

DATASHEET

E07 Series Power Module

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Product Description

1. General

DYP-E07-V1.0 is a low ripple Buck Module designed with a wide voltage power supply DC-DC chip. The module has a wide input voltage range, available in a 12-75V input voltage range, low ripple and low noise output, and is a highly reliable DC-DC buck module.

2. Features

- Wide voltage input 12~75V
- Output voltage 5V or 12V
- Internal TTL to relay output design
- No load low power consumption, No load current $\leq 4\text{mA}$
- Anti-reverse connection design, input terminal reverse connection protection
- Working temperature -15°C to $+65^{\circ}\text{C}$
- Storage temperature -25°C to $+80^{\circ}\text{C}$

3. Advantages

Wide working voltage, wide application range

Small output ripple and low noise

Internal DC-DC buck converter and TTL to Relay output integrated

The output voltage is stable and reliable

Relay response time is fast

Small size, high reliability

Low no-load power consumption

Wide working temperature

4. Applications

DC12~75V buck convert to 5V (5V or 12V)

Low ripple input product power supply

TTL output convert to Relay output

Module Specification

1.Specification

Item	Relay output	Signal direct output	Unit	Remark
Operating voltage	12~75	12~75	V	DC
Output voltage	5	5	V	(1)
Output current	≤100	≤100	mA	
Output ripple	≤70	≤70	mV	
No load current	≤4	≤4	mA	
Output modes	TTL convert to Relay output	Signal direct output		

Remarks:

The above test data are all measured at room temperature (25°C), and the specific parameters are subject to the actual environment measurement.

The default output voltage is 5V, and the 12V output voltage version can also be selected according to requirements. the power supply voltage range of the 12V voltage output version is 15~75V.

2.Environment

Item	Minimum value	Typical value	Max value	Unit	Remark
Storage Temp	-25	25	75	°C	
Storage Humidity		65%	90%	RH	(1)
Operating Temp	-15	25	60	°C	
Operating Humidity		65%	80%	RH	(2)

Remark:

- 1.Environment temperature is 0-39℃, max humidity is 90%(Non-condensation)
- 2.Environment is 40-50℃, max humidity is the highest at current temperature in nature

3.Electronics

Item	Minimum value	Typical value	Max value	Unit	Remark
Operating voltage	12	24	75	V	
Peak current			100	mA	Peak value
Input Ripple			50	mV	Peak value
Input Noise			100	mV	Peak value

Remarks: The above test data are all measured at room temperature (25℃), and the specific parameters are subject to the actual environment measurement.

Sensor Selection Instruction

There are two output formats of this series of buck modules, users can choose the corresponding model according to the actual application. If there are special requirements to change other output voltages, please communicate with our company when purchasing.

Model No.	Feature	Output mode
DYP-E07-V1.0	Signal direct output	Signal direct output
DYP-E07J-V1.0	Relay output	Relay NO/NC

Reliable Testing Condition

No.	Description	Testing condition	sample QTY	remark
1	High temperature and humidity	65℃, 85%RH, Power ON@5V, 72hrs	3	
2	low temperature	-20℃, Power ON@5V,72hrs	3	

3	High temperature and humidity storage	80°C, 80%RH, storage, 72hrs	3	
4	Low temperature storage	-30°C, storage, 72hrs	3	
5	Vibration test	10-200Hz,15min,2.0G, XYZ three axes, each axis is 0.5 hours	3	
6	Drop test	120cm free fall, 5 times on wooden floor	3	

