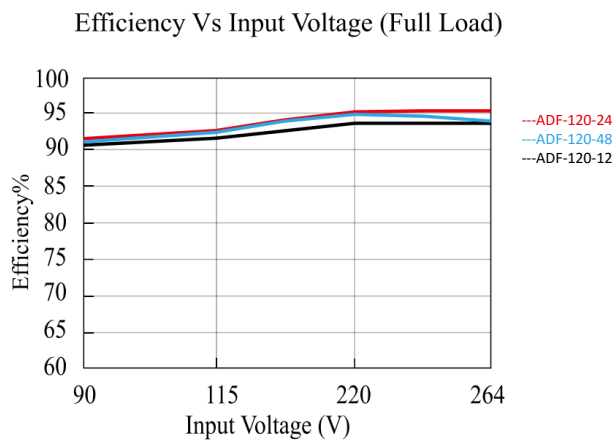
| Model | Input Voltage | Rated Power (W) | Output Voltage (V) | Voltage Adjustable Range (V) | Output Current (A) | Ripple & Noise (mVp-p) | Efficiency (%) |
|------------|---------------|-----------------|--------------------|------------------------------|--------------------|------------------------|----------------|
| ADF-120-12 | 90-264VAC | 120 | 12 | 11.4-12.6 | 10 | 120 | 94 |
| ADF-120-15 | | 120 | 15 | 14.3-15.8 | 8 | 120 | 94 |
| ADF-120-24 | | 120 | 24 | 22.6-25.8 | 5 | 150 | 94 |
| ADF-120-27 | | 120 | 27 | 26.5-27.8 | 4.44 | 150 | 95 |
| ADF-120-36 | | 120 | 36 | 33.8-38.2 | 3.33 | 200 | 94 |
| ADF-120-48 | | 120 | 48 | 44-50.1 | 2.5 | 200 | 94.5 |

| | | | | | | | | |
|------------------------|--|--|-------|-------|---------------|-------|-------|-------|
| OUTPUT | Voltage Tolerance | ±1.0% | | | 12/15V: ±2.0% | | | |
| | Line Regulation | ±0.5% | | | | | | |
| | Load Regulation | ±1.0% | | | | | | |
| | Setup, Rise Time (Typ.) | 1000ms, 30ms/230VAC 1500ms, 30ms/115VAC at full load | | | | | | |
| | Hold Up Time (Typ.) | 12ms/230VAC 12ms/115VAC at full load | | | | | | |
| INPUT | Voltage Range | 90-264VAC 120-370VDC | | | | | | |
| | Power Factor (Typ.) | PF>0.95/230VAC PF>0.98/115VAC at full load | | | | | | |
| | Current (Typ.) | 1.5A/115VAC 0.8A/230VAC | | | | | | |
| | Inrush Current (Typ.) | Cold boot 40A/115VAC 75A/230VAC | | | | | | |
| | Leakage Current (Typ.) | <0.75mA/240VAC/60Hz | | | | | | |
| PROTECTION | Over Load | ≥110% load, self-recovery after troubleshooting | | | | | | |
| | Short Circuit | Hiccup mode, self-recovery after troubleshooting | | | | | | |
| | Over Temperature | Shut-off output, normal output can be restored after power restart | | | | | | |
| | Over Voltage | Shut-off output | | | | | | |
| | | Voltage | 12VDC | 15VDC | 24VDC | 27VDC | 36VDC | 48VDC |
| | | Range | ≤16V | ≤20V | ≤32V | ≤35V | ≤50V | ≤60V |
| ENVIRONMENT | Working Temp. | -40°C to +85°C (Refer to "Derating curve") | | | | | | |
| | Working Humidity | 10-85%RH | | | | | | |
| | Storage Temp., Humidity | -40°C to +85°C | | | | | | |
| | Temp. Coefficient | 0.03%/ (0-50°C) | | | | | | |
| | Vibration | 10-500Hz, 2G, 10min./1cycle, 60min.each along X, Y, Z axes | | | | | | |
| SAFETY & EMC (NOTE 3.) | Safety Standards | Meet to UL62368-1, EN/EN62368-1, IEC62368-1 | | | | | | |
| | Isolation Voltage | I/P-O/P: 4000VAC I/P-FG(CASE): 2500VAC O/P-FG(CASE): 500VAC | | | | | | |
| | Isolation Resistance | I/P-O/P, I/P-FG, O/P-FG: >100M Ohms/500VDC 25°C 70% RH | | | | | | |
| | EMC Emission & Immunity | EN55011, EN55032 (CISPR32) CLASS B | | | | | | |
| | ESD | IEC/EN 61000-4-2 level 4 Contact ±8kV/Air ±15kV | | | | | | |
| | RF | IEC/EN 61000-4-3 level 4 lev3 | | | | | | |
| | EFT | IEC/EN 61000-4-4 level 4 4kV | | | | | | |
| | Surge | IEC/EN 61000-4-5 level 4 2kV | | | | | | |
| OTHERS | MTBF | 165K hrs min. MILDBK-217F (25°C) | | | | | | |
| | Dimension | 76.2*50.8*28.0mm (L*W*H) | | | | | | |
| NOTE | 1. All parameters not specially mentioned, are measured when TA=25°C, humidity<75%, input nominal voltage and output rated load. | | | | | | | |
| | 2. Measurement method of ripple & noise: Parallel line test method shall be adopted. Meanwhile, 0.1uF high-frequency ceramic capacitor and one 47uF electrolytic capacitor shall be connected in parallel at the terminal for measurement under 20Mhz bandwidth. | | | | | | | |
| | 3. The power supply is regarded as a component in the system, and electromagnetic compatibility shall be confirmed in combination with the terminal equipment. | | | | | | | |

