

AMM Series



- CEC2008 & EISA2007 Compliant
- Worldwide Medical Approvals
- Class I and Class II Versions
- 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 (Class I only) 500 VAC Output to Ground (Class I only)
Switching Frequency	• 50-110 kHz variable
Power Density	• 90 W: 3.4 W/In ³ , 120 W: 3.7 W/In ³ 150 W: 2.9 W/In ³
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 ² , 20 mins, 3 axes

EMC & 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

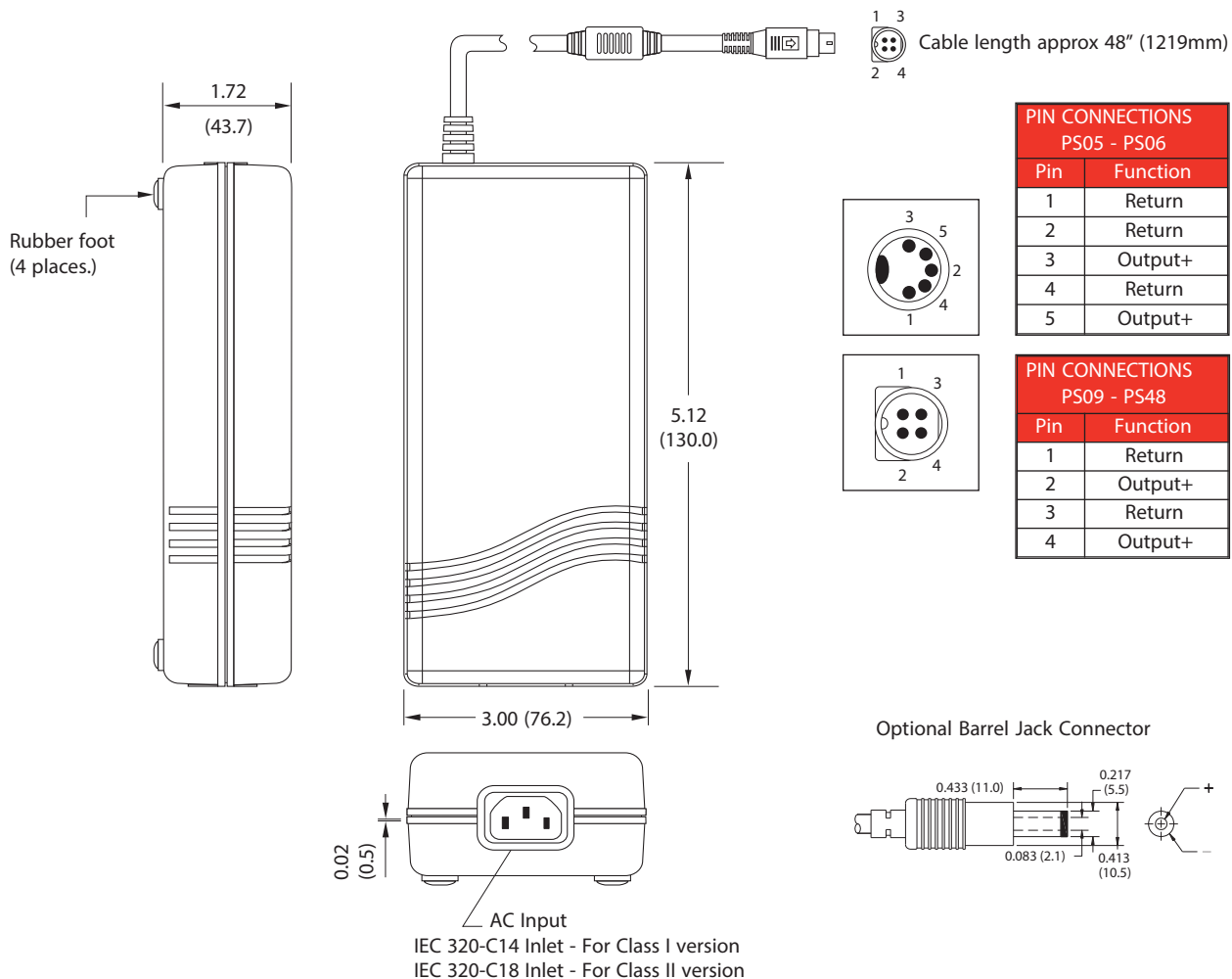
Models and Ratings

Output Power	Output Voltage	Output Current	Total Regulation ⁽²⁾	Model Number ^(3, 4)
60 W	5.0 V	12.00 A	5%	AMM90PS05 ⁽⁵⁾
60 W	6.0 V	10.00 A	5%	AMM90PS06 ⁽⁵⁾
70 W	9.0 V	7.78 A	5%	AMM90PS09 ⁽⁵⁾
80 W	12.0 V	6.67 A	5%	AMM90PS12
85 W	13.5 V	6.30 A	5%	AMM90PS13
85 W	15.0 V	5.67 A	5%	AMM90PS15
90 W	18.0 V	5.00 A	5%	AMM90PS18
90 W	19.0 V	4.74 A	5%	AMM90PS19
90 W	24.0 V	3.75 A	5%	AMM90PS24
90 W	30.0 V	3.00 A	5%	AMM90PS30
90 W	48.0 V	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 class II versions, add ' C2' to model number e.g. AMM90PS24C2.
4. For optional Barrel Jack Connector, add ' B1' to model number e.g. AMM90PS24C2B1 (not available on 5 V or 6 V models).
5. 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. For Class II versions shell is capacitively coupled to input.
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

