# Garage Door Opener

Control System Instructions And User Guide

| S/N | |
|---|---|

# Table Of Contents

# 1. CRITICAL SAFETY GUIDELINES

Failure to comply with these instructions may result in severe injury, death, or property damage.

1. Read and adhere to all safety and installation guidelines.

2. Installation Compliance:
- The opener complies with regional safety standards. Installers must verify alignment with local regulations.
- Only qualified personnel familiar with occupational health and safety standards for automated doors may perform installations.

3. Safety Responsibility:
- Installers/service providers failing to adhere to standards assume full liability for damages or injuries.

4. Photoelectric Sensor Recommendation:
- While the opener includes a pressure-sensitive safety system, installing a photoelectric sensor (Photo Beam) is strongly advised to enhance obstruction detection.

5. Operational Precautions:
- Ensure the door is fully stationary before entering/exiting the garage.
- Keep hands and loose clothing clear of moving components.

6. Safety Obstruction System Limitation:
- Designed for stationary objects only. Contact with moving objects may cause failure.

7. User Restrictions:
- Not intended for unsupervised use by children or individuals with reduced physical/mental capabilities.

8. Disposal:
- Dispose of electrical waste via certified recycling facilities.

9. Power Cord Safety:
- A damaged supply cord must be replaced by the manufacturer or certified personnel.

10. Monthly Safety Checks:
- Verify door reversal upon contacting a 50mm obstruction. Adjust if necessary.
- Inspect cables, springs, and mountings for wear/tear monthly.

11. Manual Release Warning:
- Exercise caution during manual release to prevent rapid door descent caused by spring failure.

12. Maintenance Protocol:
- Disconnect power before cleaning or servicing.

# 2. BUTTON/COIN CELL BATTERY SAFETY

## 1. WARNING:

- Contains a button/coin cell battery (lithium CR2032 or equivalent).
- Keep batteries out of reach of children. Ingestion may cause fatal injuries within 2 hours.
- Seek immediate medical attention if swallowed.

## 2. Transmitter Battery Replacement:

- Step 1: Remove screws on the transmitter's underside.
- Step 2: Replace battery with an identical specification (e.g., CR2032).
- Step 3: Verify red indicator illumination after reassembly.

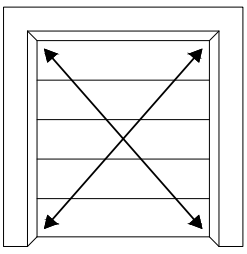
# 3. PRODUCT OVERVIEW & FEATURES

| Feature | Description |
|---|---|
| 1. Adjustable Obstruction Force | Levels 1 (min) to 5 (max). |
| 2. Travel Speed Adjustment | 80% speed ("8") or full speed ("A": 160–200mm/s). |
| 3. Reversal Time Setting | 0 = rebound to top; 1–9 = reverse duration (1–9 seconds). |
| 4. Partial Open Height | 0 = disabled; 1–C = preset heights. |
| 5. Transmitter Button Recognition | 0 = all buttons active; 1 = single-button control. |
| 6. Soft Stop Adjustment | Levels 1 (short) to 3 (long). Default: Level 2 (medium). |
| 7. Maintenance Alarm | LED flashes 10× to signal required maintenance. |
| 8. Auto-Reverse Safety | Software-controlled reversal upon obstruction detection. |
| 9. Soft Start/Stop | Reduces mechanical stress and noise. |
| 10. Auto-Close | Activates after user entry/exit for security. |

# 4. TECHNICAL SPECIFICATIONS

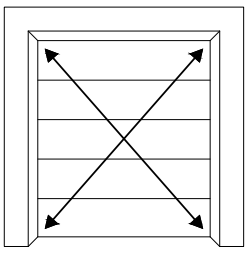
| Model | FS 700 | FS 1100 |
|---|---|---|
| Input voltage | 220 - 240V / 50–60 Hz | |
| Max. pull force | 700 N | 1100 N |
| Max. door area | 7 ㎡ | 11 ㎡ |
| Max. door weight (Balanced) | 80 kg | 130 kg |
| Max. door height | 2400 - 3500mm | 2400 - 3500mm |
| Drive mechanism | Chain / Belt | Chain / Belt |
| Opening / Closing speed | 180mm / Second | 180mm / Second |
| L.E.D supply voltage (DC) | 24V | |
| Limit setting | Electronic | Electronic |
| Transformer | Overload protection technology | |
| Radio frequency | 433.92 / 868.35 MHz | |
| Coding format | Rolling code ($7.38 \times 10^{19}$ Combinations) | |
| Status display transmitter | 2 X | 2 X |
| Code storage capacity | 50 different codes（Subject to the actual） | |
| Caution light terminal | Included | Included |
| Working temperature | -20°C - +60°C | -20°C - +60°C |
| Safety protection | Soft start & Soft stop, Photo cell option, Caution light option | |
| Protection level | IP20 | IP20 |

FS 700

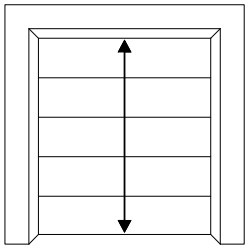


Rated door area: ⩽ 7 ㎡

FS 1100



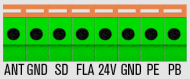
Rated door area: ⩽ 11㎡



Standard door height: 2400mm
Maximum door height: 3500mm

# 5. PORT WIRING CONFIGURATIONS

## D Wiring



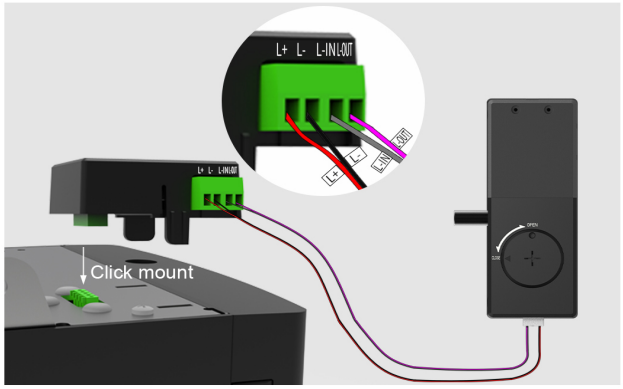

The garage door opener has above types of wiring ports.
Please check your motor to find the corresponding port and wire it according to the diagram.

**Remark:**
**Please turn off low power mode before connecting external devices to the 24V / GND port.**

Long press the 0.4W button for 3 seconds to trun off the low standby mode.

The green indication light will turn off.

### Wired E-Lock (Optional)



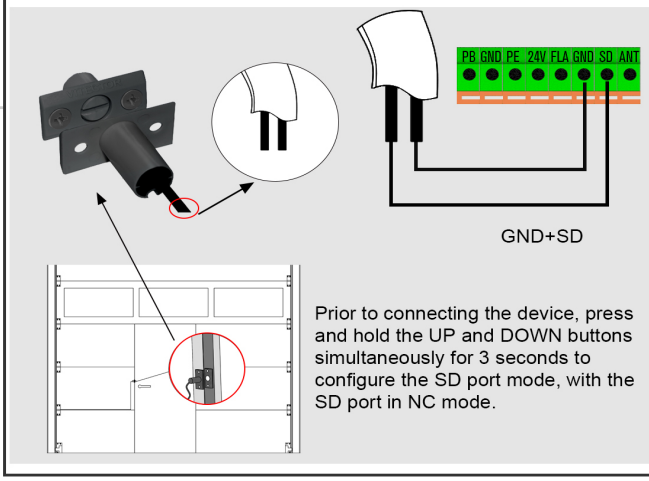

**Remark: Activate the Wired E-LOCK function on the opener setting menu** P

Connect the four wires of the wired E-Lock to the corresponding ports of the E-Lock external device:

Red: L+
Black: L-
Gray: L-IN
Pink: L-OUT

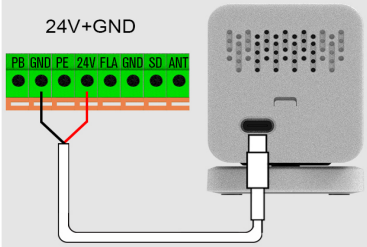
Click mount the relay module to the connection port of the GDO.

### Pass door protection device




Prior to connecting the device, press and hold the UP and DOWN buttons simultaneously for 3 seconds to configure the SD port mode, with the SD port in NC mode.

### Camera (Optional)



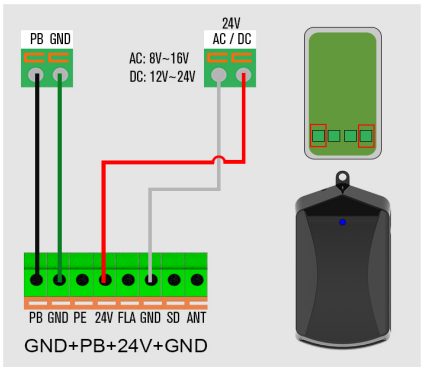

**Remark: Before connecting the camera, please turn off the low standby mode. Otherwise the camera may not working properly.**

Long press the 0.4W button for 3 seconds to trun off the low standby mode.

The green indication light will turn off.

Power connection from camera to opener

### Universal receiver (Optional)



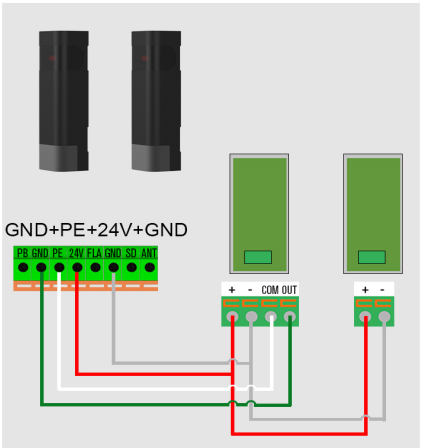

**Remark:**
**Before connecting the external receiver, please turn off the low standby mode. Otherwise the receiver may not working properly.**

Long press the 0.4W button for 3 seconds to trun off the low standby mode.

The green indication light will turn off.

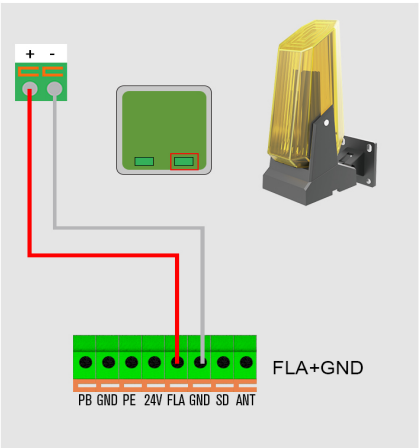
Notice:
Special attention to the wiring.
Wire in red color should be always go to 24V port on garage door opener.
In case of wrong wiring, there may cause damage to the receiver, or even other connected devices.
Remark
1. PB (External Push Button) port should be with “NO” contact.

### Wired Photo Beam (Optional)




Notice:
Please ensure installation distance between 2 sensors is over 1 meter, otherwise garage door opener can not work properly.
Remark:
1. When garage door opener is also connected with a Falsh Light, the power of light should be lower than 10W, otherwise photo beam can’t work properly due to low power supply.

### Flash lamp (Optional)



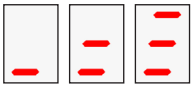

Terminals provide 24-35v flash light voltage.

Connect the flash light with DC 24v-28v, current≤ 100mA. When use AC 220V power flash lights, please match an adapter, and connect the wires as required.

