

PRODUCT INTRODUCTION

IPS-S2 motor controller that integrates photoelectric signal/radio frequency/WIFI/button control, mainly used to control electric linear actuators. The controller is compatible with voltage of DC10V~30V, maximum current of 10A. The positive and negative poles need to be wired according to the wiring diagram. If the positive and negative connections are not correct, it will not burn the controller. For example, 60W linear actuator, please choose 60-90W power adapter/switch power supply. If use smaller power, the motor will not work. The controller can be used to control various specifications of electric linear actuators. WIFI module can be controlled through the "EWeLink" APP, and only supports 2.4G WIFI. There are 6 buttons F1, F2, F3, Δ , ∇ , WiFi on the controller for adjusting various functions. Please refer to the following for detailed instructions. The Δ , ∇ button controls the forward and backward movement of the motor; Press WiFi to pair the WIFI.

MAIN TECHNICAL PARAMETERS

Model: IPS-S2
Input Voltage: DC 10V~30V
Output Voltage: 20~93% Input Voltage Adjustable
Current Monitoring Accuracy: $\pm 0.3\text{A}$
Maximum Current: 10A
Power Consumption: < 3W
DC Connector: 5.5*2.1MM
RF Frequency: RF433MHz/2.4GHz
WIFI Protocol: IEEE802.11 b/g/n
Remote Control Battery: 23A 12V
Working Temperature: -20°C ~ +70°C
Working Humidity: 10%~90%RH(No condensation)
Input Signal Type: NPN

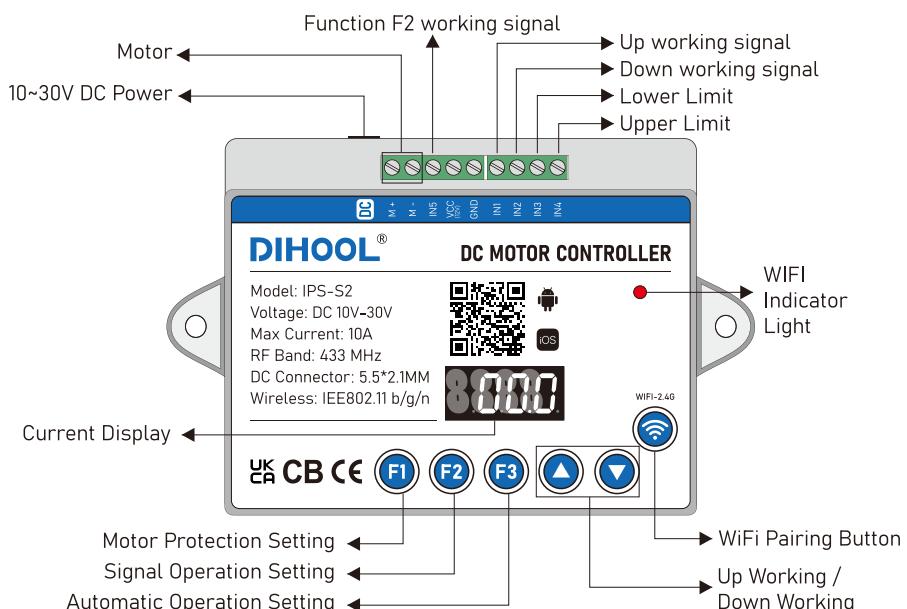
DEFAULT ACCESSORIES

Controller
Remote Control (without battery)

OPTIONAL ACCESSORIES

Limit Switch
Magnetic Switch
Photoelectric Switch
Button Switch
Handle Switch
Foot Switch

