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AMA40D-Y



Desktop Adaptor

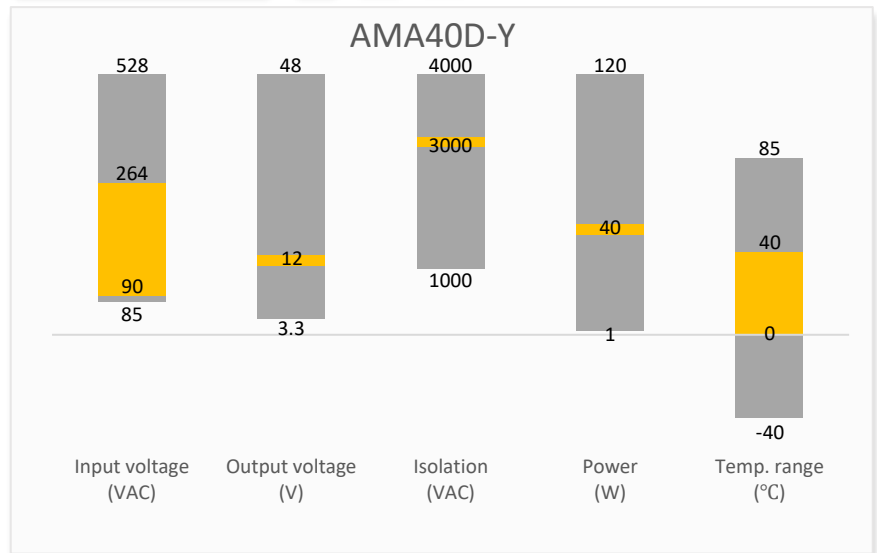
The AMA40D-Y is a small industrial grade desktop adapter. Offering a commercial input voltage range of 90-264VAC and an output power of 40W. This adapter will offer many benefits to powering your system such as low power consumption, high efficiency (complies with DoE level VI), meeting IEC60950-1, IEC62368-1, FCC Class B, CISPR22 Class B.

It also features an isolation of 3000VAC 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: 3000VAC
- Low ripple & noise, 120mV(p-p), max
- Output short circuit, over-current, over-voltage protection
- Regulated Output

Summary



Training



Product Training Video
(click to open)



Press Release

Coming Soon!

Application Notes

Applications



Portable Equipment



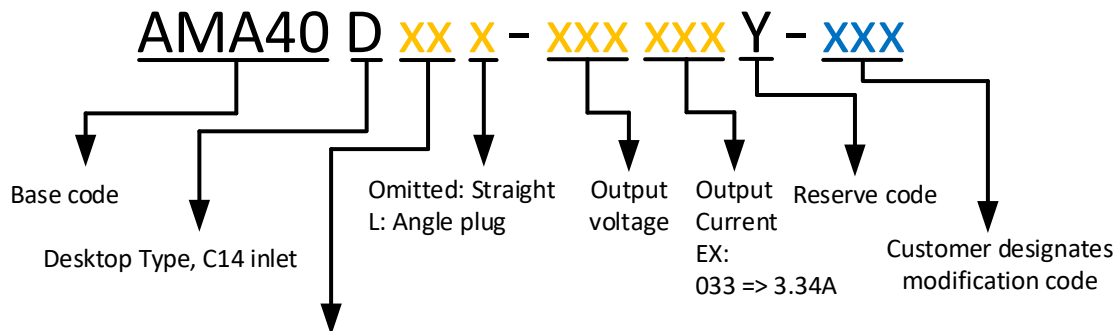
Industrial

Models & Specifications

General Feature

Model	Input Voltage (VAC)	Output Voltage (VDC)	Output Current max (A)	Output Power max (W)	Efficiency (%)
AMA40D-120033Y	90 - 264	12	3.34	40	87

Please refer to below coding rule for completed part numbers. Eg. AMA40D**R5**-12Y for industrial grade adaptor which comes with 5.5mm*2.5mm*9.5mm straight standard output plug.



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
USB	U2	* USB type C		
Wire	WI	Wire with stripped ends		

* NOTE: The USB type C connector option is only a physical USB type-C connector which does not support PD and programmable power supply.