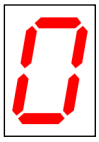
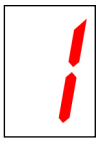
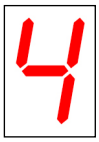
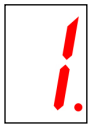
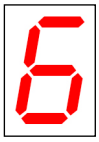
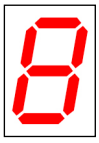
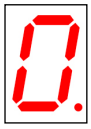
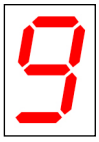
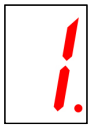
# 6. BASIC BUTTON INSTRUCTIONS

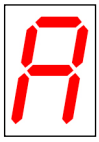
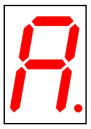
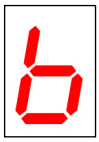
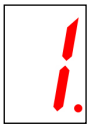
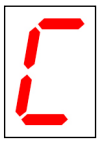
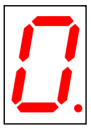
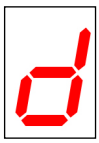
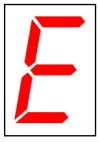
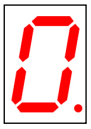
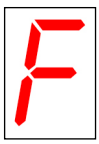
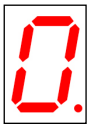
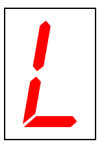
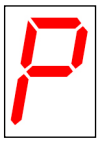
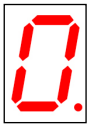
| Item | Button | Function Description |
|---|---|---|
| 1. |   | **Short press:** Confirm setting.<br>**Long press:** Enter the function menu setting. |
| 2. |   | **Short press:** Remote coding.<br>**Long press:** Clear the coded remote. |
| 3. |   | **Short press:** Open the door.<br>**Long press:** Increase the over load mode force during closing. |
| 4. |   | **Short press:** Close the door.<br>**Long press:** Restore factory settings. |
| 5. |   | **Long press:** Turn on/off the low standby mode. |

# 7. QUICK SETTING INSTRUCTIONS

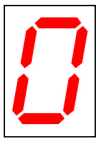
| Quick Setup Function | Operation | Function Description |
|---|---|---|
| Over load mode | **Long press for 4 seconds**   | Press and hold the UP button for 4 seconds. The digital display will increment and cyclically show levels 0-3. Release the button to select the current level.<br>0: means the function is disabled （default）<br>1: increase the overload force 25% based on your current force.<br>2: increase the overload force 50% based on your current force.<br>3: increase the overload force 75% based on your current force. |
| Restore factory settings | **Long press for 4 seconds**   | Keep press DOWN button, after 4 seconds, it will scroll to display  , then the garage door opener will restart.<br>PS: Restart means all settings are back to factory settings, all learning things need to be done again except the transmitter learning code. |
| Remote coding | **Short press**   | 1. In the Setting Status, short press CODE, it will exit the current operation and return to the standby interface.<br>2. In the Standby Status, short press the CODE, A dot will be indicated in the corner, now entering the code leaning mode. Now first click the button on the hand transmitter you want to use, the dot may disappear ,then press again the same button on the hand transmitter, the dot will flash, here, the code learning is finished. |
| Remote clearing | **Long press**   | Press and hold CODE button until a letter  is indicated on the display.<br>All stored remotes will be deleted.<br>**Note:** Clearing the remote will not clear all paired wireless accessories. |
| Low standby mode | **Long press for 3 seconds**   |   Turn on the low standby mode.<br>   Turn off the low standby mode. |

# 8. PARAMETER OVERVIEW

| Par | Function Description | Description of default parameters | P. |
|---|---|---|---|
|  | Motor Forward / Reverse rotation adjustment |  : Motor forward rotation (Default) | 11 |
|  | Programming open & close limits | Learning the door open limit and close limit. | 12 |
|  | Obstruction force adjustment |  : Obstruction force level 3(Default) | 13 |
|  | Closing speed setting |  : Full speed (Default) | 14 |
|  | Auto closing on/off & Auto closing countdown time setting. |  : Auto closing function is not enabled (Default) | 15 |
|  | Auto closing trigger condition setting (Door position) |  : Auto closing is only triggered when the door is at the open limit (Default) | 16 |
|  | Led off delay time setting |  : LED light turns off after a 3-minute delay(Default) | 17 |
|  | Reversal running time setting (After the resistance rebound) |  : Full open running to the open limit after resistance rebound | 18 |
|  | Partial open function ON/OFF & Partial open height setting |  : The Partial open function is not enabled (Default) | 19 |
|  | Transmitter buttons recognition function setting |  : The transmitter button recognition is under single key cycle model (Default) | 21 |

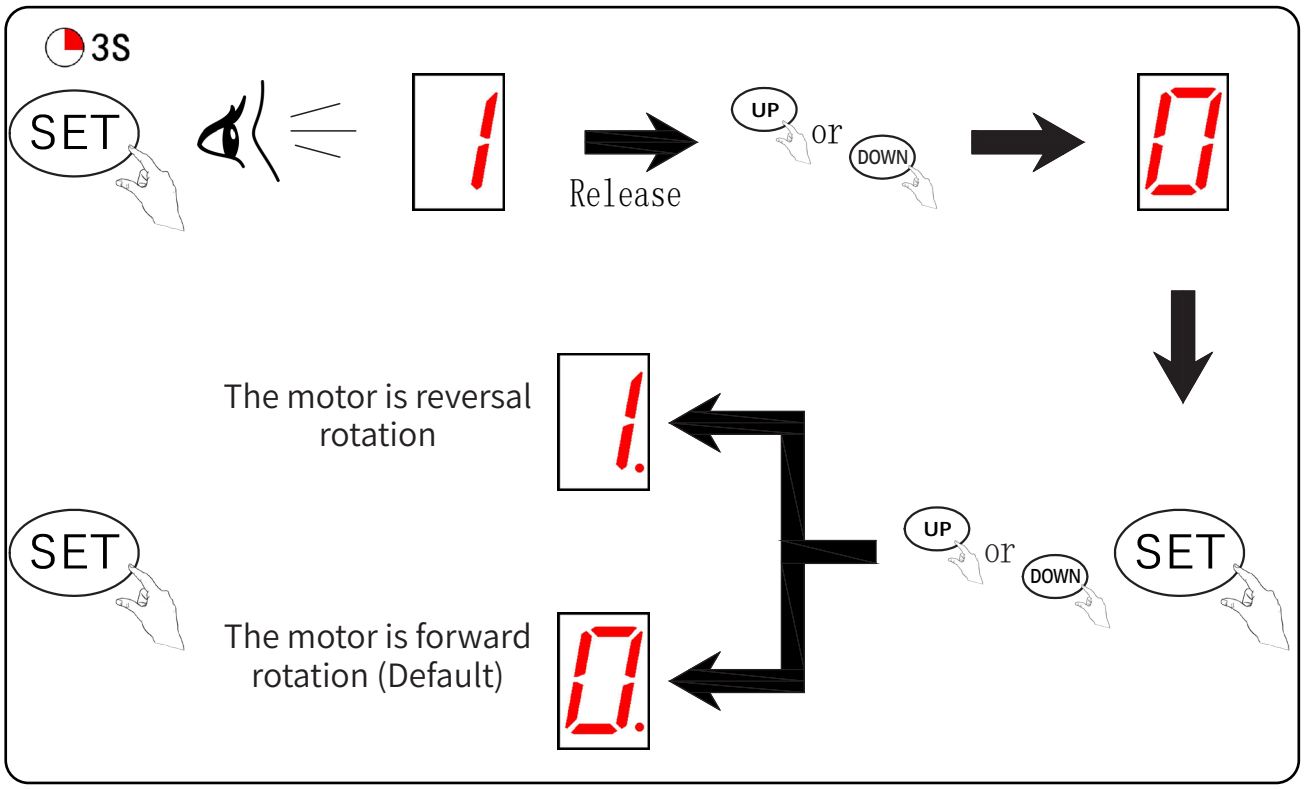
| Par | Function Description | Description of default parameters | P. |
|---|---|---|---|
|  | Soft stop distance adjustment |  : Short range of soft stop distance (Default) | 22 |
|  | Reversal position ignoring setting while obstruction |  :Reversal position ignoring setting to 1cm up the ground (Default) | 23 |
|  | Wired pass door sensor port setting (NO/NC) |  : Normally Open (NO) port for pass door sensor (Default) | 24 |
|  | Wired photo beam function ON/ OFF |  : Photo beam function is not enabled (Default) | 25 |
|  | Maintenance alarm operation cycles count setting |  : Maintenance alarm function is not enabled | 26 |
|  | Community function (Parking lot function) ON/OFF |  : Community function (Parking lot function) is not enabled (Default) | 28 |
|  | Opening force adjustment setting |  : Opening force under normal level 5 (Default) | 29 |
|  | Wired E-Lock function ON/OFF |  : Wired E-Lock function is not enabled (Default) | 30 |

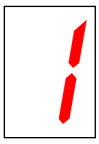
# 9.PARAMETER DETAILS



**: Programming Motor Forward / Reversal rotation.**

ⓘ This function is applicable to swing doors. When enabled, the trolley moves forward during door opening and backward during closing.



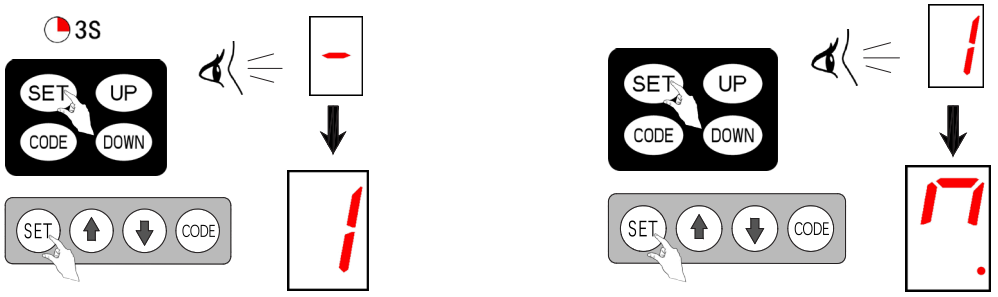


# Parameter: Programming Open & Close Limits

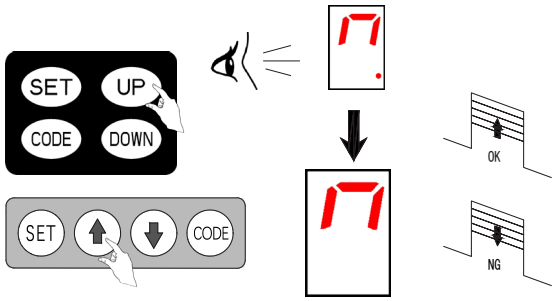
ⓘ Pre-Setup Preparation: Manually open the door to half-height to avoid incorrect rotation during setup. Entering the travel limit menu will clear previous settings.

ⓘ Motor Direction Verification: Confirm motor output direction aligns with door movement

1. Enter travel limit setting

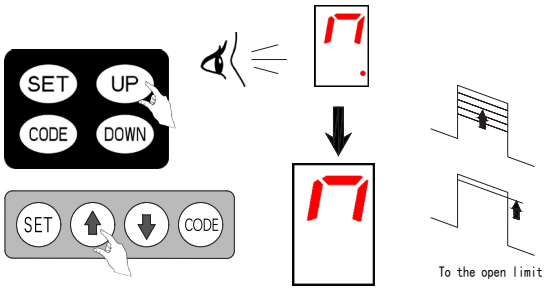



2.Check the direction of motor output and the door running operation

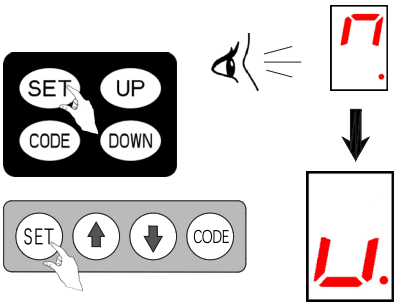



Note: If the motor running direction does not match the door running direction, please exit the learning process first and adjust the motor running direction in the 0 menu.

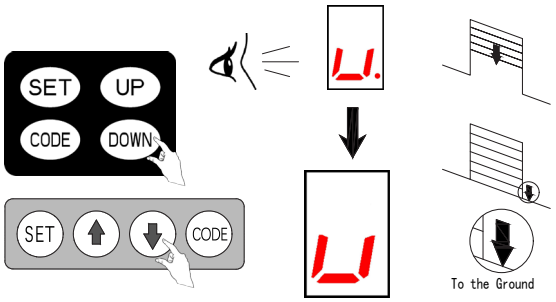
3.Start the travel limit set, open the door and move the door to the open limit position



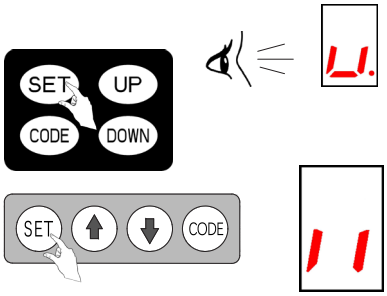

4.Save open limit position




5.Close the door and move the door to the close limit.



