

AMA120D-Y

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Desktop Adaptor

The AMA120D-Y is a small industrial grade desktop adapter offering a commercial input voltage range of 90-264VAC and an output power 120W. This adapter will offer many benefits to powering your system such as low power consumption, high efficiency (complies with DoE level VI), meeting FCC, Class B, CISPR22, Class B.

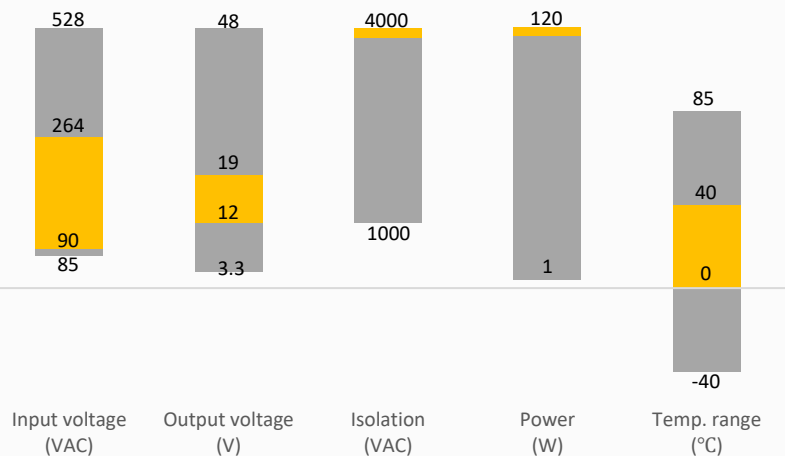
It also features an isolation of 4000VAC for improved reliability and system safety and comes standard with output short circuit protection (OSCP) and output over-current protection (OCP).

Features

- Universal Input: 90 - 264VAC/47 - 63Hz
- Operating Temp: 0 °C to +40 °C
- High isolation voltage: 4000VAC
- Low ripple & noise, up to 200mV(p-p), max
- Output short circuit, over-current protection, over-voltage protection
- Regulated Output

Summary

AMA120D-Y



Training



Product Training Video
(click to open)



Press Release

Coming Soon!

Application Notes

Applications



Portable Equipment



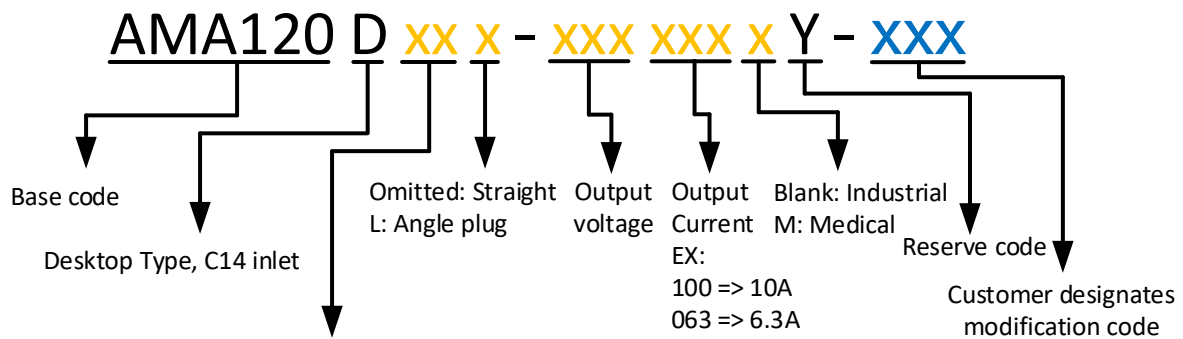
Industrial

Models & Specifications

General Feature

Model	Input Voltage (VAC)	Output Voltage (VDC)	Output Current max (A)	Output Power max (W)	Efficiency (%)
AMA120D-120100Y	90 - 264	12	10	120	88
AMA120D-190063Y	90 - 264	19	6.3	120	88
AMA120D-240050Y	90 - 264	24	5	120	88
AMA120D-540022Y	90 - 264	54	2.23	120	88

- Please refer to below coding rule for completed part numbers. Eg. AMA120D**R5**-190063Y for industrial grade desktop type adaptor which comes with 5.5mm*2.5mm*9.5mm straight standard output plug.
- For models with suffix **MY** indicating a medical grade product. Eg. AMA120D**D1**-190063**MY** for medical grade desktop type adaptor which comes with a DIN4 output connector. The 54V output model with exclusion from medical grade adapters.