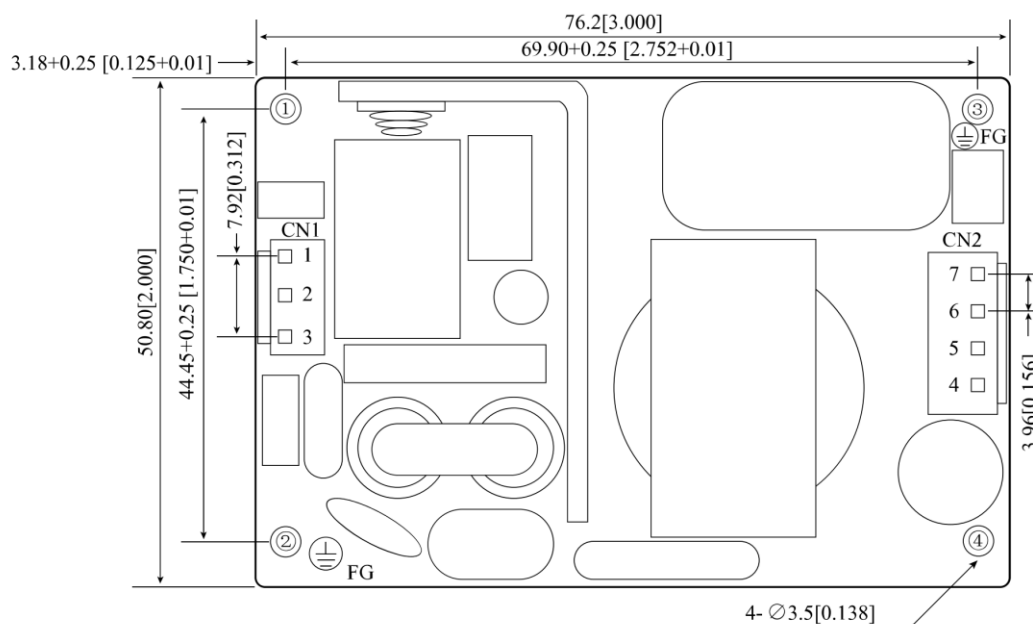
Typical Characteristics Curve

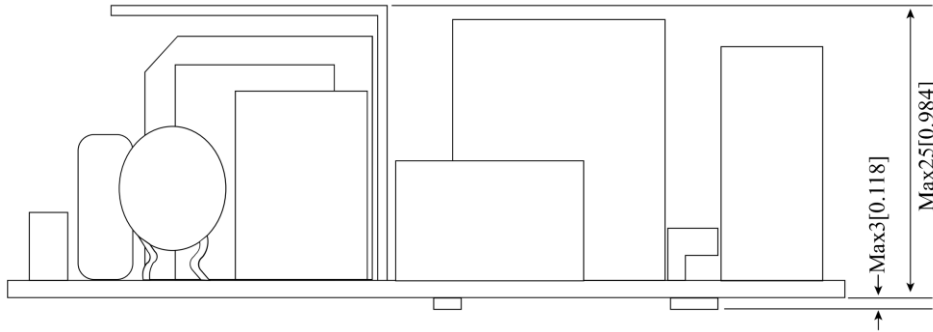


Efficiency Curves



Mechanical Specification

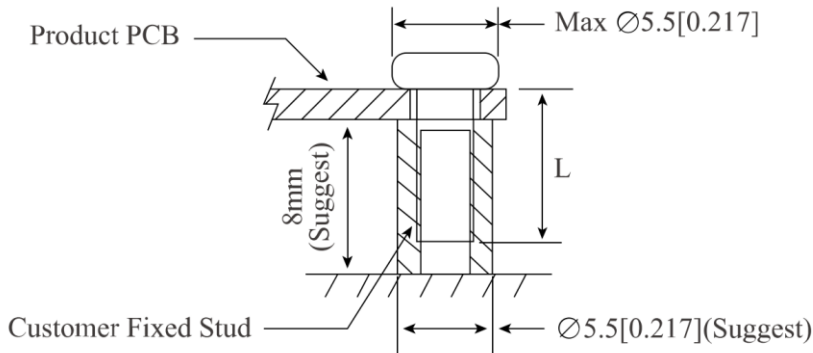




NOTE:

1. Unit size: mm[inch]
Unmarked tolerances: $\pm 0.5\text{mm}$
2. CLASS I system: Mounting holes marked with \perp must be connected to safety earth
3. CLASS II system: Unnecessary to connect with safety earth

| Pin Method | | | |
|------------|-----|----------|---|
| Connector | Pin | Function | Customer Connection End |
| CN1 | 1 | AC(N) | Connector: JST VHR Connector Terminals: JST SVH-21T-P1.1 Or Equivalent Products |
| | 2 | NC | |
| | 3 | AC(L) | |
| CN2 | 4-5 | -Vo | Connector: JST VHR Connector Terminals: JST SVH-21T-P1.1 Or Equivalent Products |
| | 6-7 | +Vo | |



| Installation location | Screw Specifications | L (Suggest) | Torque (max) |
|-----------------------|----------------------|-------------|--------------|
| ①-④ | M3 | 6mm | 0.4N·m |

Notes:

1. If the product works under the minimum required load, it cannot guarantee that the performance of the product complies with all the performance indicators in this manual;
2. The maximum capacitive load is tested under the input voltage range and full load condition;
3. Unless otherwise stated, all indexes in this manual are measured at $T_a=25^\circ\text{C}$, humidity $<75\%\text{RH}$, nominal input voltage and rated output load;
4. All index testing methods in this manual are based on the enterprise standards of the company;
5. Our company can provide product customization, specific needs can directly contact our technical staff;
6. AMCHARD reserves the right to make changes to the product at any time without notice.