Attention:

Electronic module products require you to have a certain electronic foundation, and read the product description carefully before use; the product is not designed for medical, life-saving, life-sustaining and other purposes, and cannot be used in dangerous places such as coal mines and oil depots, and we will not take any such responsibility. Guarantee; the profit of the product is low, the user's operating ability and use occasions vary widely, and any electronic equipment cannot be foolproof. The equipment owner should make corresponding protective measures and risk management plans. If the equipment directly or indirectly causes any personal or property damage, the company is not responsible for compensation.

Description:

This is an operation control module specially designed for single-axis stepper motors. The module has built-in multiple fixed operation modes, and the user can quickly select the appropriate motion trajectory. You can save and set distance/speed/delay/cycle times when power off. It can run independently as a module, or it can be used in conjunction with other systems. It can be used in general industrial control occasions, but cannot be used in special industries such as medical treatment and fire protection or in life-critical fields.

Specifications:

Model: ZK-SMC01 Stepper Motor Controller
Adapter motor: stepper motor
Number of control axes: single axis
Motor signal: common cathode
Power supply range: DC 5-30V universal
Instruction features: streamline and optimize many common instructions
Acceleration and deceleration control: yes
Input reverse polarity protection: yes
Remote communication control: TTL serial port
Main functions of the system: automatic, manual, setting, serial port control
Speed range: 0.1~999 laps/min
Number of forward rotation pulses: 1-9999 pulses
Number of reverse pulses: 1-9999 pulses
Cycle work times: 1-9999 times
Forward delay time: 0.0-999.9 seconds
Inversion delay time: 0.0-999.9 seconds
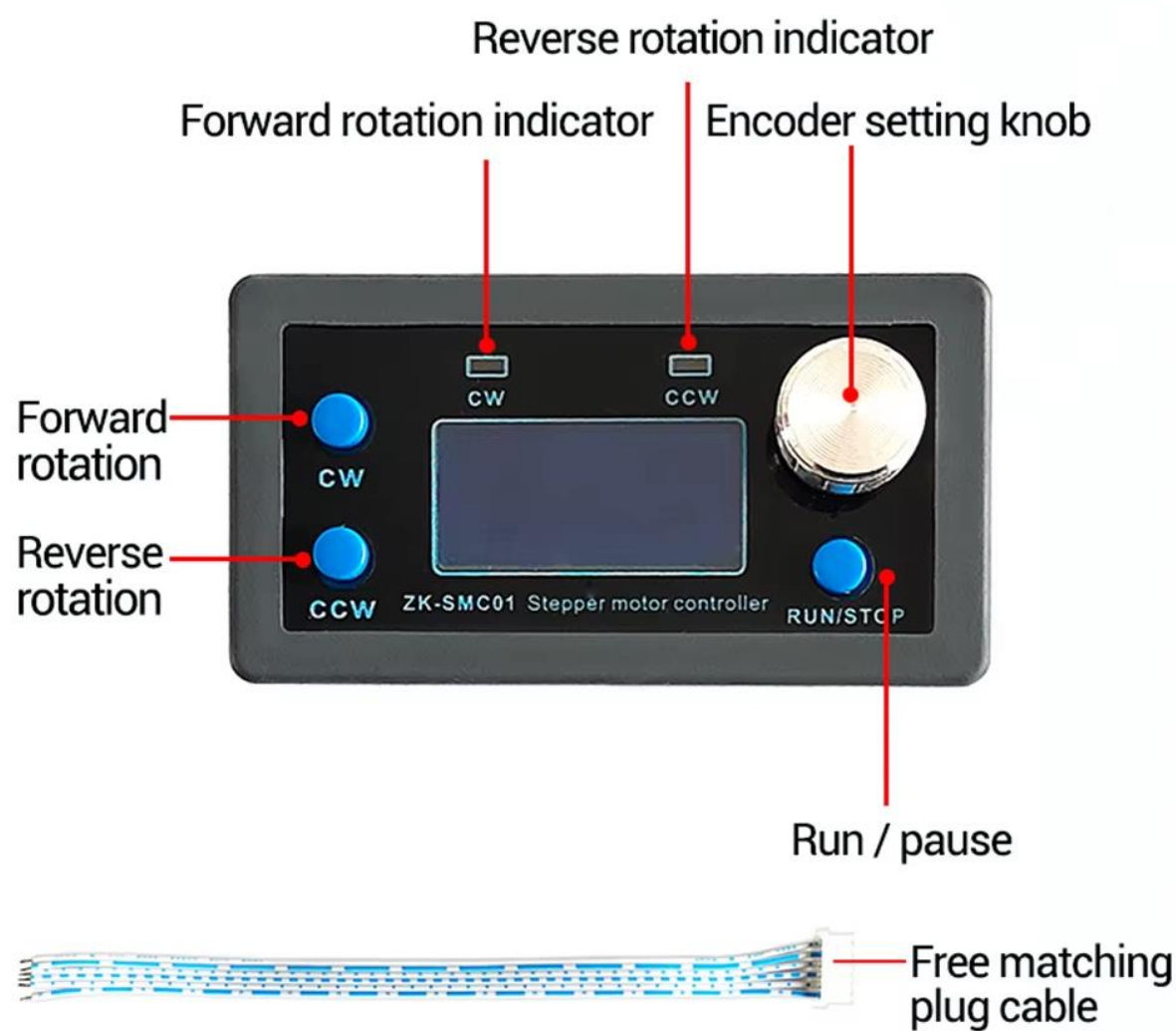Segment selection range: 1-128 segments
Product use environment: -5°C-60°C (non-condensing)