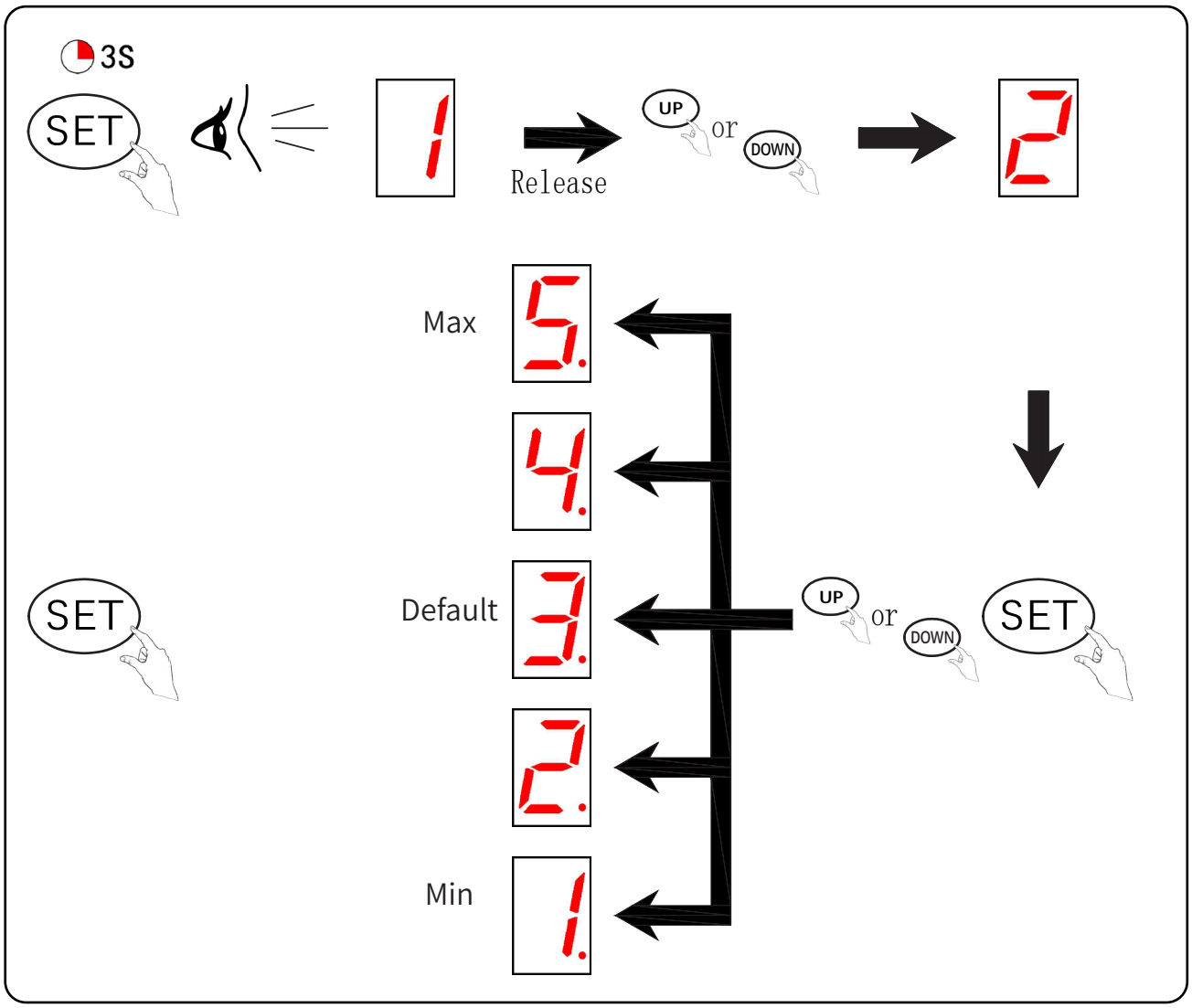

6.After confirming the close limit position, the motor enters into self-learning.
When the motor self-learning is complete, the travel limit set is complete.

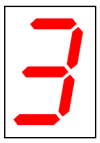


## Parameter: Obstruction Force Adjustment

ⓘ **Note:**
Automatically configured during initial setup. Manual adjustment is unnecessary normally.

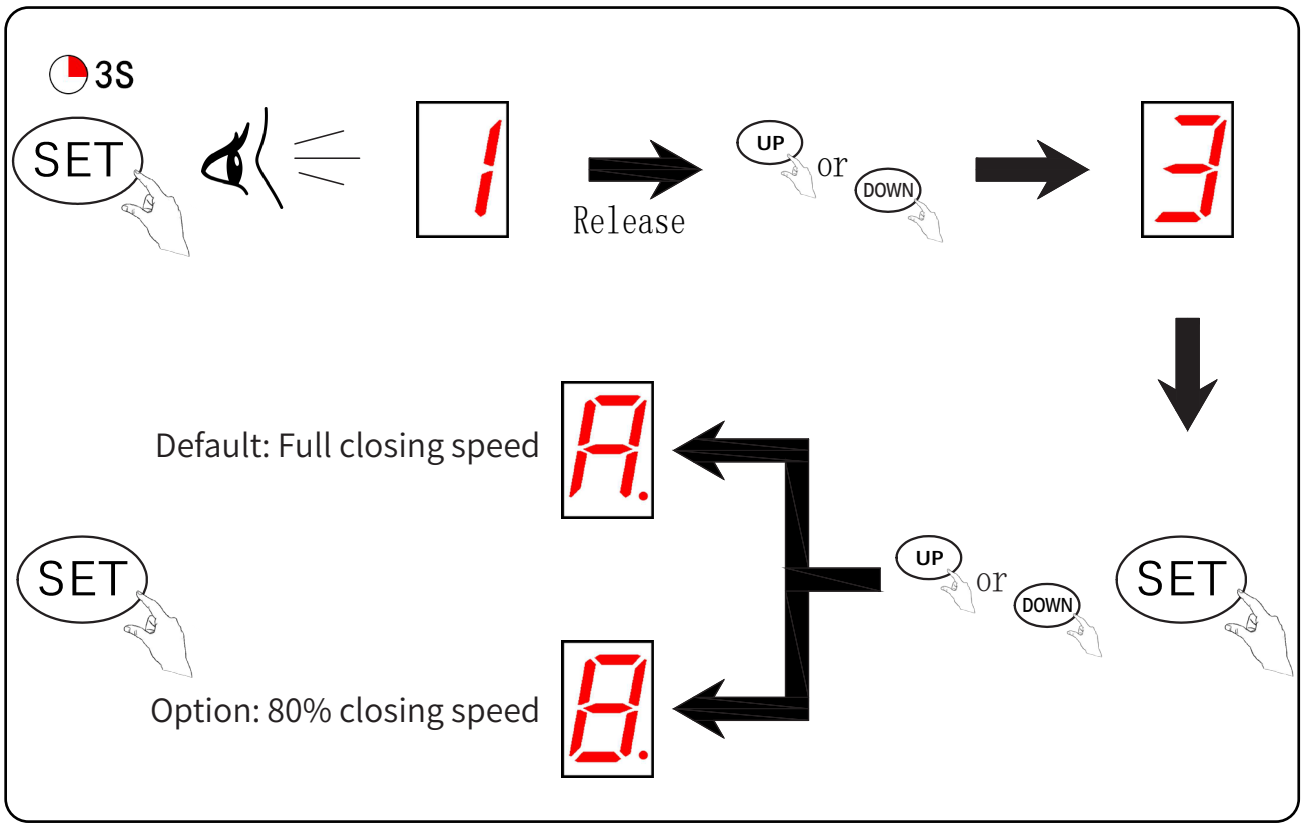
ⓘ Default: Level 3 (Medium force).





## Parameter: Closing Speed Setting

ⓘ **Note:**
Adjusts closing speed only.

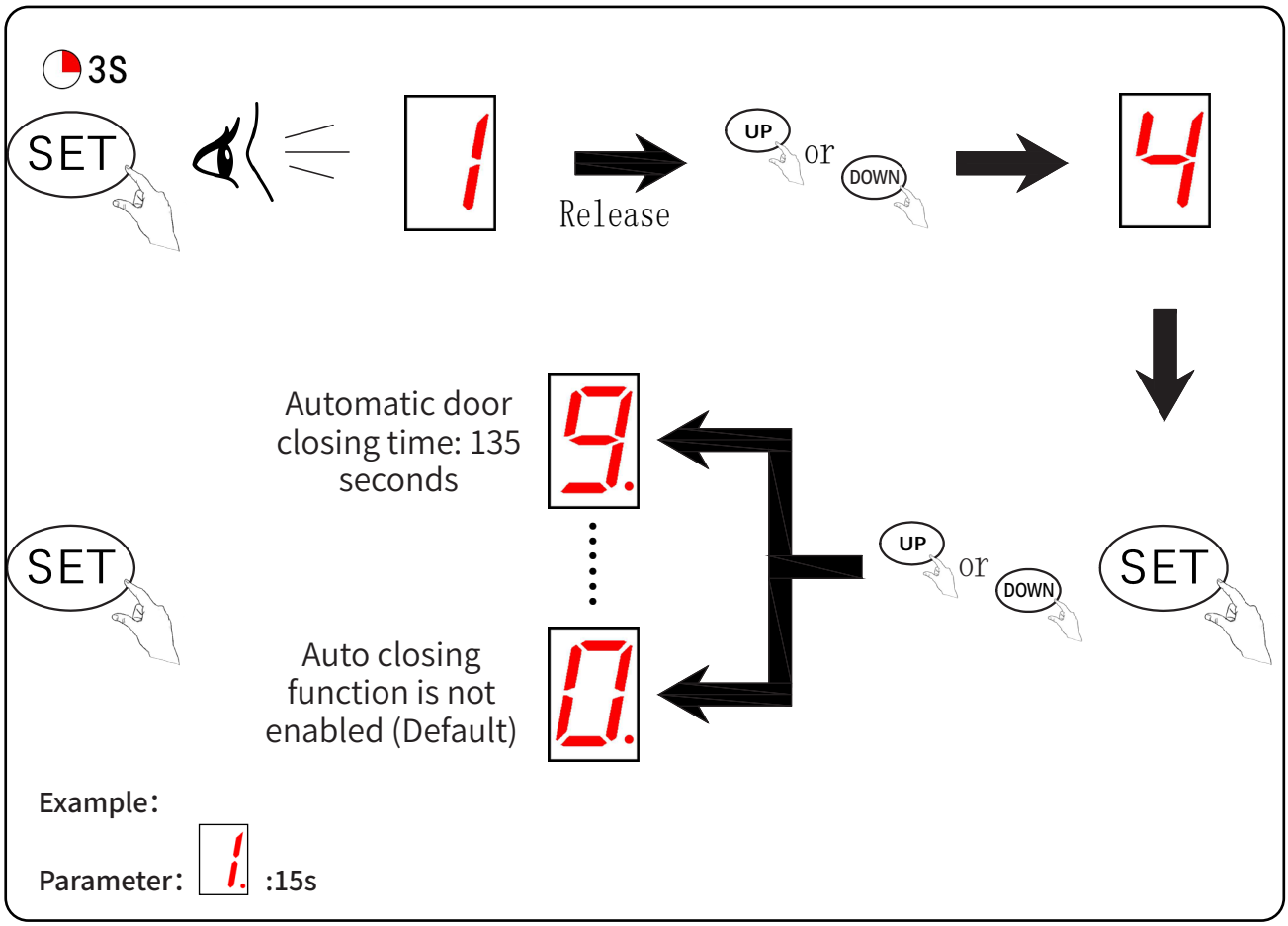


## 4 : Auto closing on/off & Auto closing countdown time setting.

ⓘ Range: 1–135 seconds (9 intervals).

ⓘ Prerequisite: Photo beam function must be enabled.