FUNCTION DESCRIPTION



MATCH UP TO 8 REMOTE CONTROLS

Remove the lid and find a small circuit board, see Figure 1

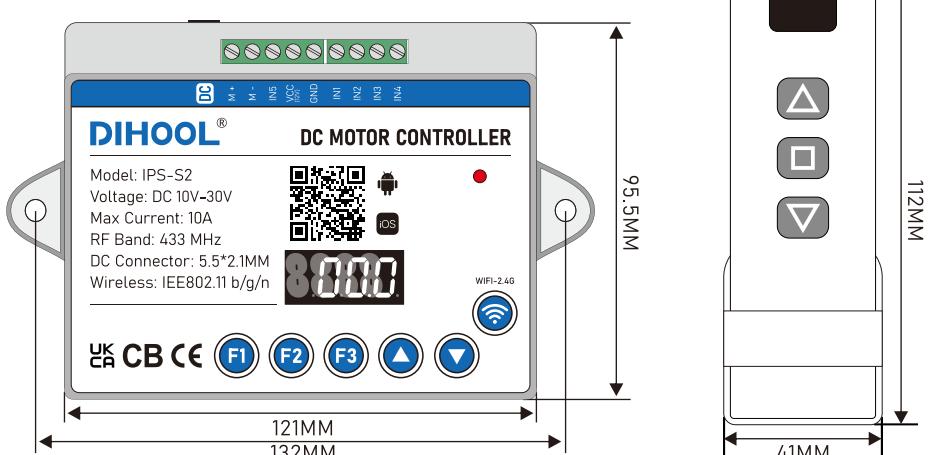
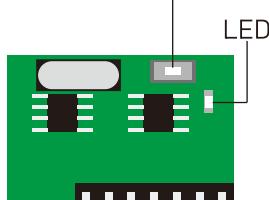
Click the white matching button and the indicator light illuminates, Click any key of the remote control to match automatically. Press the up and down keys of the remote control to test.

Clear Pairing:

Click the matching button 8 times, until the indicator light flashes and ends--unbind

Figure 1

Remote Control Match button



FUNCTION F1: MOTOR PROTECTION SETTINGS

Press and hold the **F1** key for 3 seconds to enter the F1 sub-function settings, click F1 to switch in the sub-functions, and hold the **F1** key for 3 seconds to exit the setting (press "▲" to increase / "▼" to adjust the value)

Code/Subfunction Name	Subfunction Parameter Description	Value	Default Value	Unit
A	Overcurrent Protection	Upward overcurrent protection	A01.0~ A10.0	A04.0 (Amp)
b		Downward overcurrent protection	b01.0~ b10.0	b01.0 (Amp)
C	Operation Mode	C=-1: Jogging; C=0: Self-holding; C>0: Time-delay	C -1~ C999	C000 (Seconds)
d	Stall Detection Protection	Downward Stall Detection Protection	d00.0~ d09.9	d00.6 (Amp)
E		Upward Stall Detection Protection	E00.0~ E09.9	E00.0 (Amp)
F	Stall Reverse Time	Obstruction rebound duration	F000~ F999	F001 (Seconds)
G	Stall Protection Time-delay Intervention	Set the time for delayed intervention of stall protection	G0.20~ G3.00	G0.30 (Seconds)
H	Percentage Of Voltage Regulation Range	Downward voltage regulation range (20%~93%)	H020~ H093	H093 (%)
J		Upward voltage regulation range (20%~93%)	J020~ J093	J093 (%)
L	Display Brightness Adjustment	Screen brightness ranges from 1 (dim) to 8 (bright)	L001~L008	L005
P	Operation Mode Of Wired Controller	Foot switch / wired controller (0: Jogging, 1: Self-holding)	P 0 / P 1	P 0
t	Screen Off Time	The default time is 5 minutes	t000~ t999	t005 (Minutes)
Lo	Soft Stop	0: Turn Off, 1: Turn On	Lo 0 / Lo 1	Lo 0

