

Industrial door operator operation instruction



WARNING

1. This door machine must be installed and debugged by professional installer.
2. Corresponding installation and wiring shall be in accordance with the Construction Criteria, and wires diameter $\geq 1.5 \text{ mm}^2$. Ensure the power source has sound earth grinding, and the grinding wire shall tightly connect into grounding plate. Cutting away the grinding lead wire is prohibited. Earth leakage protection device fulfilling corresponding national criteria shall be firmly set at the front end of the inlet power source.
3. This Industrial Door Machine is only applicable for door with sound balance and Spring-Balanced, or the Machine would likely be destroyed by overloading.
4. The door shall run freely and without any seizure wear. Each end of the door rail shall have one restrictor or a buffer booster to avoid the door slipping from the guide rail.
5. Control box shall be installed on wall or volume from where the door's operation condition can be visually observed, and with at least 1.4 meters distance above floor level so that children could no longer touch it. For the sake of children's safety, remoter shall be kept away from kids. Operating the door remoter at a place invisible of the door's running condition is prohibited.
6. Electricity supply system of both door-opening machine and control box shall be cut off if maintenance and removal required. Door shall be checked before maintenance and removal to ensure it is in lock-up condition and there is no any sign of falling risk.
7. No any entrance or stay is allowed once the door is running.
8. Pulling the hand chain of this machine is prohibited when the door machine is in operation, since it will easily damage the door.
9. For equipment with shift clutches, pulling ropes of the shift clutches is prohibited unless otherwise the door is in definite close status; and no any other conditions are allowed for rope drawing.
10. For the sake of safety of people and cars passing by, infrared safeguard device and gasbag preventative devices shall be available.

Content

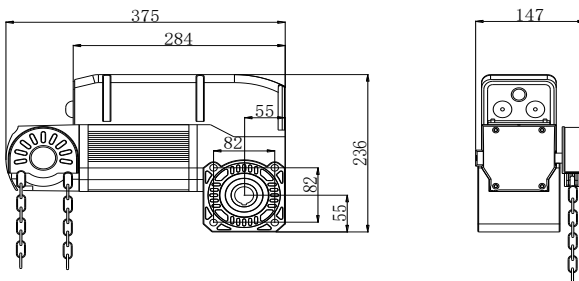
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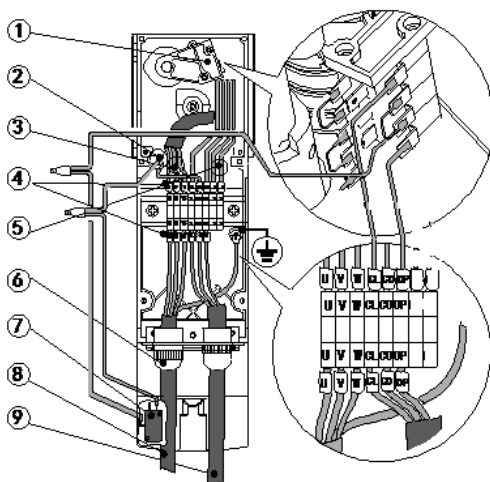
Type	GYM70 -1	GYM100S-1	GYM100S-3
Power supply	AC220V	AC380V	AC220V
Rated Power	500W	450W	550W
Starting Torque	60N.m	100N.m	60N.m
No-load Operation Time	15min	25min	25min
Maximum door weight	25m ²	35m ²	25m ²
Thermal Protection Temperature	120°C	120°C	120°C
No-Load Rotating Speed	24r/min	24r/min	32r/min
Type of Lubricate	Oil Immersed	Oil Immersed	Oil Immersed
Noise	<55dB	<55dB	<60dB
Mode of manual chain	Universal chain style	Universal chain style	Universal chain style
Type of limit switch	Mechanical limit	Mechanical limit	Electronic limit
Diameters of the hole for output shaft	∅ 25.4mm	∅ 25.4mm	∅ 25.4mm
Ambient temperature	-20°C ~ +45°C	-20°C ~ +45°C	-20°C ~ +45°C
Protective level	IP54	IP54	IP54
Total weight	14KG	14KG	14KG

