MULTI-DRIVE PRO Garage & Commercial Door Opener

Control System Instructions And User Guide

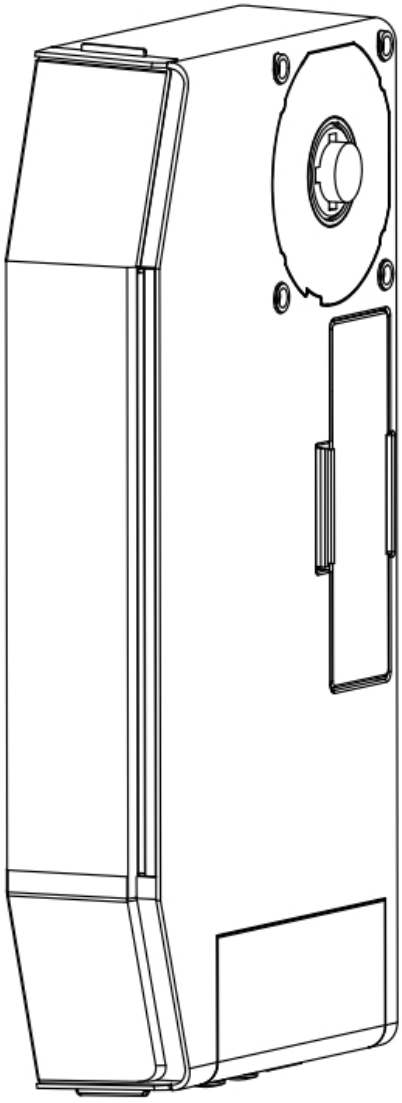

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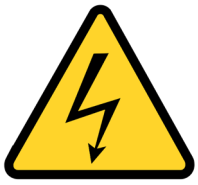
Table Of Contents

Table Of Contents

1.General Information

Warning – General hazard

Hazard for user and/ or fitter Intended to draw attention to the caption.

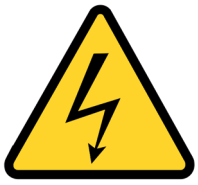


Warning – Electrical hazard

Symbol denotes a specific hazard regarding electricity.

Precautions – Important

★ **The schematic diagram is based on the product example, and the delivered product may be deviated.**



WARNING:

Do not connect the CEE plug until installation is complete, all plug-in terminals are attached and all connectors secured.

2.Installation&Installation Instructions

- Only competent and professional persons may install and fit the door. The person responsible for electrical installation of the door must also have electron qualification in order to work on such an installation. Persons may not be allowed to work on the door or its electrical installation if they are under the influence of drugs, alcohol or medication which may reduce their reactive capacity.

- The supplied product may only be converted and/or changed following consultation with the manufacturer. Original components or original replacement parts must always be used. Any liability will automatically be canceled if any other parts are used.

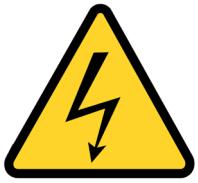
- Electric current is a hazard. Contact with live components can result in electric shock, burns and even death. Only professional and electron qualified persons may conduct work on electrical components. The installation must be disconnected from the mains power during any work. Always check the disconnection before work is conducted. When working on the electrical installation, the entire system must be protected against unintentional reconnection to the mains network by a third party.

- Before starting up the installation, it must be checked whether all connections are sound and fitted according to the user manual. It must also be checked whether all fittings of the operator and control box are sound. All electric cables must be fitted and connected in such a way that they cannot be unintentionally moved. The control box must be

programmed in such a manner that it is guaranteed to work safely and according to standards.

- Upon delivery of the door with the electrical installation, the responsible user/owner must be informed of the hazards of the door and the electrical installation. He/she must also be informed that this information must be passed on to any other users.

-The competent and professional person, and in the case of an electrical installation also an electron qualified person, is responsible for correct fitting of the door and the electrical install.