FUNCTION F2: SIGNAL OPERATION SETTING

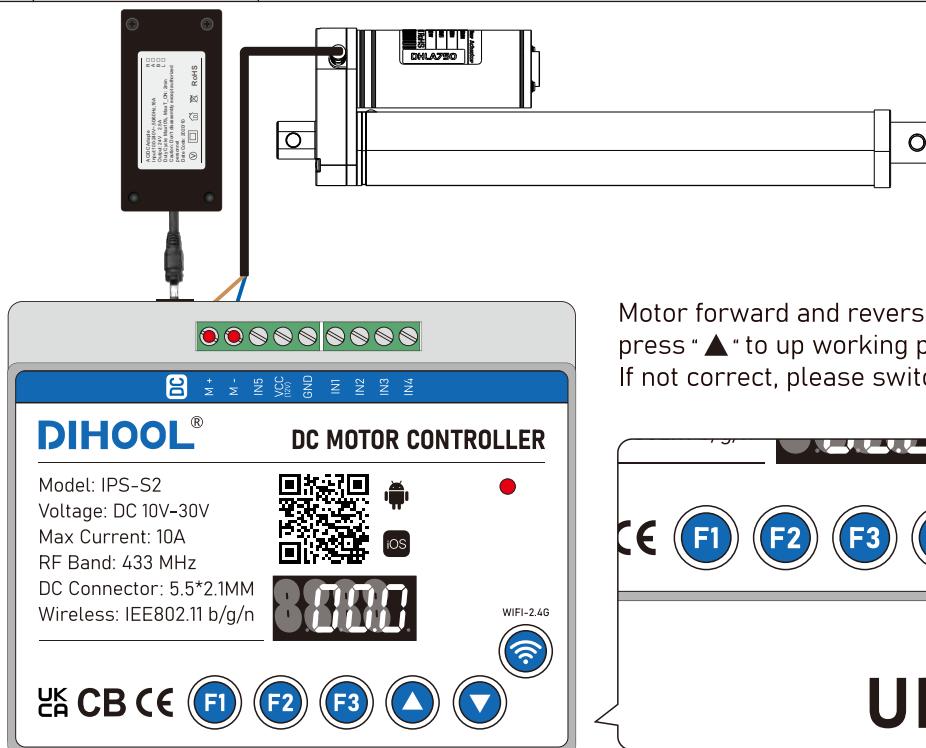
Press and hold the **F2** key for 3 seconds to enter the F2 sub-function settings, click F2 to switch in the sub-functions, and hold the **F2** key for 3 seconds to exit the setting (press "▲" to increase / "▼" to adjust the value)

Code/Subfunction Name	Subfunction Parameter Description	Value (Unit)
A	Up Working Time	Motor Up Working Time
b	Pause Time	Motor Pause Time
C	Down Working Time	Motor Down Working Time
d	Operation Mode 0: Motor Working 1: Motor not Working	0: Signal Present, stop. Signal disappear, execute actions A,b,c 1: Signal Present, stop after executing action A. Signal disappear, execute actions b and c
		d000/d001 /

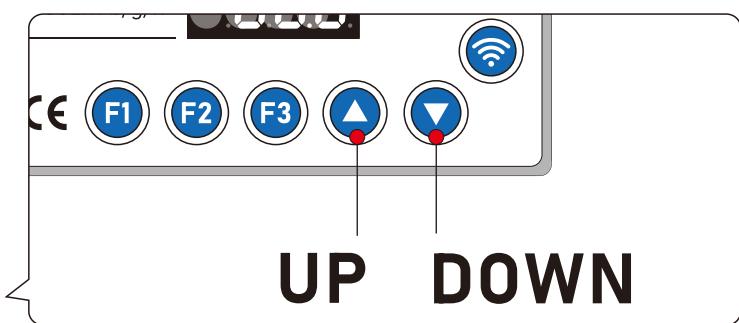
FUNCTION F3: AUTOMATIC OPERATION SETTING

Press and hold the **F3** key for 3 seconds to enter the F3 sub-function settings, click F3 to switch in the sub-functions, and hold the **F3** key for 3 seconds to exit the setting (press "▲" to increase / "▼" to adjust the value)