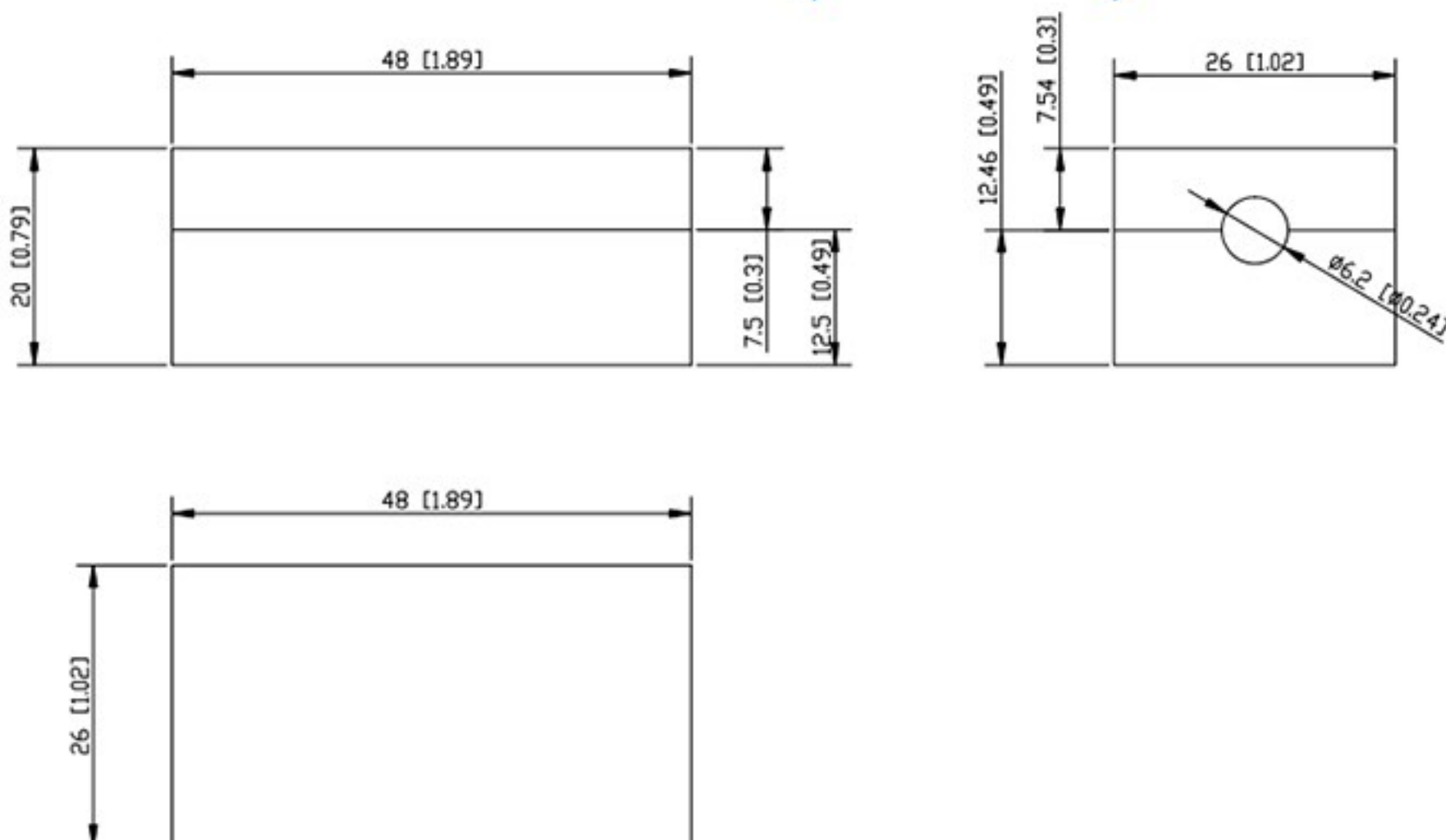
Note: After the test, the module passes the function test and it is determined to be OK, the performance degradation rate is $\leq 10\%$.

Notice

1. Please pay attention to the structural tolerances when designing. Unreasonable structural design may cause temporary abnormalities in module functions.
2. Please pay attention to the evaluation of electromagnetic compatibility when designing. Unreasonable system design may cause malfunction of the module.
3. When the boundary application of the product limit parameter is involved, you can contact after sale service dept. to confirm the relevant precautions.
4. The company reserves the right to change this document and update the functions without prior notice.

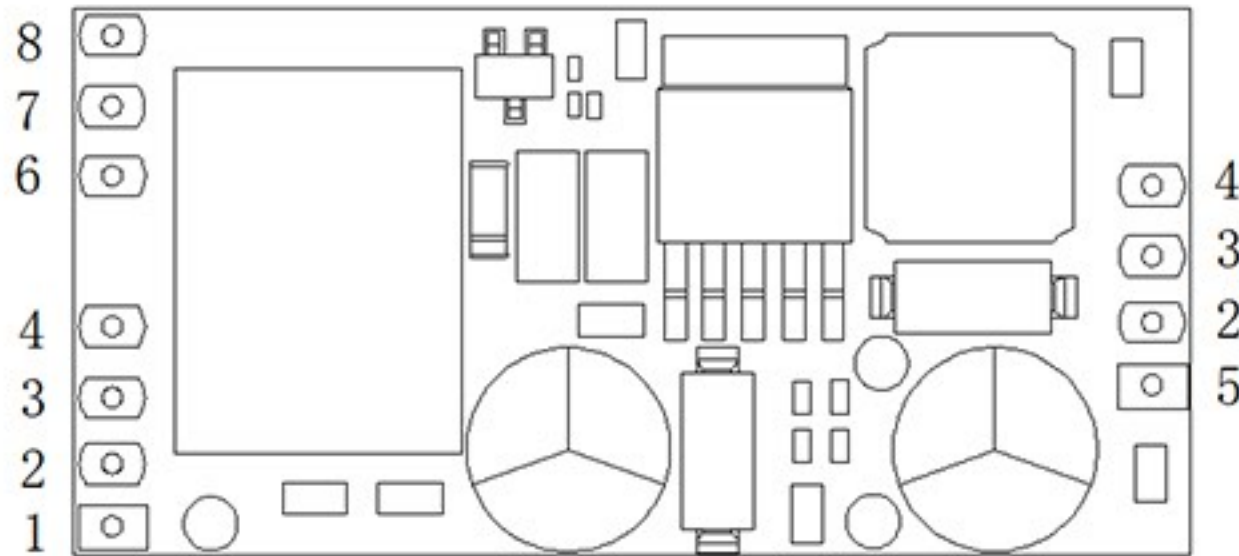
Mechanics

1. Mechanical Dimensions (mm-inch)



2. Pin out

Product internal structure interface diagram



No.	Mark	Description	Remark
1	+	Positive power supply	
2	-	Negative power supply	
3	I1	Signal 1	(1)
4	I2	Signal 2	
5	+	Positive Power output	
6	Common	Relay Common terminal	
7	N O	N O	
8	N C	N C	

Remarks:

In the relay output version, the I1 at the positive power output (i.e, the output interface 3 on the right side of the figure above) is the relay control terminal, which is active at high level, the input interface 3 on the left has no control function.