

STEPPERONLINE®

User Manual

Y2SDIR5-PLUS-F01

2 phase input DC drivers



Read the operating instructions carefully before putting the driver into operation with power

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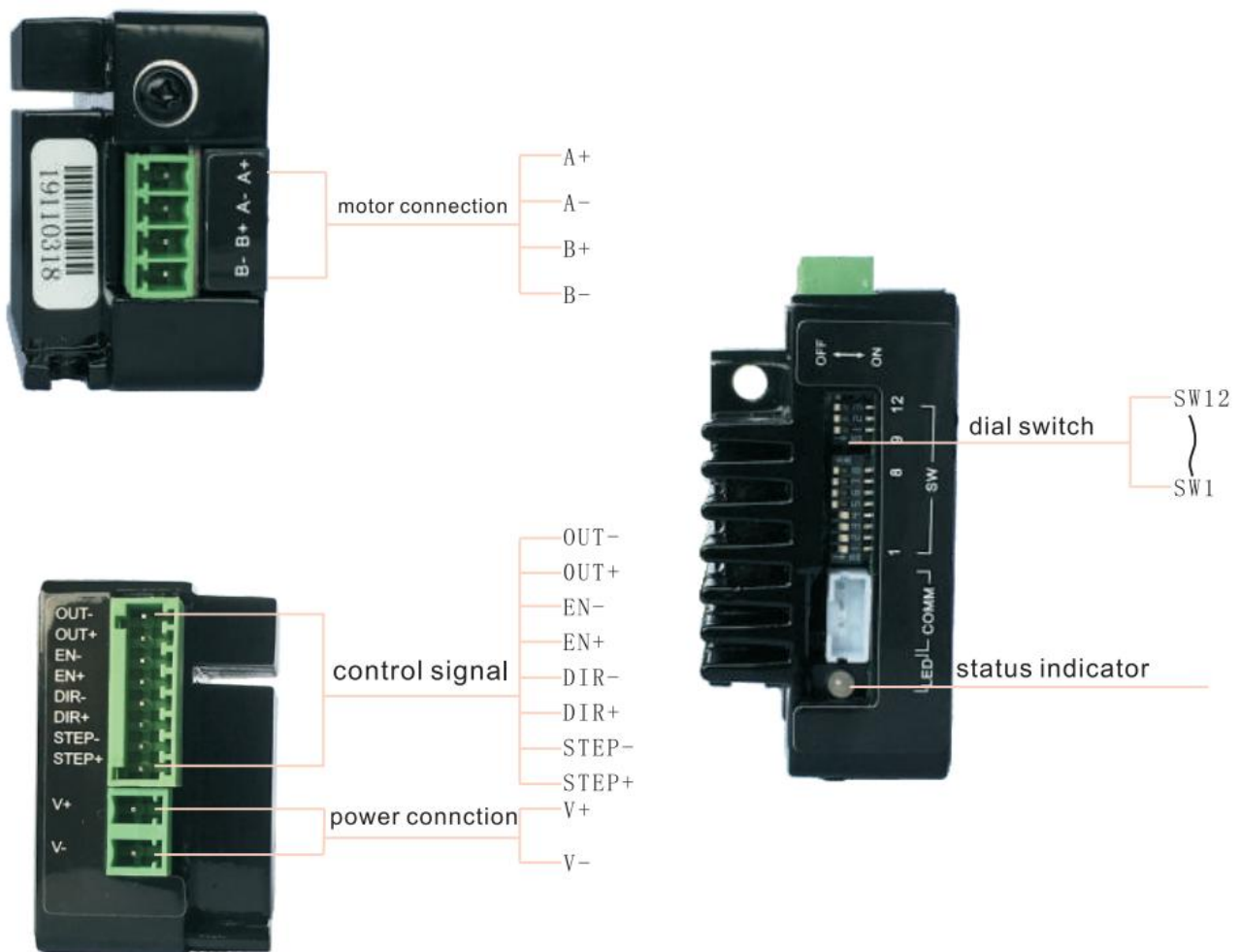
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1. Character

- DC input 2 phase stepper motor driver
- Output current: 0.4-3.0A
- Input voltage: 16-48VDC
- I/O control
- 16 stall subdivide optional
- Control signal 5-24V compatible
- Multiple electrical protection

2. Running and Connection

Name and function of each part of the driver



2.1 Status indicator

Display	Colour	Explain
Power	green	The green light flashes when the driver is normal
Error	red	The traffic lights flash alternately and the drive is faulty.

