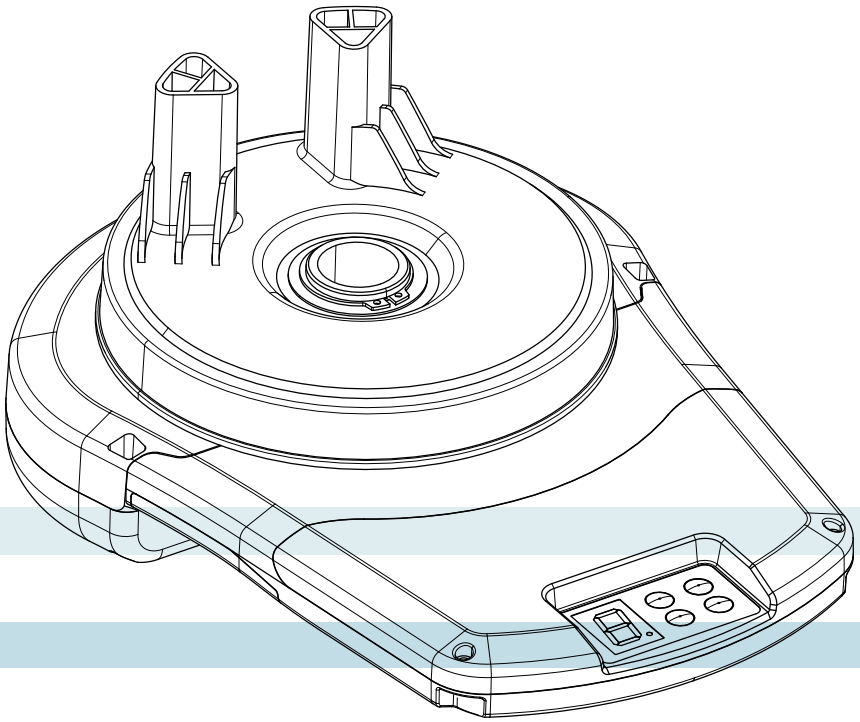
Rolling Door Opener

Installation Instruction and User Manual



- Automatic Obstacle Detection
- Photo Beam Protection System
- Remote Control Hopping Code
- Electronic Travel
- Soft Start Soft Stop
- Automatic Close

MENU

Please read the following safety precautions carefully

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For much protection, it is strongly recommended to use photo beam sensor devices, only with a bit extra cost.

While operating the rolling door opener, always keep the moving door in sight, and ensure that nobody, no vehicle below the moving door. Ignorance of this warning, severe personal injury or equipment damage may happen.

Please do not operate the opener while a kid or someone standing by the door. During the process of operating the opener, in the case of a kid nearby, the kids should be taken after by his/her supervisor. Ignorance of this warning, severe personal injury or equipment damage may happen.

Children are not allowed to operate the door opener in case of sever personal injury.

Make sure automatic obstacle detection function performs well. Please test and set this function according to the instructions strictly, and conduct a regular test. If needed, necessary adjustments should be made.

In the case that people, car or other objectives below the rolling door, please do not pull the clutch and operate manually.

In the case of installing wall switch or wall transmitter, the location of wall switch or wall transmitter should be beyond the reach of children.

The rolling door must be well balanced. In the case that sticking or bending, it is required to ask qualified installation workers to check and repair. Do not repair the door or the door opener arbitrarily, since that there is powerful spring inside the door, which may cause physical injury and property loss.

Before installation of door opener, please remove or unlock the rolling door and mechanical devices.

The power supply for the rolling door opener must be connected to standard 220V socket by professionals, and with sound grounding.

The power must be cut off whenever mending the opener or opening its cover. The door opener should be mended by professionals.

Hands and loose clothes are prohibited approaching the door or door opener no matter when.

In the case of automatic closing mode, the photoelectric protection device must be installed correctly. The photoelectric protection device must be tested regularly. While using the automatic closing function, the above safety code should be obeyed strictly.

In case that the door can rebound while encountering obstacles to open mode, it should be ensured the obstacle reverse function be adjusted properly during the installation of door opener. The debugging of obstacle reverse must be carried out repeatedly, if necessary, adjustments may be made.

Make sure that the rolling garage door is completely open before entering and exiting.

Make sure the rolling garage door is completely closed while leaving.

Features

ERDO are endowed with quite a few new features. The components and materials used in the control board are of the latest technology and best quality. Following are the main features:

Easy Operation

Press the buttons of the handheld transmitter of rolling door opener, the door will open or close automatically. While the door is closing, simply press the button, then the door will stop moving down and open reversely. When opening, simply press the button, then the door will stop moving. Also, the above function can be achieved by wall-mounted transmitter or wall switch (optional) or the button on the cap of main control board.

Encryption Coding

Every time the remote control transmitter works, the encryption coding will change once. The possible password combination can be as much as 4.29 billion, which enhances security tremendously and makes “code-pirating” impossible.

Intelligent Barrier Detection System

While the door is doing a closing cycle and hitting an obstacle or be restricted in some manner, the door can reverse automatically. Likewise, while the door is opening and encountering an obstacle, the door will close automatically. The force of resistance should be adjusted via the potentiometer of the main control board during the initial installation. The force of resistance should be checked at least once monthly, more details please refer to installation instructions.

Security Code Storage of Transmitter

The latest advanced technology is applied in encryption coding stored in transmitter. Up to 30 different code of transmitter can be stored. To store any new code, simply press the CODE button on the opener and press the transmitter button twice, the transmitter code will be stored immediately. The code can be deleted at any time.

Automatic Courtesy Lights

The courtesy light on the Opener turns on automatically whenever the door is activated to do an opening or a closing cycle. When the door stops moving, the courtesy light will stay on for approximately three minutes then turns off automatically.

Automatic Closing Mode

The Opener can be programmed to automatic closing mode. The function of automatic delay closing can be opted via the jumper on the opener. I f this mode is selected, a photo beam sensor must be installed.

