

STEPPERONLINE[®]

ST-C01 controller

Physical button / LCD / Industrial controller

ST-C01

Single Axis Stepping Motor Controller

Pulse /
direction control

Auto / manual

TTL serial
communication



Adjustable
 Delay

Adjustable
 Speed

Adjustable
 Angle

Adjustable
 Distance

1. Product introduction

This is a special operation control module for single shaft stepping motor.

The module has a variety of built-in fixed operation modes, so users can quickly select the appropriate motion trajectory. 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 applications, not recommended for medical, fire and other specialised industries or life-critical areas.

2. Product parameters

Model: ST-C01 stepper motor controller

Adaptive motor: stepping motor

Number of control axes: single axis

Motor signal: common cathode

Power supply range: DC 5-30V general

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: 1-9999999 pulses

Number of reverse pulses: 1-9999999 pulses

Number of cycles: 1-9999

Forward rotation delay time: 0.0-999.9 seconds

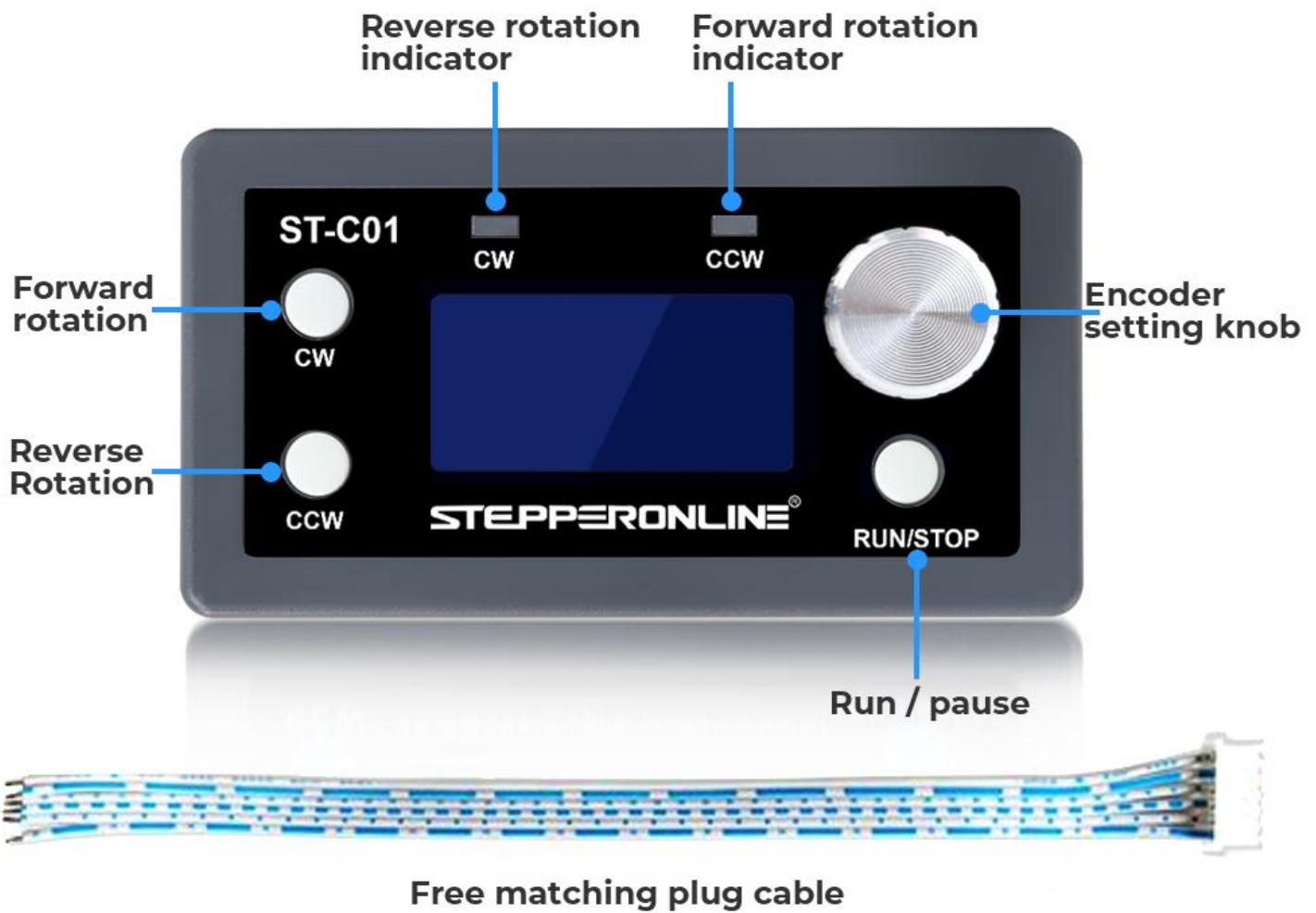
Reverse delay time: 0.0-999.9 seconds

Subdivision selection range: 1-128 subdivision

Product service environment: - 5 °C - 60 °C (no condensation)

