



## **AM11-12W12V**

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



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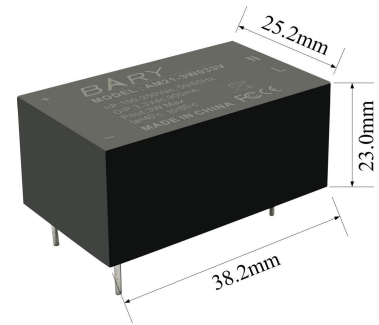
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# 1.Product introduction

## 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;

## 2.Specification parameters

### 2.1. Limit parameters

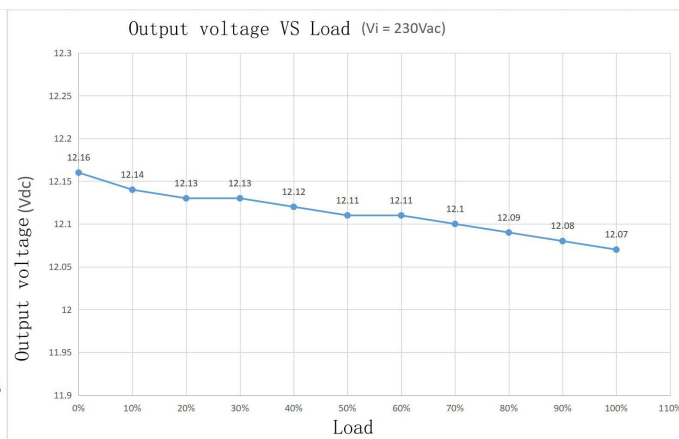
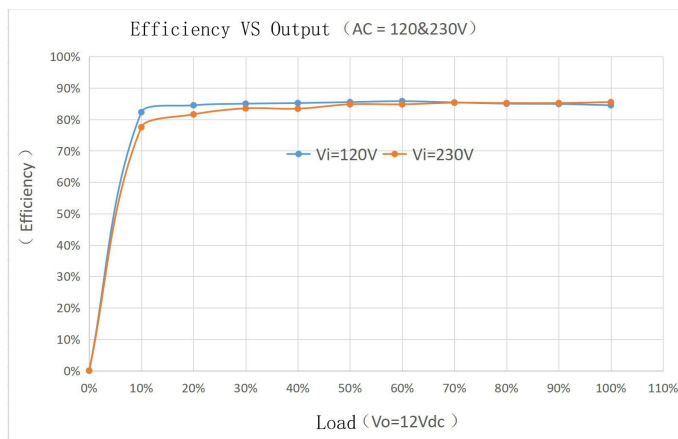
Order number	Main parameter	Minimum	Maximum	Remarks
1	Input voltage (Vac)	85	264	Vac
2	Input voltage (Vdc)	100	370	Vdc
3	output power (W)	0	12	W
4	working temperature(°C)	-40	+85	ta=40°C,tc=85°C

### 2.2. Working parameters

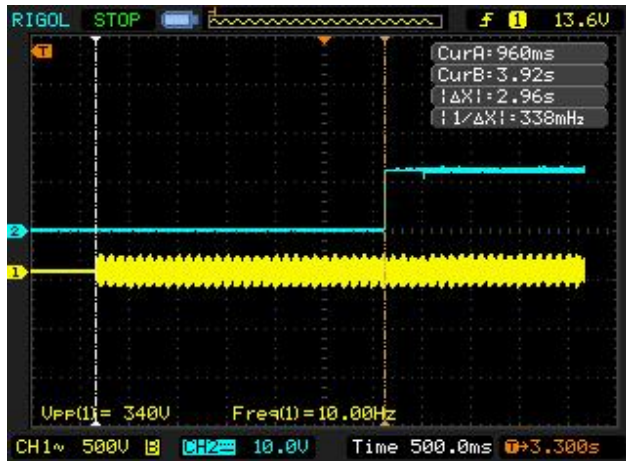
Order number	Main parameter	Minimum	Typical value	Maximum	Remarks
1	Input voltage (Vac)	100	220	250	Vac
2	Input voltage (Vdc)	120	-	350V	Vdc
3	working frequency(Hz)	-	50/60	-	AC/50/60Hz
4	output power(W)	0	-	12	W
5	working temperature (°C)	-40	+25	85	ta=40°C,tc=85°C
6	Power factors	0.4	-	0.55	>0.55 at 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

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 (°C)	-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 °C