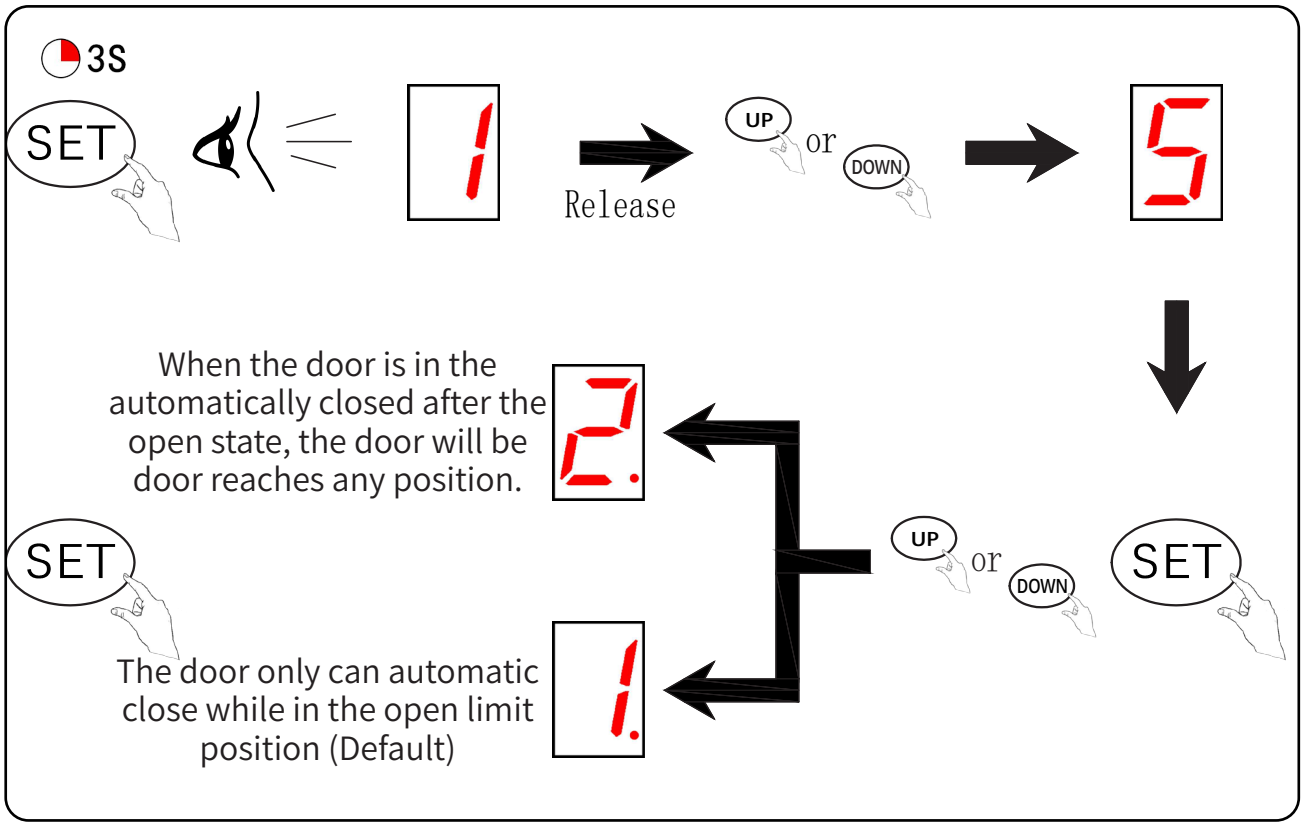
ⓘ Behavior: Obstructions pause the timer, which resumes after clearance.



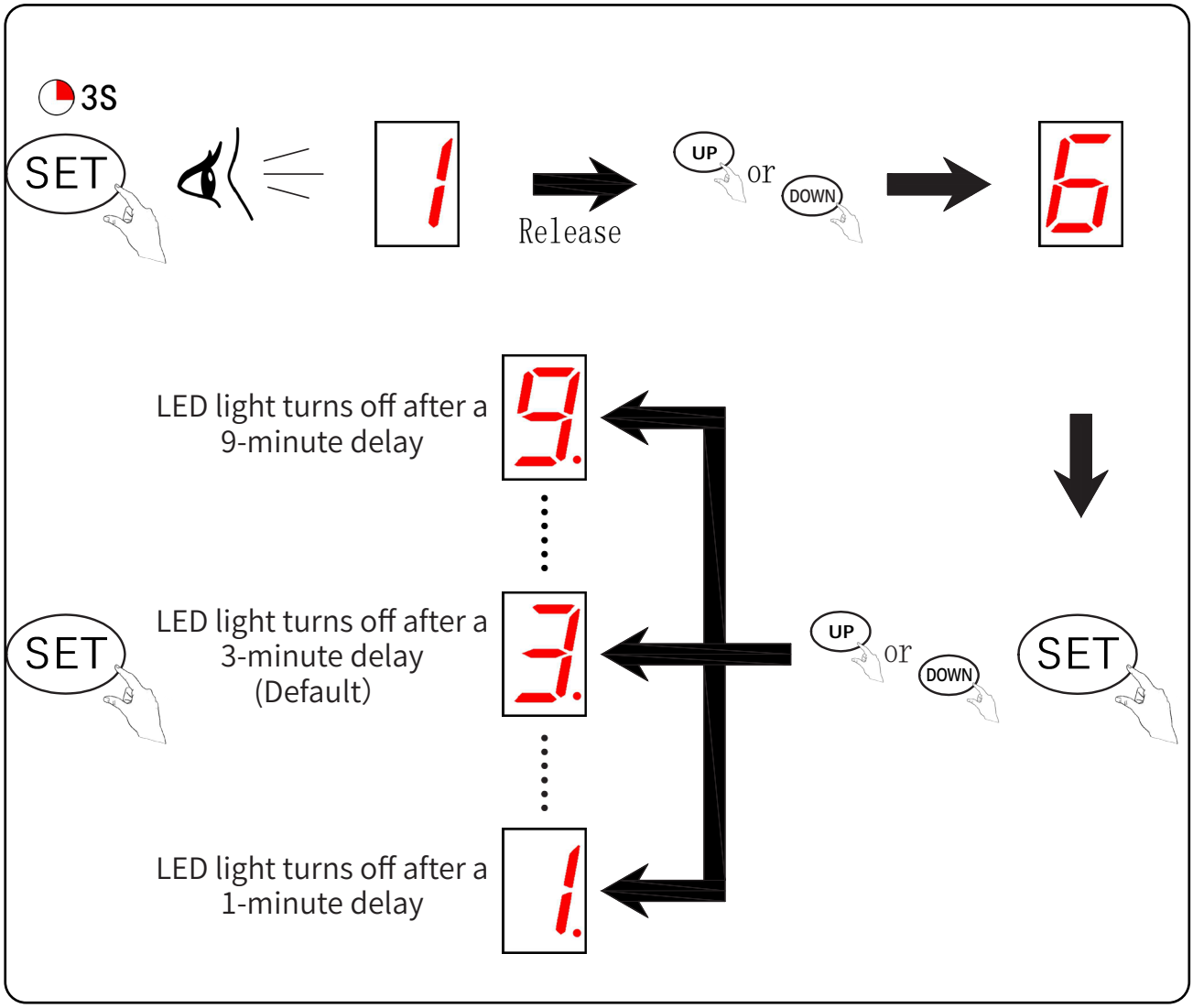
## : Auto closing trigger condition setting (Door position)

ⓘ Default: Door closes only from the fully open limit position.