Multiple Protection

Overtime protection; Low voltage protection; Rotating speed fluctuation protection.

Manual Operation

The Opener is equipped with a manual disengaging system. I f the power to the Opener is cease for some reason, the door can be shifted to manual mode by pulling down string handle, in this situation manual open and close is allowed. When the power is restored, pull down the string handle then the opener is back to the automatic mode.(The above situation is suitable for single clutch-ERD1007; if ERD1006—double clutches, pulling down the red string for manual operation, pulling down the green one for automatic operation mode).

Soft Start Soft Stop

This function can abate the impact on the door caused by opening and closing the door effectively.

Photo Beam Sensor(optional)

The Opener has an input for photo beam sensor , which is to be connected for extra safety protection. The photo beam sensor must be installed if auto closing mode is chosen.

Definition of Control Board

1 Function Setting Button (Set)

During installation, please set the upper and lower limit, left and right installation, operating power and auto closing time.

2 Remote control learn button (Code)

Add or delete code of transmitter.

3 Increase (Open) Button (▲)

During installation， please set the button value be Increase or Open.

4 Decrease (Close) Button (▼)

During installation, please set the button value Decrease or Close.

5 Open/Stop/Close Button (OSC)

The opener operates in the cycle of Open-----Stop--------Close-----Stop.

6 Digital Display Menu

During the installation and using, the digital menu displays current value and status.

7 Courtesy Light

Illumination and Fault Indicator.

8 Interface to Outside Wall Switch

This interface is available for wall switch or other control devices, the opener operates in the manner of Open-----Stop----Close----Stop.

9 Connector for Photo Beam Sensor

DC 24V Normally Closed Photo Beam Sensor can be connected to this connector.

10 Input for Encoder Signal

To connect the inside encoder.

11 Motor Power Output

Connect to inside DC motor

12 Backup Battery Input

Can connect DC 24V back up battery.

13 Transformer Power Input

Input AC 24V transformer power.

14 24V Power Supply Fuse

T15A/250V Fuse, in the case of burning out, please replace it with the same model.

15 Manual Clutch Handle

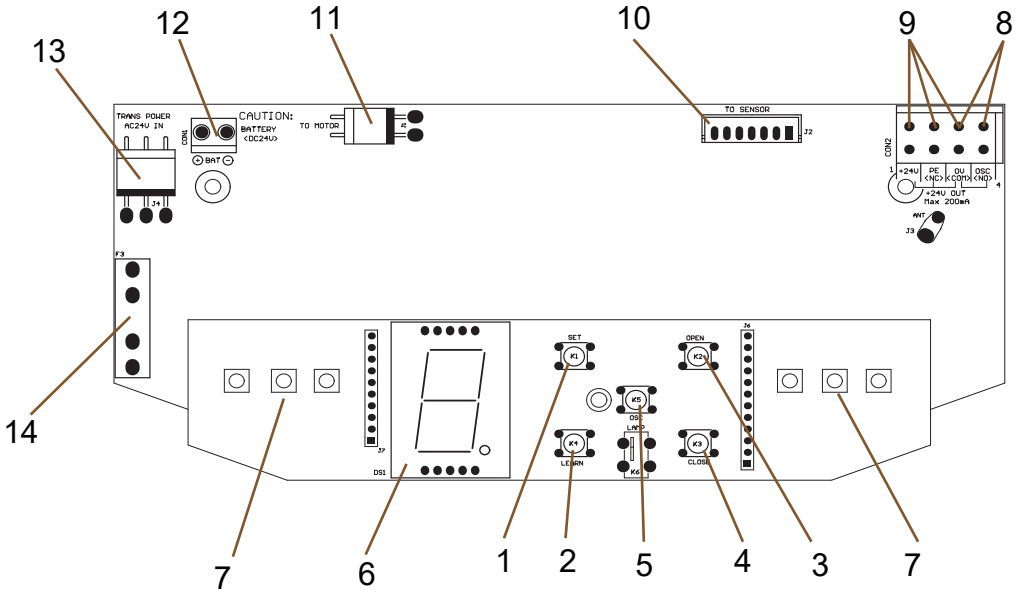
When power off, pull down the clutch handle to shift to manual operation mode; pulling down again to automatic operation mode.

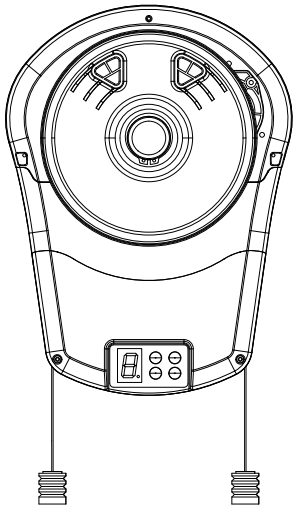
Restrictions on Use

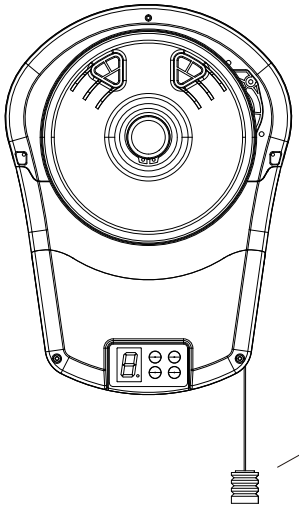
1 In the case of power off and manual mode is applied, OPEN/CLOSE limit should not exceed 20cm of the learning time, otherwise malfunction may occur when power on.

2 When the door stays close to the top but not limit top, press OPEN button, the door will not open; when the door stays near the bottom but not limit bottom, press CLOSE button, the door will not close.

