



Puertas & Portones Automáticos, S.A. de C.V.
¡Nuestra pasión es la Solución!....

» OPERADOR INVERTER ENCODER ABSO TAB 40NM 220V MARCA POWEVER
MOD C40-DW4, MOD. C60-DW4.



C40-DW4
C60-DW4

MANUAL DE INSTALACION

Para Modelos C40 & C60.

Descargar en PDF



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Introduction

Thank you for choosing Industrial Door Servo Control System.

Please read this manual carefully before you start to use the system. In this manual you will find instructions for how to set the operating code the controller, malfunction diagnostics and debugging, and routine maintenance.

Notice:

- Before connecting the system to live wire place make sure the power supply is off.
- Please make sure the power voltage in the main circuit is the same as controller's rated voltage. Also please make sure the ground terminal is properly and reliably connect to the ground wire.
- DO NOT touch output terminal directly. DO NOT short circuit the output terminal and out shell.
- After the power supply is cut, and before the LCD is off, there still high voltage electricity in the circuit, so DO NOT touch the internal wiring and electronic components.
- Internal wiring and electronic components are very sensitivity to static electricity, so DO NOT let any object contact the internal wiring and electronic components of motor driver and the main circuit of the touch control panel.

Inspection

All product has passed inspection and testing before is leaving the factory.

When you open the unit place make sure there is no damager during shipping.

Also to confirm the equipment ratings are matching your requirement.

General Characteristic

Our servo control system is suitable for counterbalanced sectional doors.

The system is in compact package, with high torque and high operating speed, lower noise, high reliability, smooth and soft operating curves.

The system curtain can be controlled by wall switch, push button, bluetooth, radar, safety edge, photo eye, induction loops, etc.

Specification

Specification for Controller

Model	DW4	
Enclosure material	ABS	
Dimension(L*W*H)	303x123x105(145)(include E-STOP)	mm
Installation method	Vertical installation without vibration	
Power supply	1N~200-240	V
Power frequency	50/60	Hz
Rate output power	1.5	KW
External power supply	12	VDC
	0.4	A
Ambient temperature	-20 ~ +50	°C
Storage temperature	-25 ~ +55	°C
Ambient humidity	30%-85%, No condensation	
Place of use	Indoor, no direct sunlight, no dust, corrosive gas, oil mist, water vapor, etc.	
Weight(net)	1.0	Kg

Specification for Motor

Model	C40	C60	
Rated Output Speed	40		RPM
Rated Output Torque	40	60	Nm
Power supply	1N ~ AC200-240		V
Power frequency	50/60		Hz
Power current	4.8	6.5	A
Ambient temperature	-20 ~ +50		°C
Storage temperature	-25 ~ +55		°C
Ambient humidity	30%-85%, No condensation		
IP degree	IP54		
Limit Mode	Absolute Encoder		
Self Locking Mode	Gear self-braking		
Manual Release	Rapid hand chain		
Weight(net)	11 ¹⁾	12 ¹⁾	Kg

1)Weight includes 8 meter hand chain.

Operating Instructions

1. Basic Function

The system can be operated via: 1) control box; 2) jog control; 3) continuous automatic operation; 4) emergency stop; 5) single side operation box; 6) time delay; 7) radar and/or induction loops. Please refer to wiring terminal for external connections.

2. Control Key/Button

- a) " ↑ "Key/Button: Inching control door's opening movement or continuous automatic opening.
- b) " ↓ "Key/Button: Inching control door's closing movement or continuous automatic closing.
- c) "STOP" Key/Button: control door to stop running.
- d) "Emergency STOP" Key/Button: Push this key under emergency situation it will shutdown the operation and the door will stop and stay at that position
- e) Four key on LCD are main menu key.

3. Install limit switch

The limit switch of system uses the built-in absolute encoder solution, which is pre-installed in the motor before leaving the factory and does not need to be reinstalled.

