



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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## AMM Series



- CEC2008 & EISA2007 Compliant
- Worldwide Medical Approvals
- Class I
- High Power Density
- High Efficiency
- Operating Temperature up to +60 °C
- 3 Year Warranty

## Specification

## Input

Input Voltage	• 90 W: 80-264 VAC, derate output power 10% <90 VAC & 15% <85 VAC, 120/150 W: 80-264 VAC, derate output power 15% <90 VAC & 20% <85 VAC
Input Frequency	• 47-63 Hz
Input Current	• 90 W: 1.2 A at 115 VAC, 0.6 A at 230 VAC 120 W: 1.6 A at 115 VAC, 0.8 A at 230 VAC 150 W: 2 A at 115 VAC, 1.0 A at 230 VAC
Inrush Current	• 60 A max at 115 VAC, 120 A max at 230 VAC, cold start +25 °C
Power Factor	• 0.98 typical
Earth Leakage Current (Class I Versions)	• 90 µA max at 115 VAC/60 Hz, 150 µA max at 230 VAC/50 Hz
Input Protection	• 90 W: Internal T2.5 A/250 V fuse in line and neutral lines, 120 W: Internal T3.15 A/250 V fuse in line and neutral lines, 150 W: Internal T4 A/250 V fuse in line and neutral lines
No Load Input Power	• <0.5 W

## Output

Output Voltage	• See tables
Output Voltage Trim	• Not user-adjustable
Initial Set Accuracy	• ±2%, set at 60% load
Minimum Load	• No minimum load required
Start Up Delay	• 90/120 W: 2 s max at 115 VAC, 150 W: 3 s max at 115 VAC
Start Up Rise Time	• <80 ms at 115 VAC
Hold Up Time	• 15 ms minimum at full load & 115 VAC
Line Regulation	• 0.5% maximum
Load Regulation	• See tables
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	• 90/150 W: Unit shuts down, auto recovery 120 W: Unit shuts down, recycle input to reset
Overload Protection	• 110-180%, auto recovery
Short Circuit Protection	• Trip and restart (Hiccup mode)
Temperature Coefficient	• 0.04%/°C

## General

Efficiency	• 85% typical
Isolation	• 4000 VAC Input to Output 1500 VAC Input to Ground 500 VAC Output to Ground
Switching Frequency	• 50-110 kHz variable
Power Density	• 90 W: 3.4 W/In <sup>3</sup> , 120 W: 3.7 W/In <sup>3</sup> 150 W: 2.9 W/In <sup>3</sup>
MTBF	• 150 kHrs typical to MIL-HDBK-217F at 25 °C, GB

## Environmental

Operating Temperature	• 0 °C to +60 °C, derate linearly from 100% power at +40 °C to 50% power at +60 °C
Cooling	• Convection-cooled
Operating Humidity	• 5-95% RH, non-condensing
Storage Temperature	• -40 °C to +85 °C
Operating Altitude	• 3000 m
Shock	• 30 g, 10 ms on 3 axes
Vibration	• 5-100 Hz, 2.31 m/s <sup>2</sup> , 20 mins, 3 axes

## EMC &amp; Safety

Emissions	• EN55011/FCC/VCCI, Class B conducted EN55011/FCC/VCCI, Class B radiated
Harmonic Currents	• EN61000-3-2, Class A
Voltage Flicker	• EN61000-3-3
ESD Immunity	• EN61000-4-2, level 3 Perf Criteria A
Radiated Immunity	• EN61000-4-3, level 2 Perf Criteria A
EFT/Burst	• EN61000-4-4, level 3 Perf Criteria A
Surge	• EN61000-4-5, level 3 Perf Criteria A
Conducted Immunity	• EN61000-4-6, 3 V Perf Criteria A
Magnetic Field	• EN61000-4-8, 3 A/m Perf Criteria A
Dips & Interruptions	• EN61000-4-11 90/120 W: 70% 10 ms, 40% 100 ms, <5% 5000 ms, Perf Criteria A, B, B (Perf Criteria A, A, B with 70% load) 150 W: >95% 10 ms, 60% 100 ms, <30% 500 ms, Perf Criteria A, B, B
Safety Approvals	• EN60601-1, UL60601-1, CSA22.2 No. 601-1 per cUL