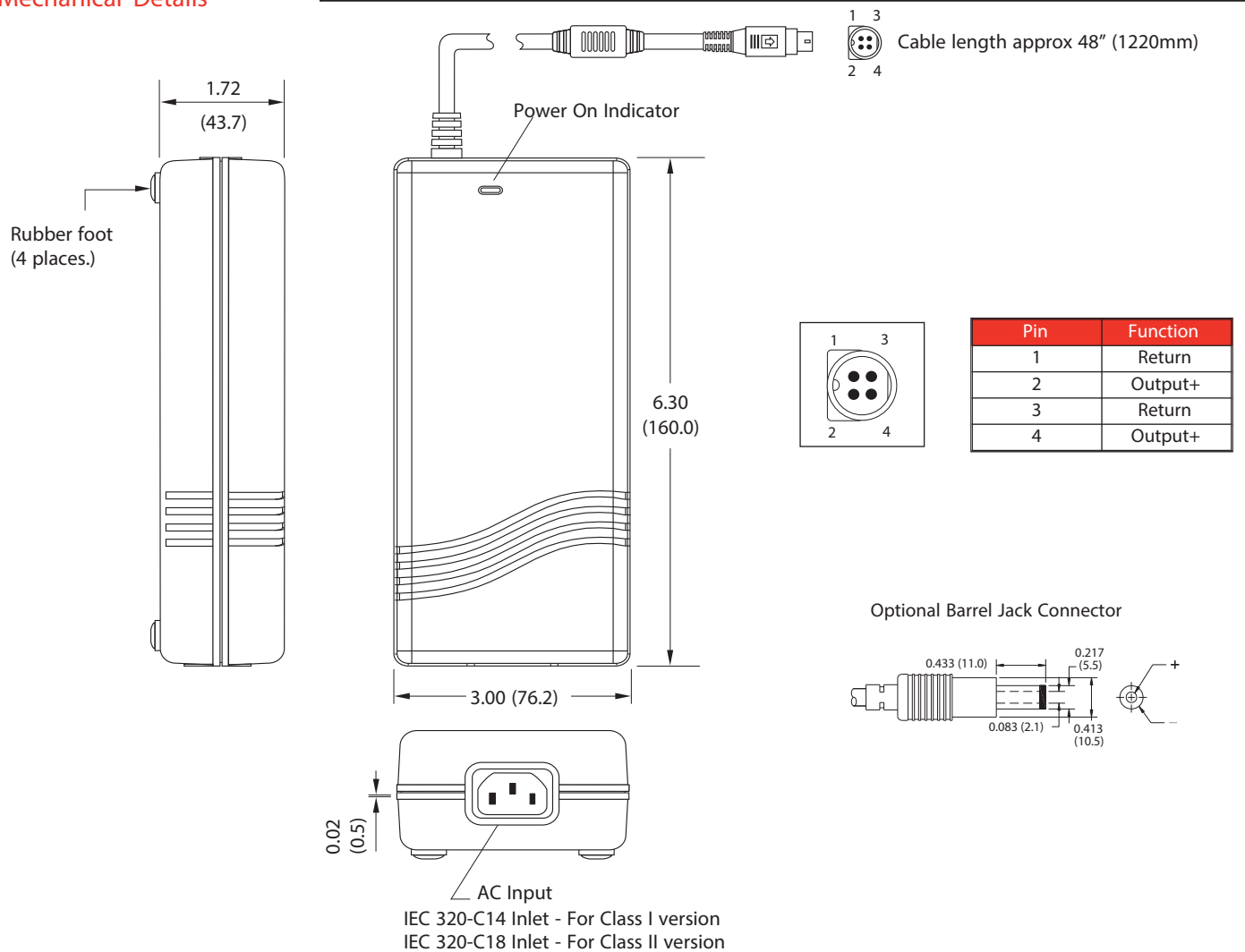
Models and Ratings

AMM120

Output Power	Output Voltage	Output Current	Total Regulation ⁽²⁾	Model Number ^(3, 4)
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 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 Class II versions, add ' C2' to model number e.g. AMM120PS24C2.
 4. For optional barrel jack connector add suffix ' B1' to model number e.g. AMM120PS24C2B1.