WARNING:

The control box is programmed for a clockwise (right-rotating field). Avoid any damage caused by incorrect rotation of the operator.*

3.Instructions for Use

- Children and/or any person with limited physical, sensory or mental capacity must not be allowed to operate the control box. It is also not permitted to play in the direct vicinity of an electrically operated door. These persons must not be allowed to operate the door even under supervision.
- Defective components can be extremely hazardous and can result in serious and even fatal injury. In the case of failure of a component, the door and its electrical installation must be switched off. In doing so, the installation must be disconnected from the mains network. This disconnection must take place in such a manner that accidentally switching the door back on is reasonably impossible. The defective component or components may only be repaired and/or replaced by a competent and professional person.
- The electrical installation must always be in good condition when in use. It is essential that proper maintenance and management takes place as given in the user manual.
- The electrical installation and its components may only be deployed for the described purpose.
- Children and/or any person with limited physical, sensory or mental capacity must not be allowed access to hand-held openers and other control components. These must be stored safely and out of reach, in order to avoid unintentional and unauthorized use.
- The control box must not be used in environments where there is a risk of condensation.

4.Maintenance, Disassembly and Disposal

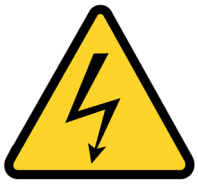
Maintenance

The operator and control box are maintenance-free. The following inspections are to be conducted during maintenance.

- Check the complete fitting of the operator and control box.
- Check the balance of the door and correct this when necessary .
- Check the functioning of the end switch, encoder and the limit switch setting.
- Check the functioning of all (safety) switches.
- Check the functioning of any safety edge or light curtain.
- Check the functioning of any braking device.
- Conduct a general (audio) visual inspection.

The supplied product may only be converted and/or changed following consultation with the manufacturer. Original components or original replacement parts must always be used. Any liability will automatically be canceled if any other parts are used.

Disassembly



HAZARD:

With a view to the hazards of maintenance work, this may only be conducted by a competent and professional person.*

The installation manual can be used as a reference for disassembly of the operator and control box. The described adjustment work does not apply in that case.

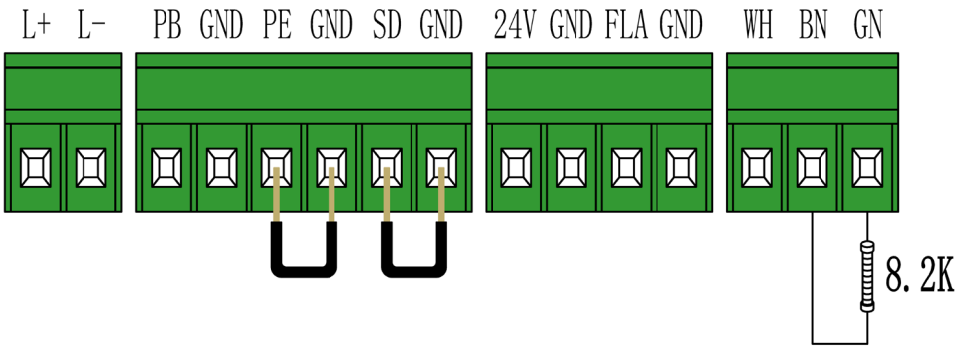
Disposal

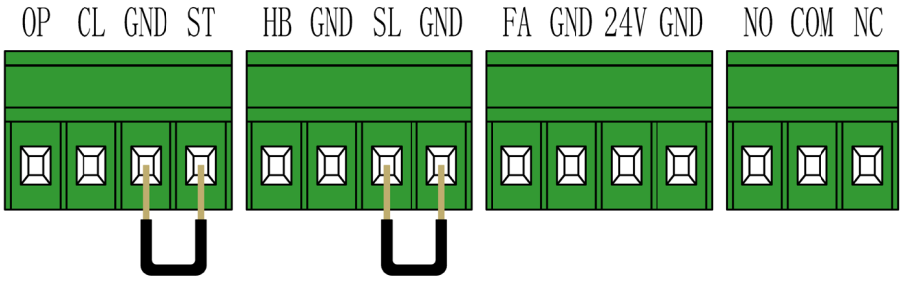
- When disposing of waste products, these must be separated into metals, plastics, electrical parts and lubricants.
- The applicable national rules must be taken into account for disposal of materials .
- The product must not be disposed of with regular household waste, and must be disposed of as electronic equipment.