4. Safety

- 1) The motor and controller **MUST** ground properly;
- 2) During the installation, commission and operation **NO ONE** is permit to stand under the door and stand in the operating path;
- 3) While installing and testing the motor package, at least half of the door's axle **MUST** be insert into the reducer.
- 4) Check if there any obstacles in the operating path, if there is please remove the obstacles before lower the gate.
- 5) **DO NOT** disassemble the controller and motor; any damagers due to this action are **NOT** cover under free warranty.

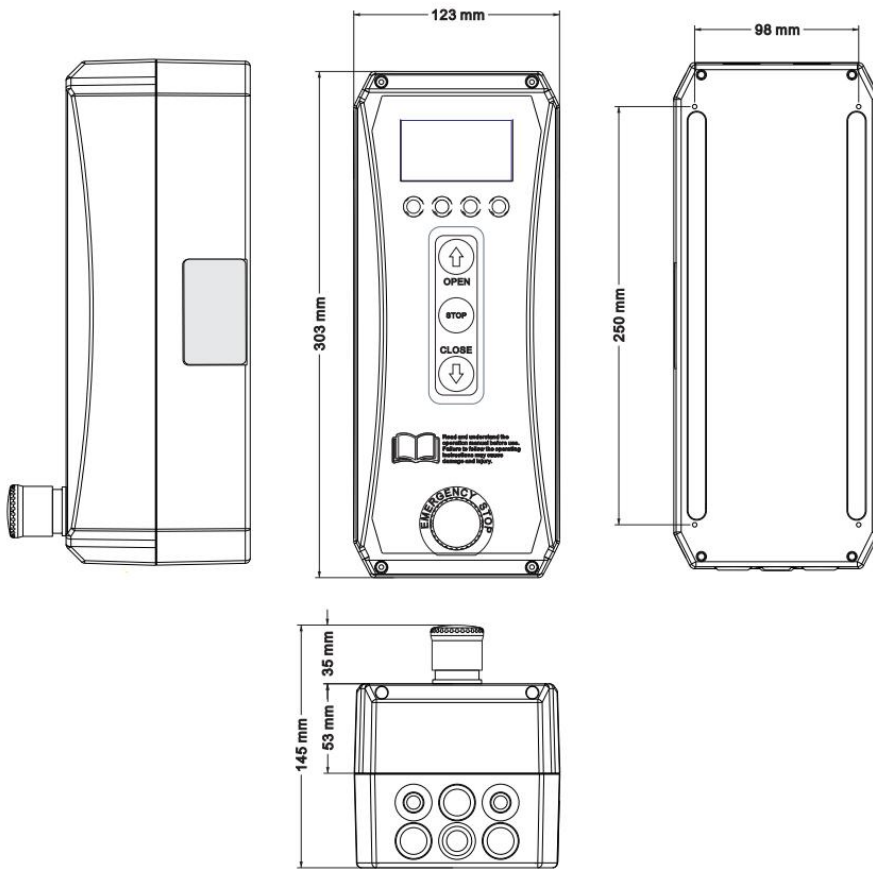
The company reserves the right to modify the product, according to improvement of technology and production process, while the basic characteristic of the product may remain some.

