AM11-12W05V

12W Low Power AC-DC Step-down Power Supply Module



Chengdu Ebyte Electronic Technology Co.,Ltd.

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Contents

1.Product introduction..... 4

1.1. Brief introduction.....4

1.2. Product features..... 4

1.3. Application scenarios.....4

2.Specification parameters.....5

2.1. Limit parameters.....5

2.2. Working parameters.....5

2.3. Work efficiency and load.....6

2.4. Start-up time..... 7

2.5. Full-load ripple..... 7

3.Basic operation.....7

3.1. Notes..... 7

4.Mechanical Characteristics and Pin Definition.....8

4.1. Product size.....8

4.2. Pin Definition.....8

5. Product selection.....8

About us.....9

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Disclaimer

EBYTE reserves all rights to this document and the information contained herein. Products, names, logos and designs described herein may in whole or in part be subject to intellectual property rights. Reproduction, use, modification or disclosure to third parties of this document or any part thereof without the express permission of EBYTE is strictly prohibited.

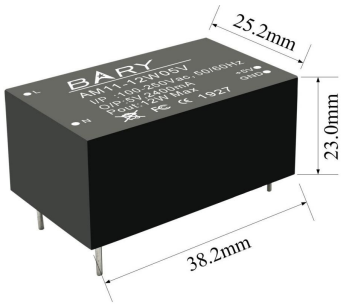
The information contained herein is provided “as is” and EBYTE assumes no liability for the use of the information. No warranty, either express or implied, is given, including but not limited, with respect to the accuracy, correctness, reliability and fitness for a particular purpose of the information. This document may be revised by EBYTE at any time. For most recent documents, Please visit www.ebyte.com

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

1.Product introduction

1.1. Brief introduction

AM11-12W05V is a low-power AC-DC step-down power supply module with an input voltage of 85~264Vac/100~370Vdc. This series of products are widely used consumer electronics, industrial control equipment, instrumentation, smart home and so on for its advantages such as ultra-low ripple, ultra-low power consumption, high efficiency, safe isolation and high reliability. The user does not need to consider stability because the output can be stabilized even in a complex voltage environment.



1.2. Product features

- Ultra-low ripple: full load ripple is less than 100mV;
- Ultra-small size: 38.2*25.2*23mm;
- Input voltage: universal voltage of 85 ~ 264Vac/100~370Vdc;
- Protection measures: over-voltage protection, over-current protection, short-circuit protection, over-temperature protection;
- High-quality scheme: greatly improve its work efficiency, with a maximum efficiency of 86.2%;
- AM11 series is aimed at economical ultra-low cost.

1.3. Application scenarios

- Power Supply System of Charging Pile；
- Intelligent home and Industrial sensors, etc.；
- Internal power supply system of security alarm；
- Industrial control；
- MCU motherboard, toys；
- Supply LED driving Lamp belt with Power；
- Intelligent street lamp；
- Intelligent switch, socket；

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

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	Vac
4	Working temperature（℃）	-40	+80	**Ta=40℃, tc=85℃**

