



DM21-7W050H product specifications

7W low-power DC-DC Step-down Power Supply Module



Contents

1.product introduction.....	2
1.2. Characteristic.....	2
1.3. Application scenarios.....	2
2.Specification parameter.....	3
2.1. Limit parameters.....	3
2.2. Work parameters.....	3
2.3. Work efficiency VS load.....	4
3.basic operation.....	4
3.1. Points for attention.....	4
3.2. Typical application.....	5
4.Mechanical characteristics and pin definition.....	5
4.1. Product size.....	5
4.2. Pin definition.....	6
5.product types selection.....	6
Revision history.....	7
About us.....	7

1.product introduction

1.1. brief introduction

DM21-7W050H is a DC-DC low-power buck power supply module, can continuously output 7W power, wide voltage input design: 7.5 ~ 28V, the max input can up to 28V, greatly reduces the user design threshold. All components come from regular purchasing channels. industrial grade design: -40~85 °C , even in complex voltage environment ,it also can output steadily.



1.2. Characteristic

Ultra-small volume: 23.5*17.5*8.5mm;

output power: can continuously output 5V/1.5A=7.5W;

Plastic-package plug-ins: special AB glue encapsulation to prevent human contact leading to output voltage amplitude burning down the rear stage;

Over temperature protection: The highest working temperature is set in the module, module can be automatically restored;

working voltage: ultra-wide work input voltage: 7.5~28V, it can work steadily;

Ultra-low ripple: output ripple < 100mV under full power load;

1.3. Application scenarios

- MCU, toys;
- Smart home;
- industrial internet of things;
- Industrial motherboards;
- Wireless communication equipment;
- Vehicle power supply;
- Security products;
- Industrial control;

2.Specification parameter

2.1. Limit parameters

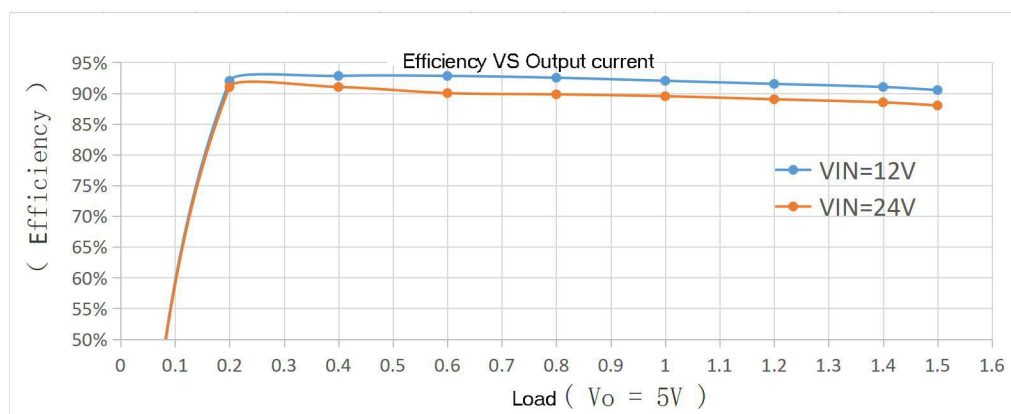
Order number	main parameter	minimum	Maximum	Remarks
1	Input voltage (Vdc)	7.5	28	Work voltage shouldn't exceed 28Vac, otherwise will cause permanent damage to the module.
2	output power (W)	0	7.5	Can continuously output 7.5W power
3	working temperature (°C)	-40	+85	°C

2.2. Work parameters

Order number	Main parameter	minimum	Typical value	Maximum	Remarks
1	Input voltage (Vdc)	7.5	-	28	V
2	work frequency (Hz)	-	0.5	-	MHz
3	Output power (W)	0	-	7.5	Can continuously output power of 7.5 Watt
4	Work temperature (°C)	-40	+25	85	°C
5	Static power (mA)	-	-	1.0	<=1 mA
6	Shut-down current(uA)	-	1	2	<2uA
7	Output voltage(Vdc)	4.9	5.0	5.1	V
8	Persistent current (mA)	0	-	1.5	A
9	ripple noise(mV)	20	-	100	<100mV
10	Maximum efficiency	86	-	91	%

	(n%)				
11	Over-current protection (%)	4	-	4.5	A
12	Short circuit protection	-	-	-	NO
13	Work humidity (RH%)	20	-	90	no-condensing
14	Storage temperature (°C)	-10	+25	+50	Dry storage at normal temperature
15	Storage humidity (RH%)	10	-	90	Dry storage at normal temperature