Maintenance

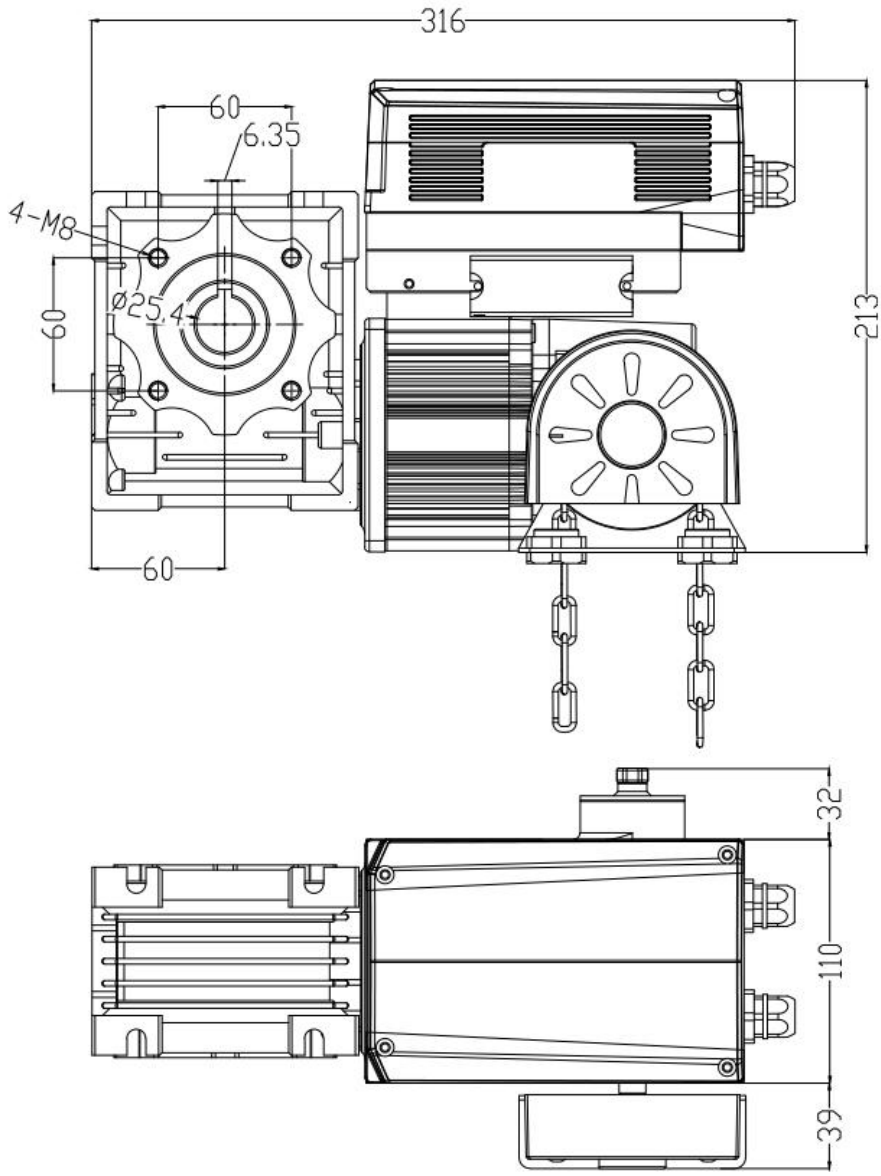
The mounting screw for the controller and motor must inspect regularly to prevent screw been getting loose and falling off. Check the internal and external wirings. Check and change the oil for the reducer on regular basis.

Size

UNIT: mm



DW4 Controller



C40/C6

0 Motor

System Operation

MAIN-----

TORQUE:	(dispal)		
MODE:	(mode)		
STATUS:	(status)		
<input type="button" value="Info"/>	<input type="button" value="Err"/>	<input type="button" value="Set"/>	<input type="button" value="Mode"/>

(dispal): Torque, Speed, Position.

(mode): Auto, Jog.

(status): OK, Opening, Closing, Fault, Safety, Maintenance etc.

Press key, input password (6668) .

Password			
6666			
<input type="button" value="+"/>	<input type="button" value="-"/>	<input type="button" value="Ok"/>	<input type="button" value="Esc"/>

Change the operation mode (Auto, Jog).

Mode Setting			
AUTO			
<input type="button" value="Adj"/>	<input type="button" value="Save"/>	<input type="button" value="Esc"/>	

Press key, input password (default 6668).