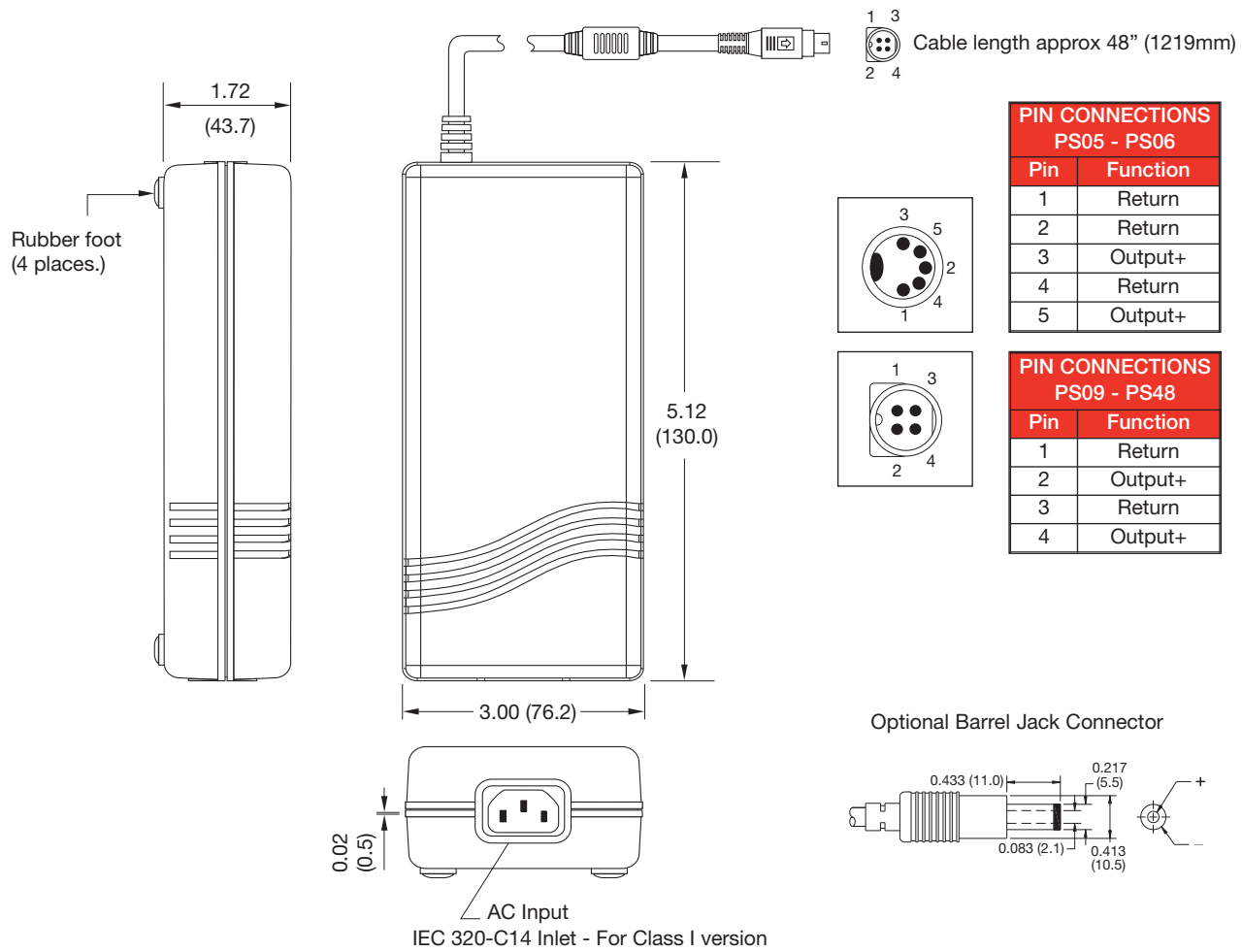
**Models and Ratings**

Output Power	Output Voltage	Output Current	Total Regulation <sup>(2)</sup>	Model Number <sup>(3)</sup>
60 W	5.0V	12.00 A	5%	AMM90PS05 <sup>(5)</sup>
60 W	6.0V	10.00 A	5%	AMM90PS06 <sup>(5)</sup>
70 W	9.0V	7.78 A	5%	AMM90PS09 <sup>(5)</sup>
80 W	12.0V	6.67 A	5%	AMM90PS12
85 W	13.5V	6.30 A	5%	AMM90PS13
85 W	15.0V	5.67 A	5%	AMM90PS15
90 W	18.0V	5.00 A	5%	AMM90PS18
90 W	19.0V	4.74 A	5%	AMM90PS19
90 W	24.0V	3.75 A	5%	AMM90PS24
90 W	30.0V	3.00 A	5%	AMM90PS30
90 W	48.0V	1.87 A	5%	AMM90PS48

**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.
3. For optional Barrel Jack Connector, add 'B1' to model number e.g. AMM90PS24B1 (not available on 5 V or 6 V models).
4. Not CEC2008 or EISA2007 compliant.