2.3. Work efficiency VS load

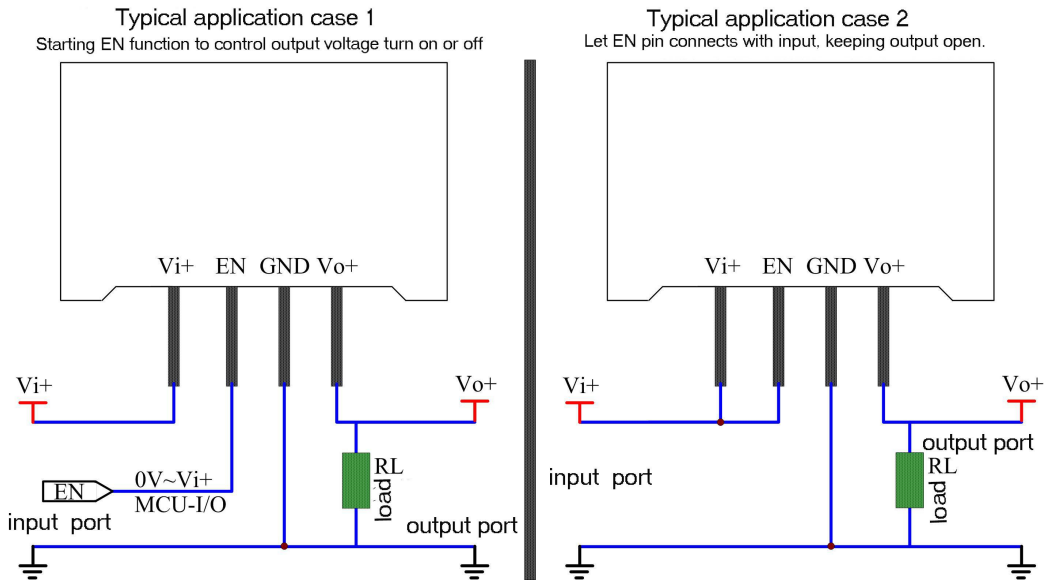


3. basic operation

3.1. Points for attention

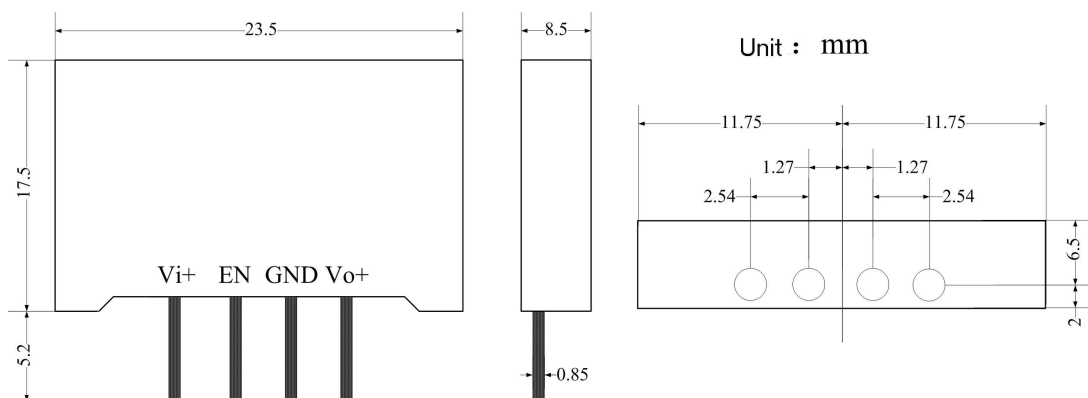
- Operating this module requires certain professional skills, prohibit non-professionals operate on it!
- Before using it, you must study Knowledge of safe use carefully.
- prohibit human body contact with power lines after electrification to prevent accidents caused by electric shock. Recommend input front-end to Increase isolation.
- The maximum input voltage shall not exceed 28Vdc, otherwise may occur permanent damage.
- In daily maintenance, the input power should be disconnected to prevent from electric shock accidents.

3.2. Typical application



4. Mechanical characteristics and pin definition

4.1. Product size



4.2. Pin definition

Order number	Pin name	orientation	use
1	Vi+	Input	DC input, positive power supply (7.5~28Vdc, exceed 28V will cause permanent damage to the module.)
2	EN	Input	5~Vi+ , output voltage Enable pin, High Level Enabling, low level prohibited.
3	GND	Input/Output	DC Input/Output, power supply reference GND.
4	Vo+	Output	DC output, positive power supply.

5. product types selection

Product types	Input voltage	Output voltage	Output current	efficiency	Installation method
DM21-7W033H	5.5 ~ 28V	3.3V	2.0A	87%	Plastic package plug-ins
DM21-7W050H	7.5 ~ 28V	5V	1.5A	91%	Plastic package plug-ins
DM21-7W120H	14.5 ~ 28V	12V	0.6A	93%	Plastic package plug-ins

Revision history

Order number	vision	modification date	Revision notes	Maintain person
1	V1.0	20190301	First edition, first public release	Deng
2	V1.1	20190916	Modify parameter	li

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

Fax: 028-64146160 ext. 821

Web: www.ebyte.com

Address: Innovation Center D347, 4# XI-XIN Road, Chengdu, Sichuan, China