Input Password			
6666			
<input type="button" value="+"/>	<input type="button" value="-"/>	<input type="button" value="Ok"/>	<input type="button" value="Esc"/>

-----1.Parameter

Index	Parameter	Value	Default
1	Opening Speed	20-150	80
2	Closing Speed	20-150	70
3	Open Slowdown Dist	30-500	50
4	Close Slowdown Dist	30-500	50
5	Auto Closing Time	<ul style="list-style-type: none"> ● 0:Disable ● 1-240 s 	0
6	Output 1 Config	<ul style="list-style-type: none"> ● Non-close Limit ● Close Limit ● Non-open Limit ● Open Limit ● Opening ● Closing 	Disable
7	Output 2 Config	<ul style="list-style-type: none"> ● Non-limit Position ● Limit Position ● Reach Close Limit ● Fault Warning ● Disable ● Double Interlock Automatic Opening ● Running ● Stopped ● E-Stop State ● Auto Closing Countdown ● Delayed Opening Countdown ● Safety Signal ● Normal State Output 	Disable
8	Safe Signal Height	Set the current position of the door to the failure height of safety signal	
9	Display Config	<ul style="list-style-type: none"> ● Position ● Speed ● Torque 	Torque
10	Backlight Setting	<ul style="list-style-type: none"> ● 3 minute auto Off ● Signal Wake_up ● 60 minute power saving ● 60 minute auto off ● Always On 	Signal Wake_up
11	Auto Anti Frozen	<ul style="list-style-type: none"> ● Off ● 1-999 min 	Off
12	Wireless Remote	<ul style="list-style-type: none"> ● Off ● On 	Off
13	Safety Edge Set	<ul style="list-style-type: none"> ● Unused ● Open cmd ● Stop cmd 	Unused

-----2.Limit Switch Setting

Choose the open direction.

Press OPEN-key
Direction
Correct?

Next, we shall set the Open and Close Limit.

Open Limit

Close Limit

Finally, we will see the result.

Calibrate
Programmed

or

Calibrate
Failure

-----3.RTC Config

Configure the date and time of the real time clock.

1. Year
2. Month
3. Day

Year
2015

Index	Parameter
1	Year
2	Month
3	Day
4	Hour
5	Minute

-----4. Advanced Setting

-----1. Communication

Set RS485 slave address and baudrate.

1. Slave Address
2. Baud Rate

↑ ↓ Ok Esc

Slave Address

1

+ - Save Esc

Baud Rate

4800

Adj Save Esc

-----2. Contact Type

Set the contact type.

Index	Parameter	Value	Default
1	E-Stop	N.O / N.C	N.C
2	Safety Signal	N.O / N.C	N.O
3	D_In_Door	N.O / N.C	N.O

1. E-Stop
2. Safety Signal
3. D_In_Door

↑ ↓ Ok Esc

Ext E-Stop

N.O

Adj Save Esc

-----3. Adv Parameter

First, input password (7779).

Password

7777

+ - Ok Esc

Select the parameter index.

Adv Parameter
Index: 01

+ - Ok Esc

Change the parameter value.

Adv Parameter
P01: 0001

+ - Save Esc

-----4. Maintenance

Set the work cycles before the next maintenance.

Maintenance
0 Thousand

+ - Save Esc

-----5. System Config

Input password (default 1111).

Password
_000

← → Ok Esc

1. Cycle
2. Time
3. Password

↑ ↓ Ok Esc

Set the work cycles and time.

Work Cycle
0 Thousand

+ - Save Esc

Work Time
0 Days

+ - Save Esc

Change the system config password.

Password
_111

→ Adj Save Esc

-----6.Auto Test
Run the system auto testing.

Auto Test
(display)
0

-----5.Language
Set the system language.

Language
English

-----6.Default
Restore factory settings.

Default ?

-----**Info**

-----1.Input Query
Displays the input states.

Index	Port	State
1	Manual Open	0: No Signal 1: Has Signal
2	Manual Close	
3	Manual Stop	
4	Ext E-Stop	
5	D_In_Door	
6	Safety Signal	
7	Remote Close	
8	Remote Open	
9	Remote Stop	
10	Safety Edge	

1. Manual Open	0	
2. Manual Close	0	
3. Manual Stop	0	
<input type="button" value="↑"/>	<input type="button" value="↓"/>	<input type="button" value="Esc"/>

-----2.Sum Counter

Displays the work cycles.