Status	Error	Reason
Green flicker	Drive normal	--
green light is always on	Drive not enabled	EN Port has high level input
3 red and 1 green	Drive temperature is too high	Need to strengthen the heat
4 red and 1 green	Driver power input over voltage	Power supply voltage is greater than 56VDC
5 red and 1 green	Driver over current	Motor wiring fault or poor contact
6 red and 1 green	Motor winding open circuit	Motor is not connect well
3 red and 2 green	Drive internal voltage error	Supply power is too low
4 red and 2 green	Driver power input under voltage	Power supply voltage is less than 12VDC

2.2 Dial switch 1

2.2.1 Running current

Switch setting			Current(A)
OFF	OFF	OFF	3.0
ON	OFF	OFF	2.7
OFF	ON	OFF	2.4
ON	ON	OFF	2.0
OFF	OFF	ON	1.6
ON	OFF	ON	1.2
OFF	ON	ON	0.8
ON	ON	ON	0.4

2.2.2 Quiescent current

Switch	Status	Function
SW4	ON	Set 50% of the running current
	OFF	Set 90% of the running current

2.2.3 Subdivide

Switch Setting				Y2SD1R5-PLUS-F01
SW5	SW6	SW7	SW8	Rotating speed(R/S)
OFF	OFF	OFF	OFF	8.0
ON	OFF	OFF	OFF	7.5
OFF	ON	OFF	OFF	7.0
ON	ON	OFF	OFF	6.5
OFF	OFF	ON	OFF	6.0
ON	OFF	ON	OFF	5.5
OFF	ON	ON	OFF	5.0
ON	ON	ON	OFF	4.5
OFF	OFF	OFF	ON	4.0
ON	OFF	OFF	ON	3.5
OFF	ON	OFF	ON	3.0
ON	ON	OFF	ON	2.5

OFF	OFF	ON	ON	2.0
ON	OFF	ON	ON	1.5
OFF	ON	ON	ON	1.0
ON	ON	ON	ON	0.5

2.3 Dial switch 2

2.3.1 Driver self-checking

Display	Switch name	Function
SW9	Self testing	Set this dial to ON, the motor at 1rpm/s to do two laps reciprocating move of positive and reverse

2.3.2 Subdivision interpolation

Display	Switch name	Function
SW10	Subdivision interpolation	ON:The driver inserts microsteps in low subdivisions,and 8 subdivisions are recommended below.

2.3.3 Single and double pulse selection

Display	Switch name	Function
SW11	Single and double pulse selection	ON:CW/CCW mode OFF:STEP/DIR mode

2.3.4 Digital signals selection

Display	Switch name	Function
SW12	Digital signals selection	ON:150KHz,suit low subdivided driver OFF:2MHz,suit high subdivided driver

*Advise setting 150KHz filtering to get anti-jamming effect.

2.3.5 Power connect

Terminal identification	Power connect
V+	Power+
V-	GND

2.3.6 Motor connect

*Motor connection,please refer to motor connection information.

2.4 Signal control connection

2.4.1 Input signal

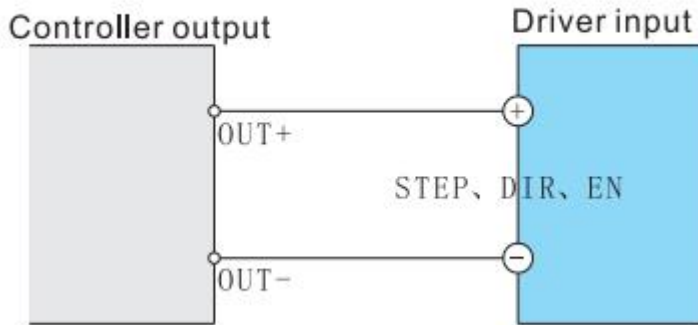
Display	Terminal name	Function
STEP	Pulse signal(CW)	Receive 5-24V differential signal, NPN and PNP signal.
DIR	Direction signal (CCW)	Receive 5-24V differential signal, NPN and PNP signal.
EN	Enable signal	Receive 5-24V differential signal, NPN and PNP signal.EN no input,and motor works.