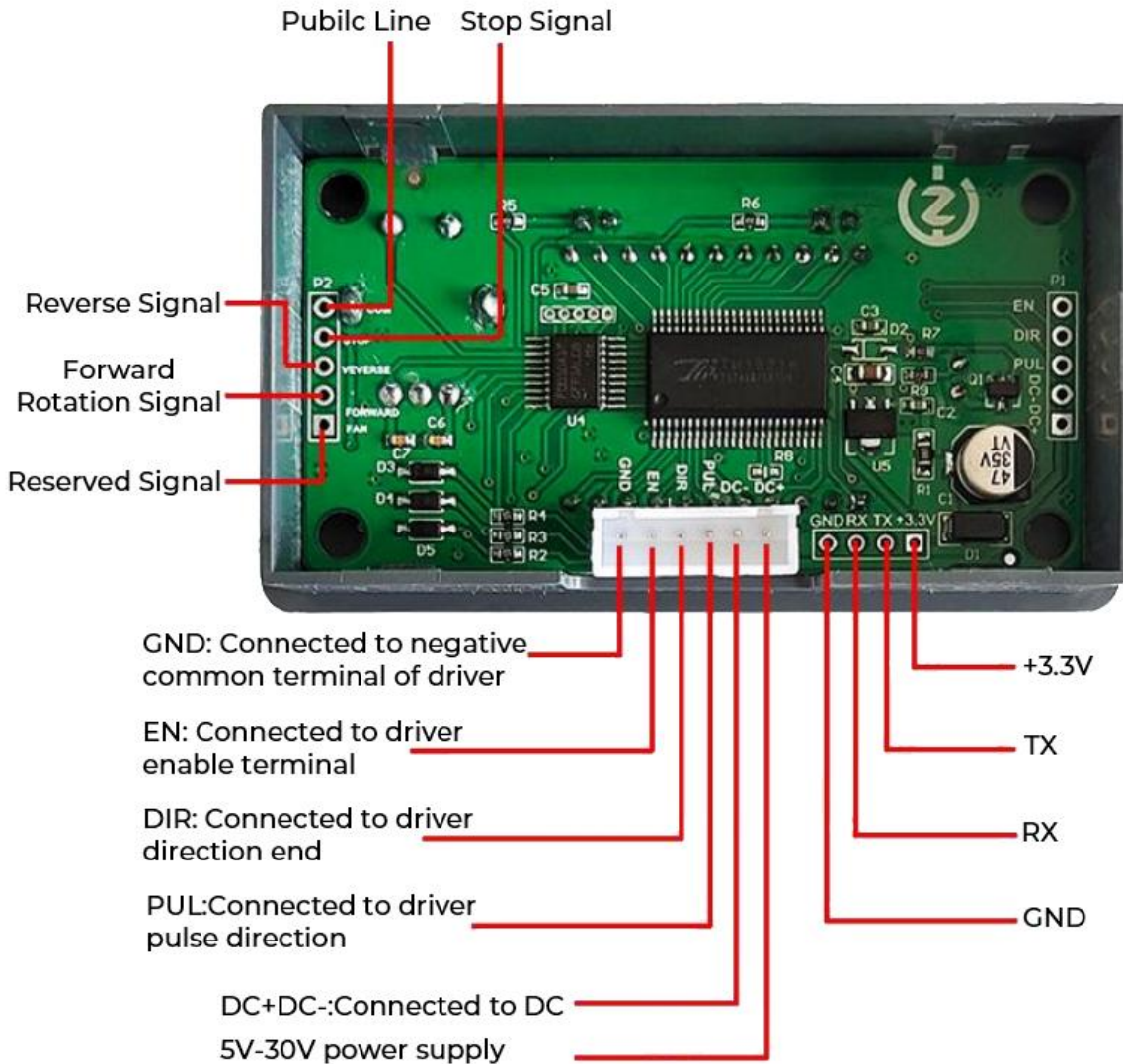
3. Product function

≡ Product Function ≡