ⓘ Alternative: Door closes from any intermediate position



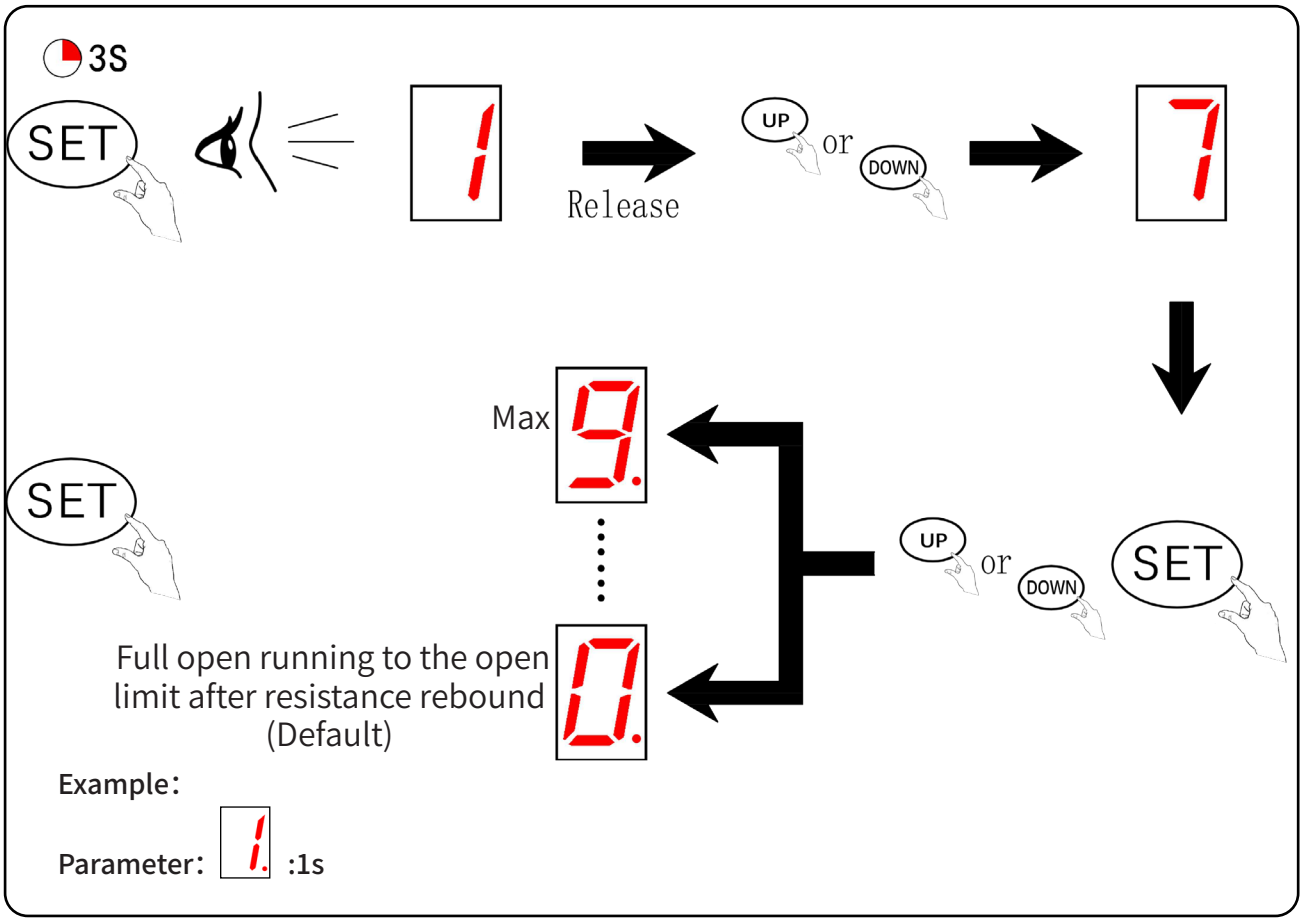
## 6 : LED off delay time setting



## 7 : Reversal running time setting (After the resistance rebound)

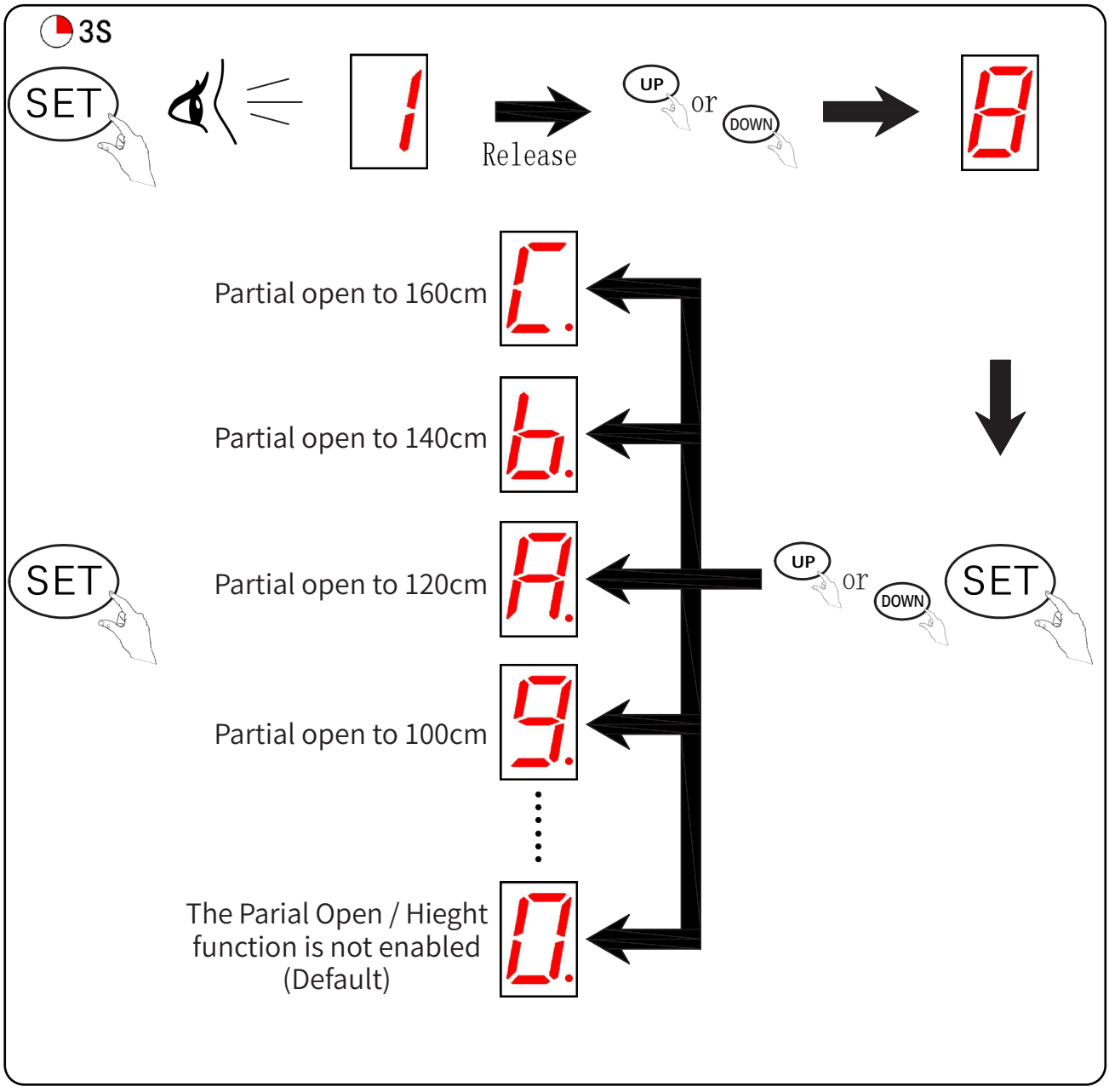
ⓘ Option 0: Door stops at open limit upon reversal (default).

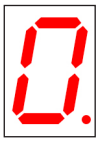
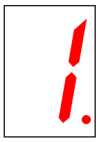
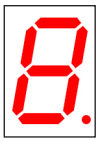
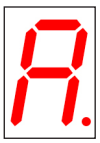
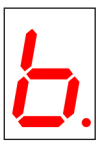
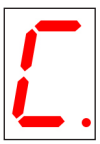
ⓘ Options 1–9: Door reverses for 1–9 seconds



## : Partial Open ON/OFF Setting/Height Setting

ⓘ When the partial open/height function is activated, the button's recognition function will be deactivated.
ⓘ When the partial open function was initially enabled and subsequently disabled, that only the initially programmed button can now control the opener.



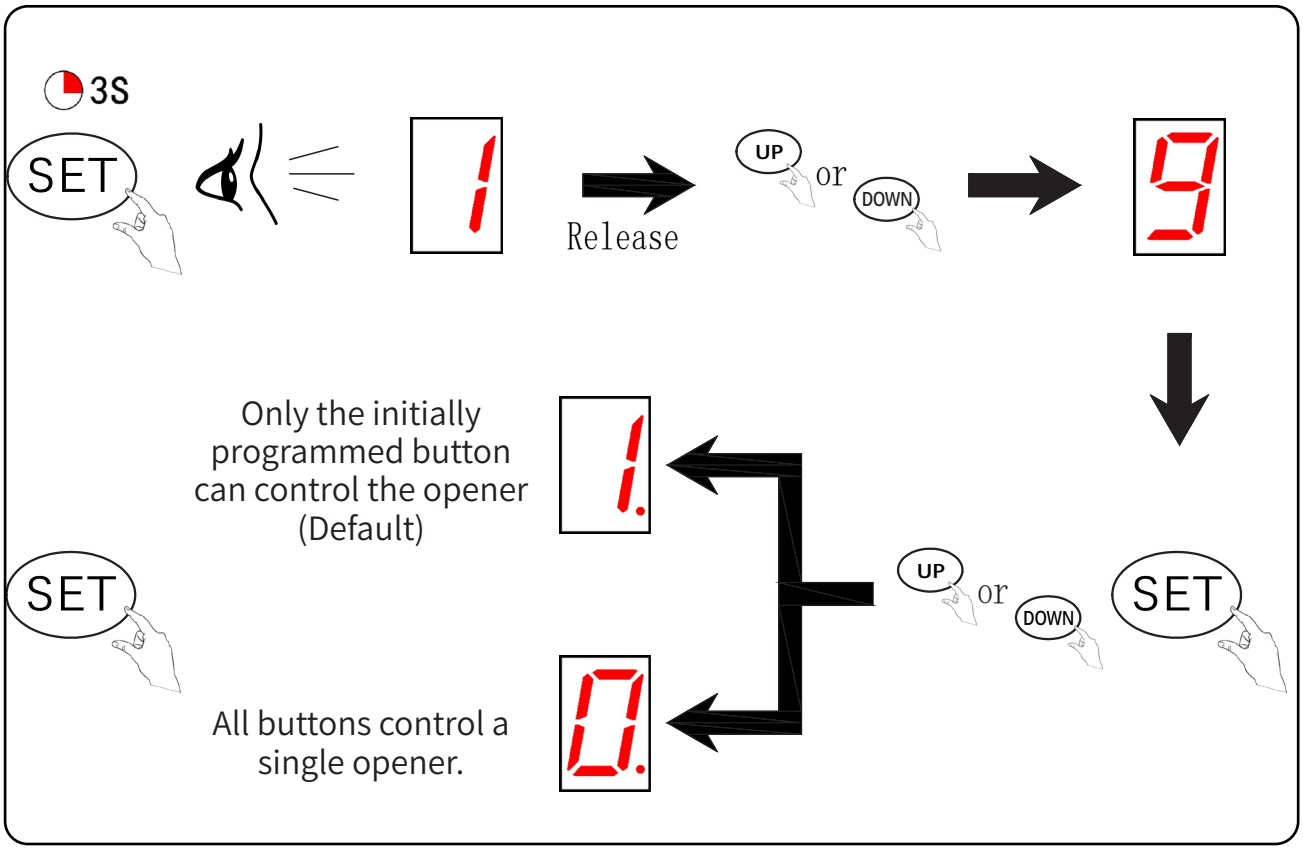
| | |
|---|---|
|  | The Partial Open / Hieght function is not enabled (Default) |
|  | Partial open to 2cm. |
|  | Partial open to 4cm. |
|  | Partial open to 8cm. |
|  | Partial open to 12cm. |
|  | Partial open to 20cm. |
|  | Partial open to 40cm. |
|  | Partial open to 60cm. |
|  | Partial open to 80cm. |
|  | Partial open to 100cm. |
|  | Partial open to 120cm. |
|  | Partial open to 140cm. |
|  | Partial open to 160cm. |

## 9 : Transmitter Button Recognition Setting

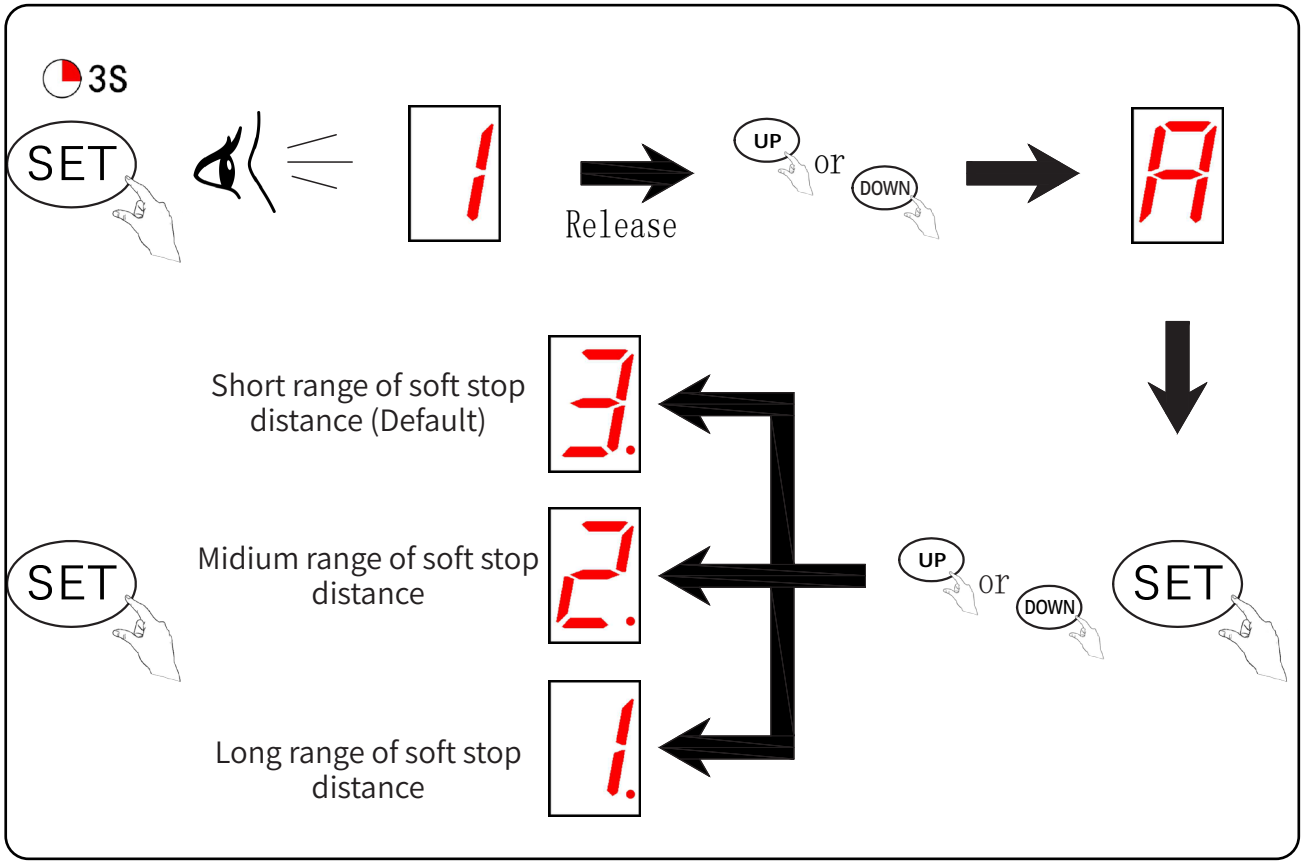
ⓘ **Note: The "8" function (Partial Open/Height Setting) must be turned off before using the transmitter recognition function**

ⓘ Parameter "0" disables button recognition. If you have only one automatic door, all four buttons on the remote can control it.

ⓘ Parameter "1" enables button recognition. Only the first button will control the opener if it is coded to the first opener. This is suitable for users with multiple automatic doors or gates.



