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AMA42D-MGY

Desktop Adapter

The AMA42D-MGY is a small medical grade desktop adapter offering a commercial input voltage range of 90-264VAC and an output power up to 42W. This adapter will offer many benefits to powering your system such as low power consumption, high efficiency, meets EN55032, Class B.

It also features an isolation of 4000VAC for improved reliability and system safety and comes standard with output over-voltage protection (OVP), over-load protection (OLP) and output short circuit protection (OSCP).

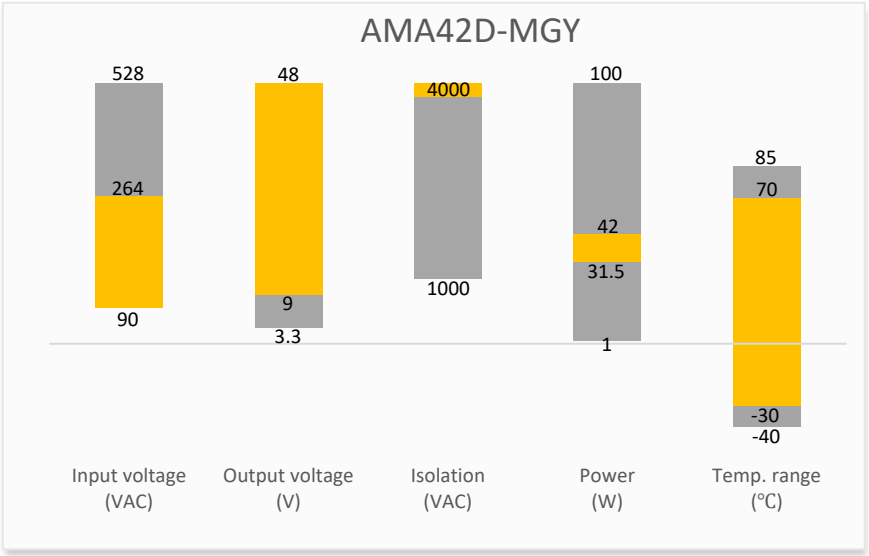
Features

- Universal Input: 90 - 264VAC/50 - 60Hz
- Operating Temp: -30°C to +70°C
- High isolation voltage: 4000VAC
- Low ripple & noise, 400mV(p-p), max
- Overload, over-voltage, and short circuit protection
- 2xMOPP

RoHS

3yr Warranty

Summary



Training

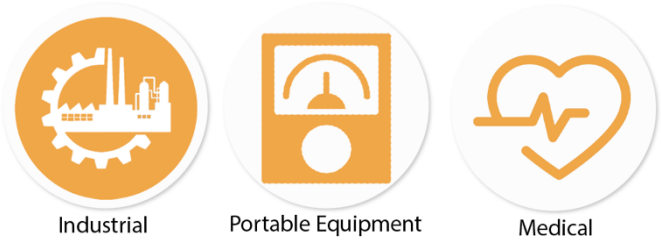
Product Training Video (click to open)

Press Release

Coming Soon!