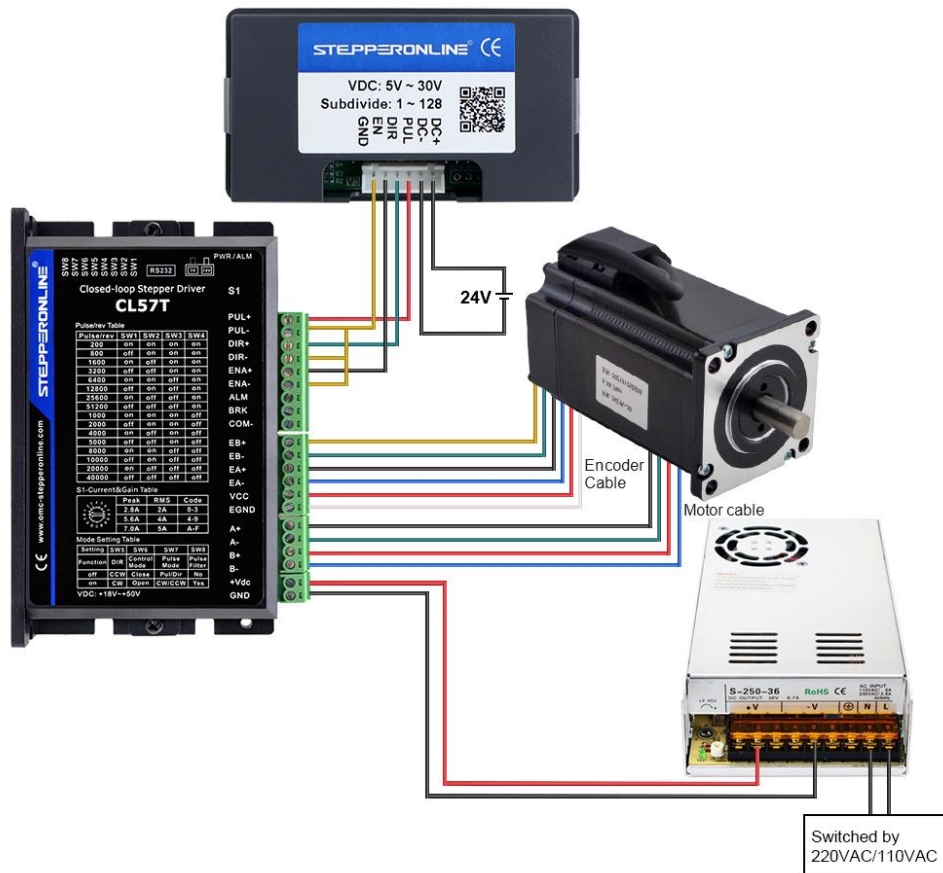
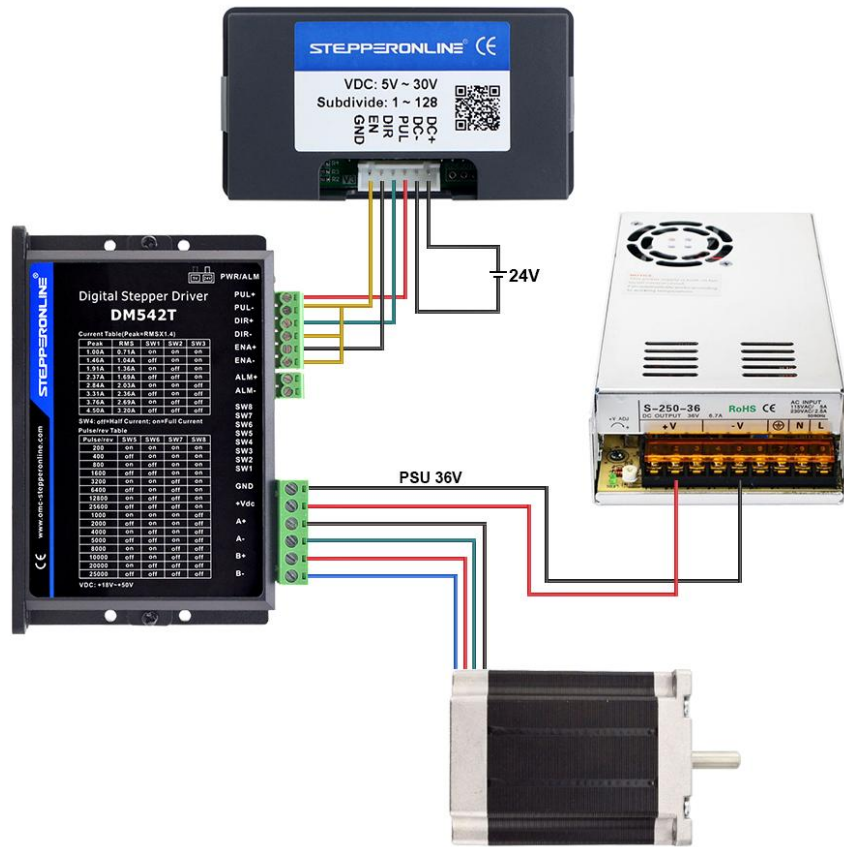


