120 Watts

AML120 Series

- Energy Star Level V ≥ 18 V
- CEC 2008 & EISA 2007 Compliant ≥15V
- High Power Density
- Single Outputs from 12 V to 48 V
- High Efficiency
- 0 °C to +70 °C Operating Temperature
- Non-standard Connectors Available

Specification

Input

Input Voltage	• 90-264 VAC
Input Frequency	• 47-63 Hz
Input Current	• 1.6 A rms at 115 VAC, 0.8 A rms at 230 VAC
Inrush Current	• 60 A at 115 VAC, 120 A at 230 VAC, cold start +25 °C
Power Factor	• 0.98 typical at 115 VAC
Earth Leakage Current	• 150 µA max at 115 VAC, 60 Hz 250 µA max at 230 VAC, 50 Hz
Input Protection	• Internal 3 A fuse
Standby Power Consumption	• <0.75 W

Output

Output Voltage	• 12 to 48 VDC
Output Voltage Trim	• Not user-adjustable
Initial Set Accuracy	• ±2%
Minimum Load	• No minimum load required
Start Up Delay	• 2 s max at 115 VAC
Start Up Rise Time	• <80 ms at 115 VAC
Hold Up Time	• 15 ms minimum at full load and 115 VAC
Line Regulation	• ±0.5% maximum
Load Regulation	• See table
Transient Response	• 4% max. deviation, recovery to within 1% in 500 µs for a 25% load change
Ripple & Noise	• 2% max pk-pk (see note 1)
Overvoltage Protection	• 110-140% Vnom, recycle input to reset
Overtemperature Protection	• Unit shuts down, recycle input to reset
Overload Protection	• 110-150%, auto recovery
Short Circuit Protection	• Trip and restart (Hiccup mode)
Temperature Coefficient	• 0.04%/°C

General

Efficiency	• 86% typical, 80% min for 12 V & 15 V models
Isolation	• 3000 VAC Input to Output 1500 VAC Input to Ground Output 0 V is electrically connected to Input Ground
Switching Frequency	• 20-110 kHz variable
Power Density	• 4.9 W/In^3
MTBF	• >100 kHrs per MIL-HDBK-217F

Environmental

Operating Temperature	• 0 °C to +70 °C, derate from 100% power at +50 °C to 60% power at +70 °C
Cooling	• Convection-cooled
Operating Humidity	• 10-95% RH, non-condensing
Storage Temperature	• -20 °C to +80 °C
Operating Altitude	• 3000 m
Shock	• 30 g, 10 ms on 3 axes
Vibration	• 5-100 Hz, 2.31 m/s^2, 20 mins, 3 axes

EMC & Safety

Emissions	• EN55022/FCC/VCCI, Class B conducted EN55022/FCC/VCCI, Class B radiated
Harmonic Currents	• EN61000-3-2
Voltage Flicker	• EN61000-3-3
ESD Immunity	• EN61000-4-2, level 3 Perf Criteria A
Radiated Immunity	• EN61000-4-3, level 3 Perf Criteria A
EFT/Burst	• EN61000-4-4, level 2 Perf Criteria A
Surge	• EN61000-4-5, level 3 Perf Criteria A
Conducted Immunity	• EN61000-4-6, 10 V Perf Criteria A
Dips & Interruptions	• EN61000-4-11, 30% for 10 ms, 60% 100 ms, 100% 5000 ms, Perf Criteria A, B, B
Safety Approvals	• EN60950, UL60950, CSA22.2 No. 60950 per cUL, CE Mark