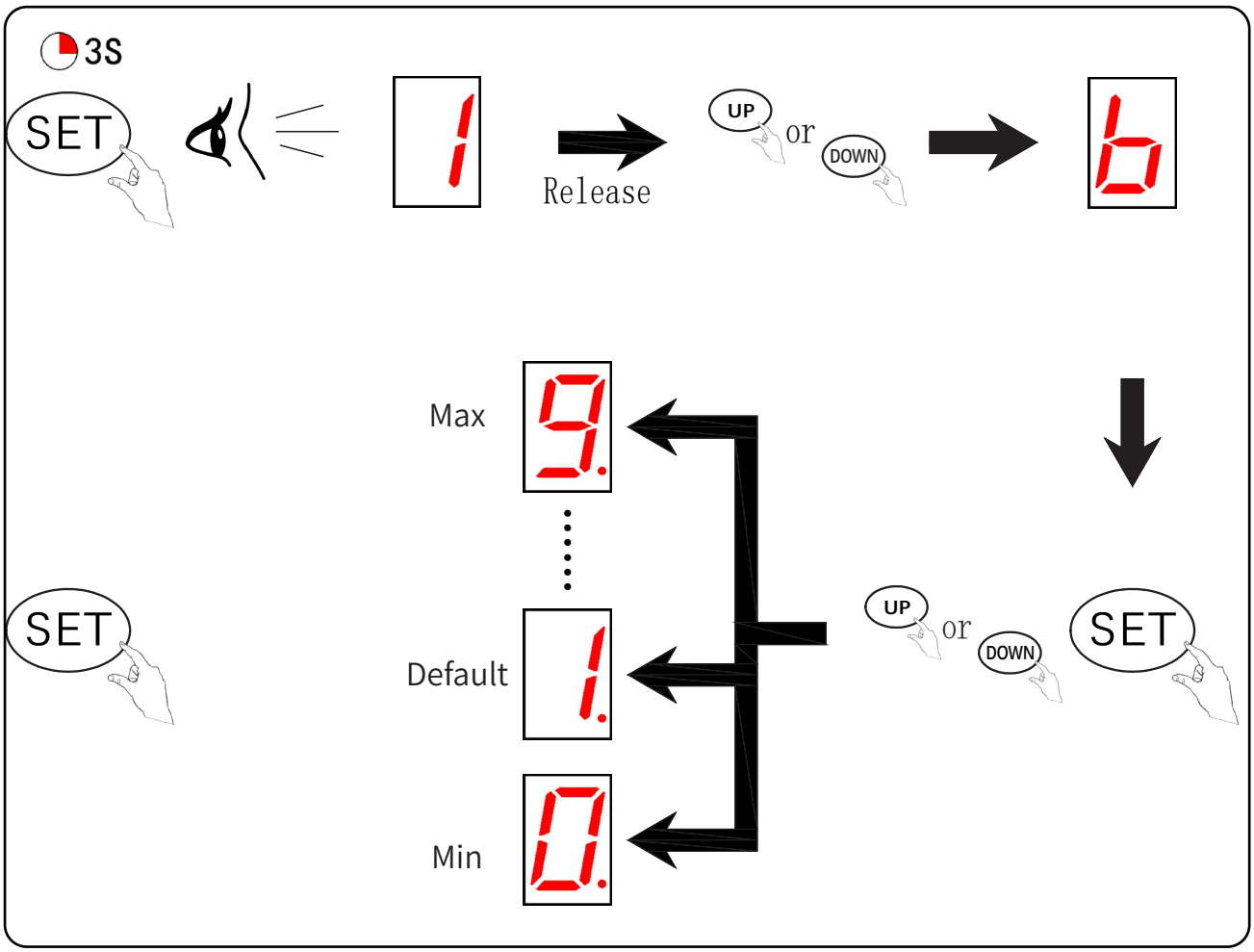
## A : Soft stop distance adjustment



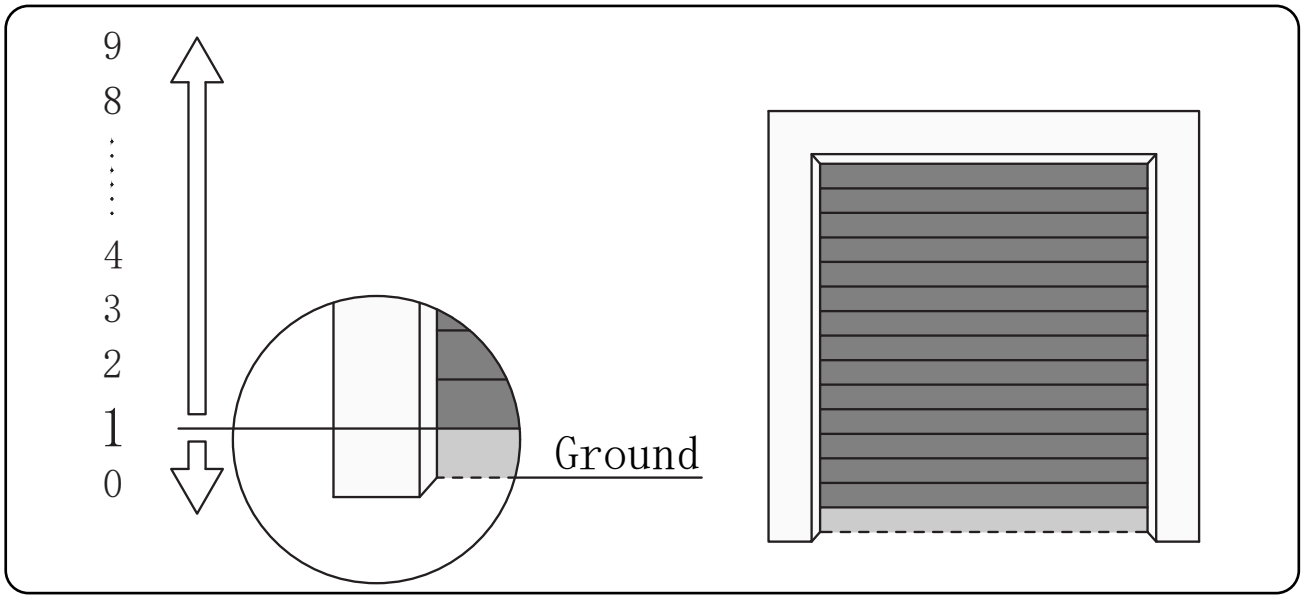
## b : Reversal Position Ignorance While obstruction

ⓘ Range: 1–9 cm (door ignores obstructions near the closed position).

ⓘ Use Case: Ideal for snowy environments.



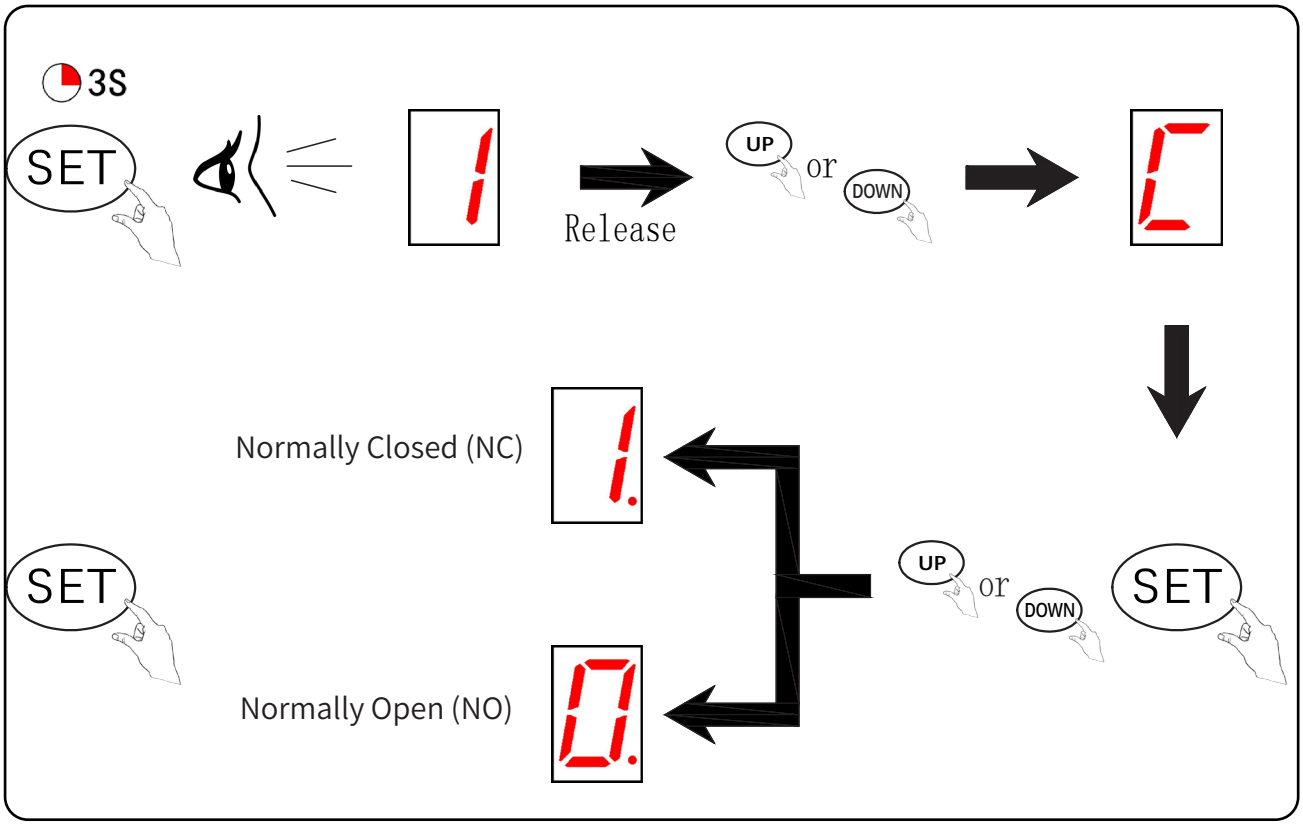

The motor stops immediately without reversing if an obstacle is detected while closing the door in the designated area.



## C : Wired pass door sensor port setting (NO/NC)

ⓘ **Connection Description: SD-GND port**

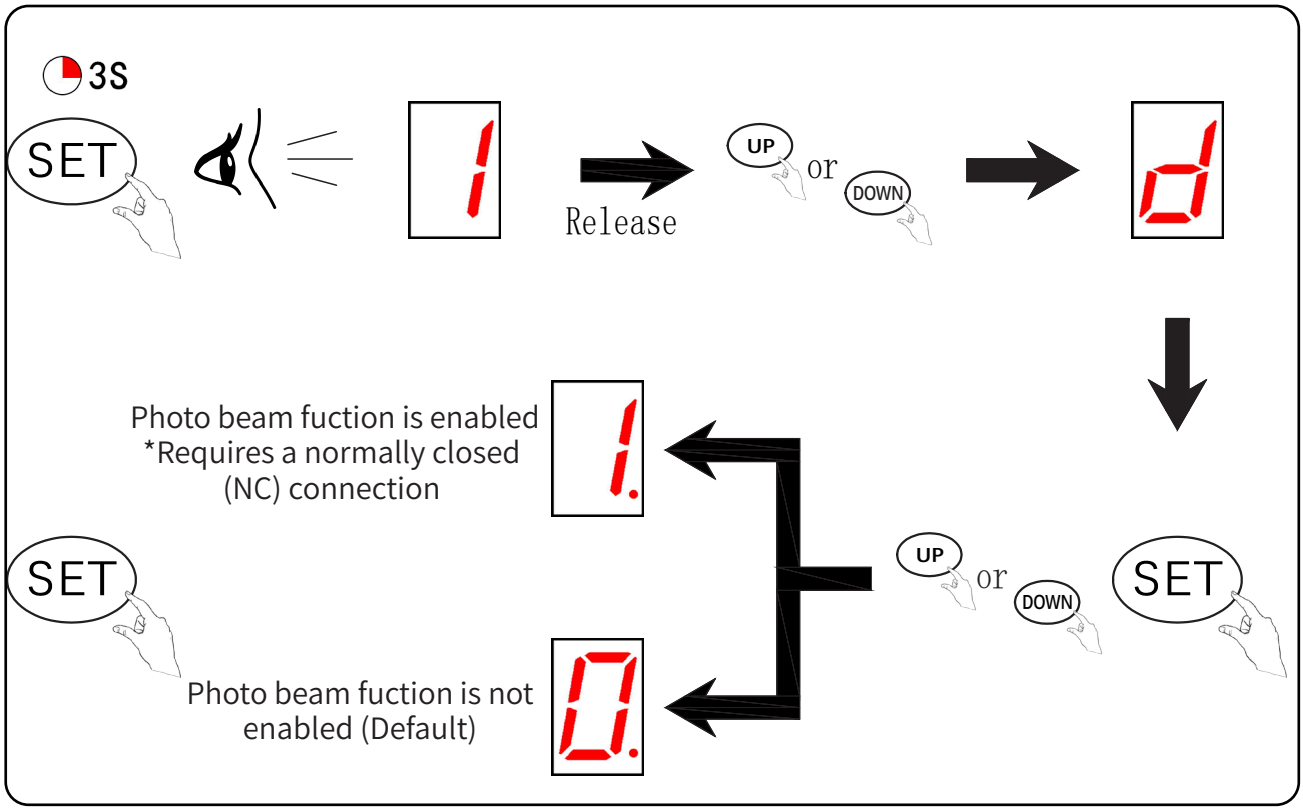
ⓘ **Note:** After the wicket door is opened, the motor will enter low-power mode and will automatically exit this mode after a while, display C.