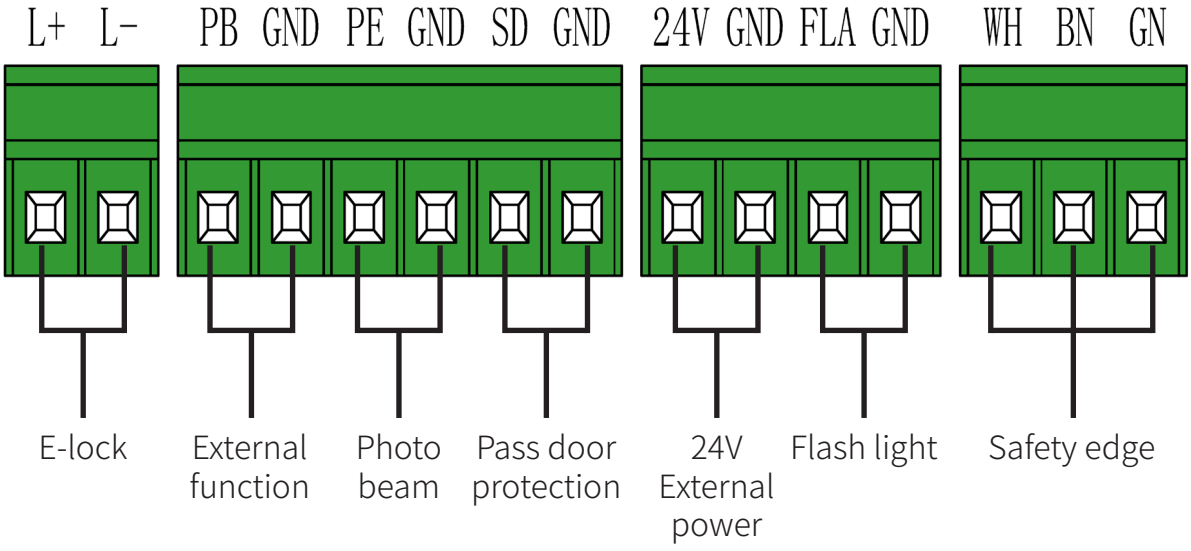
5.Electrical Parameters

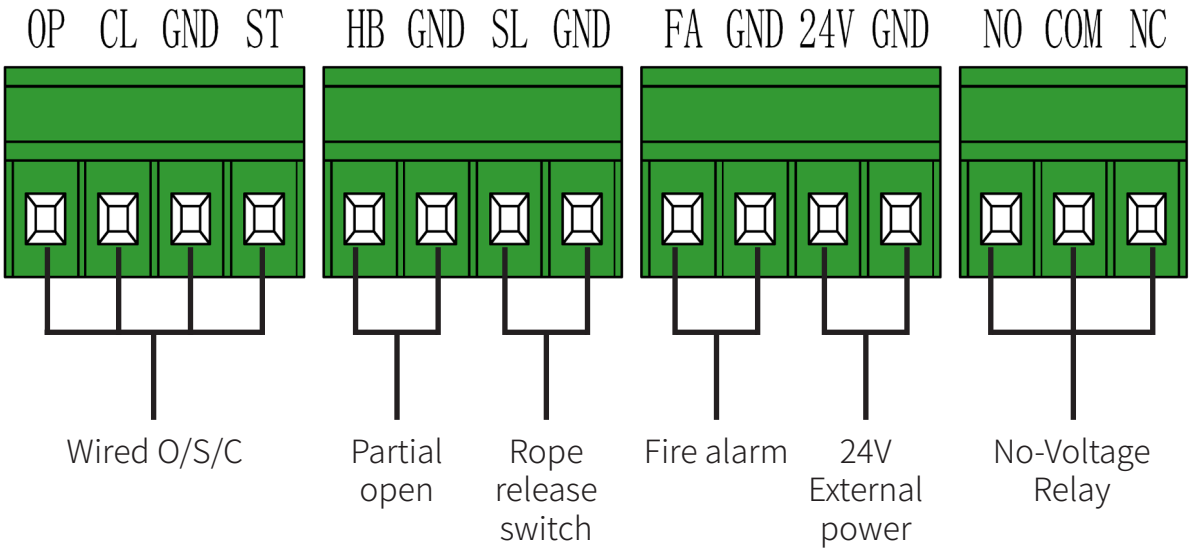
Series Name	Multi Drive
Dimensions (L*W*H mm)	443*221*73
Installation	Vertical, No Vibration (without rail adapter)
Power supply frequency (HZ)	50/60
Power supply voltage (±10%)	110V-127V or 220V-240V
Maximum Current Output (A)	13
Phase protection current (A)	3.15
External power supply：24V	24V(DC)
	0.5A
Bulti-in lithium battery input voltage（V）	29.6
System Control Voltage（V）	3.3
Standby Power Consumption (W)	5
Temperature range (° C)	-20°C～ +60°C
Enclosure protection level	IP43
Limit switch	DES (Digital Limit Switch)