**Mechanical Details**



**Notes**

1. Dimensions shown in inches (mm). Tolerance is 0.02 (0.5) maximum, except output cable length.
2. Weight: 1.46 lb (660 g).
3. Maximum load per pin on output connector is 7.5 A.
4. Output connector for AMM90PS05 and PS06 is 5 pin 180° DIN.
5. Output connector for AMM90PS09-PS13 is 4 Pin DC Power Plug non locking type. For mating half, use KYCON KPJ-4S-S or equivalent.
6. Output connector for AMM90PS15-PS48 is 4 Pin DC Power Plug locking type. For mating half, use KYCON KPJ-4S-S or equivalent.
7. For Class I versions shell is connected to ground.
8. For European mains lead order part: EU-MAINS-IEC
9. For UK mains lead order part: UK-MAINS-IEC
10. For US mains lead order part: US-MAINS-IEC
11. Mains lead length is 76" (1930 mm) approx

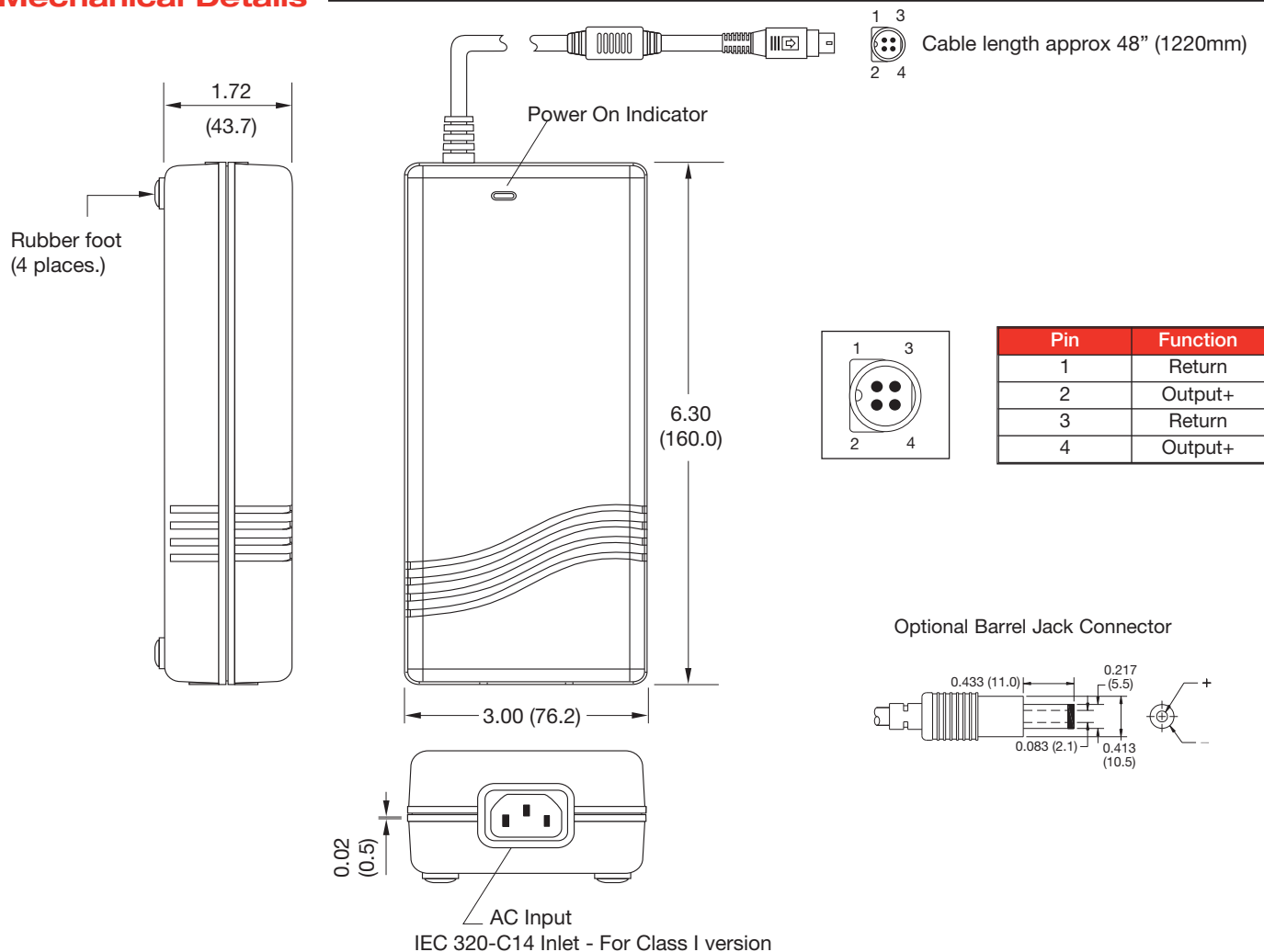
## Models and Ratings

Output Power	Output Voltage	Output Current	Total Regulation <sup>(2)</sup>	Model Number <sup>(3)</sup>
96 W	12 V	8.00 A	5%	AMM120PS12
105 W	15 V	7.00 A	5%	AMM120PS15
120 W	18 V	6.67 A	5%	AMM120PS18
120 W	19 V	6.32 A	5%	AMM120PS19
120 W	20 V	6.00 A	5%	AMM120PS20
120 W	24 V	5.00 A	5%	AMM120PS24
