AM11-12W12V

12W Low-power AC-DC Buck Power Supply Module



Chengdu Ebyte Electronic Technology Co.,Ltd.

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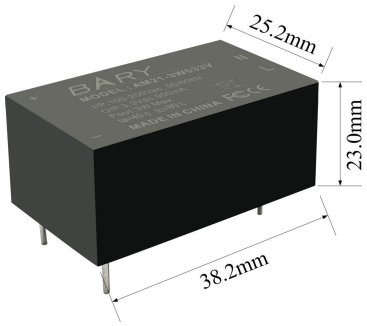
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1.Product introduction

1.1. Brief introduction

AM11-12W12V is a ultra-small volume switching power supply, AC/DC dual use, Input voltage 85~264Vac/100~370Vdc, super low ripple, ultra-low consuming, safe isolation, high reliability; It is widely used in consumer electronics, meters and industrial control, etc.Users do not need to worry about stability, when in complex voltage environment, it also output steadily.



1.2. Product features

- Super-low ripple: Full load ripple< 150mV;
- Input voltage: Global universal voltage: 85 ~ 264Vac/100~370Vdc;
- Protective measures: Over-voltage protection, over-current protection, short circuit protection, over-temperature protection;
- High-quality plan: greatly improved it's work efficiency, average efficiency is 87.3%;

1.3. Application scenarios

- Vehicle charging pile;
- Security alarm;
- Intelligent home;
- Industry, electricity, instruments;
- MCU motherboard（MCU）;
- Intelligent street lamps, energy-saving lamps;
- Intelligent switch, socket;
- RF communication equipment;

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2.Specification parameters

2.1. Limit parameters

Order number	Main parameter	Minimum	Maximum	Remarks
1	Input voltage（Vac）	85	264	Vac
2	Input voltage（Vdc）	100	370	Vdc
3	output power (W）	0	12	W
4	working temperature（℃）	-40	+85	**ta=40℃,tc=85℃**

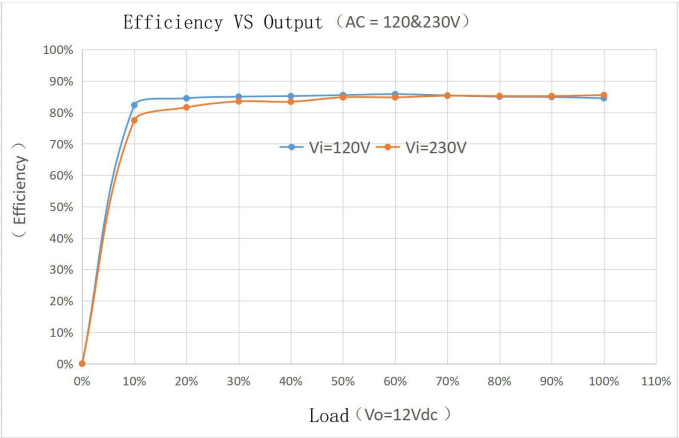
2.2. Working parameters

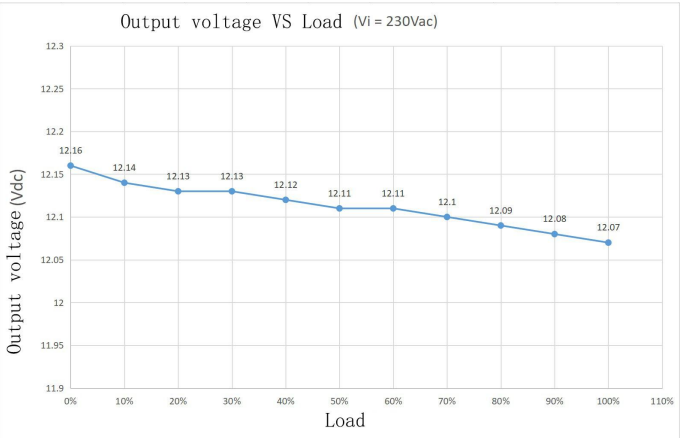
Order number	Main parameter	Minimum	Typical value	Maximum	Remarks
1	Input voltage（Vac）	100	220	250	Vac
2	Input voltage（Vdc）	120	-	350V	Vdc
3	working frequency(Hz)	-	50/60	-	AC/50/60Hz
4	output power(W)	0	-	12	W
5	working temperature (℃)	-40	+25	85	**ta=40℃,tc=85℃**
6	Power factors	0.4	-	0.55	>0.55 at 120Vac / >0.4 at 230Vac with full load.
7	Static power consumption (mA)	-	-	1.0	< =1 mA / 240Vac
8	output voltage(Vdc)	11.75	12.1	12.25	V
9	Persistent current(A)	0	-	1	A