Input Specification

Parameters	Conditions	Minimum	Typical	Maximum	Units
Voltage range		90	100 - 240	264	VAC
Frequency		47	50 - 60	63	Hz
Input current				1.2	A
Leakage current	240VAC/50Hz			0.25	mA

Output Specification

Parameters	Conditions	Minimum	Typical	Maximum	Units
Output voltage	12VDC output	11.4	12	12.6	VDC
Output current	12VDC output	0		3.34	A
Voltage regulation				±5	%

Line regulation				±1	%
Load regulation	50% - 100% Load			±5	%
Dynamic load	50% to 100% step change, 100Hz & 1KHz 50%duty, Slew rate 0.5A uS			±5	%
Over shoot				10	%
Ripple and Noise	20 MHz bandwidth			120	mVp-p
Start-up time				3	S
Hold-up time	Vin at 115VAC	8			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, I/O		3000	VAC
	60 sec, leakage current < 10mA, I&O/PE		1500	
Insulation resistance	500VDC		50	MΩ

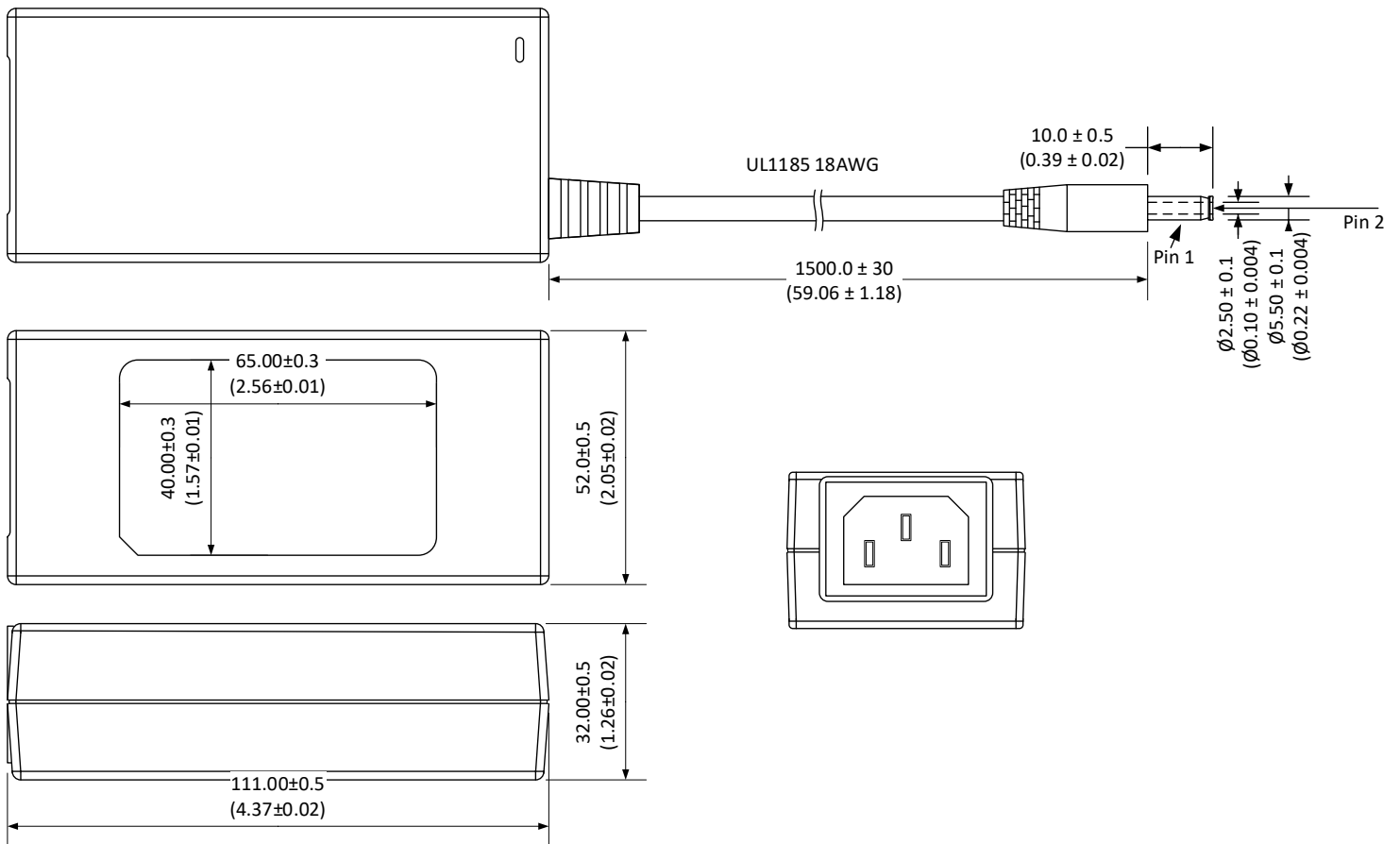
General Specification					
Parameters	Conditions	Minimum	Typical	Maximum	Units
Operating temperature		0		40	°C
Storage temperature		-20		85	°C
Efficiency	At active average mode	87.6			%
Power consumption	Vin at 115 -230VAC, no load			100	mW
Humidity	Non-condensing	10		90	% RH
Altitude		0		2640	m
Vibration	1.0mm, 10 - 55Hz, 15minutes for each axis				
DOE LEVEL	VI				
Short circuit protection	Continuous, auto recovery				
Over current protection	Continuous, auto recovery				
Over voltage protection				20	V
Dimensions (L x W x H)	4.37 x 2.05 x 1.26 inches (111.0 x 52.0 x 32.0mm)				
Output cable length	59.06 inches (1500mm)				
MTBF	> 100 000 hrs (Bell Core 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 approvals	cULus UL62368-1, CE EN62368-1	
	Designed to meet IEC 62368-1	
Standards	EMC - Conducted and radiated emission	FCC, Class B CISPR22, Class B