Code/Subfunction Name	Subfunction Parameter Description	Value (Unit)
A	Up Working Time	Motor Up Working Time
b	Pause Time	Motor Pause Time
C	Down Working Time	Motor Down Working Time
d	Pause Time	Motor Pause Time
E	Number of Cycles	The Number Of Cycles Of The Motor
F	Cycle Operation Model:0 Close, 1 Start	0: Close Cycle Operation; 1: Start Cycle Operation Press the "▲" / "▼" to start, press again to close
		F000/F001 /



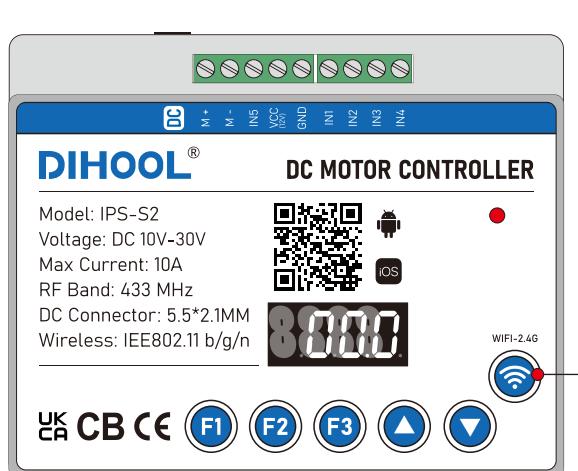
Motor forward and reverse control:
press "▲" to up working press "▼" to down working,
If not correct, please switch to connecting the motor cable.



Note: First time connecting to wireless, it is necessary to place the controller within 5 meters of the router. After connecting, the controller should be kept within 20 meters of the router

- ①. Download 'Ewelink' APP, register an 'Ewelink' account and log in. (Connect to 2.4G WiFi. 5G WiFi not supported.)
- ②. Press 'HOME' -- 'ADD' -- 'Quick Paring' -- 'Add one device'
- ③. Enter the correct 2.4G WIFI account and password
- ④. After pressing the  button for 5-20 seconds, the controller will automatically connect to the router

WIFI Pairing Button



SUPPORT 32 LANGUAGES

- ⑤ Tap "... " to enter Settings. Modify the device name and Channel 1 and Channel 2 (Figure 3).
- ⑥ Turn ON the " Hide AI ON/OFF " option. Enter " Inching Settings " (Figure 4).
- ⑦ In " Inching Settings ", open " UP " and " DOWN ", and set both to " 0.5sec " (Figure 5).
- ⑧ Enter the **F1** function of the controller and set the " C " parameter to " 0 " (self-locking mode).