Sum Counter
88
<input type="button" value="Esc"/>

-----3.Maint Counter

Displays the work cycles after maintenance.

Maint Counter
88
<input type="button" value="Esc"/>

-----4.Fault Memory

Displays the error history.

01. ERR23 No		
Limit Settings		
2015-11-17 10:25		
<input type="button" value="↑"/>	<input type="button" value="↓"/>	<input type="button" value="Esc"/>

-----5.System Query

Displays the value of selected system register.

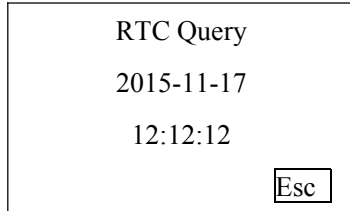
1. Bus Voltage		
0		
<input type="button" value="↑"/>	<input type="button" value="↓"/>	<input type="button" value="Esc"/>

-----6.Version

Displays the system version.

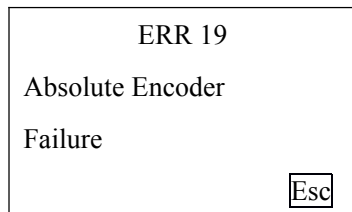
-----7.RTC Query

Displays the current date and time of the real time clock.



-----Err

Shows the current error message.



Error Table:

Error Code	Content
ERR01	Over current
ERR03	Under Voltage
ERR04	Over Voltage
ERR05	Over Voltage
ERR06	Locked Rotor
ERR07	Out Of Limit Position
ERR08	EEPROM Failure
ERR09	Over Speed
ERR10	Motor Reversion
ERR11	Overload
ERR12	Sample Current Failure
ERR13	Motor Encoder Failure
ERR14	Initial Rotor Angle Failure
ERR15	Communication Failure
ERR18	Brake Circuit Failure
ERR19	Absolute Encoder Failure
ERR20	Run Time Exceeded
ERR21	Safety 1 Exceeded During Cycle
ERR22	Safety 2 Exceeded During Cycle
ERR23	No Limit Settings
ERR24	DC24V Failure
ERR26	Mechanical Limit Failure
ERR27	Overheated
ERR28	Electromagnetic Brake Fault
ERR29	Absolute Encoder Reset
ERR30	Motor Parameter Matching Fault
ERR31	Motor Encoder Failure 2
ERR32	Motor Encoder Failure 3
ERR33	Absolute Encoder Failure 2
ERR34	Absolute Encoder Reset 2
ERR35	Absolute Encoder Run Reset
ERR36	Limit Distance Too Short
ERR38	Electromagnetic Brake Fault 2
ERR39	Motor Encoder Failure 4
ERR40	Motor Encoder Failure 5
ERR41	Absolute Encoder Position Unstable
ERR42	Motor Dir Err In Limit Setting
ERR43	Proximity Switch Too Close
ERR44	Limit Distance Too Long
ERR45	Absolute Encoder Dir Failure

ERR47	Limit HALL Value Not Match
ERR48	Abnormal Door Position
ERR49	Limit Abnormal
ERR50	Motor Thermal Protect
ERR51	Drive Thermal Protect
ERR53	Electromagnetic Brake Error 3
ERR54	System Matching Fault

Port Table:

Port Table Of Controller:

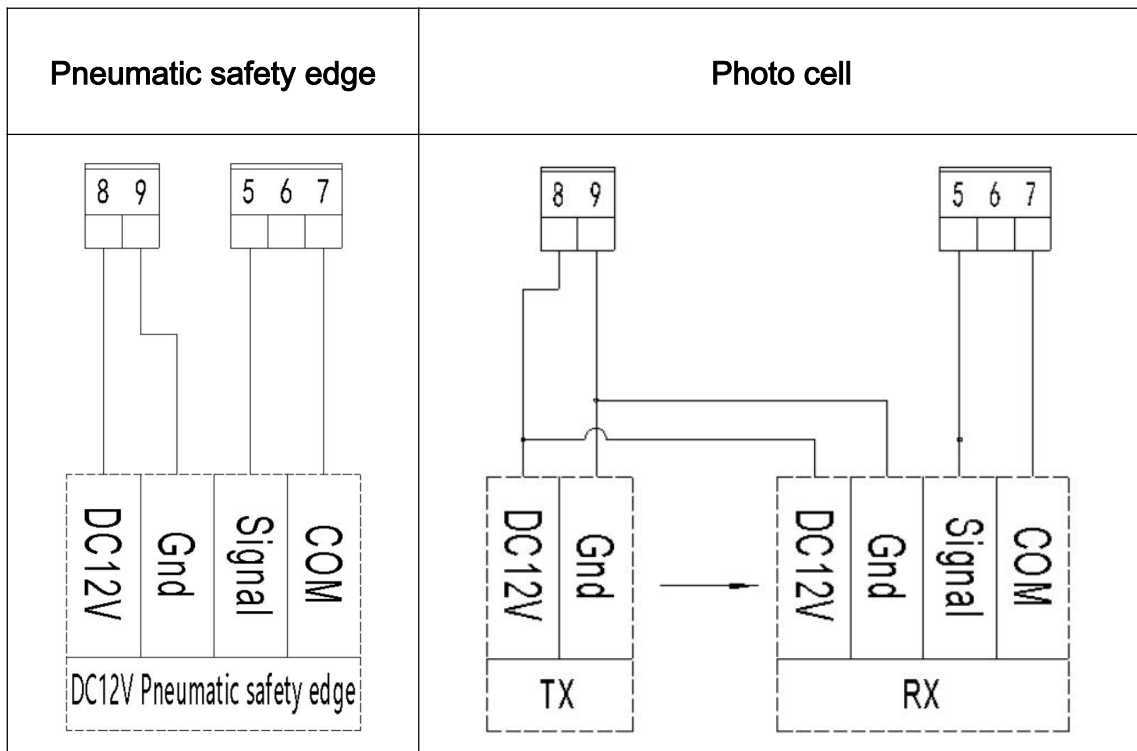
Port	Function	Remark
L	L	1N~AC220V input
N	N	
PE	PE	
L1	L1	1N~AC220V output, connect to motor
N1	N1	
PE	PE	
B1	Motor signal output	Connect to motor
B2		
B3		
S1		
1	Manual open input	NO
2	Manual close input	NO
3	Manual stop input	NO
4	COM/GND	
5	Safety input ¹⁾	NO(Safety edge, photocell, etc), reverse to open limit when closing
6	Door in door input ¹⁾	NO
7	COM/GND	
8	DC+12V	Maximum output current 0.4A
9	COM/GND	
10	Emergency stop input ¹⁾	NC
11	COM/GND	
24	Output 1A	NO, refer to "Output 1 config"
25	Output 1B	
26	Output 2A	NO, refer to "Output 2 config"
27	Output 2B	