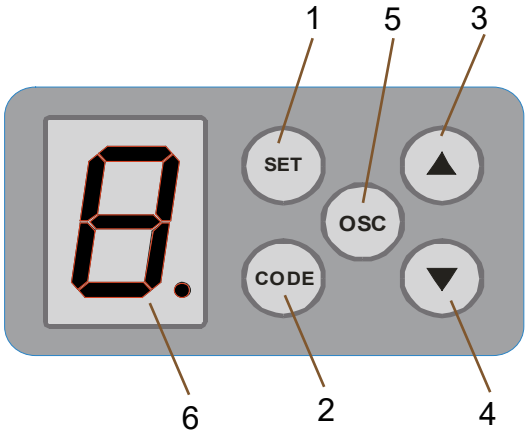
Definition of Control Board







ERD1006 ERD1007



1 Function setting button

2 Remote control learn button

3 Up (Open) button

4 Down (Close) button

5 Open/Close/Stop button

6 Digital display tube

7 Courtesy light

8 Interface to outside wall switch

9 Interface to outside photo beam sensor

10 Input for encoder signal

11 Output for motor power

12 Interface to outside backup battery

13 Input for transformer power

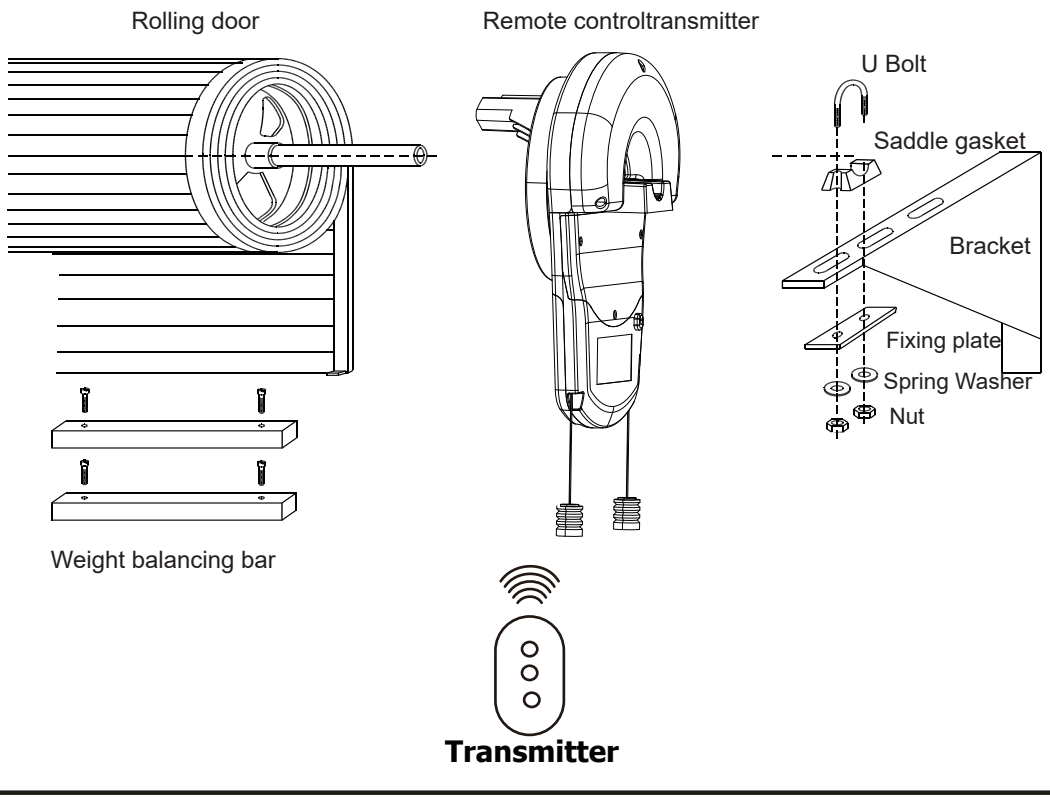
14 24V power fuse

15 Manual/Automatic clutch handle

Packing List

Name	Quantity
Driver	**1**
Transmitter	**2**
U Bolt	**1**
Installation instructions and user manual	**1**

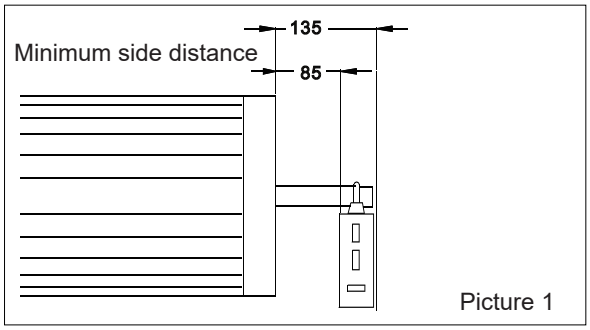
Install Sequence



Installation

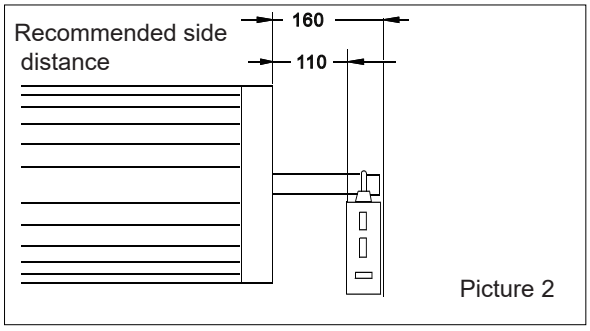
Side Room Requirements

Picture 1 shows the minimum side room that is required: The distance between the edge of the door curtain and the inside of the bracket should be 85mm.; the distance between the edge of the door curtain and the outside of the bracket should be 135mm.



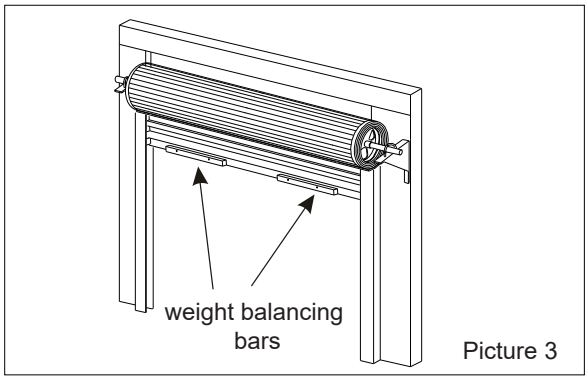
Picture 1

Picture 2 demonstrates the recommended side room: The distance between the edge of the door curtain and the inside of the bracket should be more than 110mm; the distance between the edge of the door curtain and the outside of the bracket should be more than 160mm.