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Motor size



Motor wiring diagram

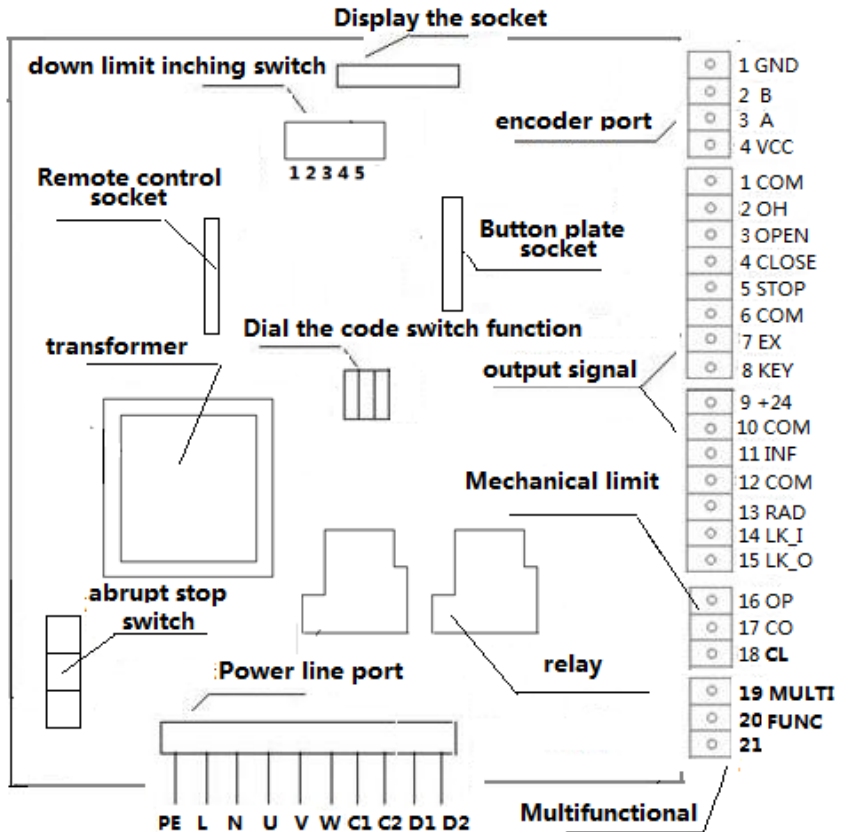


- 1, Limit switch components
- 2, motor thermal protection
- 3, Three phase motor (single) line
- 4, Number tube

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- 5, terminal
- 6, Waterproof connectors
- 7, Manual chain switch (NC)
- 8, Motor cables
- 9, Limit connections

AC220V Circuit board structure: (GYK-91Y)



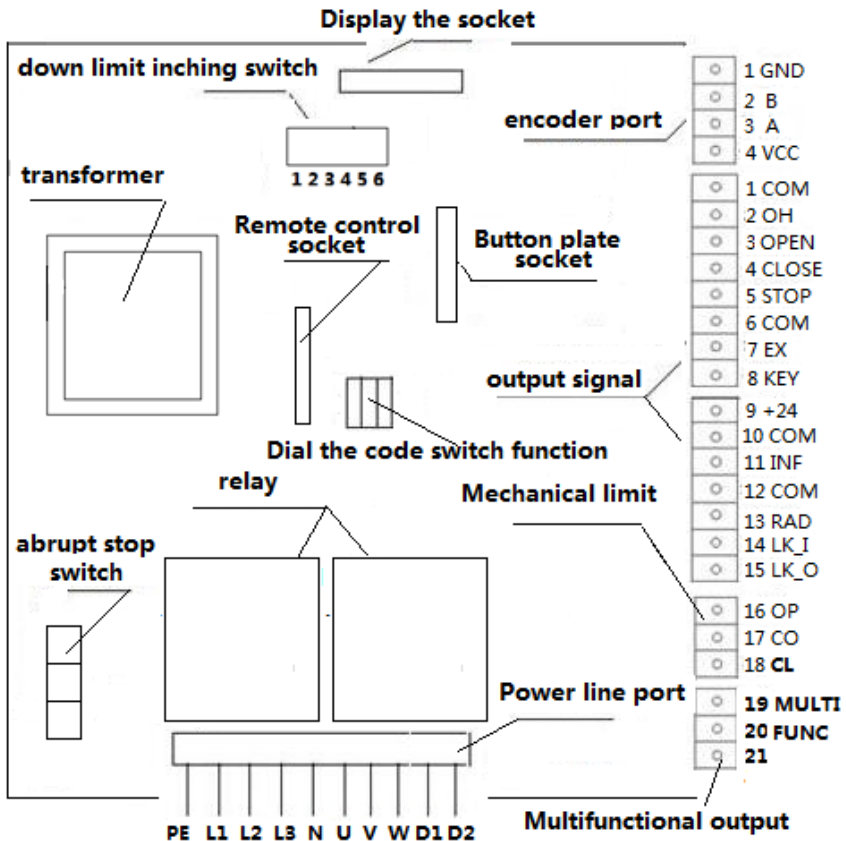
Motor connection port:

- 1, L N : AC 220 V power supply into line,

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- 2, PE: Grounding.
- 3, U V W: Motor line, U (blue), V (brown), W (black) and motor terminals U, V, W corresponding connection.
- 4, C1 C2: Start the capacitance (6.3Uf), Optional use
- 5, D1 D2: Runtime output 220 v port, Warning lights.