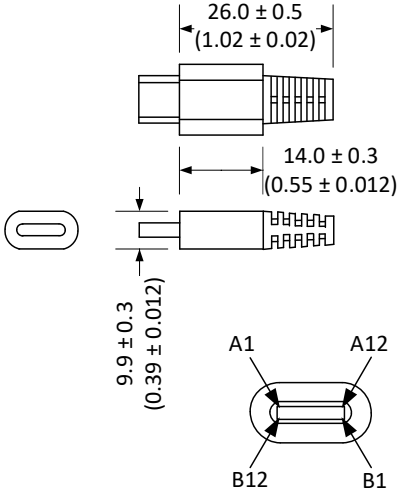

Electrostatic Discharge Immunity	IEC 61000-4-2 Level 2: Contact $\pm 4\text{KV}$ Level 3: Air $\pm 8\text{KV}$
RF, Electromagnetic Field Immunity	IEC 61000-4-3 Level 2: Field strength 3V/m
Electrical Fast Transient/Burst Immunity	IEC 61000-4-4 Level 2: $\pm 1\text{KV}$
Surge Immunity	IEC 61000-4-5 Level 3: L-L $\pm 1\text{KV}$, L-G & N-G $\pm 2\text{KV}$
CS, Conducted Disturbance Immunity	IEC 61000-4-6 Level 2: 3V/M
Voltage dips, Short Interruptions Immunity	IEC 61000-4-11 0% 250cycle, 40% 5cycle, 70% 0.5cycle

Dimensions

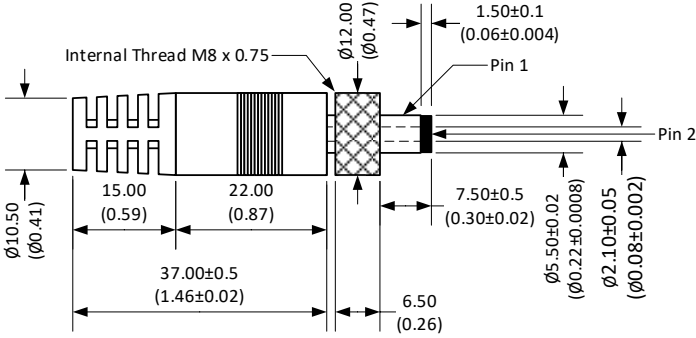
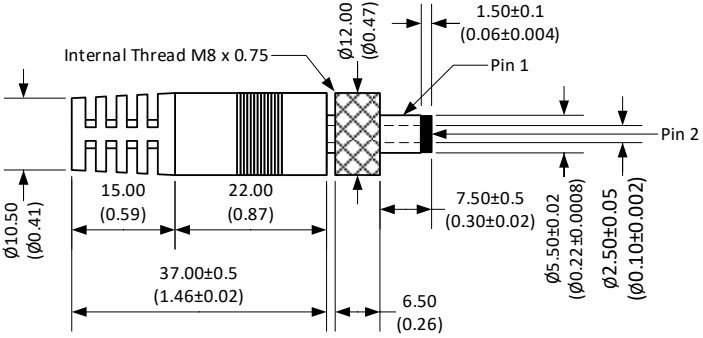