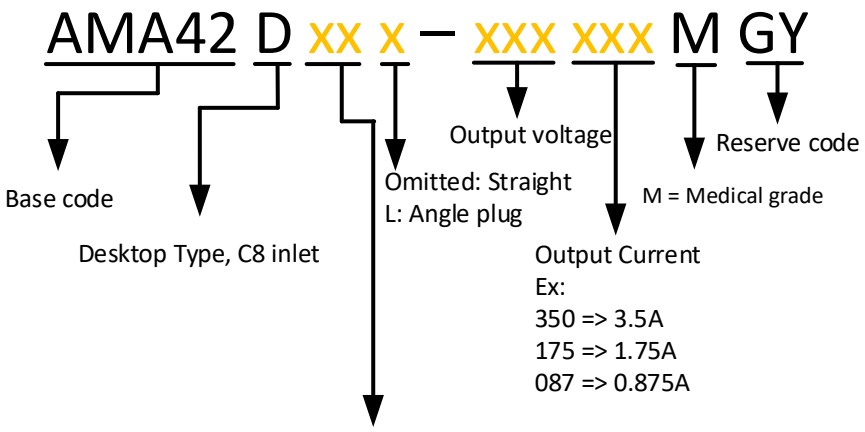
Application Notes

Applications



Models & Specifications

General Feature					
Model	Input Voltage (VAC/Hz)	Output Voltage (VDC)	Output Current max (A)	Output Power max (W)	Efficiency (%)
AMA42D-090350MGY	90~264/50~60	9	3.5	31.5	86
AMA42D-120350MGY	90~264/50~60	12	3.5	42	88
AMA42D-150280MGY	90~264/50~60	15	2.8	42	88
AMA42D-240175MGY	90~264/50~60	24	1.75	42	88
AMA42D-360116MGY	90~264/50~60	36	1.16	42	88
AMA42D-480087MGY	90~264/50~60	48	0.875	42	88
Please refer to below coding rule for completed part numbers. Eg. AMA42DR5-120350MGY for medical grade desktop type adapter which comes with 5.5mm*2.5mm*9.5mm straight standard output plug.					



Plug type	Code	O. D.	I. D.	Length
Standard	R4 / B4	5.5mm	2.1mm	9.5mm
	R5 / B5	5.5mm	2.5mm	9.5mm
	R6 / B6	5.5mm	2.1mm	11.0mm
	R7 / B7	5.5mm	2.5mm	11.0mm
Center Pin	C1	5.5 mm	3.4 mm	11.0 mm
	C2	6.5 mm	4.4 mm	11.0 mm
	C3	7.4 mm	5.1 mm	11.0 mm
Min. Pin	M1	2.35 mm	0.7 mm	11.0 mm
	M2	4.0 mm	1.7 mm	11.0 mm
	M3	4.75 mm	1.7 mm	11.0 mm
3 Pin with Lock (male)	3M			
4 Pin with Lock (male)	4M			
4 Pin with Lock (female)	4F			
5 Pin (male)	5M			
Wire	WI	Wire with stripped ends		
USB	U2	USB type C		

Input Specification					
Parameters	Conditions	Minimum	Typical	Maximum	Units
Voltage range			90 - 264		VAC
Frequency			50 - 60		Hz
Input current	Vin at 115VAC		1.1		A
	Vin at 230VAC		0.6		A
Inrush Current	Vin at 115VAC, cold start		40		A
	Vin at 230VAC, cold start		60		A
Leakage Current	230VAC			0.1	mA

Output Specification					
Parameters	Conditions	Minimum	Typical	Maximum	Units
Voltage regulation			±5		%
Line regulation			±3		%
Load regulation			±5		%
Ripple and Noise*	9 VDC Output			100	mVp-p
	12 VDC Output			150	mVp-p
	15 VDC Output			150	mVp-p
	24 VDC Output			200	mVp-p
	36 VDC Output			300	mVp-p
	48 VDC Output			400	mVp-p
Start-up time	230VAC input, full load		0.5		s
	115VAC input, full load		1.0		s
Rise time	230VAC input, full load		30		ms
	115VAC input, full load		30		ms
Hold-up time	230VAC input, full load		120		ms
	115VAC input, full load		12		ms
*Ripple and Noise are measured at 20MHz bandwidth.					

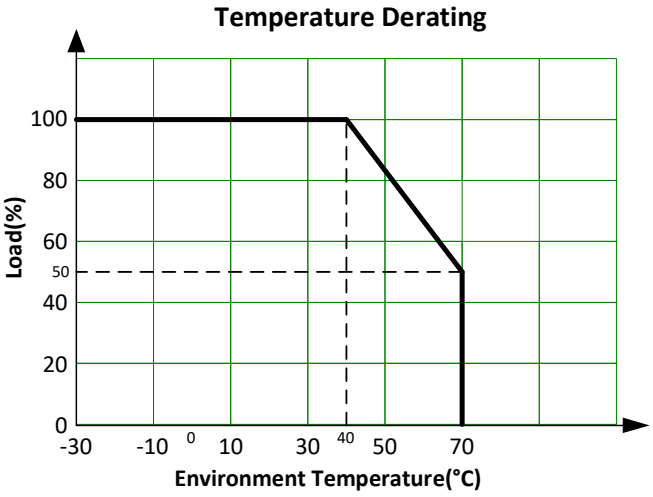
Isolation Specifications				
Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec, I/O		4000	VAC
Resistance	500VDC	100		MΩ

