STEPPERONLINE®

ST-C01 controller

Physical button / LCD / Industrial controller

ST-C01

Single Axis Stepping Motor Controller

Pulse / direction control

Auto / manual

TTL serial communication

ST-C01

CW

CCW

CW

CCW

STEPPERONLINE®

RUN/STOP

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
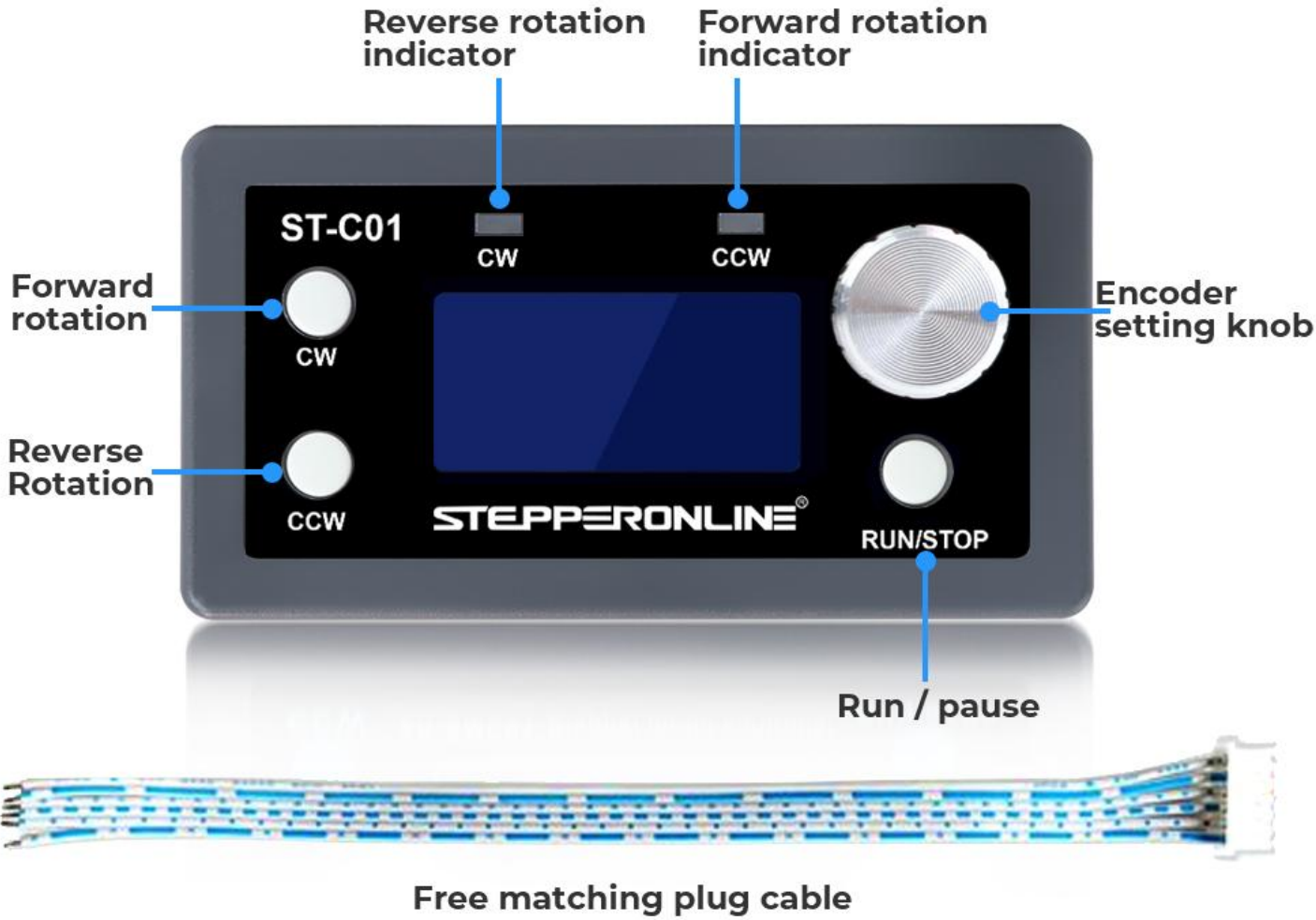
Forward rotation delay time: 0.0-999.9 seconds