2.4.2 Output signal

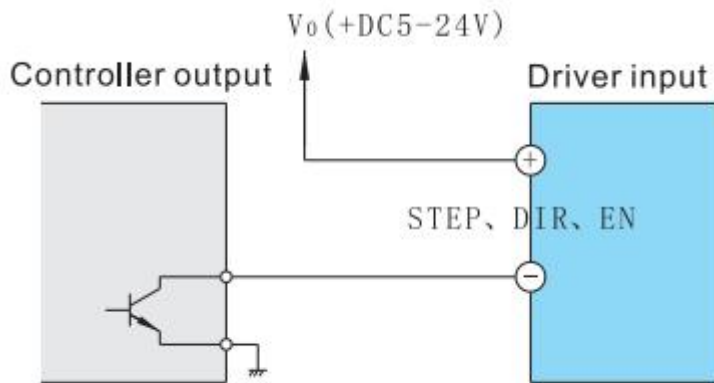
Display	Terminal name	Function
OUT	Error output	Open circuit optocoupler output

2.5 Input connection

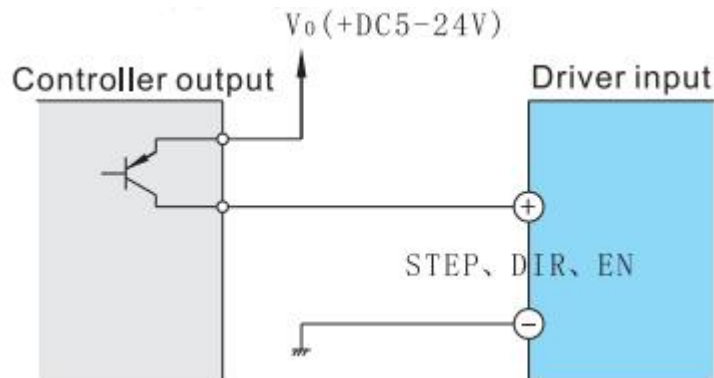
Differential



2.5.1 NPN connection

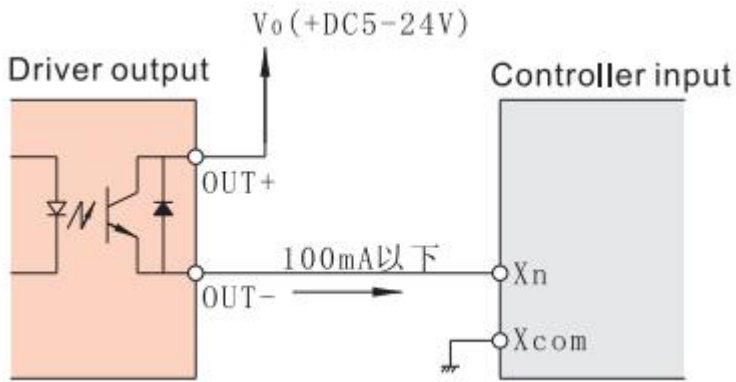


2.5.2 PNP connection

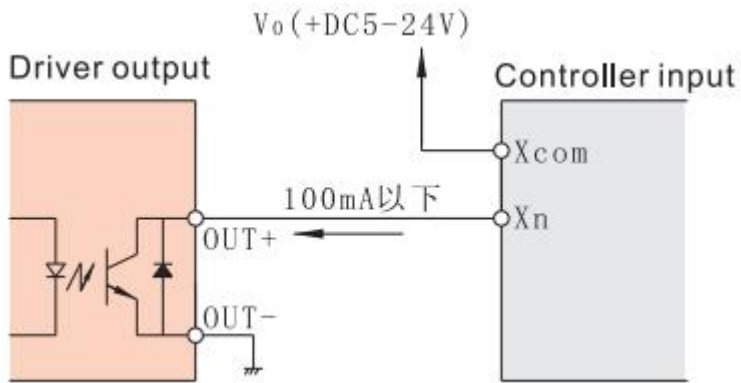


2.5.3 Output connection

Common-cathode



Common-anode



3. Dimension

(Unit: mm [1inch=25.4mm])