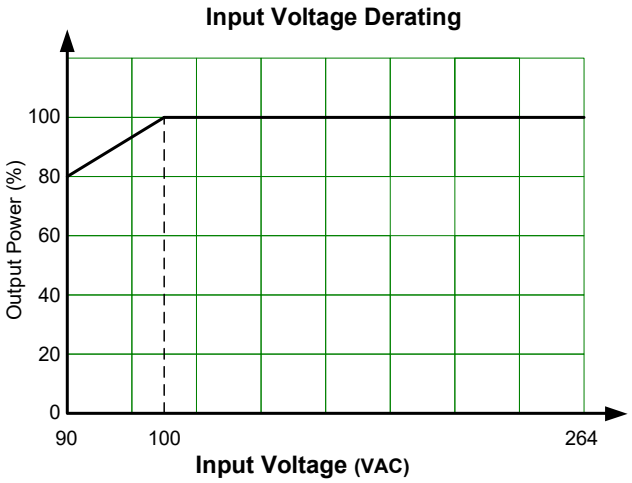
General Specifications				
Parameters	Conditions	Typical	Maximum	Units
Overload protection	Hiccup mode, recovers automatically after fault condition is removed	105	150	% of Iout
Over voltage protection	Shut down o/p voltage, re-power on to recover	120	180	% of Vout
Short circuit protection	Shut down o/p voltage, re-power on to recover			
DOE LEVEL	VI			
Operating temperature	20% ~ 95% RH Non-Condensing	-30 to +70		°C

Storage temperature	10 ~ 95% RH	-40 to +85		°C
No load power consumption			0. 1	W
Vibration	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes			
Power derating	+40 °C to +70°C	1.67		% / °C
	90VAC - 100VAC	2		% / VAC
Temperature coefficient	0 ~ 40 °C	± 0.03		% / °C
Weight		180		g
Dimensions (L x W x H)	4.10 x 1.81 x 1.19 inches (104.00 x 46.00 x 30.10 mm)			
MTBF	> 492 900 hrs min. MIL-HDBK-217F(25ºC)			
NOTE: 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		
Standards	Designed to meet EN60601-1	
	EMC - Radiated & Conducted emission	CISPR32/EN55032, Class B
	Harmonic Current emission	EN 61000-3-2 Class B
	Voltage Fluctuations & Flicker	EN 61000-3-3 Class B
	Electrostatic Discharge Immunity	EN 61000-4-2, Air ±8KV, Criteria A
	RF, Electromagnetic Field Immunity	EN 61000-4-3, Criteria A
	Electrical Fast Transient/Burst Immunity	EN 61000-4-4, Criteria A
	Surge Immunity	EN 61000-4-5, Criteria A
	CS, Conducted Disturbance Immunity	EN 61000-4-6, Criteria A
	Power Frequency Magnetic Field Immunity	EN 61000-4-8, Criteria A
	Voltage dips, Short Interruptions Immunity	EN 61000-4-11, >95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods

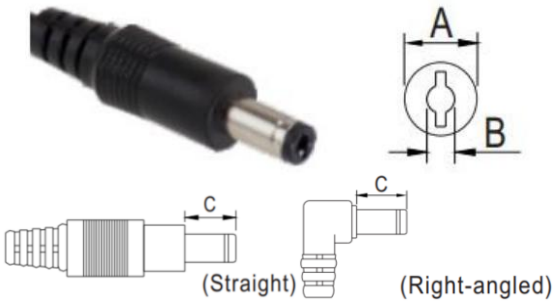
Derating





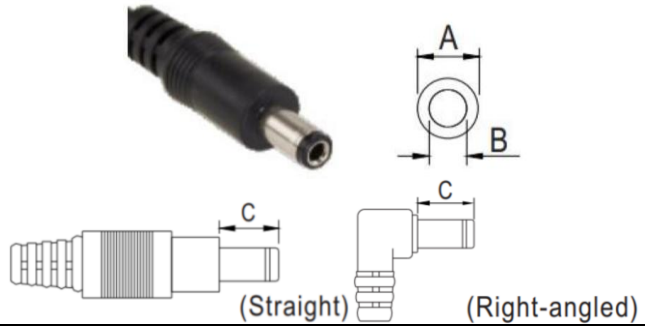
DC output plug

Tuning Fork Style (Straight or Right-angled)