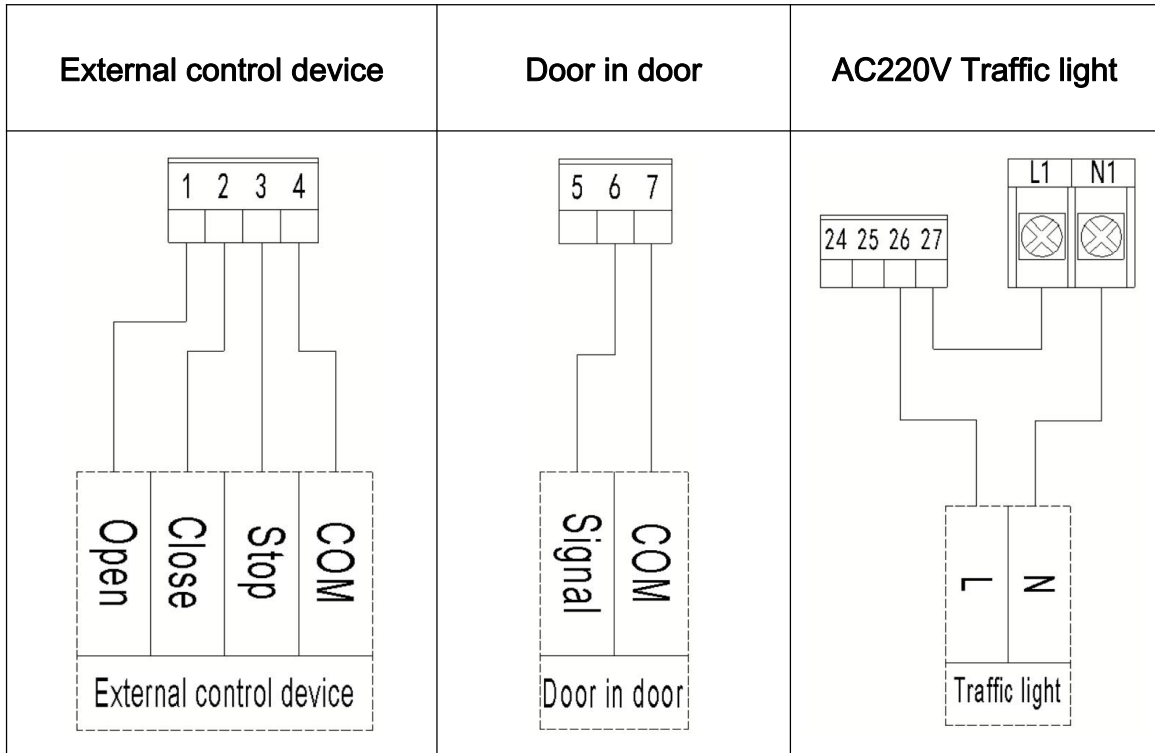
1) The NO/NC state of the input port can be modified by setting relevant parameters.

Port Table Of Motor:

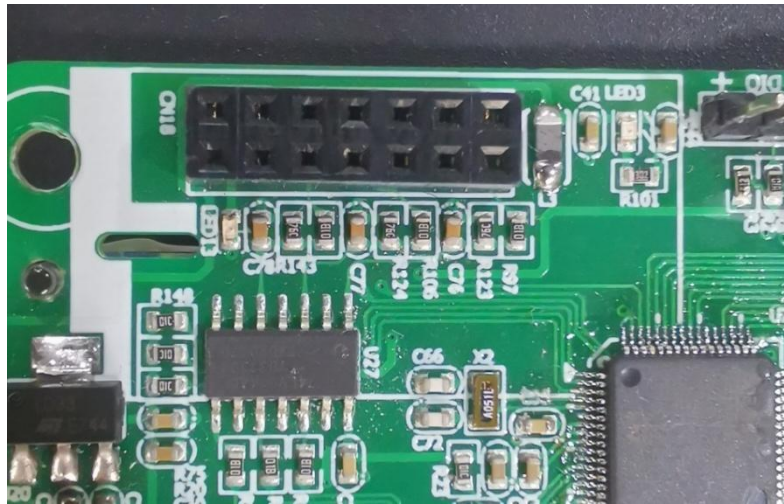
Port	Function	Remark
L1	L1	AC220V input, connect to controller
N1	N1	
PE	PE	
B1	Motor signal input	Connect to controller
B2		
B3		
S1		
S2	Hand chain safety input	Connect to chain safety sensor
S3		

Advanced electrical installation





Radio receiver (optional)



Insert the built-in radio receiver board into the 2x7 socket in the upper left corner of the circuit board above, and the insertion direction is consistent with the white box; Then make the following settings to turn on the function:

SET→Parameter→Wireless Remote→On





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