## : Wired photo beam function ON/OFF Setting

ⓘ **Connection Description: PE-GND port**

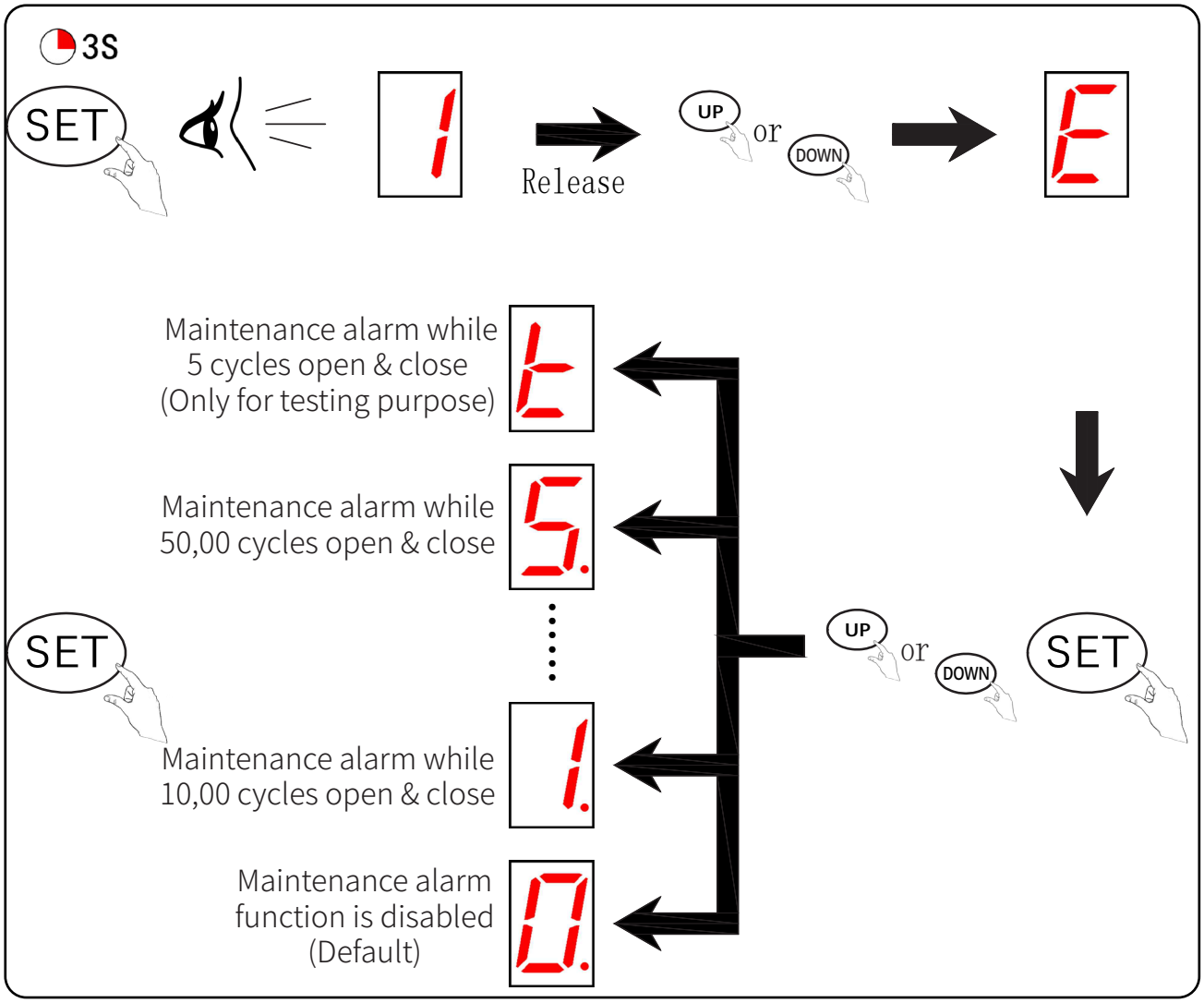
ⓘ **Note:** After the infrared function is activated, the motor will automatically exit low-power mode before entering it and display .

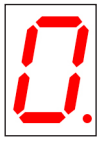
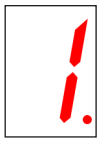
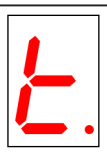


## E : Maintenance alarm-operation cycles count setting

ⓘ **Note:**

**LED flashes 10 times upon imbalance or maintenance requirement. Check the door balance or re-learn the travel limit of the garage door.**



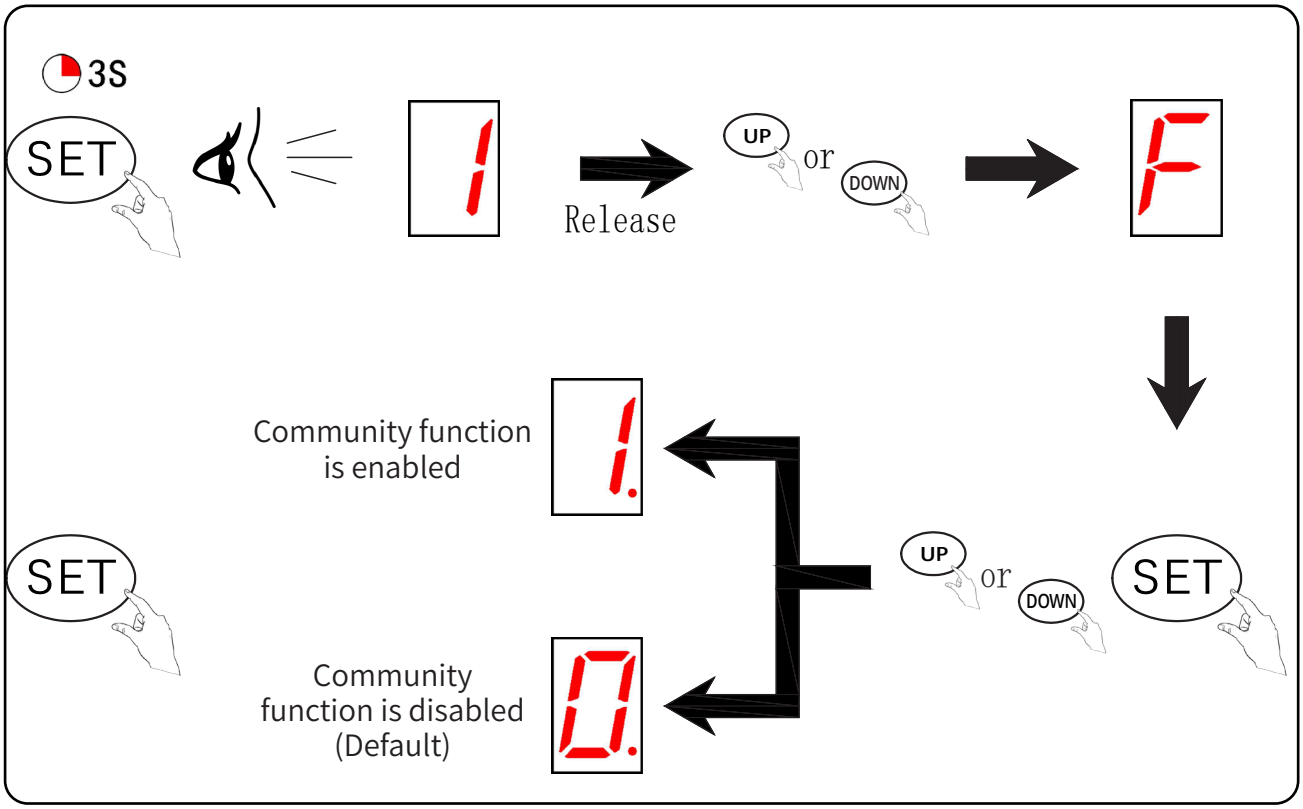
| | |
|---|---|
|  | Maintenance alarm function is disabled (Default) |
|  | Maintenance alarm while 10,00 cycles open & close |
|  | Maintenance alarm while 2,000 cycles open & close |
|  | Maintenance alarm while 3,000 cycles open & close |
|  | Maintenance alarm while 4,000 cycles open & close |
|  | Maintenance alarm while 5,000 cycles open & close |
|  | Maintenance alarm while 5 cycles open & close (Only for testing purpose) |

## F : Community function (Parking lot function) ON/OFF

ⓘ Function Activation Instructions:

· If the remote is triggered while the door is closing, the door will open immediately.

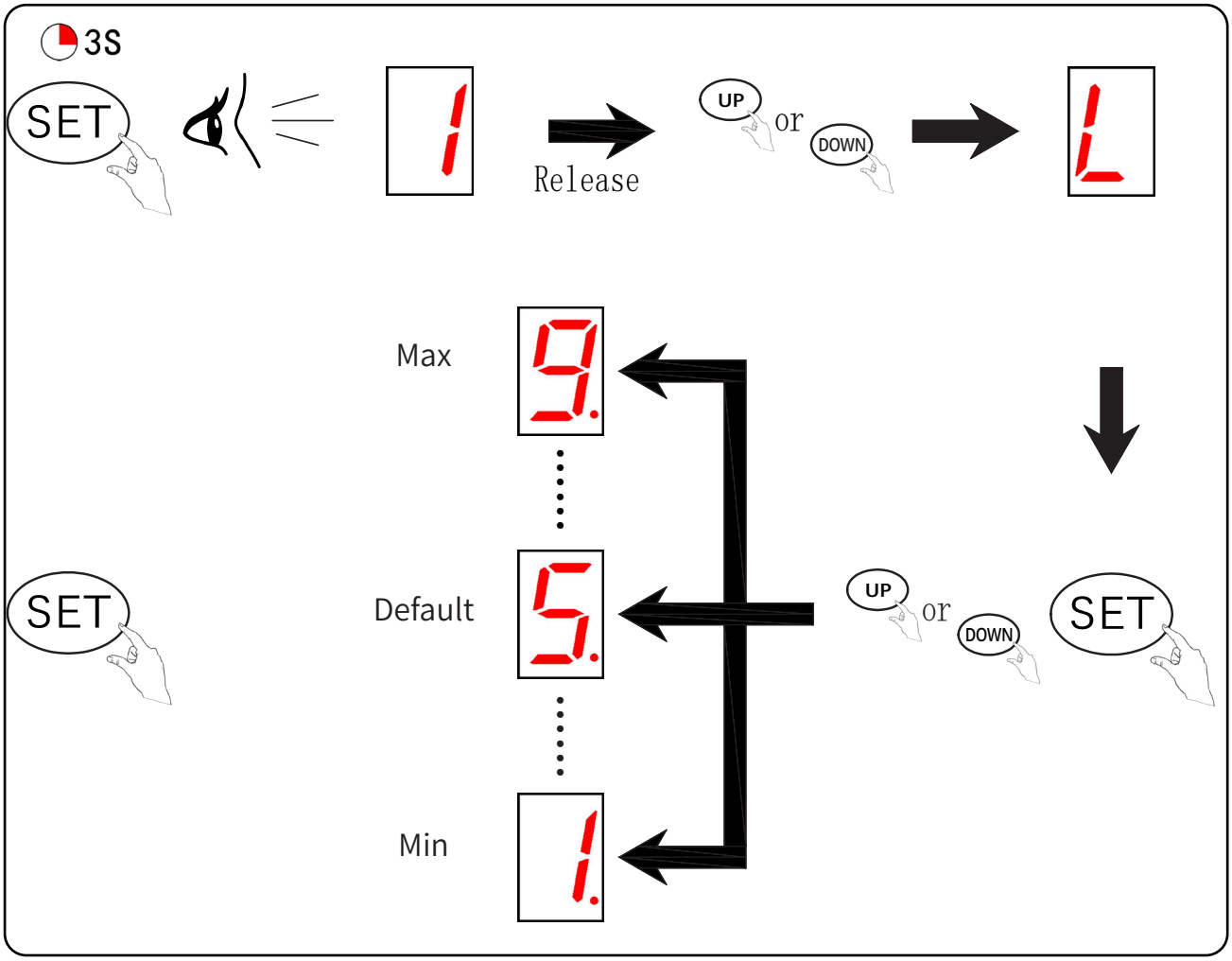
· If the remote triggered is while the door is opening, there will be no response.