Package Included:

1*stepper motor controller
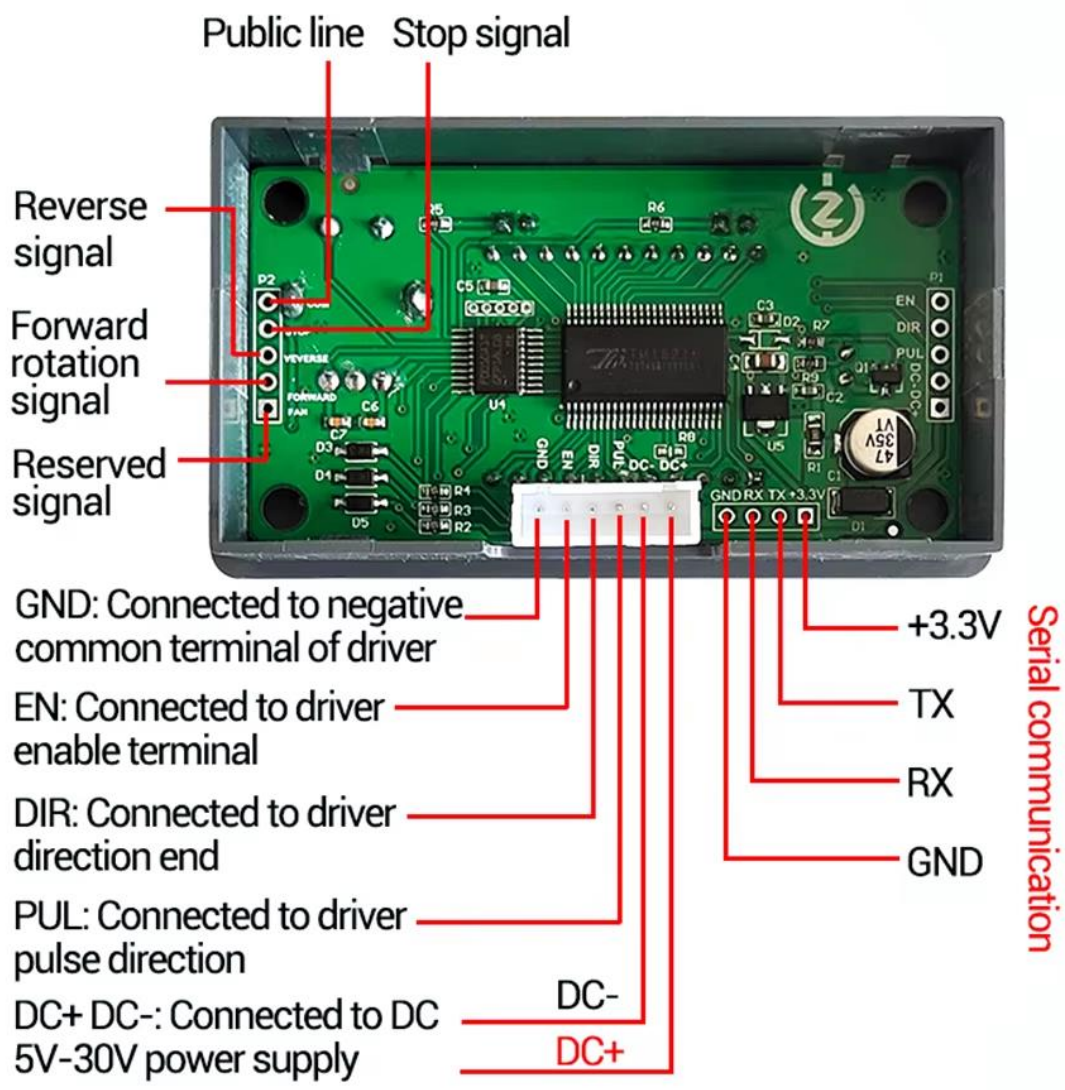1*plug wire

Product function

Reverse rotation indicator

Forward rotation indicator

Encoder setting knob

Forward rotation

CW

Reverse rotation

CCW

CW

CCW

ZK-SMC01 Stepper motor controller

RUN/STOP

Run / pause

Free matching plug cable

▌[F] Menu setting function

List of all [F] menu setting functions

Serial number	Function	Adjustable range	Defaults
F-01→?	Action flow mode selection (details below the table)	1-9	1
F-02	Number of forward rotation pulses Unit: number	1-9999	1600
F-03	Forward rotation speed Unit: Revolution / minute	0.1-999	10
F-04	Number of reverse pulses Unit: Number	1-9999	1600
F-05	Reversal speed Unit: circle (revolution)/min	0.1-999	10
F-06	Cycle work times (among them----=numerous times) Unit: times	0-9999 or countless times	1
F-07	Forward rotation in place delay Unit: second accuracy ± 0.2 second	0.0-999.9	0.0
F-08	Reverse in place delay Unit: second accuracy ± 0.2 second	0.0-999.9	0.0
F-09	Number of pulses per revolution: 1-9999 (X10) Unit: 10 (for example, the step angle is 1.8 degrees, the stepping motor drives 8 segments, and one revolution is 360 / 1.8 * 8 = 1600, setting 160, actual 1600)	1-9999	160
F-10	Main interface display content Up: motor coil speed (unit: RPM) Downlink: delay time (unit: s) / number of cycles (unit: Times) 00- [Motor coil speed delay time] 01- [Motor coil speed cycle times]	0-1	00
F-11	Action when pressing pause key 0 - slow stop of motor deceleration 1 - motor stops immediately (emergency stop has impact)	0-1	0
F-12	Acceleration and deceleration level 1-100, 1 slowest, 100 fastest	1-100	20
F-13	Postal address	1-255	1