Picture 2

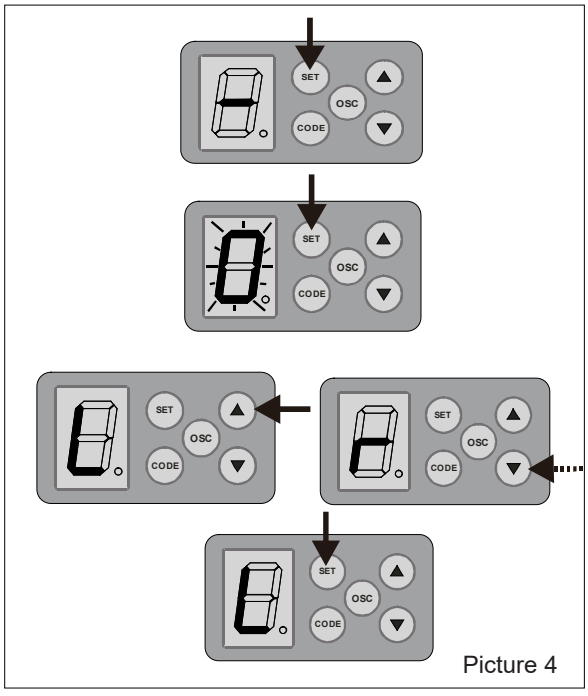
1 Check the door carefully
Before the installation of door opener, please check the door opener carefully, and ensure the rolling door is well balanced and in a good condition. Therefore, the door can move smoothly in the guide rail and can stay at around 90cm—120cm above the ground. The force of door lifting or downing should not over 20kg.



Picture 3

2 Fixing the door weight balancing bars
Move the door manually to half open position, and place the weight balancing bars equally apart on the door bottom, then fix them with the fasteners provided . (see picture 3) Check the door again, if the door moves heavily in the guide rail, it may require extra tension to be added to the door springs. In this case , please refer to the door installation instructions from door manufacturer on how to adjust the door spring.

3 Door opener on the right or left
The ready opener is set to be install on the right side, in the case of left side installation, please reset the function setting button " " from " " to " "
Operating as follows, see picture 4:



Picture 4

3.1 After the power is on, press the function setting button (SET) for 4 seconds and then release, when the digital display tube shows" ", press SET button again, if the digital display tube shows" ", which indicates to right side installation, press UP (▲) or DOWN (▼) button, when the digital display tube shows " ", that means left side installation, the press SET once more, then check and store.

Installation

4 Door Opener Installation (Right side installation)

There are several methods of door opener installation, following one of them is described.

First of all, make sure enough room for driver installation, the distance between the end of the door shaft and the wall should be 135mm at least (Attention: this method only suitable for right side installation). For specific installation, please refer to picture 5, picture 6, picture.

4.1 Check carefully to see whether the U bolt on the left side is tightly fixed on the door shaft.

4.2 Lift up the door, tie up the door firmly with a rope in middle position.

4.3 Use support to sustain the right part of the door curtain. (Attention: Something soft should be padded under the support in case of door surface damage.)

Warning: During installation, children are forbidden to be around, if ignore this warning, severe personal injury or property loss may be caused.

4.4 Check if step 3 is finished, then release the U bolt on the right side of the door and take it away carefully.

4.5 After right the door support removed from the wall, please make sure that the support of the door is safe and reliable.

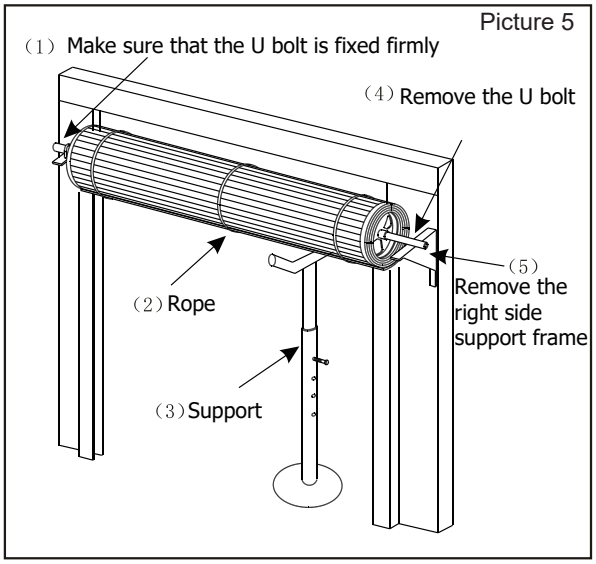
4.6 Take out the opener from the package, manually turn the forks on the opener to make the gear spin, if the gear do not spin, it is considered as auto mode. At this time, please draw the clutch handle (if ERD1006 draw red clutch) manually and softly to take part the driving gear and the motor to shift to manual operation mode, in this case the gear can spin freely.

4.7 Push the opener along the door shaft to plastic plate, and make sure that the double forks of the gear is in the narrowest spoke and stretch into the plastic plate.

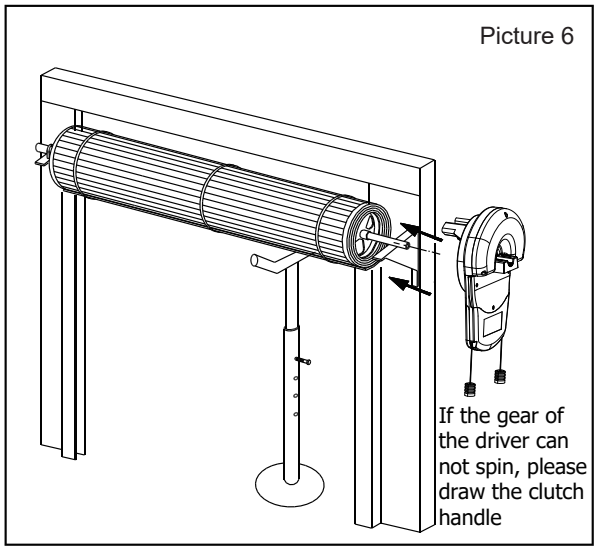
4.8 Reinstall the right side support, if special case, the support frame should be relocated, and retighten the U bolt, remove the support below the door and the bundled rope.