## : Opening lifting force adjustment

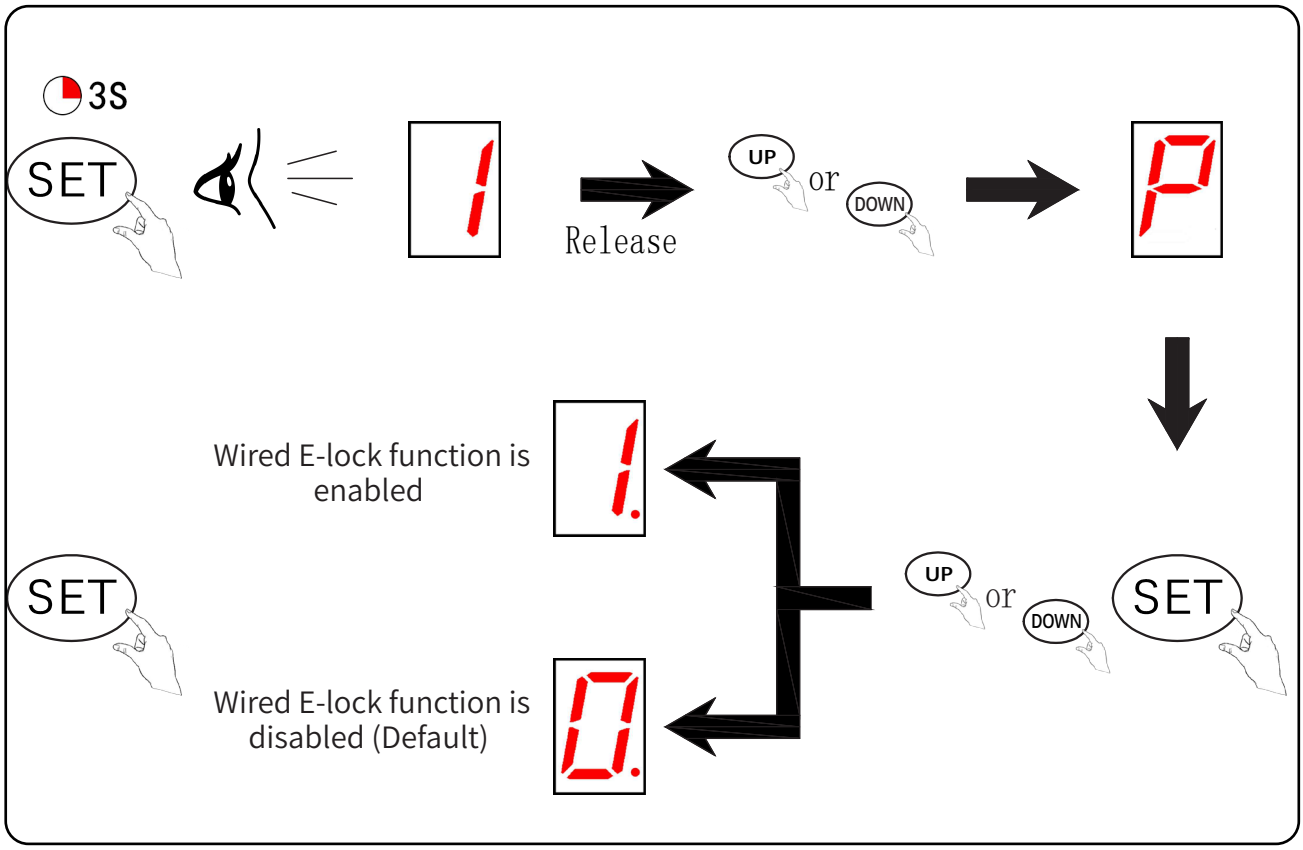
ⓘ **Caution:**

The opening lifting force has been set automatically after travel limit programmed, manual adjustment is unnecessary normally.

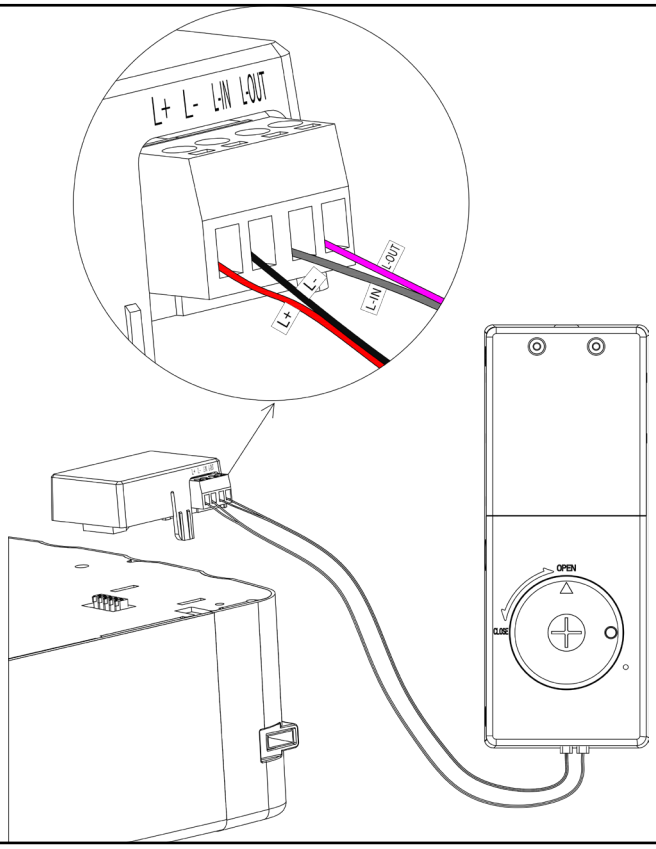


## : Wired E-Lock Function ON/OFF

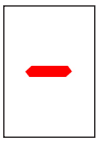
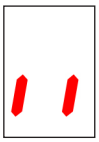
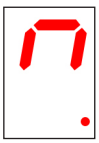
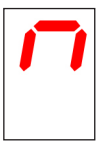
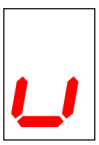
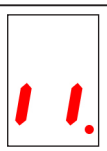
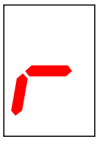
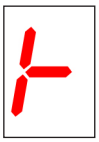
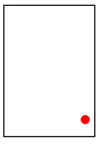
ⓘ Connect the wired E-lock to the E-lock port of the motor.



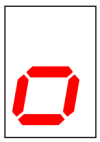
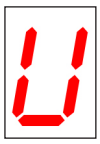
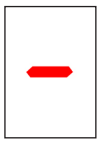
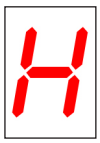
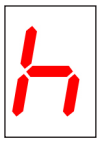
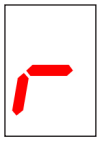
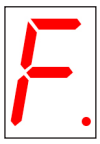
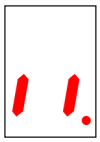
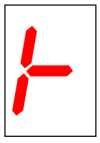

Wired E-lock wiring diagram:

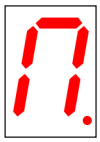
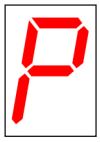


# 10.RUNNING DISPLAY CODES

| Display information | |
|---|---|
|  | No travel limit set |
|  | Standby status display |
|  | Open limit learning status display |
|  | Close limit learning status display |
|  | Door is opening |
|  | Door is closing |
|  | Pass door triggered |
|  | Wired photo beam triggered |
|  | Wired E-lock triggered |
|  | Transmitter learnning |

# 11.COMMON FAULT & SOLUTIONS

| Fault display code | Problem Description | Solution |
|---|---|---|
|  | 1. Door travel range exceeds maximum threshold (9m) or falls below minimum requirement (30cm).<br>2. The door loses balance and affects the proper operation of the motor. | 1. Learn the proper travel limit range.<br>2. Check the door balance (Mechnical parts and springs) or replace a stronger power motor. |
|  | Abnormal voltage input (A low input voltage), or unbalanced door weights. | 1. Check the power supply for a right input voltage.<br>2. Check the door balance (Mechnical parts and springs) or replace a stronger power motor. |
|  | Fail to learn the up and down limit setting<br>Improperly learn the up and down limit setting | Learn "UP" and "DOWN" limit setting again follow the manual |
|  | Hall sensor/wiring fault/<br>Component fault on PC board. | 1. Inspect connections.<br>2. Replace the PC board. |
|  | Reversed Motor Wiring to PC board. | 1. Disconnect from main power supply.<br>2. Reverse the polarity of gear motor wiring connections at the terminal block.<br>3. Programme the travel limit. |
|  | The wired photo beam function remains active despite no photo beam being installed. | 1. Deactivate the wired photo beam function refer to the manual.<br>2. Verify proper wiring termination and ensure no physical obstructions are interfering with photoelectric detection. |
|  | Exceeds limit of paired remote controls. | Delete all stored codes on the Opener (Refer the instruction manual). |
|  | Pass door safety protection function is triggered | 1. Check the pass door and ensure it has been closed compeletly. 2. Check the pass door sensor performance. |
|  | 1. Wired E-Lock is triggered or faults.<br>2. The wired E -Lock function (Parameter "P") has been enabled but no wired E-lock is installed. | 1. Inspect the electrical connections of the wired E-lock for proper termination and continuity.<br>2. Verify the operational integrity of the wired E-lock, checking for Physical damage or component malfunction. Improper retraction of the locking bolt mechanism. |

| Fault display code | Problem Description | Solution |
|---|---|---|
|  | Activated the low standby model when a USB-WIFI module | Low standby mode fails to activate when a USB-WIFI module is installed<br>Remove the USB-WIFI module before restarting low standby mode |
|  | Activated the low standby mode when the wired E -Lock function had been enabled on the motor. | Low standby mode fails to activate when the wired E-Lock function had been enabled on the motor<br>Turn off the wired E-Lock function before restarting low standby mode |

| Fault Symptom | Potential Causes | Recommended Solutions |
|---|---|---|
| No Response from Openers | 1. Power supply interruption | 1. Inspect E-Lock wiring integrity |
| | 2. Loose wiring connections | 2. Verify E-Lock functionality (ensure bolt retracts properly) |
| LCD Screen Inoperative | 1. Power supply failure | 1. Check main power input |
| | 2. Faulty E-Lock mechanism | 2. Replace damaged E-Lock components |
| Position Calibration Error | System limit setting misalignment | Reset travel limits via control panel |
| LED Indicator Continuously On | 1. Control panel malfunction | Replace control board or power supply board |
| | 2. Power board failure | |
| Caution Light Persists | Circuit board damage | Replace main circuit board |
| LED Failure | 1. Disconnected LED wiring | 1. Reconnect LED cables |
| | 2. LED unit defect | 2. Install new LED module |
| | 3. Circuit board fault | 3. Replace circuit board |
| Premature Door Reversal | 1. Obstruction detected | 1. Clear obstruction path |
| | 2. Incorrect door installation | 2. Reinstall door track |
| | 3. Travel limit misaligned | 3. Adjust force sensitivity and reset travel limits |

| Fault Symptom | Potential Causes | Recommended Solutions |
|---|---|---|
| Door Halts During Opening | 1. Safety sensor activation | 1. Clean sensor lenses |
| | 2. Track misalignment | 2. Realign door track |
| | 3. Foreign object blockage | 3. Remove obstructions |
| Remote Control Malfunction | 1. Depleted battery | 1. Replace battery |
| | 2. Antenna disconnection | 2. Secure/extend antenna |
| | 3. Signal interference | 3. Eliminate nearby RF sources |
| Remote Pairing Failure | Incompatible remote model | Use manufacturer-approved remote control |
| Motor Runs, Door Static | Motor-rail coupling failure | Inspect and reattach motor-drive rail linkage |
| Battery Failure | 1. Discharged battery | 1. Recharge battery |
| | 2. Reverse polarity connection | 2. Verify terminal orientation (+/-) |
| | 3. Damaged wiring | 3. Replace defective cables |
| Other Anomalies | External device incompatibility | 1. Disconnect non-certified devices |
| | | 2. If unresolved, replace circuit board |