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. For Class II versions shell is capacitively coupled to input.
 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

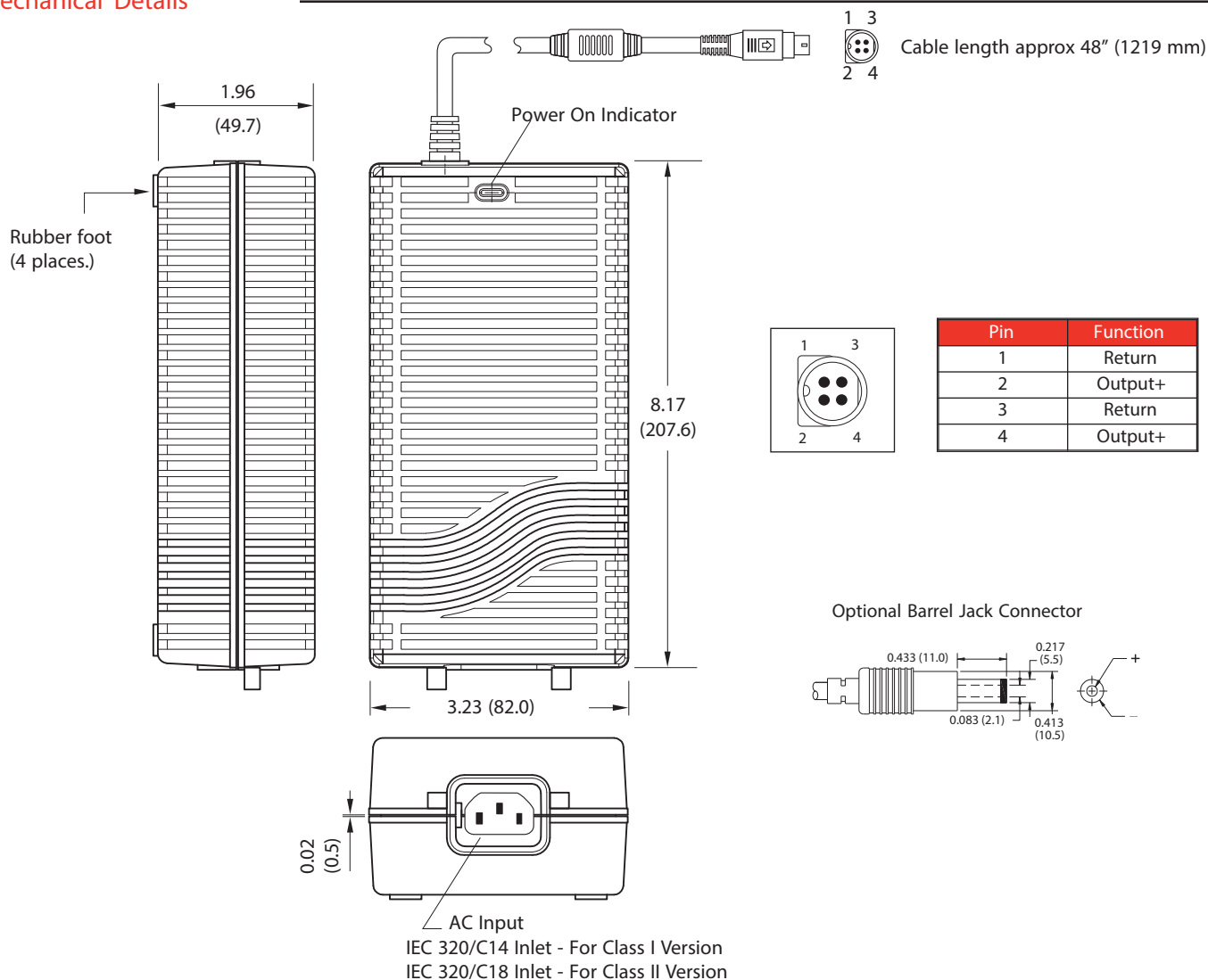
Models and Ratings

Output Power	Output Voltage	Output Current	Total Regulation ⁽²⁾	Model Number ^(4,5)
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 ⁽⁶⁾
150 W	24 V	6.25 A	5%	AMM150PS24 ^(3,6)
150 W	27 V	5.56 A	5%	AMM150PS27 ^(3,6)
150 W	48 V	3.13 A	5%	AMM150PS48 ^(3,6)

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 on the Class I Version, add suffix ' A ' to the model number e.g. AMM150PS24A or AMM150PS24B1A. AC mains lead must be Interpower Corporation, part number: 70006020300. Optional AC cable restraint is not available on the Class II Version.
5. For Class II Versions, and ' C2 ' to model number, eg. AMM150PS24C2.
6. 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. For Class II Versions shell is capacitively coupled to input.
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