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10	ripple noise (mV)	30	-	100	Full load<=100mV
11	Average efficiency (n%)	-	-	87.3	%
12	Over current protection (%)	110	-	150	Constant current limit, automatic recovery.
13	Short-circuit protection	-	-	-	Hiccup mode,can be automatic Recover after eliminating the fault state.
14	Work humidity (RH%)	20	-	90	No-condensing.
15	Storage temperature (℃)	-40	+25	+85	Dry storage in normal temperature.
16	Storage humidity (RH%)	10	-	90	Dry storage in normal temperature.
17	withstand voltage test	-	-	3000	I/P - O/P: 3000 VAC
18	Insulation impedance	-	-	100	I/P - O/P: 100M ohms / 500VDC at 25 ℃

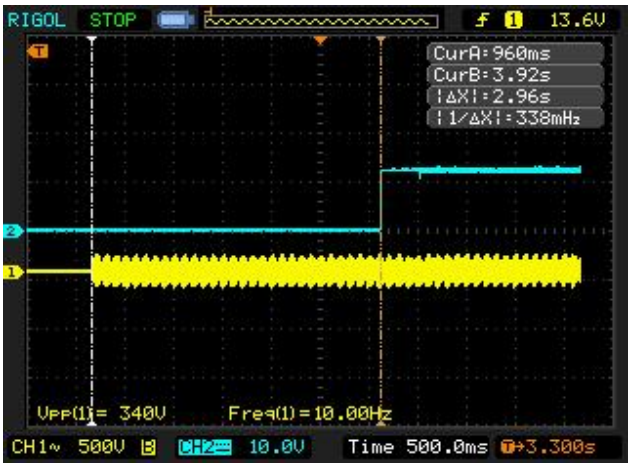
2.3. Work efficiency VS load



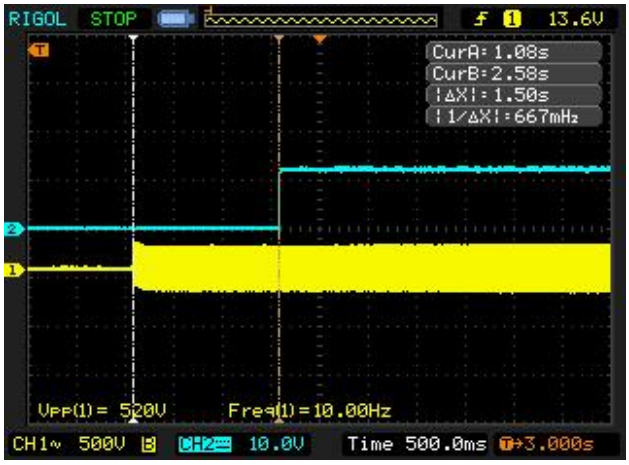


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2.4. Start-up time

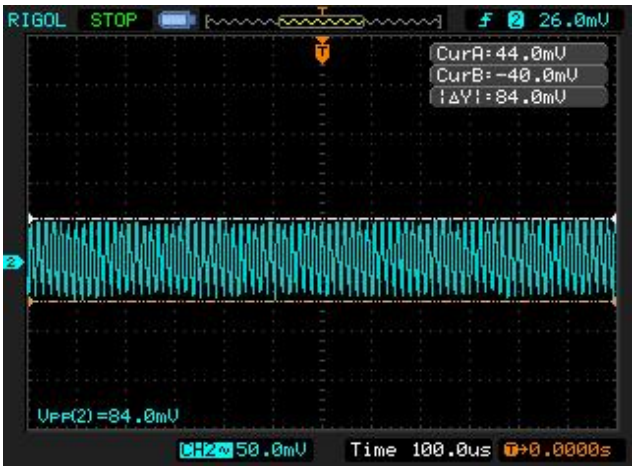


INPUT:AC 120V OUTPUT:12V 1A

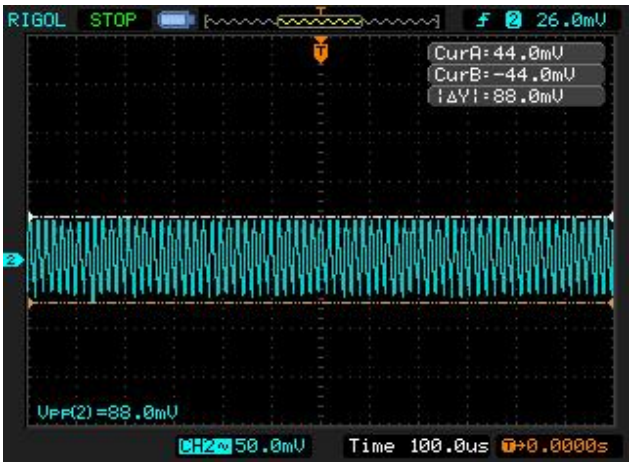


INPUT:AC 230V OUTPUT:12V 1A

2.5. Full-load ripple

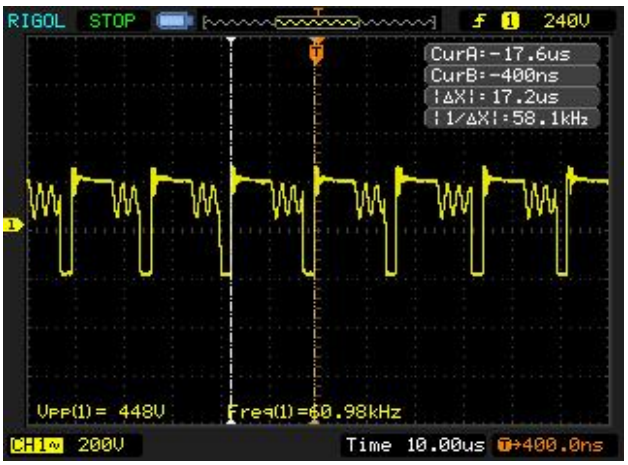


INPUT:AC 120V OUTPUT:12V 1A

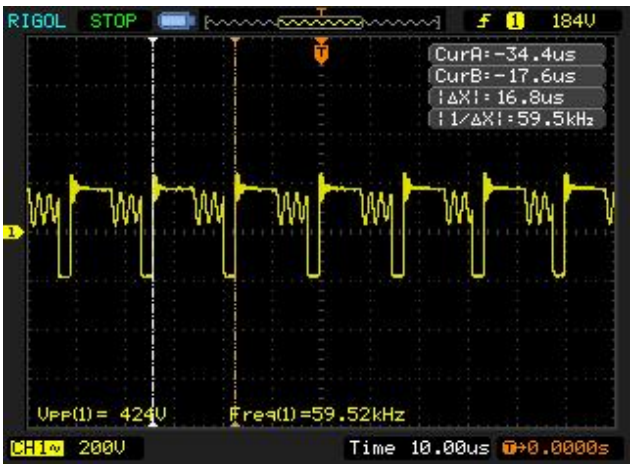


INPUT:AC 230V OUTPUT:12V 1A

2.6. Working frequency and voltage



INPUT:AC 120V OUTPUT:12V 1A



INPUT:AC 230V OUTPUT:12V 1A

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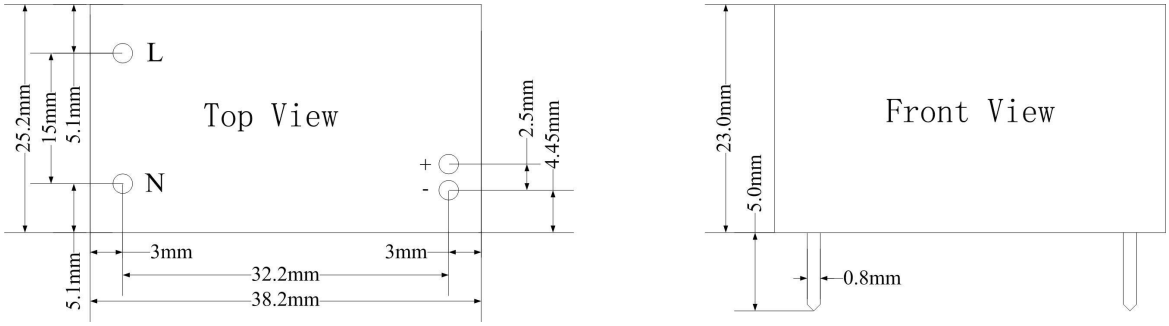
3.Basic operation

