It can be directly connected to stepping motor

ZK-SMC02
Industrial
Controller

Stepper Motor Controller + Driver Integrated

Physical button | LCD | Auto / manual | TTL serial communication

Adjustable Delay | Speed Regulation | Angle Adjustment | Adjusting Distance

Disclaimer:
For electronic module products, you need to have a certain electronic foundation and carefully read the product description before use; The product is not designed for medical, life-saving, life support and other purposes, and cannot be used in dangerous places such as coal mine and oil depot. We do not guarantee such responsibilities; The product profit is low, the user's operation ability and use occasions vary greatly, and any electronic equipment cannot be foolproof. The equipment owner shall make corresponding protective measures and risk management plan. The company shall not be liable for compensation for any personal or property loss directly or indirectly caused by the equipment.

SMC02

Product introduction

This is a special operation control module for single shaft stepping motor.
A variety of fixed operation modes are built in the module, and users can quickly select the appropriate motion track. The distance / speed / delay / number of cycles can be saved and set after power down. It can run independently as a module, or it can be used together with other systems.
It can be used in general industrial control occasions, not in special industries such as medical treatment and fire protection or life-threatening fields.

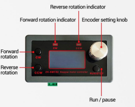
SMC02

Product parameters

Model: ZK-SMC02 stepper motor controller + driver
Adaptive motor: stepping motor
Number of control axes: single axis
Motor signal: common cathode
Power supply range: DC 5-30V general
Driving capacity: 4A
Instruction features: streamline and optimize multiple common instructions
Acceleration and deceleration control: Yes
Input reverse connection protection: Yes
Remote communication control: TTL serial port
Main functions of the system: automatic, manual, setting and 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
Number of cycles: 1-9999
Forward rotation delay time: 0.0-999 .9seconds
Reverse delay time: 0.0-999.9 seconds
Subdivision selection range: 1-32 subdivision
Product service environment: - 5 ℃ - 60 ℃ (no condensation)

SMC02

Product function



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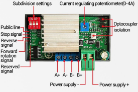
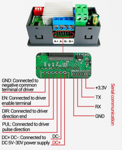
Product details

S3	S2	S1	M-SET
ON	ON	ON	NC
OFF	ON	ON	1
ON	OFF	ON	2/A
ON	ON	OFF	2/B
OFF	OFF	ON	4
OFF	ON	OFF	8
ON	OFF	OFF	16
OFF	OFF	OFF	32





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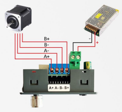
Product wiring



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Interface function

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.

SMC02

Operating instructions

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.

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.

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[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)

SMC02

Comparison of SMC01and SMC02

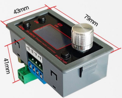
SMC01 is a stepper motor controller, which needs to be used together with our or other stepper motor drivers to control the stepper motor.

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.

SMC02

Product size



Net weight: 64g
Weight: 90g (with packaging)

SMC02

Packaging form