120 W	30 V	4.00 A	5%	AMM120PS30
120 W	36 V	3.34 A	5%	AMM120PS36
120 W	48 V	2.50 A	5%	AMM120PS48

### Notes

1. Ripple and noise measured at 20 MHz bandwidth with a 10  $\mu$ F tantalum and 0.1  $\mu$ F ceramic cap connected at the measurement point.
2. Total regulation includes initial set accuracy, line and load regulation.
3. For optional barrel jack connector add suffix 'B1' to model number e.g. AMM120PS24B1.

## Mechanical Details



### Notes

1. Dimensions shown in inches (mm). Tolerance is 0.02 (0.5) maximum, except output cable length.
2. Weight 1.72 lbs (780 g).
3. Maximum load per pin on output connector is 5 A.
4. Output connector for AMM120PS12 & PS15 is 4 Pin DC Power Plug, non-locking type. For mating half, use KYCON KPJ-4S-S or equivalent.
5. Output connector for AMM120PS18-PS48 is 4 Pin DC Power Plug, locking type. For mating half, use KYCON KPJ-4S-S or equivalent.
6. For Class I versions shell is connected to ground.
7. For European mains lead order part: EU-MAINS-IEC
8. For UK mains lead order part: UK-MAINS-IEC
9. For US mains lead order part: US-MAINS-IEC
10. Mains lead length is 76" (1930 mm) approx