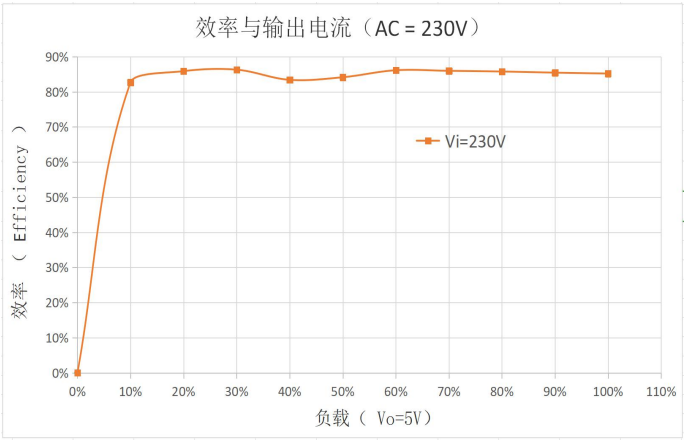
2.2. Working parameters

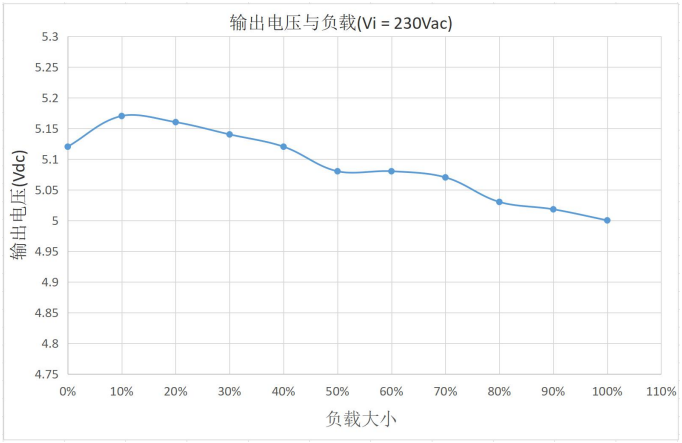
Order number	Main parameter	Minimum	Typical value	Maximum	Remarks
1	Input voltage(Vac)	100	220	250	Vac
	Input voltage(Vdc)	120	-	350V	Vdc
2	Working frequency (Hz)	-	50/60	-	Hz
3	Output power(W)	0	-	12	W
4	Output accuracy	-	±5	-	%
5	Working temperature (℃)	-40	+25	85	**Ta=40℃, tc=85℃**
6	Power factor	0.4	-	0.55	>0.55 at 120Vac / >0.4 at 230Vac Full load
7	Static power(mA)	-	-	1.0	< =1 mA / 240Vac
8	Output voltage(Vdc)	4.75	5.1	5.25	V
9	Persistent current(mA)	0	-	2.4	A
10	Ripple noise(mV)	27	-	50	Full load<=120mV

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

11	Maximum efficiency (n%)	-	-	86.5	%
12	Over-current protection(%)	2.43	2.48	2.55	A (Constant current limit, automatic recovery)
13	Short circuit protection	-	-	-	Hiccup mode, automatic recovery after elimination of failure state
14	Working humidity (RH%)	20	-	90	Non-condensing
15	Storage temperature (℃)	-40	+25	+85	Dry storage at normal temperature;
16	Storage humidity (RH%)	10	-	90	Dry storage at 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 ℃