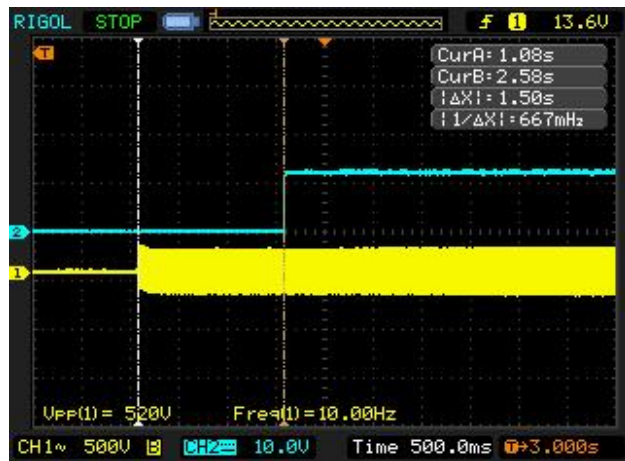
## 2.3. Work efficiency VS load



## 2.4. Start-up time

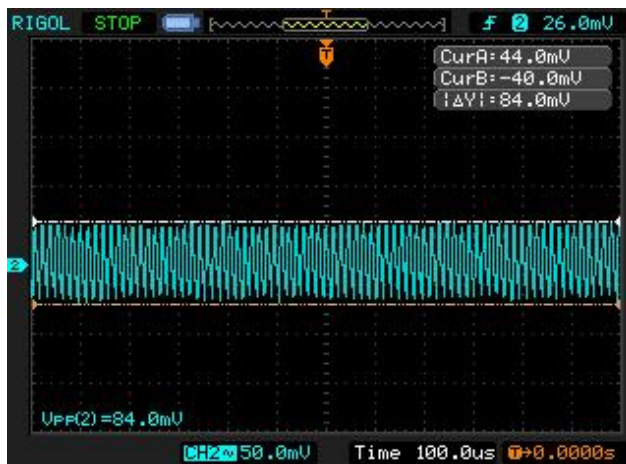


INPUT:AC 120V OUTPUT:12V 1A

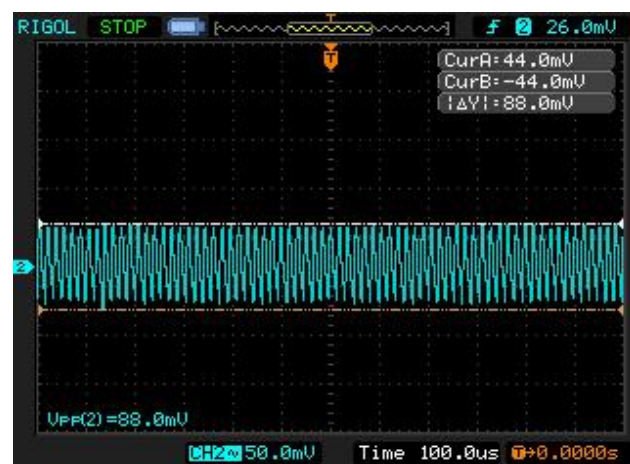


INPUT:AC 230V OUTPUT:12V 1A

## 2.5. Full-load ripple

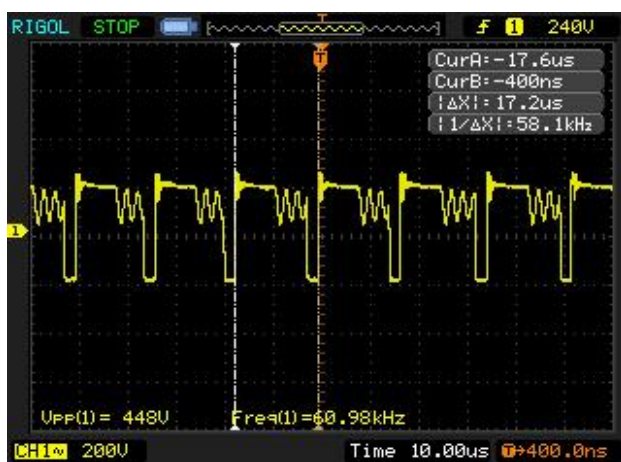


INPUT:AC 120V OUTPUT:12V 1A

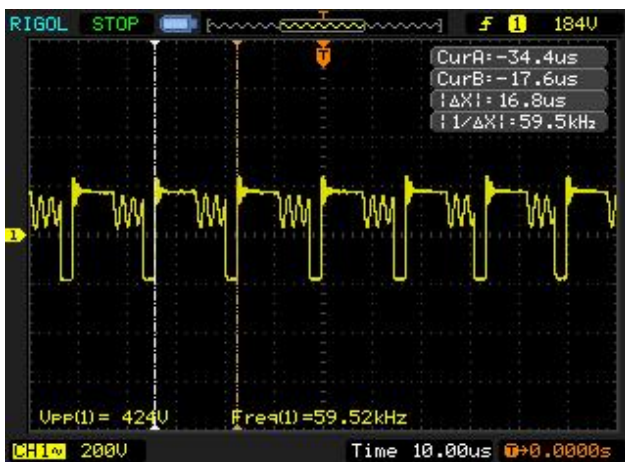


INPUT:AC 230V OUTPUT:12V 1A

## 2.6. Working frequency and voltage



INPUT:AC 120V OUTPUT:12V 1A



INPUT:AC 230V OUTPUT:12V 1A

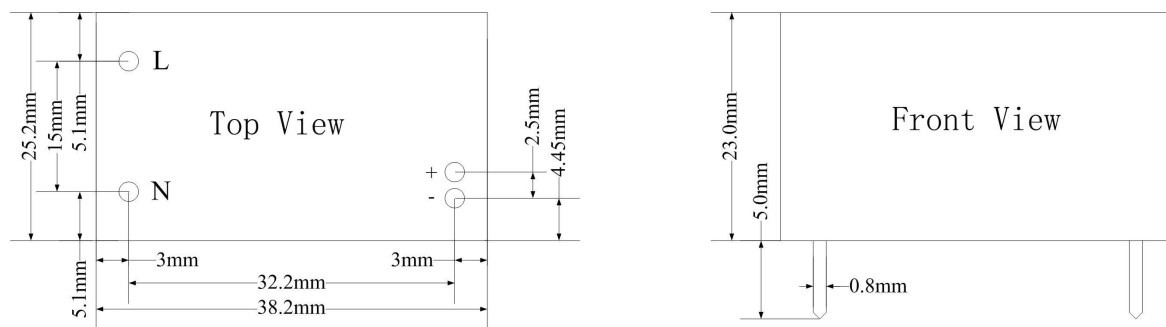
## 3. Basic operation

### 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



# Revision history

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

## About us

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