4.9 Move the door up and down with the hands to see if the door operates well. The door should move smoothly and can not be touched.

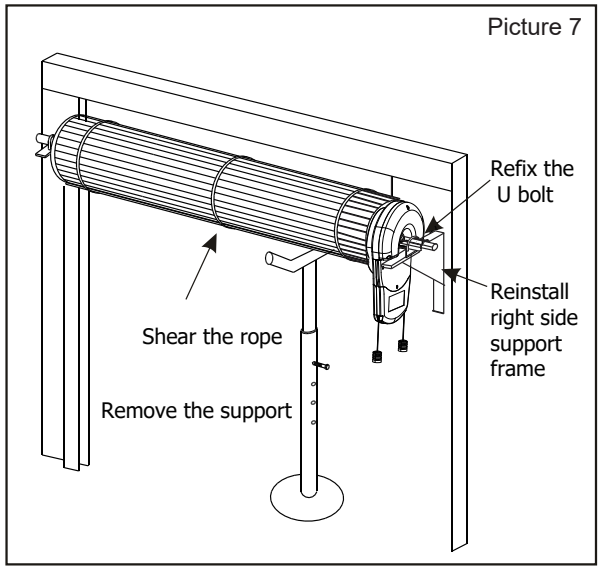
Picture 5



Picture 6



Picture 7



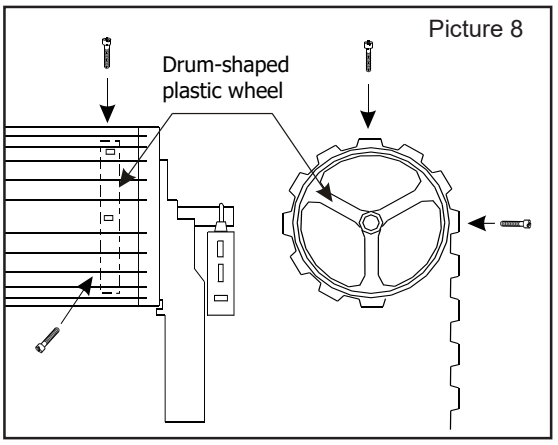
Installation

5 Please fix the door curtain on the drum-shape plastic wheel

The door curtain must be fixed firmly on the drum-shape plastic wheel.

1 Close the door completely, make marks on the both sides towards the plastic wheel.

2 Please find the marks when door is slightly open, use two self-tapping screws on every side of the door curtain on plastic wheel. Attention: the position of the two screws should be in the 90 degree direction, see picture 8.

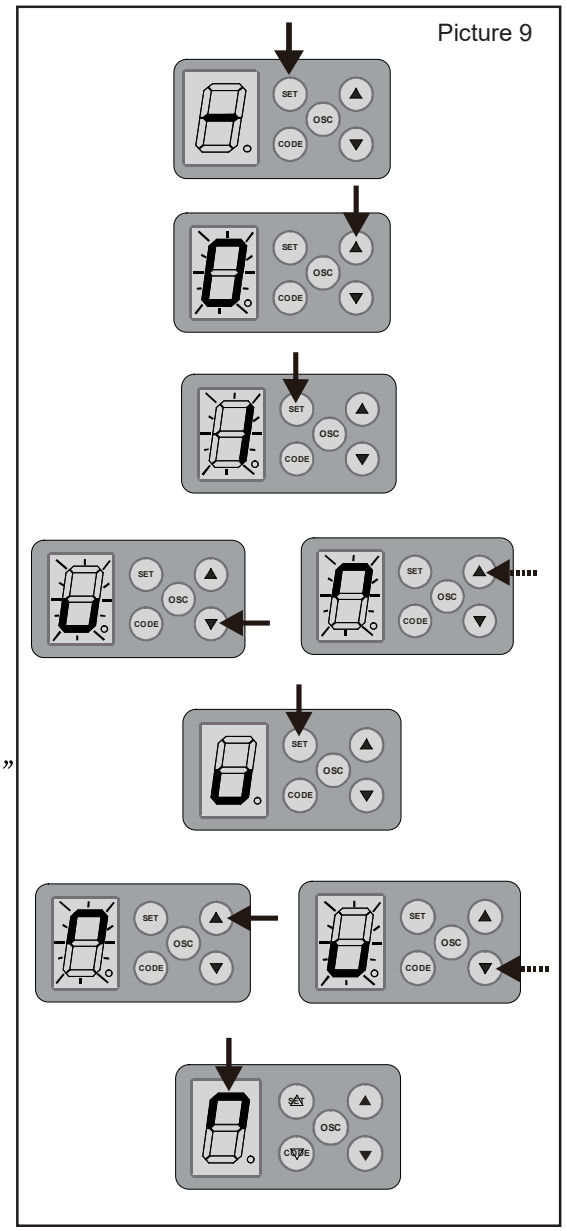


Picture 8

6 Set up and down travel position

6.1 In the case of right side installation: please move the door to the middle position manually, and draw the clutch handle （if ERD1006 draw the green clutch handle) once to make sure the door opener is in auto mode.

6.1.1 Put on the power plug, the digital display tube change from "8." to "8.". Finally "8.", see picture 9.



Picture 9

6.1.2 Press SET button for 4 seconds, when the display on digital display tube from"8." to"8."and flicker, then hands off, press the UP (▲) button once, the digital display tube turn "8." and flicker, then press SET one time and the digital display tube shows"8.", which means setting the proper position for door closing.