[P01 action process mode selection]
list of required action processes
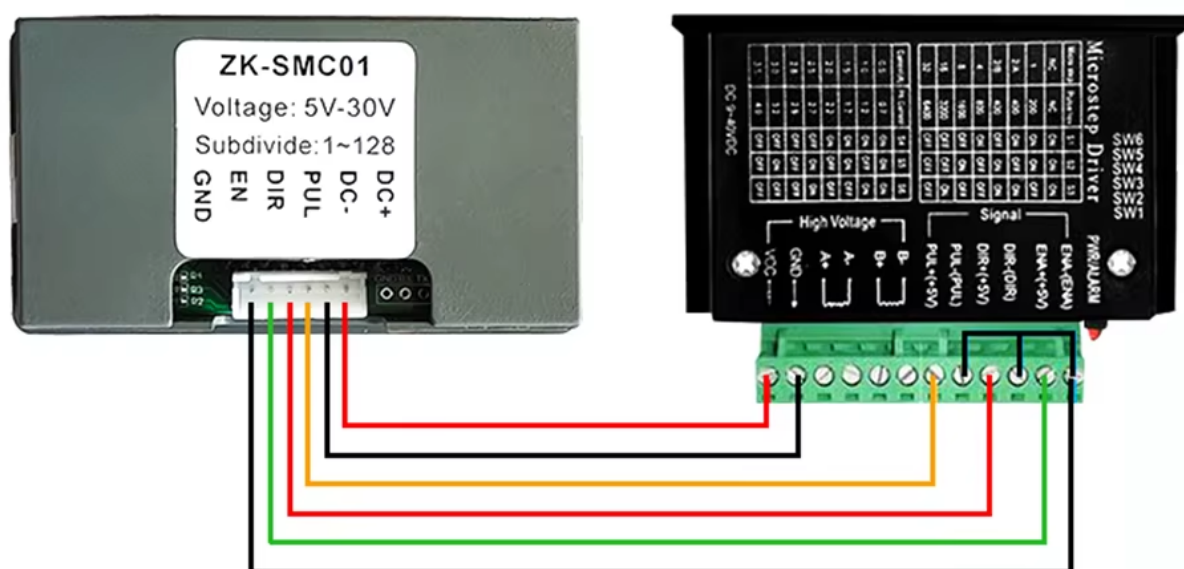
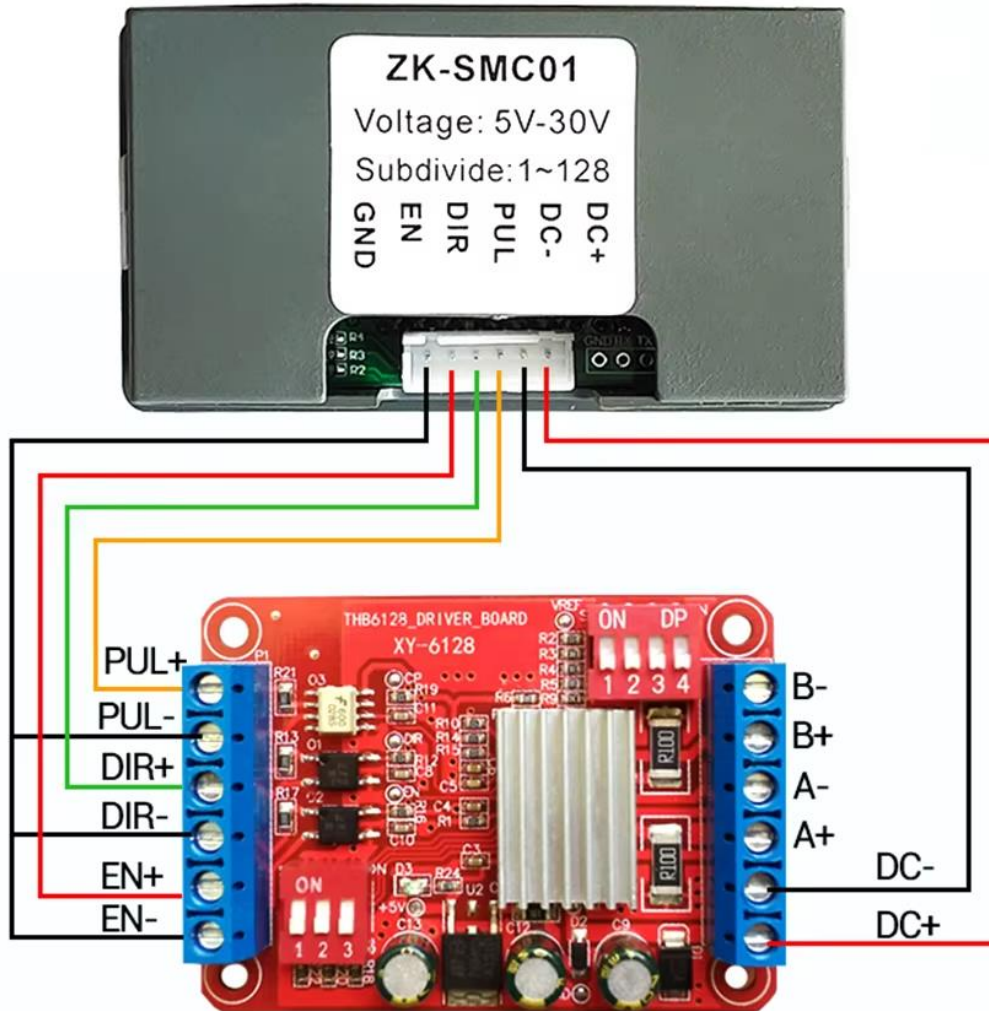|	
[P01]→1	The motor works with [knob on controller].
[P01]→2	It keeps rotating after pressing the button, and stops when it is released. [Press CW] Always rotate forward [Press CCW] Always reverse
[P01]→3	After pressing the button, keep rotating, and press again to stop. [press CW] forward rotation [press CCW] reverse rotation
[P01]→4	After pressing the button, it can rotate forward or reverse-delay according to the set distance, and it can cycle F-06 times. [Press CW] Forward rotation-Delay (F-07) [Press CCW] Reverse rotation-Delay (F-08)
[P01]→5	After pressing the button, it can cycle according to the set distance forward or reverse delay(F-06）。Return to zero at the end of the cycle. [press CW] forward rotation delay (F-07), Cycle (F-06), return to zero [press CCW] reverse delay (F-08),Cycle (F-06), return to zero.
[P01]→6	After pressing the button, cycle forward and reverse according to the set distance. Abbreviations: [press CW] forward delay (F-07) - reverse delay (F-08), [press CCW] reverse delay (F-08) - forward delay (F-07), above cycle (F-06)
[P01]→7	After pressing the button, the motor will rotate forward or reverse permanently, release the button, - delay - return to zero. Abbreviations: [press CW] forward rotation - release - delay (F-07) - return to zero, [press CCW] reverse rotation - release - delay (F-08) - return to zero.
[P01]→8	After pressing the button, forward or reverse - delay according to the set time. Recyclable (F-06). Abbreviations: [press CW] forward rotation time (F-07) - delay (F-08), [press CCW] reverse rotation time (F-08) - delay (F-07), the above cycle (F-06).
[P01]→9	After power on, it will automatically cycle forward and reverse according to the set distance. Abbreviations: forward delay (F-07) - reverse delay (F-08), cycle (F-06)