Plug type	Code	O. D.	I. D.	Length
Standard	R4	5.5mm	2.1mm	9.5mm
	R5	5.5mm	2.5mm	9.5mm
Locking	K1	5.5mm	2.1mm	9.5mm
	K2	5.5mm	2.5mm	9.5mm
DIN	D1	DIN4 Connector		

Input Specification

Parameters	Conditions	Minimum	Typical	Maximum	Units
Voltage range		90	100 - 240	264	VAC
Frequency		47	50 - 60	63	Hz
Input current	Vin at 100 -240VAC			2	A
Leakage Current				0.1	mA
Power factor	Vin at 115VAC/60Hz	90			%
	Vin at 230VAC/50Hz	85			%

Output Specification					
Parameters	Conditions	Minimum	Typical	Maximum	Units
Output voltage	12V output model		12		VDC
	19V output model		19		VDC
	24V output model		24		VDC
	54V output model		54		VDC
Output current	12V output model	0		10	A
	19V output model	0		6.3	A
	24V output model	0		5	A
	54V output model	0		2.2	A
Voltage regulation				±5	%
Line regulation				±1	%
Load regulation				±5	%
Dynamic load	50% to 100% step change, 100Hz & 1KHz 50%duty, Slew rate 0.5A uS			±5	%
Over shoot				10	%
Ripple and Noise	12V output model			200	mVp-p
	19V output model			200	mVp-p
	24V output model			240	mVp-p
	54V output model			540	mVp-p
Start-up time	Vin at 100VAC			3	S
Hold-up time	Vin at 110VAC/60Hz	16.7			mS
	Vin at 220VAC/50Hz	20			mS
Ripple and Noise are measured at 20MHz bandwidth by using a 0.1uF (M/C) and 10uF (E/C) parallel capacitor.					

Isolation Specifications				
Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec, leakage current <10mA		4000	VAC
Tested Input to GND voltage	60 sec, leakage current <10mA		2000	VAC
Resistance		50		MΩ

General Specification					
Parameters	Conditions	Minimum	Typical	Maximum	Units
Operating temperature		0		40	°C
Storage temperature		-20		85	°C
Power consumption	Vin at 115 -230VAC, no load			210	mW
Humidity	Non-condensing	10		90	% RH
Altitude		0		2640	m
DOE LEVEL		VI			
Over voltage protection	12V output model			20	V

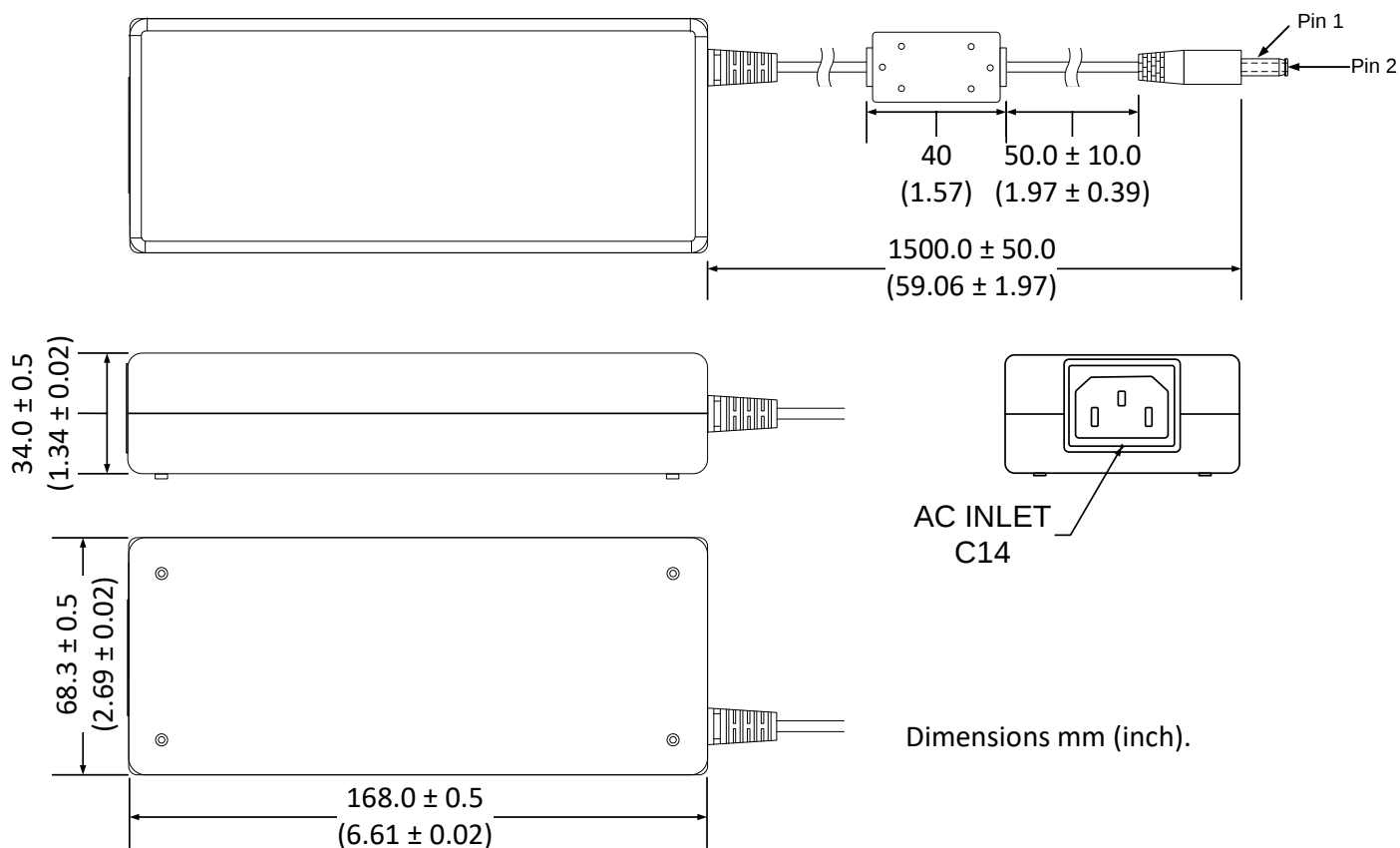
	19V output model			27	V
	24V output model			35	V
	54V output model			63	V
Over current protection	Continuous, auto recovery				
Short circuit protection	Continuous, auto recovery				
Vibration	1.0mm, 10-55Hz, 15 minutes per cycle for each axis (X,Y,Z)				
Dimensions (L x W x H)	6.61 x 2.69 x 1.34 inches (168.00 x 68.30 x 34.00mm)				
Output cable length	59.06 inches (1500mm)				
MTBF	> 100 000 hrs (Telcordia SR332, t=+25°C)/Full Load				
All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.					