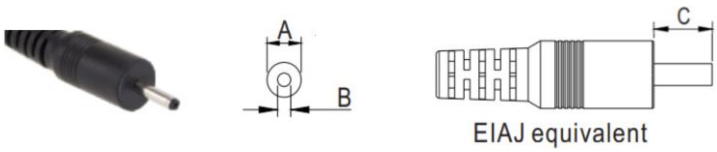
Type Number and Dimensions (mm)			
Code No.	A Outer Diameter	B Inner Diameter	C Length
R4	5.5	2.1	9.5
R5	5.5	2.5	9.5
R6	5.5	2.1	11.0
R7	5.5	2.5	11.0

Barrel Style (Straight or Right-angled)



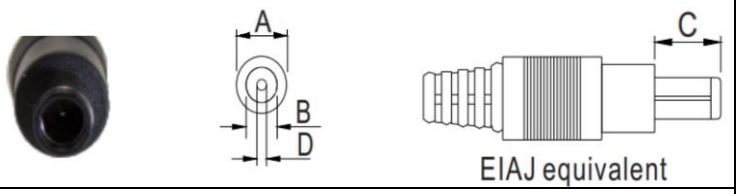
Type Number and Dimensions (mm)			
Code No.	A Outer Diameter	B Inner Diameter	C Length
B4	5.5	2.1	9.5
B5	5.5	2.5	9.5
B6	5.5	2.1	11.0
B7	5.5	2.5	11.0

Min. Pin Style



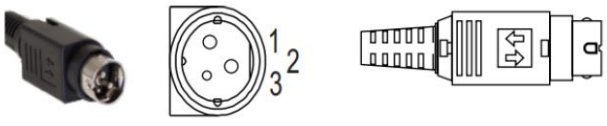
Type No.	A Outer Diameter	B Inner Diameter	C Length
M1	2.35	0.7	11.0
M2	4.0	1.7	11.0
M3	4.75	1.7	11.0

Center Pin Style



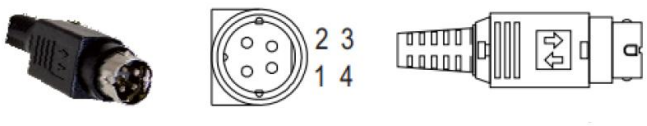
Type Number and Dimensions (mm)				
Code No.	A Outer Diameter	B Inner Diameter	C Length	D Center Pin
C1	5.5	3.4	11.0	1.0
C2	6.5	4.4	11.0	1.4
C3	7.4	5.1	11.0	0.6

3 Pin with Lock (male)



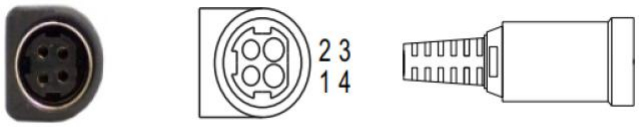
Pin Out Configurations	
Pin No.	Description
1	+Vout
2	-Vout
3	+Vout

4 Pin with Lock (male)



Pin Out Configurations	
Pin No.	Description
1	+Vout
2	-Vout
3	-Vout
4	+Vout

4 Pin with Lock (female)



Pin Out Configurations	
Pin No.	Description
1	+Vout
2	-Vout
3	-Vout
4	+Vout

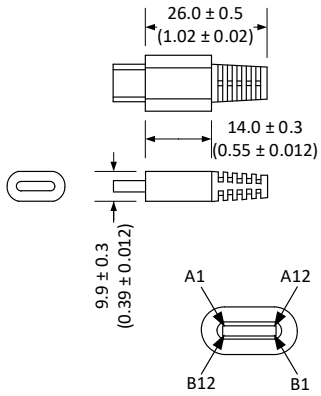
5 Pin (male)

Pin Out Configurations	
Pin No.	Description
1	-Vout
2	-Vout
3	+Vout
4	-Vout
5	+Vout