Product details

Public line   Stop signal

Reverse
signal

Forward
rotation
signal

Reserved
signal

GND: Connected to negative
common terminal of driver

EN: Connected to driver
enable terminal

DIR: Connected to driver
direction end

PUL: Connected to driver
pulse direction

DC+ DC-: Connected to DC
5V-30V power supply

DC-

DC+

+3.3V

TX

RX

GND

Serial communication

Product wiring

Control common drives in the market

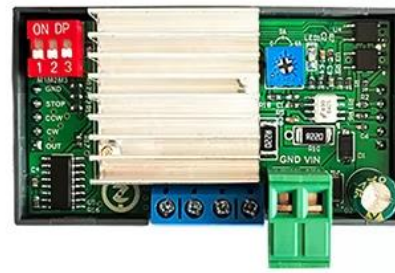# Control THB6128 stepper motor driver

SMC01 is a stepper motor controller, which needs to be used together with our or other stepper motor drivers to control the stepper motor.

SMC02 is a stepper motor controller + stepper motor driver, which can be directly connected to stepper motor control.

Other instructions

1. As long as it is 2-phase, 4-wire, 5-wire, 6-wire and 8-wire stepper motor, it can be controlled.

2. Drivers with similar interfaces can be controlled.

3. The number of pulses per revolution shall be determined according to the subdivision of the driver and the step angle of the stepping motor.