6.1.3 Press CLOSE (▼) uninterrupted and the digital display tube shows"8."and flicker, meanwhile the door is closing. (When hands off, the door will stop closing; if the door opens at this time, that means the wrong setting of left side installation and right side installation. In this case, the opener should be power off then power on again. Please refer to 3.1 and turn "8." into"8.". After the door is totally closed, release CLOSE (▼), if the door is not in proper position, please press CLOSE (▼) or OPEN (▲) once, to make the door close in the ideal place, then press SET once again, the digital display tube turns "8.", which means to set the proper position after door totally opened.

6.1.4 Press (▲) uninterrupted, the digital display tube shows"8.," then start to flicker, at the same time the door opens, when the door is totally open, release (▲), if the door does not stop at an ideal position, please press (▲) or (▼) once to make the door stay at the ideal place. Repress SET once, the door will close immediately and stop at the right totally closed position. Finally, digital display tube shows"8." and finish door travel position settings.

Attention: After the ideal place for door closing and before setting the ideal position for door opening, the position for opening door (height of opening door) stay should be within 1---3 meters; if the opening door height is beyond 1—3 meters, when you press SET, the door will not close automatically, at this time the courtesy light keep flickering for a while to show that the wrong position and new settings should be done.

Installation

6.2 Setting of left side installation: the same as the right side installation, please refer to 6.1.

6.2.1 Please refer to 3.1 and change "8." to "8." . Hereafter all the setting are the same as right side installation, please refer to 6.1.

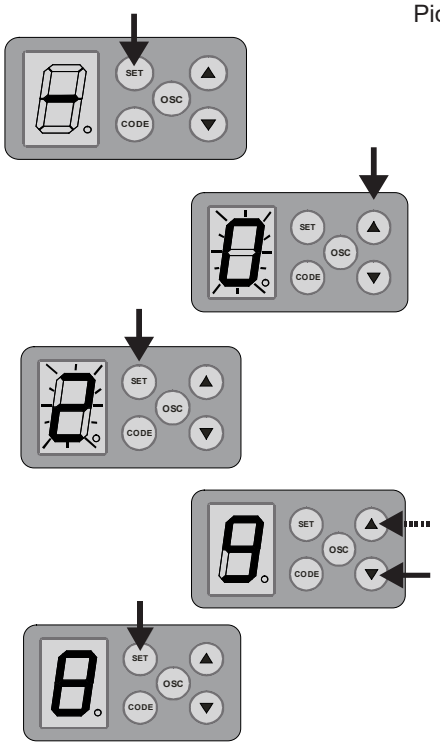
7 Set Operating Force

7.1 Set force for opening door operation (class 1-9, see picture 10)

7.1.1 Press SET for four seconds, the digital display tube changes from"8." to"8."and flickers; then release, then press (▲) twice, the digital display tube shows"8."and flickers; at this moment press SET once, the digital display tube shows"8.", which means opening door operation force Class 9 (Factory Default).

7.1.2 Press (▼) once, the digital display tube shows " 8. " , which means lowering one class of the force for opening door operation. Press (▲) the digital display tube shows " 8. " , which indicates increase one class of the force for opening door operation. After setting the proper class, press SET once again, the digital display tube shows " 8. " , and store new setting value and then return to standby mode.

Picture 10

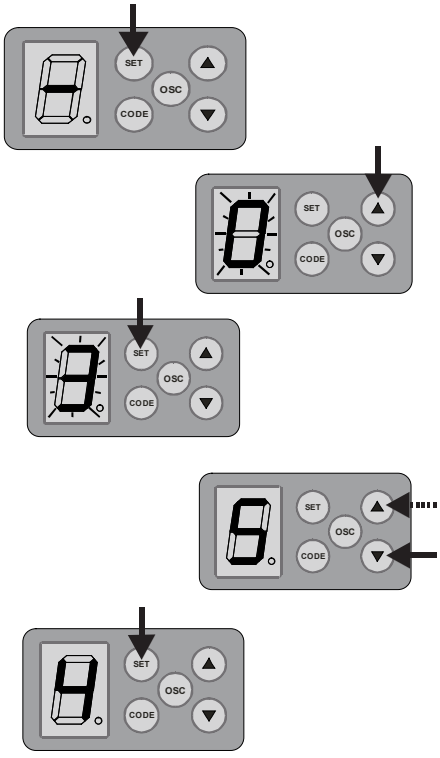


7.2 Set force for closing door operation (Class 1—9, see picture 11)

7.2.1 Press SET for four seconds, the digital display tube changes from "8." to "8."and flickers, then release. Press (▲) three times, the digital display tube shows "8." and flickers, at this moment press SET one time, the digital display tube shows "8. ", which means closing door operation force class 5 (Factory Default).

7.2.2 Press (▼) one time, the digital display tube shows "8. " , which means the door closing operation force decreases one class; if press (▲) once, the digital display tube shows "8. ", this means the door closing operation force increases one class. After setting the proper class, press SET once again, the digital display tube shows " 8. " ,and store new setting value and then return to standby mode.

Picture 11



Installation

Checking door closing force

1 Press OPEN button (▲) until door up to the highest position, see picture 12.

2 Place a 100mm x 50mm block below the door, see picture 13.

3 Press CLOSE (▼) to close the door until the door hits the block and begins moving reversely until the door is totally open.