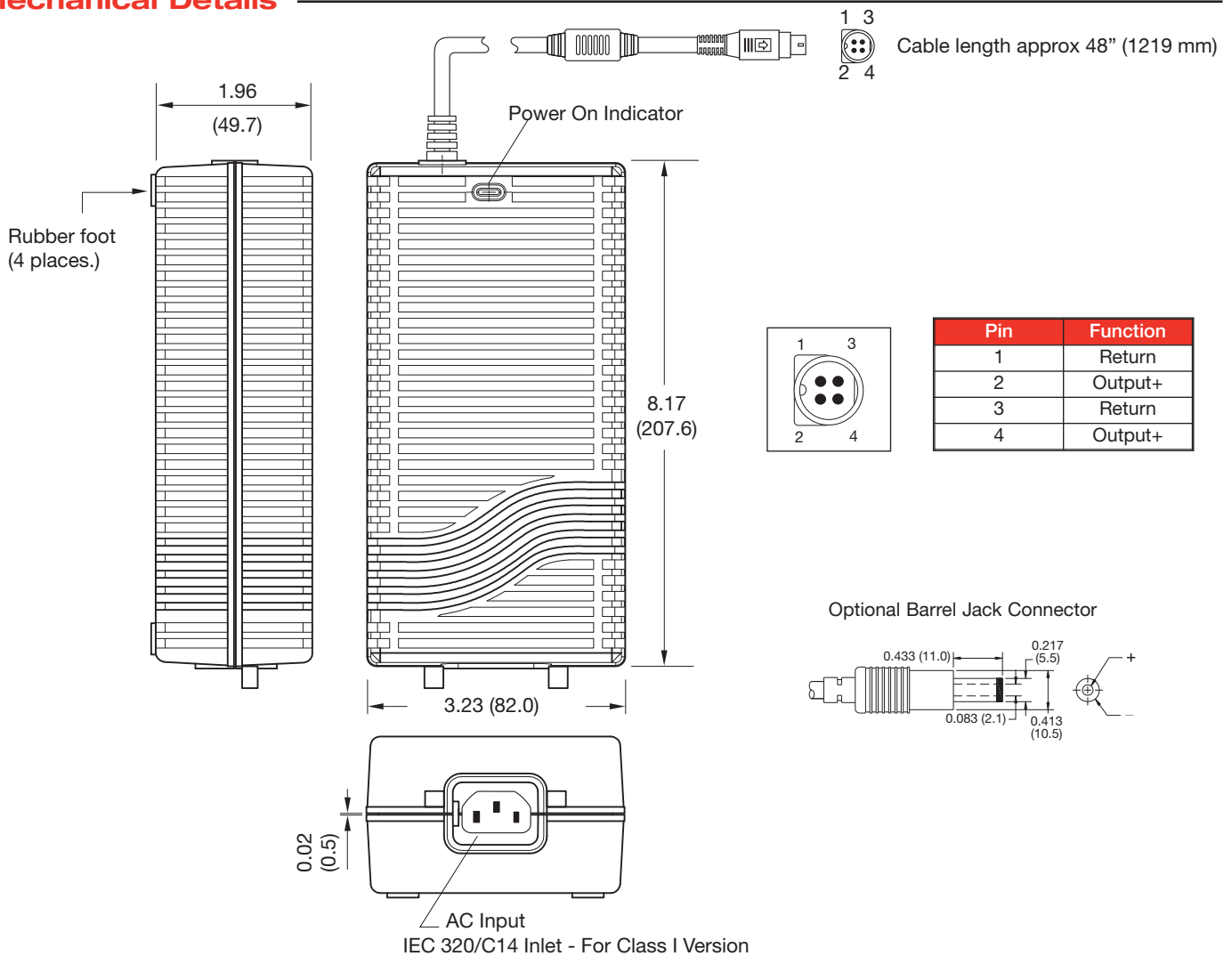
**Models and Ratings**

Output Power	Output Voltage	Output Current	Total Regulation <sup>(2)</sup>	Model Number <sup>(4)</sup>
132 W	12 V	11.00 A	5%	AMM150PS12
144 W	15 V	9.60 A	5%	AMM150PS15
150 W	19 V	7.90 A	5%	AMM150PS19 <sup>(6)</sup>
150 W	24 V	6.25 A	5%	AMM150PS24 <sup>(3,6)</sup>
150 W	27 V	5.56 A	5%	AMM150PS27 <sup>(3,6)</sup>
150 W	48 V	3.13 A	5%	AMM150PS48 <sup>(3,6)</sup>

**Notes**

1. Ripple and noise measured at 20 MHz bandwidth with a 10 µF tantalum and 0.1 µF ceramic capacitor connected at the measurement point.
2. Total regulation includes set accuracy, line and load regulation.
3. For optional barrel jack connector, add suffix 'B1' to the model number e.g. AMM150PS24B1 (not available on 12 V models)
4. For optional AC cable restraint, add suffix 'A' to the model number e.g. AMM150PS24A or AMM150PS24B1A. AC mains lead must be Interpower Corporation, part number: 70006020300.
5. Energy Star Level V.

**Mechanical Details**



**Notes**

1. Dimensions shown in inches (mm). Tolerance is 0.02 (0.5) maximum, except output cable length.
2. Weight: 2.16 lbs (980 g).
3. Output connector is 4 Pin DC Power Plug, locking type. For mating half, use KYCON KPJX-4S-S or equivalent.
4. For Class I versions shell is connected to ground.
5. For European mains lead order part: EU-MAINS-IEC
6. For UK mains lead order part: UK-MAINS-IEC
7. For US mains lead order part: US-MAINS-IEC
8. Mains lead length is 78" (2000 mm) approx