AC380V Circuit board structure: (GYK-91SY)



Motor connection port:

- 1, L1 L2 L3 N : AC 380 V power supply into line,

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L1, L2, L3 for wire, N for zero line.

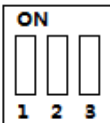
- 2, PE: Grounding.
- 3, U V W: Motor line, U (blue), V (brown), W (black) and motor terminals U, V, W corresponding connection.
- 4, D1 D2: Runtime output 220 v port, Warning lights.

Dial the code switch Settings:

Dial the code switch 1: limit mode choice.

ON: mechanical limit state,

UNDER: electronic limit state



Dial the code switch 2: closing point choice.

ON : closing point state,

UNDER: continuous running state




Dial the code switch 3: Automatic delay shutdown choice.

ON : Automatic delay shutdown state

UNDER: Manually shutdown state

Note: dial the code switch 2, dial the code switch 3. The only valid at the time of mechanical limit state.

Mechanical limit port connection:

	16	OP	Mechanical limit	open limit	Green cable
	17	CO	Mechanical limit	public	White cable
	18	CL	Mechanical limit	close limit	Red cable

Multi-functional port wiring instructions:

<input type="checkbox"/>	19	—	MULTI	Close the door in place signal output
<input type="checkbox"/>	20	—	FUNC	Open the door in place signal output
<input type="checkbox"/>	21			Damon runtime signal output
				The wind curtain signal output
				Alarm signal output

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○	1	COM	public port
○	2	OH	Motor overheating and manual chain protection
○	3	OPEN	rising
○	4	CLOSE	DOWN
○	5	STOP	STOP
○	6	COM	public port
○	7	EX	Middle limit
○	8	KEY	Step and step
○	9	+24V	power output
○	10	COM	public port
○	11	INF	Infra
○	12	COM	public port
○	13	RAD	Radar
○	14	LK_I	Interlock input
○	15	LK_O	Interlock output

Control model of port wiring instructions:

- 1, Motor overheating protection:

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When the motor overheating, or manual chain is pulled, the downward will keep flashing lights on the control panel, hint at this point in the protection state.

- 2, External three button function: Three button to switch to an external access port 3 (OPEN), 4 (CLOSE), 5 (STOP) and 6 (COM) port, switch state requirements for NO;
- 3, Middle limit function:
The external single push button switch two wires access 7 (EX) and 6 (COM). Press the switch, the gate will automatically open to, set in the middle of the limit position. Can be external fire signal, if any signal input, doors automatically open to limit position in the middle.
- 4, Step and step function:
The external single push button switch two wires access 8 (KEY) and 6 (COM). Can achieve a single bond, open, stop, close, stop cycle operation function.
- 5, DC24 v power supply output function:
Ports 9 and 10 to DC24 v power supply output port;
- 6, Infrared protection function:
The infrared signal equipment, access to 11 (INF) and 12 (COM), 24 v power cord access 9 (+ 24) and 10 (COM).. Enter the input signal is NO, NC can be set up through parameter P2-09..
- 7, Air switch protection function:
Air switch signal equipment, access to 11 (INF) and 12 (COM), 24 v power cord access 9 (+ 24) and 10 (COM).. Enter the input signal is NO, NC can be set up through parameter P2-09..

- 8, Little door switch protection function:
Factory state, the two ports is to use short jumper wire connection good, such as need little door protection, please

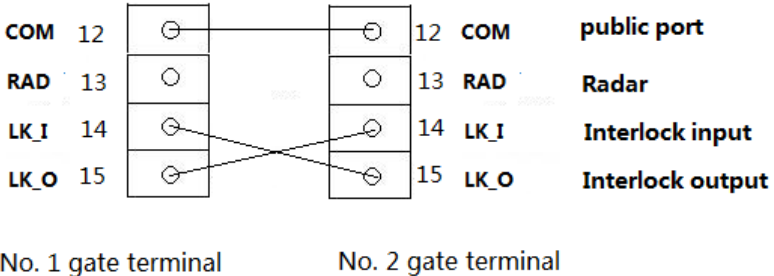
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remove the short jumper, and to access the door switch line 13 (RAD) and 12 (COM) port . Normally open, normally closed state can be set through the P2-10.At this point, when the door open, switch button without action;

9, Interlock function:

Port 14 (LK_I) and 15 (LK_O), for the interlock input and interlock of the output signal interface, use the function of the interlock function of P1-03 parameter must be set to open.