6.Port Instructions

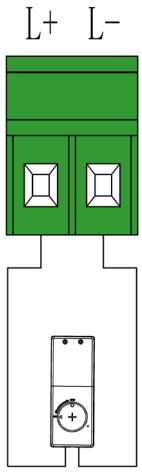
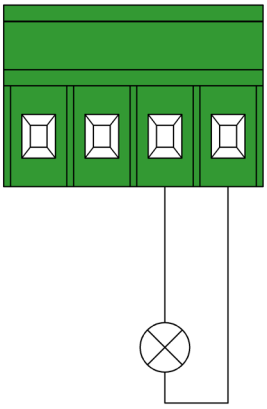


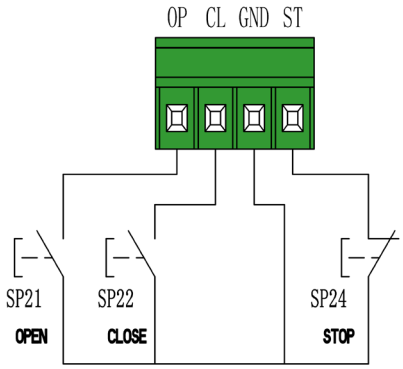
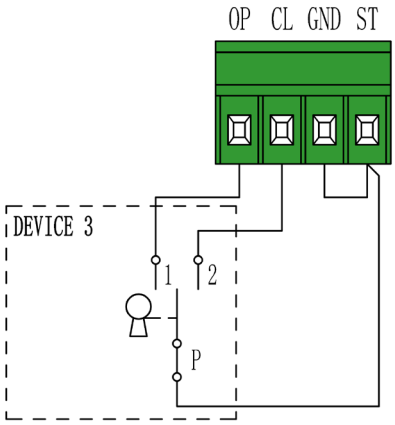


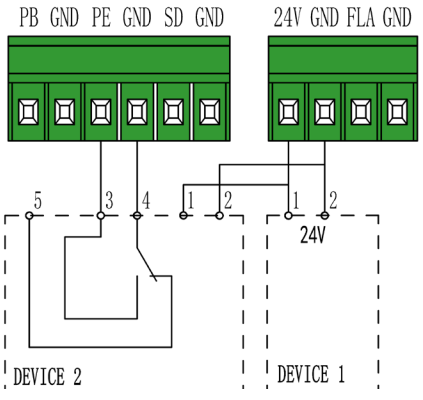
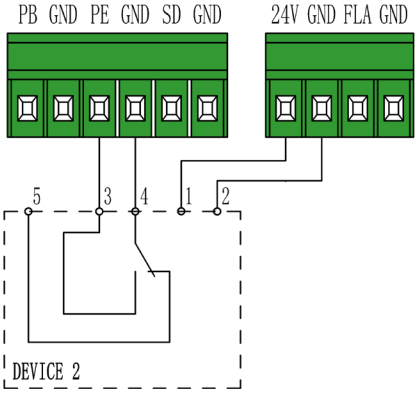


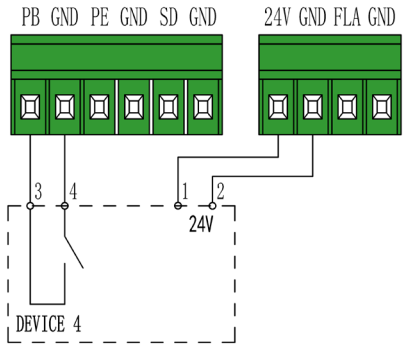
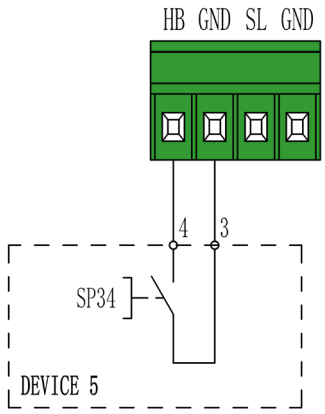