Safety Specifications

Parameters

Agency approval	Information technology equipment	cULus, UL 62368-1; CE, EN62368-1
	Medical electrical equipment	Designed to meet IEC/EN/UL 60601-1
Standards	EMC - Radiated & Conducted emission	EN55032:2015+ A11:2020, Class B EN55035:2017+A11:2020 EN60601-1-2:2015 FCC part 15B, Class B/part 18C ICES-003:2020 Issue 7, Class B ICES-001:2020 Issue 5, Class B CISPR32:2105+Cor:2016, Class B CISPR11:2015+A1:2016 Group I, ClassB
	ESD	IEC 61000-4-2 Contact ±8KV, Air ±15KV
	RS	IEC 61000-4-3 Field strength 3V/M
	EFT	IEC 61000-4-4 ±2KV
	Surge	IEC 61000-4-5 L-L ±2KV, L-G ±4KV
	CS	IEC 61000-4-6 3V/M
	MF	IEC 61000-4-8 Magnetic strength 30A/M(r.m.s)
	Dip	IEC 61000-4-11 0% 0.5 cycle, 0% 1 cycle, 70% 25 cycle, 0% 5 sec

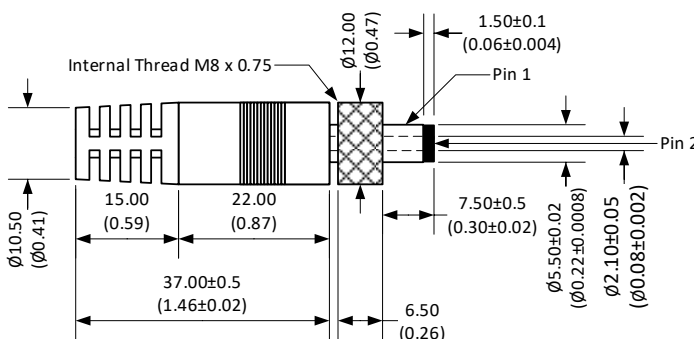
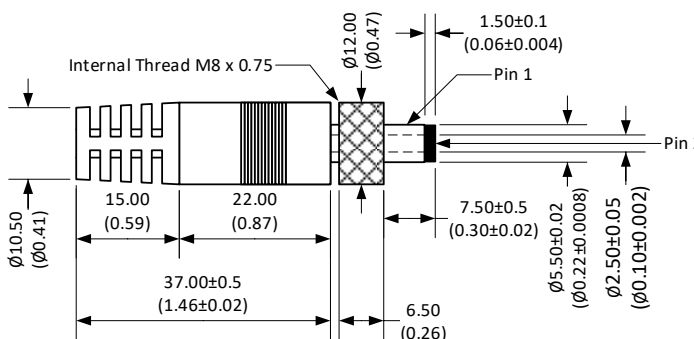
Dimensions