Interlock is the meaning of after putting in place a door closed, another door to work



Function of remote control Settings

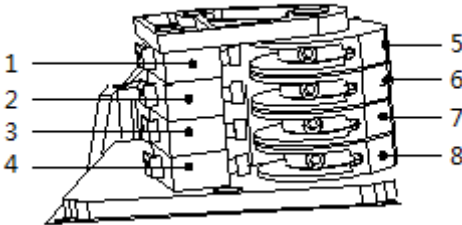
Remote control receiving plate, installed on the screen of the socket on the back of the circuit board, can plug, pay attention to the direction of the insert, when installation should pay attention to in rectangle area specified by the circuit board.

step1: after electrify hold the remote control receiver plate on white button until the red light is extinguished, to remove the original password;

step2: to press the white key learning, found that loosen the red indicator into the learning state;

Step 3: Press any one transmitter, found that the red light is put out after two flashes, end of the learning pro

Structure of the limit switch:

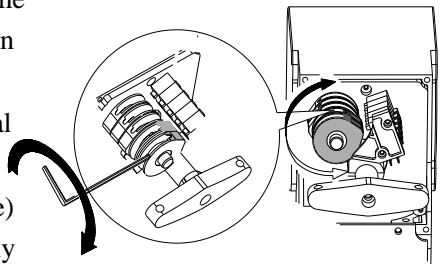


- 1, 2, close limit switch (NC)
- 3, 4, open limit switch (NC)
- 5, 6 close limit CAM (red)
- 7, 8 open limit CAM (green)

Limit switch Settings

1, Setting of the door-shut limit

Close the door electrically to the desired position and press the button “STOP” on the control box to stop the door. Observe the rotational direction of the red cam during the door-shut (see the following picture) and, when the door stops, manually turn the two red cams alongside that direction until the limit switch is pressed and a “click” is heard. Fasten with an inner-hex spanner the screw located in the center of the copper nut to secure the red cams in position.



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2, Setting of the door-open limit

Using the same method, open the door electrically to the desired position and press the button “STOP” on the control box to stop the door. Observe the rotational direction of the green cam during the door open and, when the door stops, manually turn the green cams alongside that direction until the limit switch is pressed and a “click” is heard. Fasten with an inner-hex spanner the screw located in the center of the copper nut to secure the green cams in position.

3, Precise adjustment to the limit

Commission the door and check whether the limits for open and close meet the requirements. Readjustment or fine adjustment can be done if the desired effect is not realized.

1) Precise adjustment to the close-door limit:

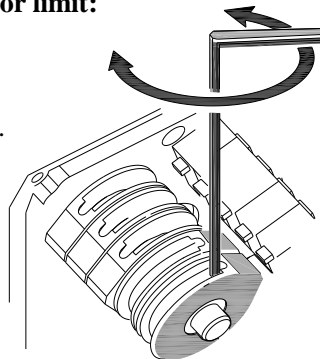
turn the fine-tune screw for the red cams clockwise or counter clockwise (see in the right-hand picture).

Observe the direction of the cam’s slight movements. The conformity of the direction of the slight movement and the original direction of the cam indicates earlier door-close limit and

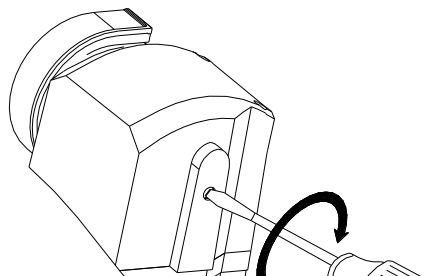
the door-close position will be higher. Otherwise, the door-close position will be lower. Generally, a 90 degree turn of the inner-hex spanner will result in a difference in door-close position of approx. 25mm.

Precise adjustment to the open-door limit: with the same method, turn the fine-tune screw for the green cams with an inner-hex spanner until the desired door-open position is obtained.

Use of manual operating chain



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When it is necessary to operate the door machine manually, the loop chain will be used. It is advisable to operate the chains with even and continuous force. Sudden jerk of the chain shall be avoided to avoid the damage to the manual mechanism. Pull the chain to realize the opening and closing of the door. During the pull, the protective switches located in the manual chain mechanism automatically cuts off the power to avoid accidents. Once the chain is released, the manual chain mechanism will automatically restore to its original position and the industrial door machine is restored to the normal power-driven status. When the loop chains are not in use, please secure the chains on the wall as per the following picture.

After a period of use, if the manually operated chain can't smoothly open or close the door, finely tune the adjusting handle on the manual chain mechanism clockwise (shown in the above picture) to increase the friction until the chain can normally open the door.

Accessories list

Motor list			
number	name	quantity	note
1	Motor	1	standard

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2	Install the plate	1	standard
3	fixed ring	2	standard
4	key	1	standard
5	Hex bolt M10*20	4	standard
6	instructions	1	standard

Control list			
number	name	quantity	note
1	Electric control	1	standard
2.	Remote control	2	optional
3.	Waterproof connectors	2	standard
4.	Cable	1	standard 4*0.75*5m
5.	Cable	1	standard 4*0.5*5m
6	Program debugging box	1	optional (for setting up the internal parameters, can be another purchase the program debugging box)