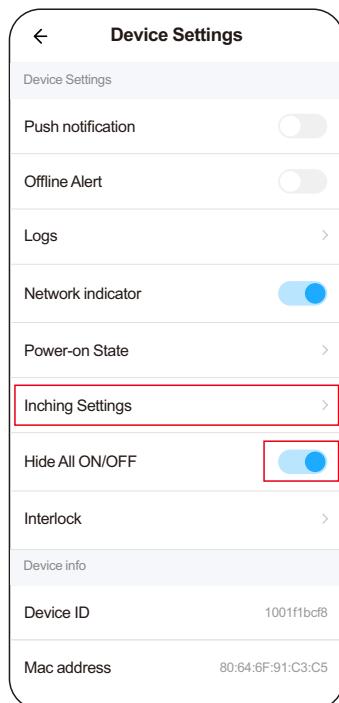
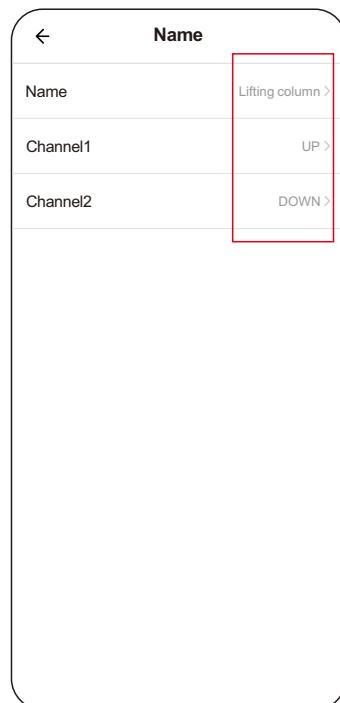
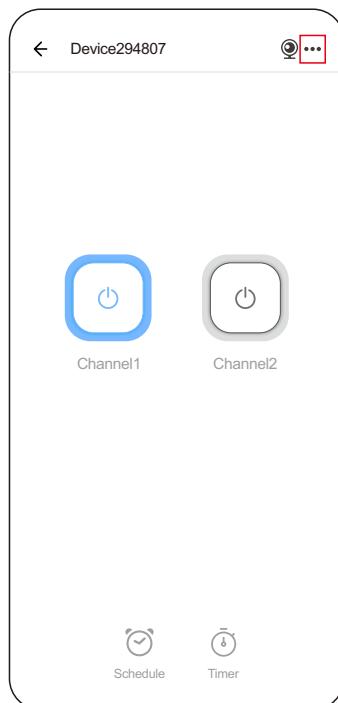


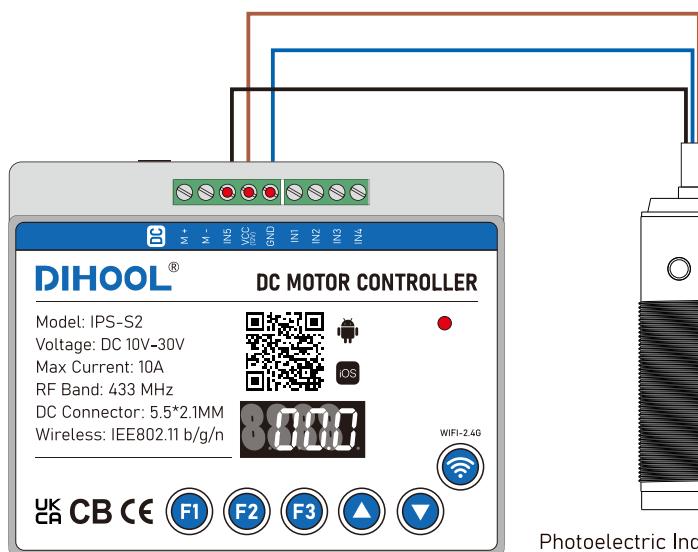
Figure 3

Figure 4

Figure 5

THE FOLLOWING PRODUCTS NEED TO BE PURCHASED SEPARATELY FOR REFERENCE ONLY

Paired With Photoelectric Switch: Signal And Wiring Instructions



Brown Wire Connection with VCC (12V)
 Blue Wire Connection with GND
 Black Wire Connection with IN5

Signal Description:
 IN5: Refer To **Function F2**.
 IN5: low-level active

Functions Available:

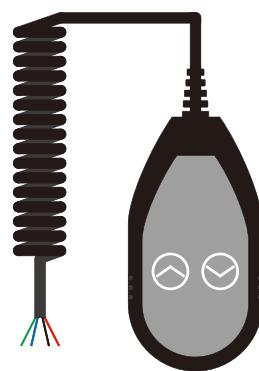
- ① When the photoelectric switch encounters a signal, the motor rises, but the signal disappears and the motor falls (automatic door opening/closing, smart trash can, etc.)
- ② Switching the positive and negative poles of the motor, the photoelectric switch encounters a signal and the motor drops for 1-99 seconds, which can be adjusted (automatic production line)
- ③ The photoelectric switch encounters a signal that the motor rises, and after setting for 1-99 seconds, the motor descends (drone shutdown platform)
-