Pin Output Specifications

Pin	Output Level
1	RTN(-)
2	+Vout

Optional Barrel Locking Type Connector:

K1 Connector	K2 Connector																
																	
<table border="1"> <thead> <tr> <th colspan="2">Pin Out Configurations</th></tr> <tr> <th>Pin No.</th><th>Description</th></tr> </thead> <tbody> <tr> <td>1</td><td>RTN(-)</td></tr> <tr> <td>2</td><td>+Vout</td></tr> </tbody> </table>	Pin Out Configurations		Pin No.	Description	1	RTN(-)	2	+Vout	<table border="1"> <thead> <tr> <th colspan="2">Pin Out Configurations</th></tr> <tr> <th>Pin No.</th><th>Description</th></tr> </thead> <tbody> <tr> <td>1</td><td>RTN(-)</td></tr> <tr> <td>2</td><td>+Vout</td></tr> </tbody> </table>	Pin Out Configurations		Pin No.	Description	1	RTN(-)	2	+Vout
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Optional DIN Type Connector:

D1 Connector

Technical drawing of the D1 Connector. The drawing shows a side view of the connector with a dimension of 6.5 ± 0.5 (0.26 $\pm$ 0.02) indicated by a double-headed arrow. The connector has a series of pins on the left and a single pin on the right. The central part of the connector has four pins arranged in a circular pattern, labeled Pin 1, Pin 2, Pin 3, and Pin 4.

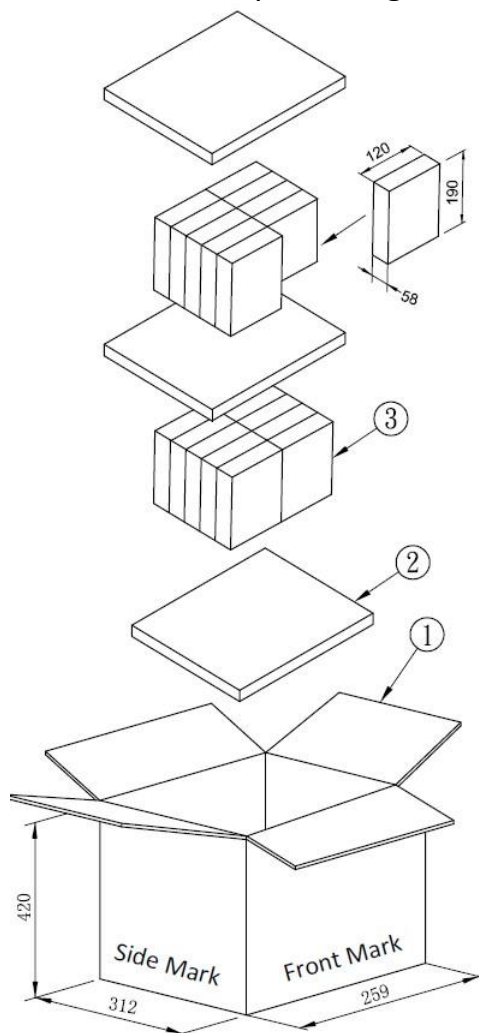
Pin layout diagram of the D1 Connector. The diagram shows a circular arrangement of four pins. The pins are labeled Pin 1, Pin 2, Pin 3, and Pin 4. Pin 1 is at the top, Pin 2 is at the bottom, Pin 3 is on the left, and Pin 4 is on the right.

Pin Out Configurations

Pin No.	Description
1	+Vout
2	+Vout
3	RTN(-)
4	RTN(-)

Packing

For US and European Plug:



Packing information:

- CARTON : L*W*H=(312*259*420) +/-5mm K=K
- CLAPBOARD : (290*240) +/-3mm A=A 3PCS
- WHITE BOX : 190*120*58 C9
- Q'TY : 10*2=20PCS
- NET WEIGHT : (g)(ref)
- UNIT : mm

NOTE: 1. Datasheets are updated as needed and as such, specifications are subject to change without notice. Once printed or downloaded, datasheets are no longer controlled by Aimtec; refer to www.aimtec.com for the most current product specifications. 2. Product labels shown, including safety agency certifications on labels, may vary based on the date manufactured. 3. Mechanical drawings and specifications are for reference only. 4. All specifications are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified. 5. Aimtec may not have conducted destructive testing or chemical analysis on all internal components and chemicals at the time of publishing this document. CAS numbers and other limited information are considered proprietary and may not be available for release. 6. This product is not designed for use in critical life support systems, equipment used in hazardous environments, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other the ones listed in this datasheet. 7. Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com. 8. Adaptors are intended for industrial use only.