Checking door opening force

1 Remove the block, press CLOSE (▼) until the door is completely closed, see picture 12.

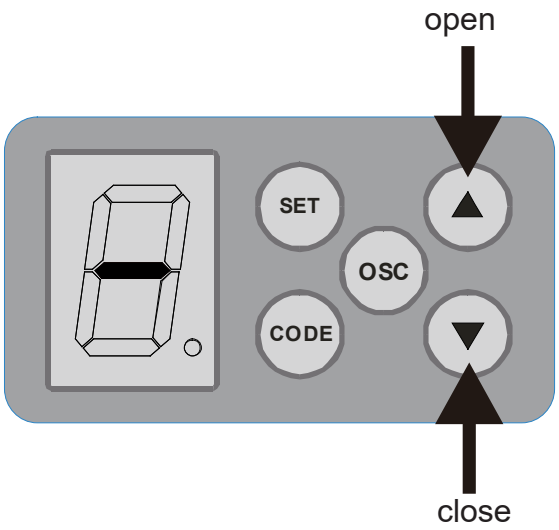
2 Press OPEN (▲) to open the door until the door moves to midway, use hands to firmly grasp the door bottom, the door should stop moving up.

In the case that the door does not backtrack easily when closing, or in the case that the door stop hardly when opening, both these two cases demonstrates that the force is not well adjusted. Then please follow 7.1, 7.2, 7.3, 7.4 to readjust.

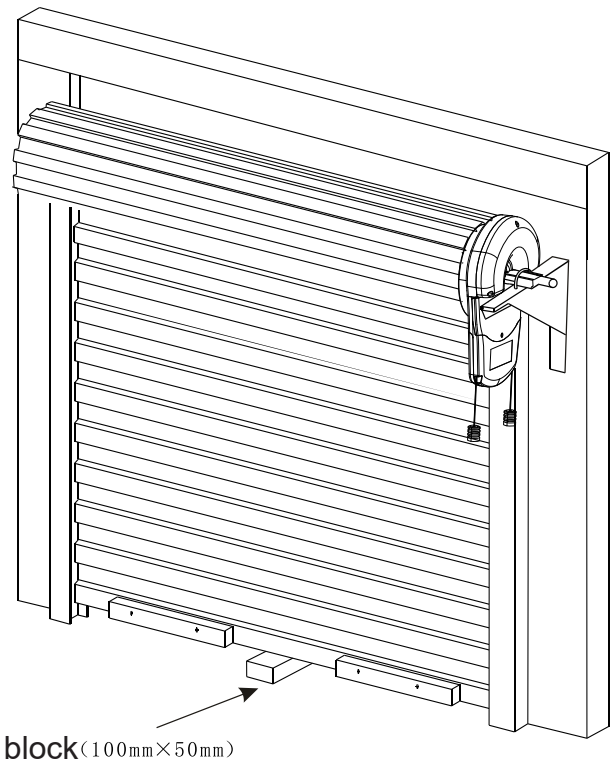
Warning:

When door is closing, if there is something wrong with torque testing system, please adjust and retest until everything meets requirements that the door can be operated.

Picture 12



Picture 13



Installation

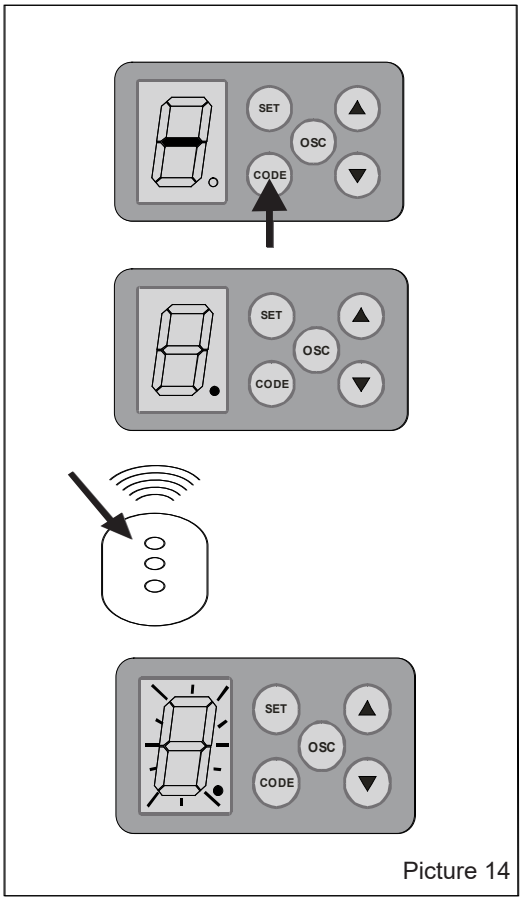
8 Setting of Remote Control Transmitter

8.1 Learning a transmitter, see picture 14.

8.1.1 Press CODE once, the digital display tube changes from "8." to "8." and enter into the learning condition, then press one of the buttons twice, and the digital display tube "8." flickers quickly then turns into "8.", and the code is learned.

Press the CODE to check if it can control the relevant door operation. This learning method can be applied into other transmitter learning.

Attention: if press CODE, the digital display tube shows "8.", which means the opener has stored 30 transmitters, no new transmitter can be learned any more.



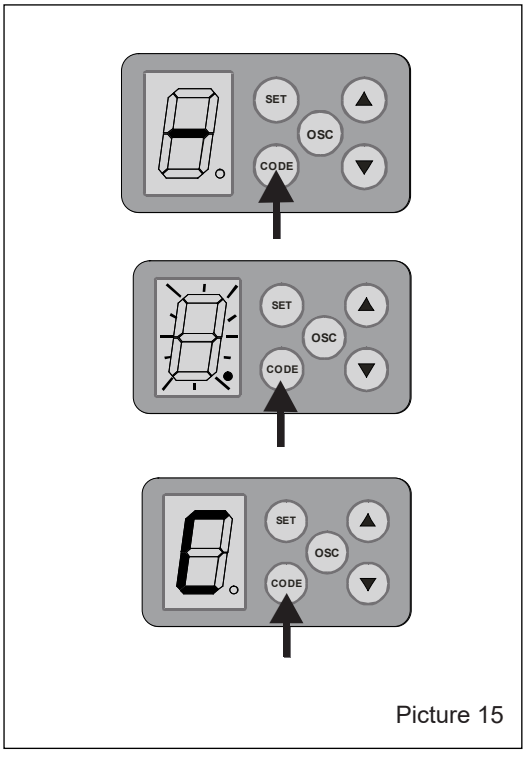
Picture 14

8.2 Delete of remote control transmitters

8.2.1 Press CODE uninterrupted until the digital display tube changes from "8." to "8." and flickers, then enter into delete transmitter condition. After eight seconds, the digital display tube shows "8." and flickers, then shows "8.", at this moment release the button and finish deleting transmitters. If release CODE within 8 seconds, itc comes into the learning condition.