4. Product details

Product details



5. Product wiring



6. Interface function introduction and operation method

The controller is divided into two interfaces: operation + interface+[F] menu setting interface

≡ Interface function ≡



RUN INTERFACE

Used to display running information during work

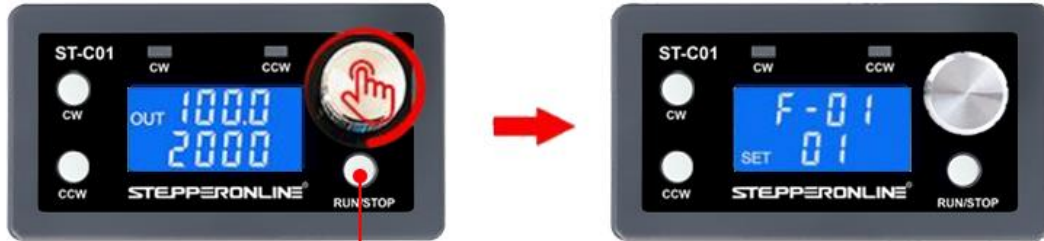


MUNU SETTING INTERFACE

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

Operating instructions

Operating instructions



Run stop exit

In the running interface, Turn the knob to adjust 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, Turn the knob to change the parameter codes F-01~F-13. **Long press** the knob, save the parameter and exit, enter the running interface.



Tune parameter

Exit parameter setting

In the menu setting interface, **short press** the knob to enter the F-XX, Corresponding menu parameter setting status. **Short press again** to shift, rotate the knob to adjust the parameters. **Short press the RUN/STOP button** to exit the parameter setting and return to the main menu number adjustment interface.

List of all [F] menu setting functions

Serial number	Function	Adjustable range	Defaults
F-01→?	Action flow mode selection (See follow-up table)	1-9	1
F-02	Number of forward rotation pulses Unit:number (The upper three bits are adjusted by rotary encoder shift, and the upper three bits display Hxxx, and the lower four bits display xxxx)	1 - 9999999	1600
F-03	Forward rotation speed Unit: Revolution / minute	0.1-999	10
F-04	Number of reverse pulses Unit: Number (The upper three bits are adjusted by rotary encoder shift, and the upper three bits display Hxxx, and the lower four bits display xxxx)	1 - 9999999	1600
F-05	Reversal speed Unit: circle (revolution)/min	0.1-999	10
F-06	Cycle work times ("----"=numerous times) Unit: times	0-9999or 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	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

【F01: action process mode selection】 list of required action processes

number	Action description
【F01】 →P01	The motor works with knob on controller.
【F01】 →P02	It keeps rotating after pressing the button, and stops when it is released. [Press CW]
【F01】 →P03	After pressing the button, keep rotating, Press STOP to stop. [Press CW] forward rotation , [Press CCW] reverse rotation
【F01】 →P04	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)
【F01】 →P05	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.
【F01】 →P06	After pressing the button, cycle forward and reverse according to the set distance. [Press CW] forward delay (F-07) - reverse delay (F-08), [Press CCW] reverse delay (F-08) - forward delay (F-07), above cycle (F-06)
【F01】 →P07	After pressing the button, the motor will rotate forward or reverse permanently, release the button, - delay - return to zero. [Press CW] forward rotation - release - delay (F-07) - return to zero, [Press CCW] reverse rotation - release - delay (F-08) -return to zero.
【F01】 →P08	After pressing the button, forward or reverse - delay according to the set time.Recyclable (F-06). [Press CW] forward rotationtime (F-07) - delay (F-08), [Press CCW] reverse rotation time (F-08) - delay (F-07), the above cycle (F-06).
【F01】 →P09	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)

7. Product size

Product size



Net weight: 36g

Weight: 72g(with packaging)