Wire with Stripped Ends

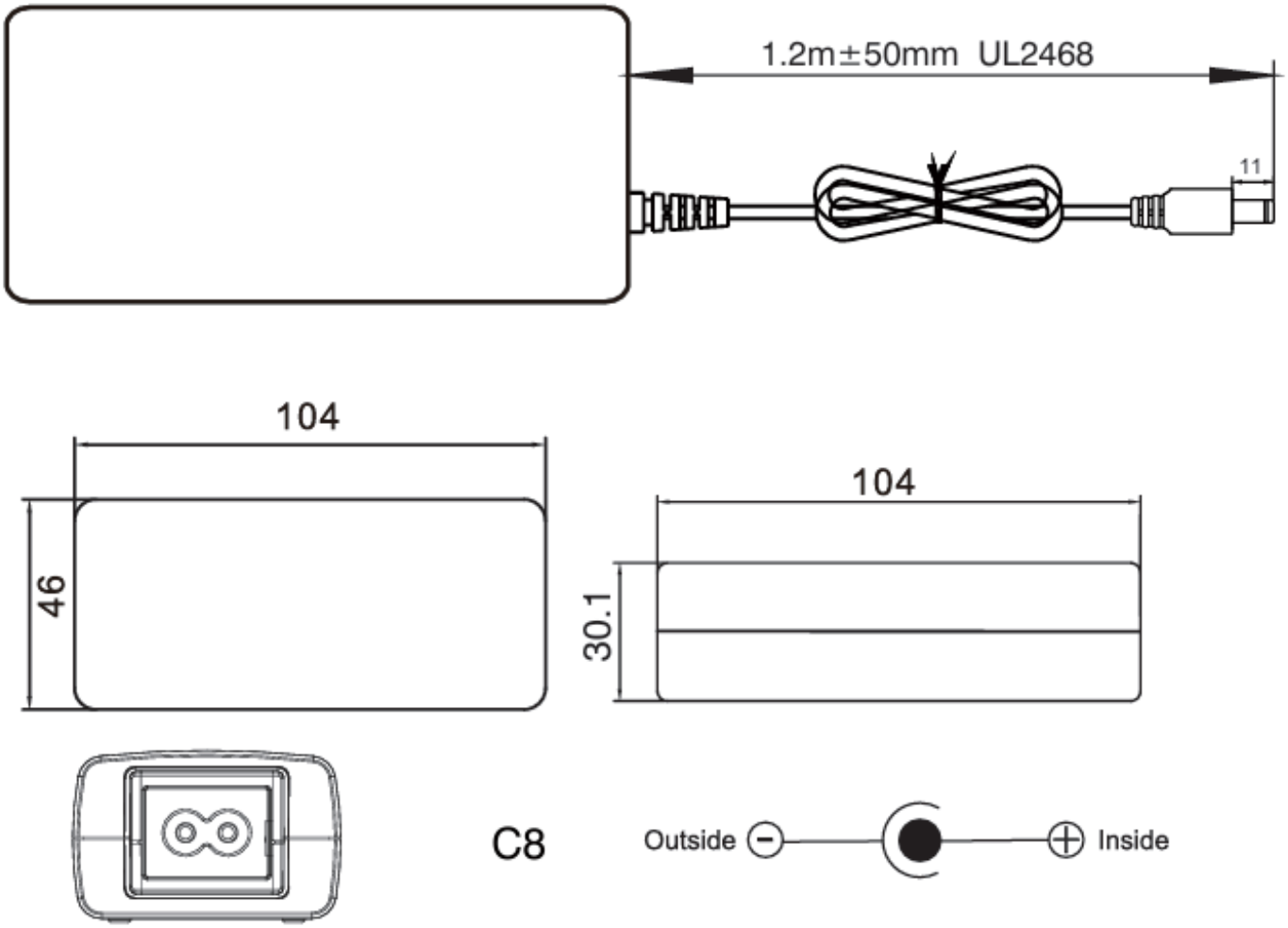
Wire Out Configurations	
Wire No.	Description
1	+Vout
2	-Vout

USB TYPE-C Connector



Pin Out Configurations	
Pin No.	Description
A4, A9, B4, B9	+Vout
A1, A12, B1, B12	RTN(-)
Others	Omitted

Dimensions



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