9 Courtesy Light Auto Turn off Time

the auto turn off time is three minutes



Picture 15

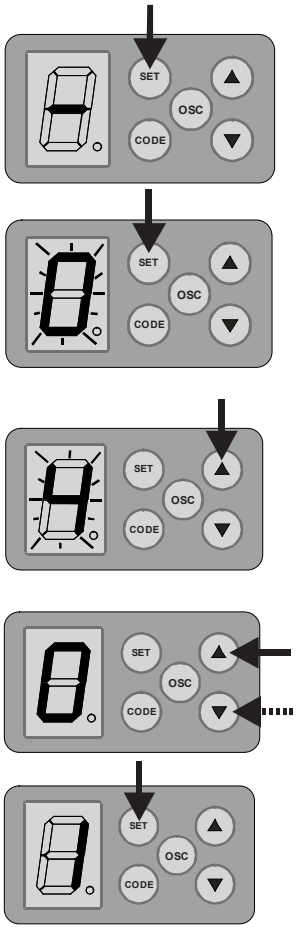
Installation

10 Auto Close Set

10.1 Auto close time setting (class 0, 1—9, see picture 17)

10.1.1 Press SET for four seconds, the digital display tube changes from "8." to "8." and flickers, at this moment release SET button. Press (▲) four times, the digital display tube shows "8."and flickers, at this moment press SET once, digital display tube shows " 8.", which indicates auto closing class 0 (Factory default, in other words, auto close function is closed.)

10.1.2 Press （▲） once， the digital display tube shows,"8." which indicates auto close time increases one class (one class means one minute); if press (▼) once, the digital display shows " 8." , which means the auto close time decreases one class; After setting the proper class, please press SET once again. The digital display tube shows " 8." , restore new setting value, and then return to standby mode.



Picture 16

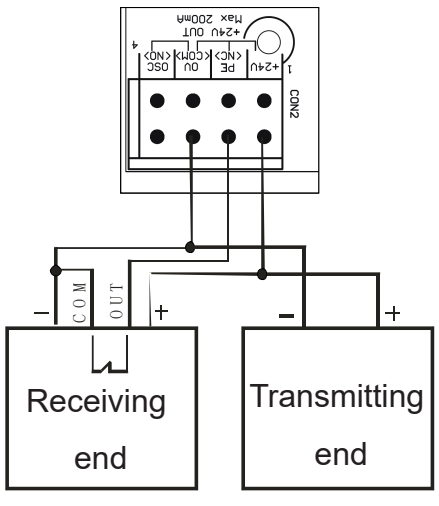
Only when the door open to the limit and auto close time is set, the auto close timer begins counting. If Photo beam sensor is blocked, the door will keep open. The door will reopen when obstructed or the photo beam sensor is blocked during closed.

11 Photo Beam Sensor (Optional)

11.1 A normal closed photo beam sensor is recommended to install at a suitable place beside the door and connect the wires to CON2 PCB board. (See picture 18)

Anything about the connection of circuit diagram photo beam sensor, please refer to of the photo beam sensor manual.

Warning: When use auto close and photo beam sensor, there should not be obstacles or people around the door. The installation position and method should be proper, or the protection function will not be effective.



Picture 17

TECHNICAL SPECIFICATIONS

INPUT VOLTAGE	220-240VAC 50HZ	
TRANSFORMER	PRIMARY VOLTAGE	220V/240V AC
	SECONDARY VOLTAGE	24V AC 100VA
	CONTROLLER VOLTAGE	24VDC
RATED LOAD	800N	
Opening /Clsoing limits travel	6 turns of door drum wheel	
Opening /Clsoing run time	60secs	
Receiver type	☐ UHF 433.92MHZ ,AM Receiver ☐ UHF 433.22MHZ ,AM Receiver	
Receiver code storage capacity	30 transmitter codes	
Transmitter	Frequency	☐ 433.92MHZ ☐ 433.22MHZ
	Coding Type	Code Hopping
	NO of code combinations	over 4.29 billion random code
	Code generation	Non-linear encryption algorithm
	Battery voltage	12V
Motor type	Permanent magnet Direct current	24VDC
Globe	LED Lighting	

Malfunctions AND SOLUTIONS

SYMPTOMS	POSSIBLE CAUSE	SOLUTION
Door do not operate	Power do not turn on	Turn on the power
	Door is obstructed	Remove obstruction
Door is locked or motor is stuck		Open the lock
		Check the motor
Door is obstructed and fails to upward	Operating force is too strong	Closing force is too strong, decrease the door closing operation force(refer to 7.2)
Door opens automatically when door is closing	Door deformation or rail tracks narrow because of extreme weather (frozen, windy)	Closing force is too weak , increase the door closing operation force (refer to 7.2)
	Door is obstructed	Remove the obstacles
Door operates from drive unit but not from hand-hold transmitter	Indicator on transmitter do not light	Battery is not well connected
	Transmitter has not been learnt	Refer to step 8
	Driver Unit antenna is not extended	Extend the antenna
	No power in battery	Replace the battery
Door stops automatically	Opener is overloaded ; door is obstructed and the spring is not elastic	Stop using the door and door open to avoid damage
Auto close function do not work	Photo beam sensor is broken or the power is off	Mend photo beam sensor and turn on power
	Photo beam sensor is blocked	Remove the obstruction
	Door is hindered when closing	Closing force is too weak , increase the door closing operation force (refer to 7.2)
	Not set the auto closing time	Refer to installation instruction step 11
Soft stop time too long, or too short, or no	Do not set soft stop and soft start	See installation instruction step 6

Installation

NOTES :