3.1. Matters need attentions

- Operating this module requires certain professional skills, prohibit non-professionals operate on it!
- Before using it, you must study knowledge of safe use carefully.
- Prohibit human body contact with L and N power lines after electrification to prevent accidents caused by electric shock. Recommend input front-end to increase isolation
- The maximum input voltage shall not exceed 250 Vac, otherwise may occur permanent damage .
- In daily maintenance, the input power should be disconnected to prevent electric shock accidents.

4.Mechanical Characteristics and Pin Definition

4.1. Product size



5. Product selection

Product model	Input voltage	Output voltage	Output accuracy	Output current	Switch efficiency	Installation mode
AM11-12W05V	100 ~ 250Vac	5Vdc	±5%	2.4A	86.27%	Plastic packaged plug-in
AM11-12W12	100 ~ 250Vac	12Vdc	±5%	1.0A	87.3%	Plastic packaged plug-in
AM21-12W05V	100 ~ 250Vac	5Vdc	±1%	2.4A	82%	Plastic packaged plug-in
AM21-12W12V	100 ~ 250Vac	12Vdc	±1%	1.0A	85%	Plastic packaged plug-in
AM21-12W24V	100 ~ 250Vac	24Vdc	±1%	0.5A	87%	Plastic packaged plug-in

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Revision history

Serial number	Vision	Modification date	Revision notes	Maintain person
1	V1.0	20210331	First edition, first public release.	Deng

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