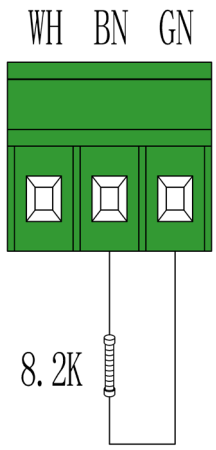
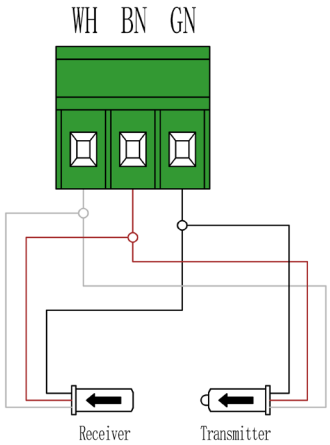
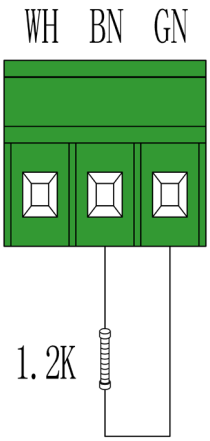
7.Electrical Installation Wiring Instructions

Wired electronic lock	Flash light
	

PB wiring	
Wired O/S/C	Self-Resetting Switch
	

Infrared port wiring	
Standard infrared wiring	Reflective infrared wiring
	

External function port wiring	
External Receiver	Partial open control button
	

Safety Edge Mode Switching and Wiring Operation Instructions		
Electrical safety edge 8.2K	Three-wire infrared safety edge	DW air switch 1.2K
		

Safety Edge Mode Switching Steps :

1. Before switching the safety edge port mode,please ensure that the power is disconnected.
2. After the power is disconnected, replace the safety edge device that needs to be connected.
3. Reconnect the power, and the safety edge port will automatically recognize the change, completing the safety edge mode switch.

⚠

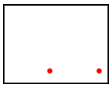
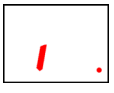
Precautions:

1. Please note if the power is not disconnected before switching the safety edge port mode, the safety edge port will not be able to automatically recognize the change. In this case, the control box's display may show an error message.
2. If both a wired safety edge port and a wireless safety edge device are connected at the same time, the device will automatically prioritize the recognition of the wireless safety edge device. In this case, the wired safety edge port will become inactive.

8.Control box function button introduction

	Display Digital
	Wireless Device Indicator
	Operation Button

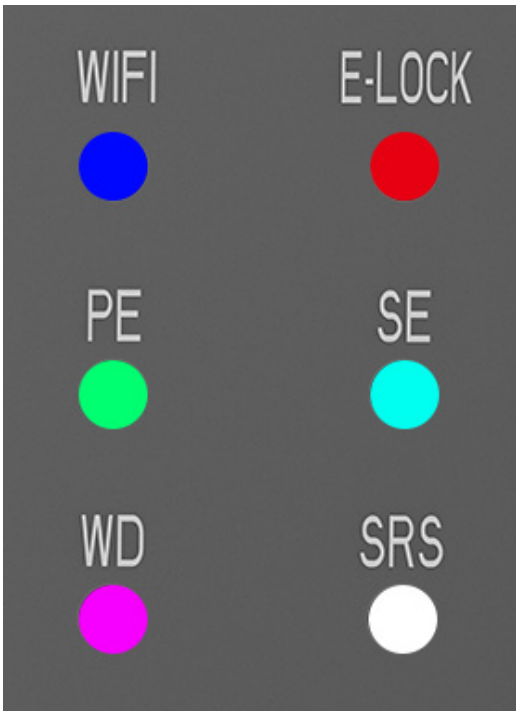
8.1 Control panel button operation instructions

Item	Button	Function Description
1.		**Short press:** Menu confirmation button **Long press:** Enter the menu
2.		**Short press:** Enter coding mode,display menu,return to the standby screen  **Long press for 8 seconds:** Clear all remote control codes and display 
3.		**Short press:** Door opening button/ move up to adjust the function menu / Travel limit setting "Door opening" button
4.		**Short press:** Door closing button / Move down to adjust the function menu / Travel limit setting "Door closing" button
5.		**Short press:** Display the current door opening speed parameters, default parameters:  (Default) **Long press:** adjust the door opening speed, parameter range:  ~ 
6.		**Long press for 3 seconds:** Enter the wireless device pairing state, the indicator light is always white, and the display  **Long press for 8 seconds:** Clear all wireless paired devices, and release the button when the indicator light flashes red.