Models and Ratings

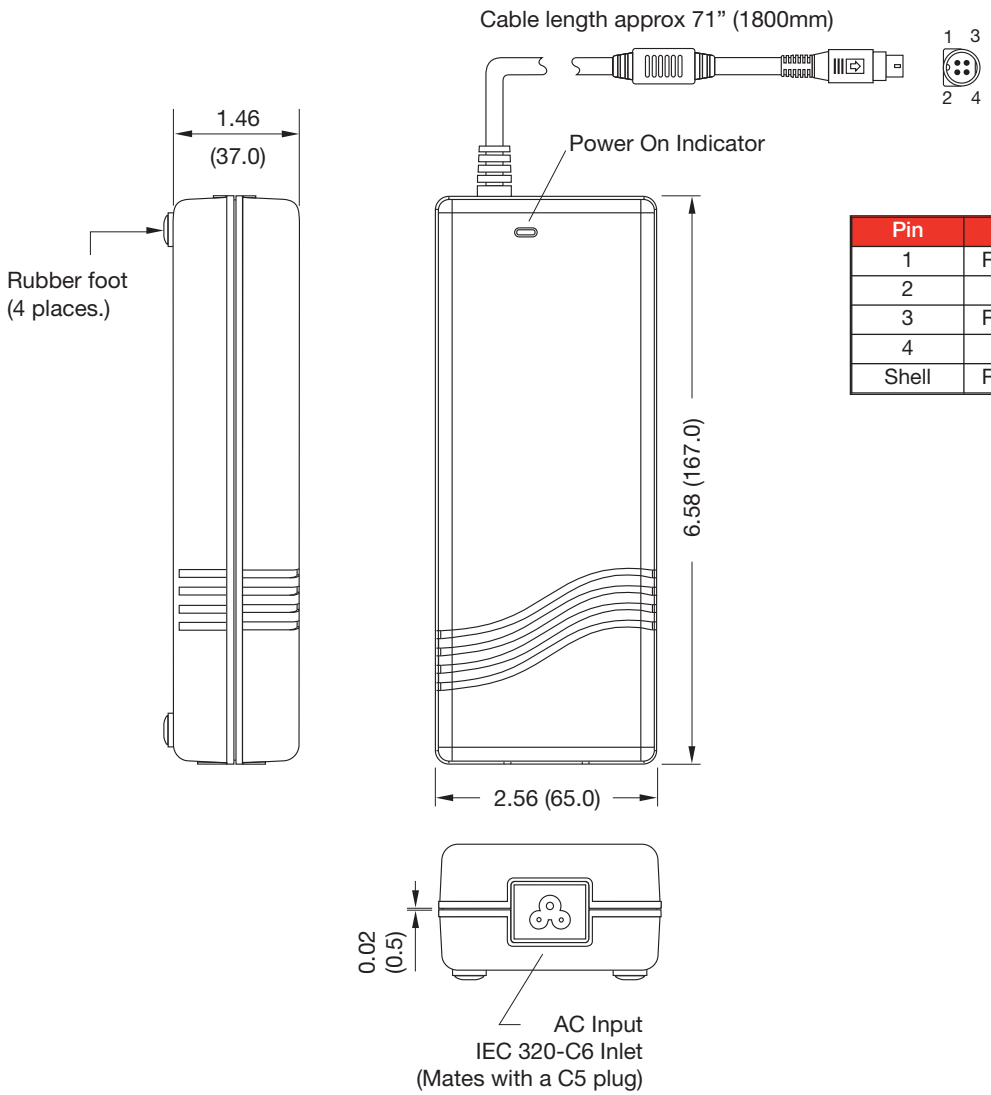
Output Power	Output Voltage	Output Current	Total Regulation[2]	Model Number
96 W	12 V	8.00 A	5%	AML120PS12†
105 W	15 V	7.00 A	5%	AML120PS15†
120 W	18 V	6.67 A	5%	AML120PS18
120 W	19 V	6.32 A	5%	AML120PS19†
120 W	20 V	6.00 A	5%	AML120PS20
120 W	24 V	5.00 A	5%	AML120PS24†
120 W	30 V	4.00 A	5%	AML120PS30
120 W	36 V	3.34 A	5%	AML120PS36†
120 W	48 V	2.50 A	5%	AML120PS48†

Notes

1. Ripple and noise measured at 20 MHz bandwidth with a 10 µF tantalum and 0.1 µF ceramic cap connected at the measurement point.
2. Total regulation includes initial set accuracy, line and load regulation.

† Available from Farnell. See pages 204-206.

Mechanical Details



Pin	Function
1	Return/Input Earth
2	Output +
3	Return/Input Earth
4	Output +
Shell	Return/Input Earth

Notes

1. Dimensions shown in inches (mm). Tolerance is 0.02 (0.5) maximum, except output cable length.
2. Maximum load per pin on output connector is 5 A.
3. Optional output connectors available. Consult sales.
4. Output connector is Kycon part KPP-4P or equivalent. Mating connector Kycon part KPJ-4S.