More features await your discovery

Paired With Handle Switches Or Foot Pedals: Wiring Instructions

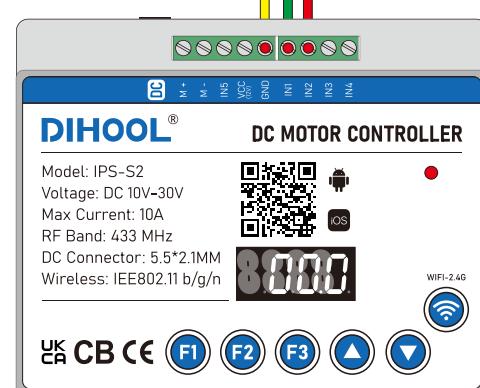
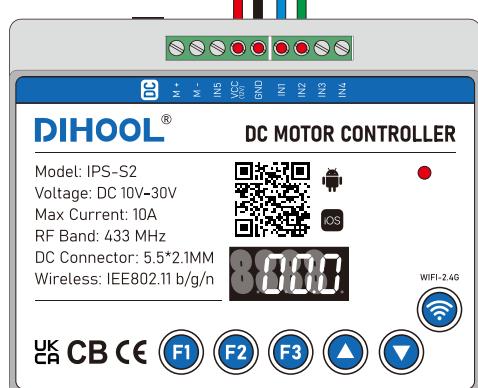
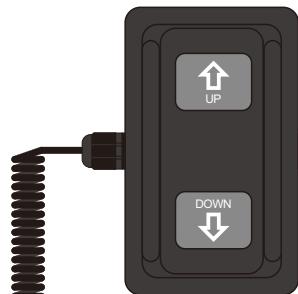
Red Wire Connection with VCC
 Black Wire Connection with GND
 Blue Wire Connection with IN1
 Green Wire Connection with IN2

Signal Description:
 IN1: Motor Up
 IN2: Motor Down
 IN1, IN2: low-level active

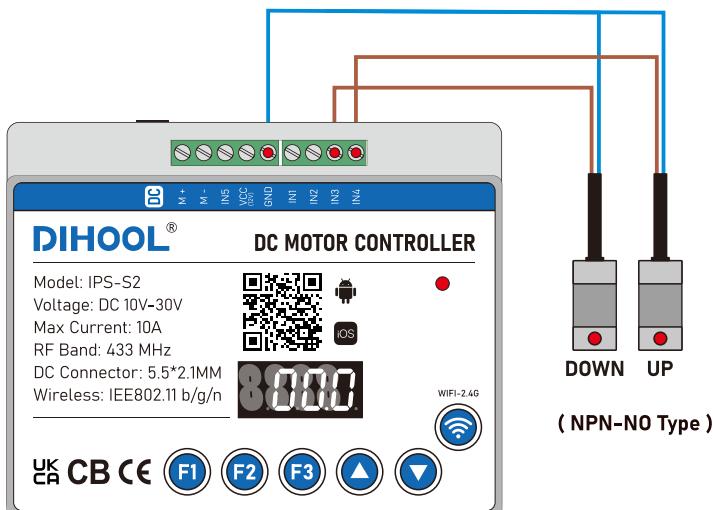


Yellow Wire Connection with GND
 Green Wire Connection with IN1
 Red Wire Connection with IN2

Signal Description:
 IN1: Motor Up
 IN2: Motor Down
 IN1, IN2: low-level active



Paired With Magnetic Switch: Signal And Wiring Instructions



Brown Wire Connection with IN3 / IN4
Blue Wire Connection with GND

Signal Description:

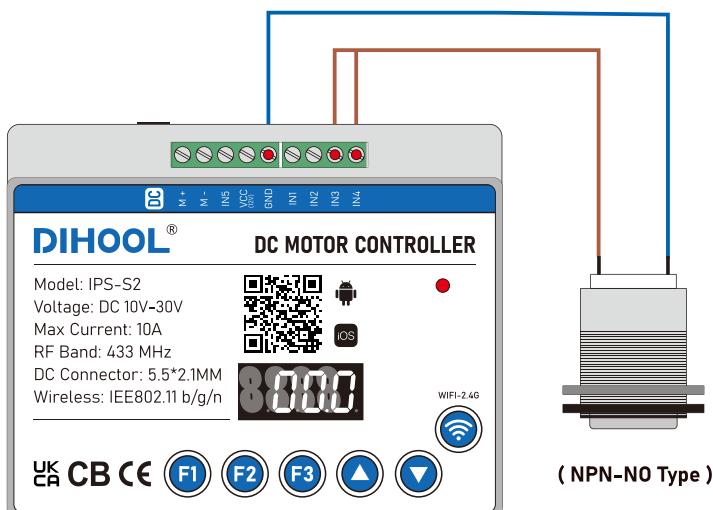
IN3: Motor Down Limit
IN4: Motor Up Limit
IN3, IN4: low-level active

Functions Available:

Attach the magnetic switch to the electric linear actuator (requires built-in magnet) to enable ascent/descent at two desired positions.

More features await your discovery

Paired With Emergency Stop Switch Or Button Switch: Signal And Wiring Instructions



Brown Wire Connection with IN3 / IN4
Blue Wire Connection with GND

Signal Description:

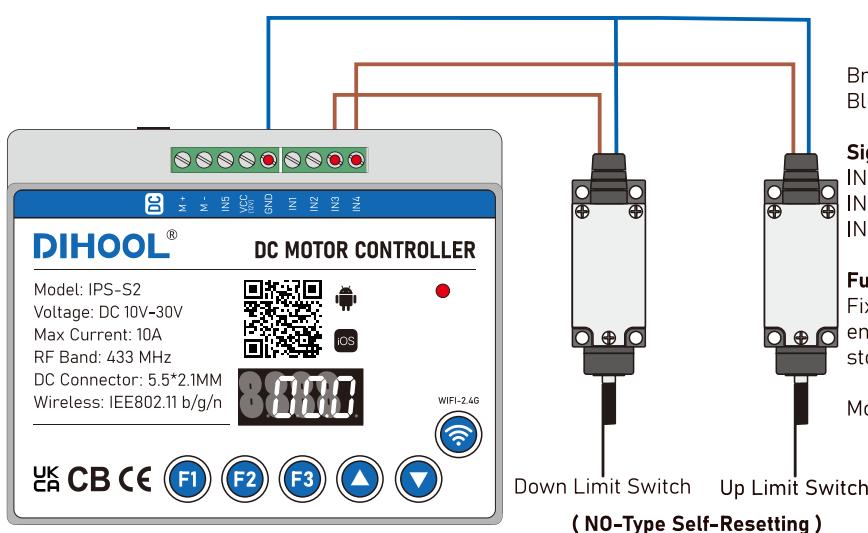
Signal Description:
IN3: Motor Down Limit
IN4: Motor Up Limit
IN3, IN4: low-level active

Functions Available:

Emergency shutdown of motor operation is possible

More features await your discovery

Paired With Various Limit Switches: Signal And Wiring Instructions



Brown Wire Connection with IN3 / IN4
Blue Wire Connection with GND

Signal Description:

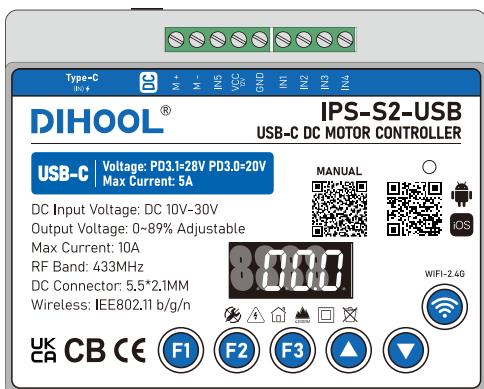
IN3: Motor Down Limit
IN4: Motor Up Limit

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Functions Available:
Fix the limit switches at two desired positions to enable the lift to ascend or descend to preset stops.