RUN INTERFACE

Used to display running information during work

MENU SETTING INTERFACE

In actual work, the parameters that need to be modified are all concentrated here.

Single Axis Stepping Motor Controller

Pulse / direction control • Auto / manual • TTL serial communication

☑ **Adjustable Delay** ☑ **Speed Regulation** ☑ **Angle Adjustment** ☑ **Adjusting Distance**

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Operating instructions

Run stop exit

In the running interface, the rotary encoder adjusts the speed, CW button-forward rotation, CCW button-reverse rotation, RUN/STOP button-operation stops and exits. Long press the encoder to enter the menu settings.


In the menu setting interface, adjust the rotary encoder to change the parameter codes F-01~F-13.
Long press the encoder, save the parameters and exit, enter the running interface.

tune parameter

Exit parameter setting

In the menu setting interface, short press the encoder to enter the F-XX corresponding menu parameter setting state, the parameter flashes, short press again to shift, rotate the encoder to adjust the parameters. Short press the RUN/STOP button to exit the parameter setting and return to the main menu number adjustment interface.

43mm

79mm

26mm

71mm

39mm
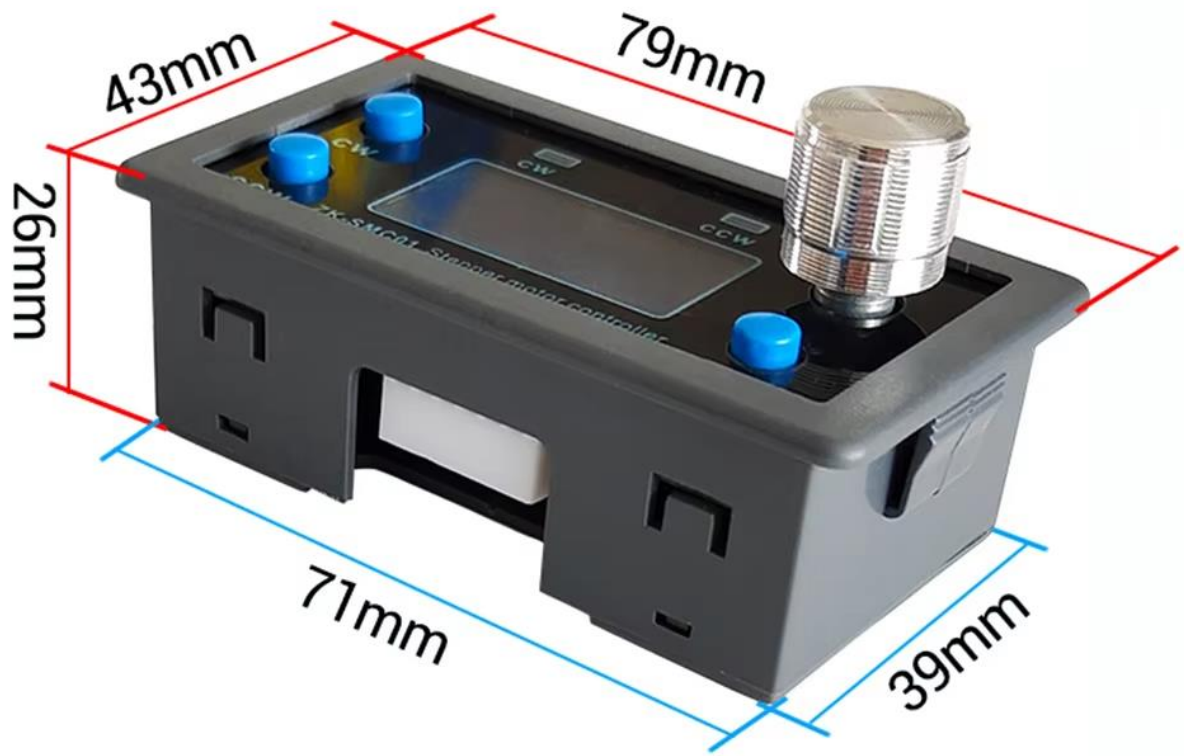
Net weight:39g

Weight: 72g (with packaging)