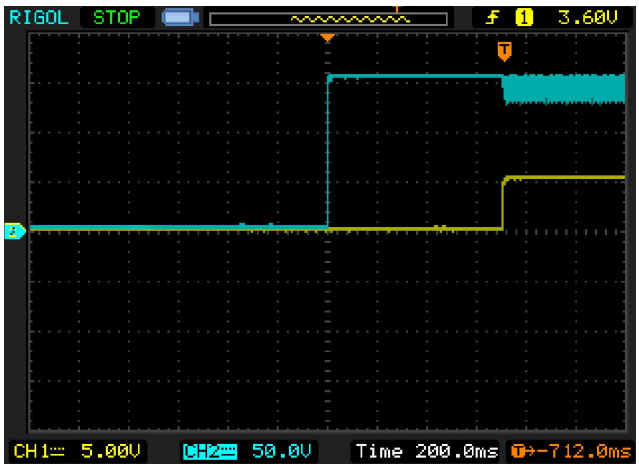
2.3. Work efficiency and load



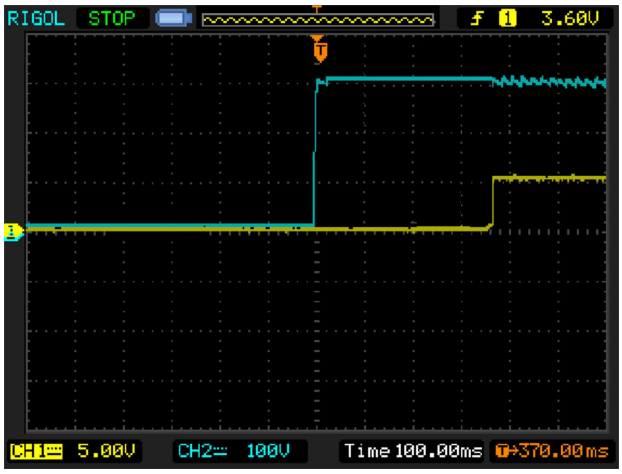


LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

2.4.Start-up time



INPUT:AC 120V OUTPUT:5V 2.4A

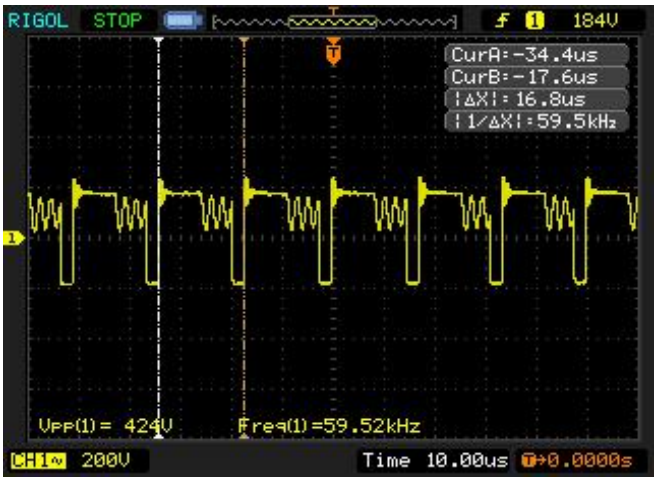


INPUT:AC 230V OUTPUT:5V 2.4A

2.5.Full-load ripple



INPUT:AC 230V OUTPUT:5V 2.4A



INPUT:AC 230V OUTPUT:5V 2.4A

3.Basic operation

3.1.Notes

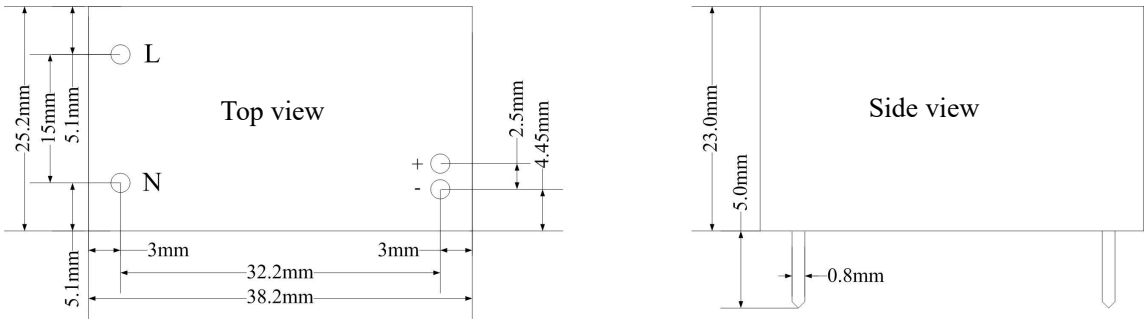
- Operating this module requires certain professional skills, prohibit non-professionals operate on it!
- Before using it, you must study knowledge of safe use.
- prohibit human body contact with L and N power lines after electrification to prevent accidents caused by electric shock.Recommend input front-end 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 from electric shock accidents.

Copyright ©2012–2021，Chengdu Ebyte Electronic Technology Co.,Ltd

Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

4.Mechanical Characteristics and Pin Definition

4.1. Product size



4.2. Pin Definition

Order number	Pin name	Orientation	Use
1	L	Input	AC power input
2	N	Input	AC power input
3	0V	Output	Direct-current output, power ground.
4	+5V	Output	Direct-current output, positive power supply.

5. Product selection

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

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

Revision history

Order number	Vision	Modification date	Revision notes	Maintain person
1	V1.0	20210331	First edition, first public release	Long Jun

About us

Technical support:support@cdebyte.com
Documents and RF Setting download link:www.ebyte.com
Thank you for using Ebyte products! Please contact us with any questions or suggestions:info@cdebyte.com
---
Phone:+86 028-61399028
Web: www.ebyte.com
Address:B5 MouldPark,199#Xiqu Ave, High-tech District, Sichuan,China

Chengdu Ebyte Electronic Technology Co.,Ltd.

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000