Reverse delay time: 0.0-999.9 seconds

Subdivision selection range: 1-128 subdivision

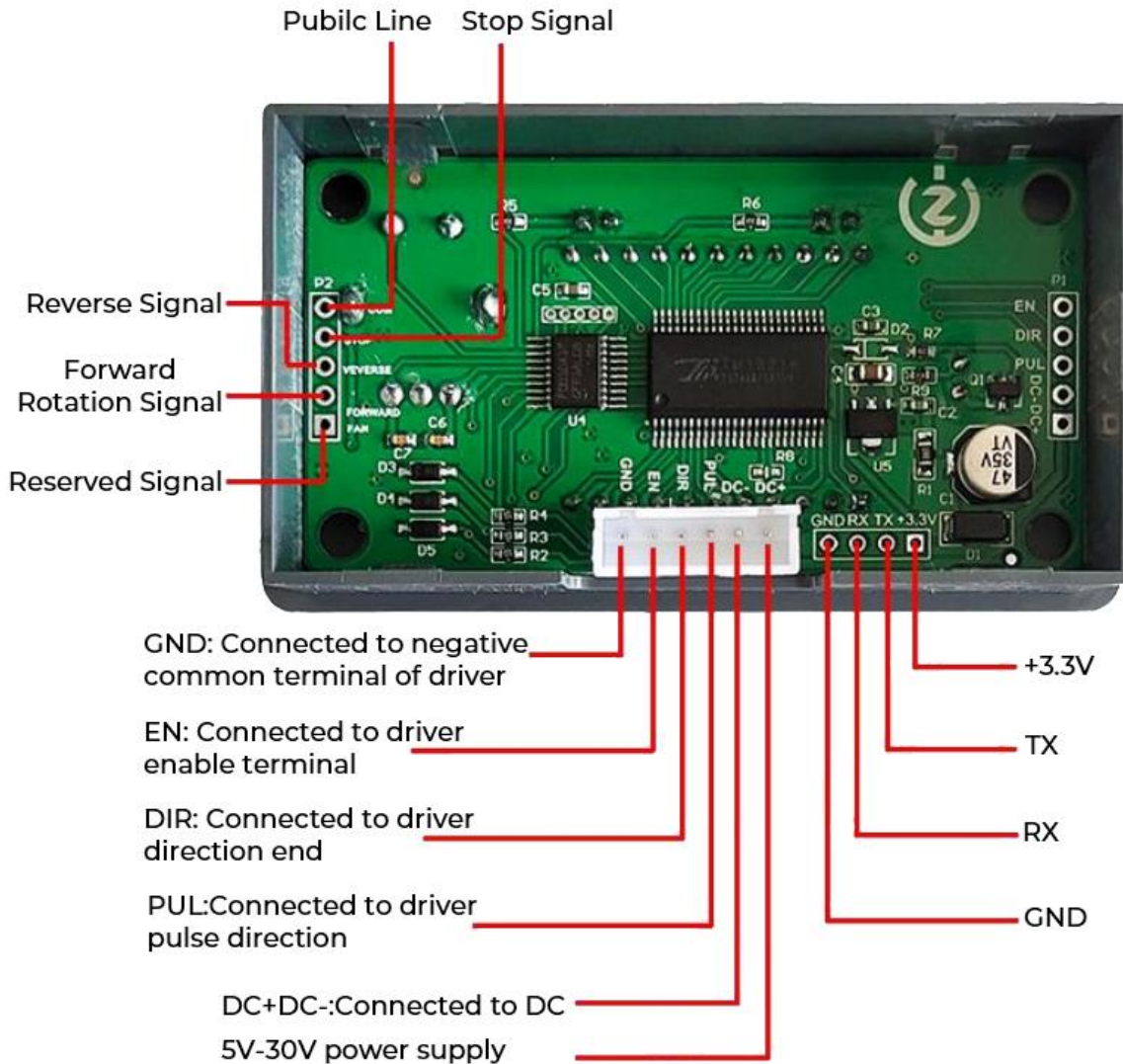Product service environment: - 5 ℃ - 60 ℃ (no condensation)

3. Product function

Product Function

Reverse rotation indicator

Forward rotation indicator

ST-C01

CW

CCW

Forward rotation — CW

Encoder setting knob

Reverse Rotation — CCW

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RUN/STOP

Run / pause

Free matching plug cable

4. Product details

Product details

Pubilc 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

+3.3V

TX

RX

GND

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
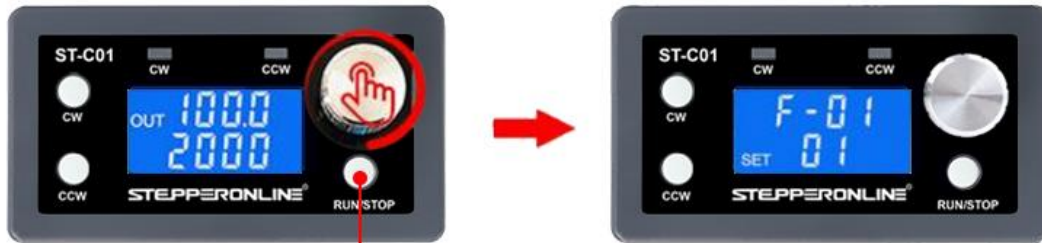
Used to display running information during work

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 upperthreebits 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

43mm
79mm
26mm
71mm
39mm

Net weight: 36g

Weight: 72g(with packaging)