Pin Output Specifications	
Pin	Output Level
1	RTN(-)
2	+Vout

Optional USB Connector or Wire:

USB TYPE-C Connector	Wire with Stripped Ends																		
																			
<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>A4, A9, B4, B9</td> <td>+Vout</td> </tr> <tr> <td>A1, A12, B1, B12</td> <td>RTN(-)</td> </tr> <tr> <td>Others</td> <td>Omitted</td> </tr> </tbody> </table>	Pin Out Configurations		Pin No.	Description	A4, A9, B4, B9	+Vout	A1, A12, B1, B12	RTN(-)	Others	Omitted	<table border="1"> <thead> <tr> <th colspan="2">Wire Out Configurations</th> </tr> <tr> <th>Wire No.</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>+Vout</td> </tr> <tr> <td>2</td> <td>-Vout</td> </tr> </tbody> </table>	Wire Out Configurations		Wire No.	Description	1	+Vout	2	-Vout
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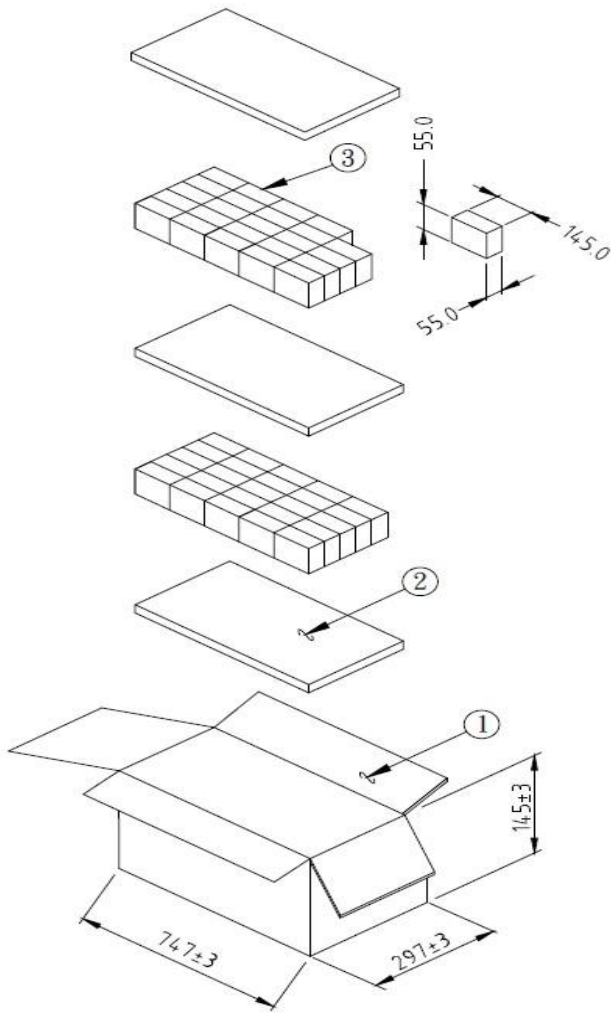
Optional Barrel Locking Type Connector:

K1 Connector	K2 Connector																
																	
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NOTE:

1. USB TYPE-C connector: Limited maximum output voltage of 20V, and maximum output current of 5A.

Packing



Packing information:

- CARTON : L*W*H=(747*297*145) +/-3mm K=K
- CLAPBOARD : (730*280) +/-3mm A=A 3PCS
- WHITE BOX : 145*55*55 C9
- Q'TY : 25*2=50PCS
- 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.