More features await your discovery.

Optional: IPS-S2B USB-C (PD3.1) Version Controller



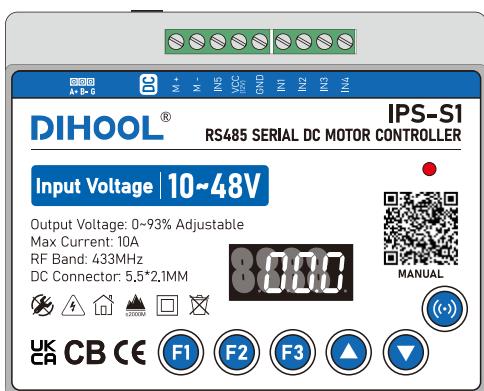
Operating Voltage: 10~30V | Power Bank PD3.1 28V, PD3.0 20V

Operating Current: Max 10A

Functions:

- ① Real-time current monitoring
- ② Adjustable up/down overload current
- ③ Programmable run time
- ④ Obstacle rebound/pause
- ⑤ Soft start: gradual ascent/descent control
- ⑥ External interfaces: photoelectric/magnetic/limit switches, buttons, E-stop
- ⑦ Programmable auto-run
- ⑧ WiFi (Google Home / Alexa compatible)

Optional: IPS-S1 RS485 Industrial Controller



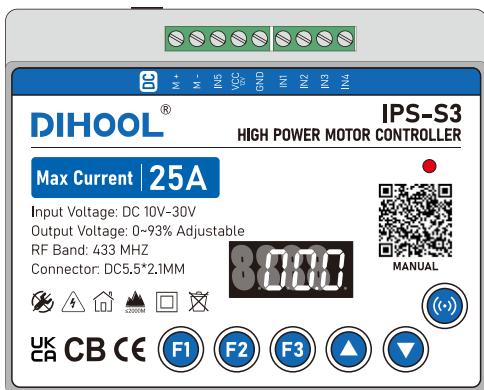
Operating Voltage: 10~48V

Operating Current: Max 10A

Functions:

- ① RS485 Serial Communication Control
- ② PWM Speed Control
- ③ Real-time current monitoring
- ④ Adjustable up/down overload current
- ⑤ Programmable run time
- ⑥ Obstacle rebound/pause
- ⑦ Soft start: gradual ascent/descent control
- ⑧ External interfaces: photoelectric/magnetic/limit switches etc.
- ⑨ Programmable auto-run

Optional: IPS-S3 25 Amp High-Power Controller



Operating Voltage: 10~30V

Operating Current: Max 25A

Functions:

- ① Real-time current monitoring
- ② Adjustable up/down overload current
- ③ Programmable run time
- ④ Obstacle rebound/pause
- ⑤ Soft start: gradual ascent/descent control
- ⑥ External interfaces: photoelectric/magnetic/limit switches etc.
- ⑦ Programmable auto-run

WARRANTY CONDITIONS

Warranty

365 days from the date of purchase of the product

Warranty Regulations

1. Any damage to the equipment due to improper use will also result in the automatic termination of the warranty period.
2. Within 7 days of receiving the product, the damage caused by express transportation can be returned to Amazon for replacement. Or contact the DIHOOL seller for low-cost recycling.
3. Within 365 days of receiving the product, if there is any quality problem, you can contact us through the Amazon for replacement.

AFTER SALES SERVICE

Manufacturer: DIHAO ELECTRIC ZHEJIANG CO., LTD.

ADD: Shangzhi Industry, Liushi Town, Wenzhou City, Zhejiang Province, China

E-mail: support@dihool.com

Technical issues with the product can be contacted through the above email address..



FCC Warning

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.