Item	Button	Function Description
1.		**Short press:** Display the current door opening force level parameters, default parameters:  (Default) **Long press:** adjust the door opening force level, level range:  ~ 
2.		**Short press:** Display the current door opening force level parameters, default parameters:  (Default) **Long press:** adjust the door opening force level, level range:  ~ 

8.2 Detailed Description of the LED Status on the Control Box Panel Label Equipment

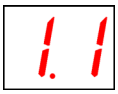
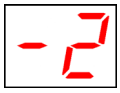
8.2.1 The following figure is a reference for the LED color display

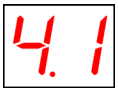
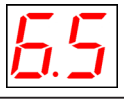


8.1.2 Wireless security device status corresponds to different colors of LED display:

LED Color / Device Name	Red	Green	Cyan	Purple	White
E-LOCK: Wireless E-LOCK	Device is paired and triggered	Device is paired and not triggered	Low battery, Device is not triggered	Low battery, Device is triggered	Device signal lost
PE: Wireless Photo Beam	Device is paired and triggered	Device is paired and not triggered	Low battery, Device is not triggered	Low battery, Device is triggered	Device signal lost
SE: Wireless Safety Edge	Device is paired and triggered	Device is paired and not triggered	Low battery, Device is not triggered	Low battery, Device is triggered	Device signal lost
WD: Wireless Wicket Door	Device is paired and triggered	Device is paired and not triggered	Low battery, Device is not triggered	Low battery, Device is triggered	Device signal lost
SRS: Wireless Slack Rope Switch	Device is paired and triggered	Device is paired and not triggered	Low battery, Device is not triggered	Low battery, Device is triggered	Device signal lost

9.Parameter Overview

Par	Function Description	Description of default parameters	P.
	Travel limit settings	Learning the open limit and close limit of motor	19
	Motor rotation direction setting	 : Motor standard direction (Default)	21
	Remote control function selection	 : Standard function, single key cycle (Default)	21
	Open/close button model setting	 : Click to open the door, click to close the door (Default)	23
	Safety edge pre-limit fine-tuning (only applicable to DES electronic limit)	 : Safety edge pre-limit area parameters (Default)	24
	Motor open limit fine-tuning (only applicable to DES electronic limit)	 : Actually the limit shifts towards the door closing direction (Default)	25
	Motor close limit fine-tuning (only applicable to DES electronic limit)	 : The actual close limit shifts toward the door opening direction (Default)	26
	Door closing speed adjustment	 : Door closing speed parameter (Default)	28
	Door opening speed adjustment	 : Door closing speed parameter (Default)	28
	Soft stop range adjustment	 : The closing speed reduction distance is the door travel limit 20% (Default)	29
	Soft start range adjustment	 : The door opening speed reduction distance is the door travel limit 15% (Default)	30
	Closing soft stop speed adjustment	 : Door closing soft stop parameters (Default)	31
	Opening soft stop speed adjustment	 : Door opening soft stop parameters (Default)	31
	Soft stop time setting	 : The slow stop time when the motor is running is 0.7 seconds (Default)	32

Par	Function Description	Description of default parameters	P.
	Soft start time setting	 : Motor start time 0.7 seconds (Default)	33
	Motor close limit overflow time setting	 : Close limit overflow time 0.20s (Default)	34
	Obstruction reversal sensitive adjustment	 : Response time of safety edge encountering obstacles 0.005 seconds (Default)	35
	Photo beam obstruction reversal sensitive adjustment	 : Infrared resistance reaction time 0.5 seconds (Default)	36
	Reverse running time adjustment	 : Motor reverse running time 0.005 seconds after encountering resistance (Default)	37
	Automatic closing function	 : Automatic door closing function off (Default)	38
	Automatic closing condition function setting	 : Open limit executes automatic door closing (Default)	39
	Relevance setting of automatic closing and photo beam function	 : After the PE port is triggered, stop the automatic door closing timer and turn off the automatic door closing function (Default)	40
	PE port function setting	 : Standard infrared function (Default)	41
	Partial open function setting	 : Feature not enabled (Default)	44
	PB port function setting	 : Switch stop cycle function (Default)	46
	Flash light port function setting	 : Function disabled (Default)	47
	Electronic lock function setting	 : Function disabled (Default)	48
	Partial open port function setting	 : Semi -Opening Function (Default)	49
	Relay function setting	 : Function is turned off (Default)	50

Par	Function Description	Description of default parameters	P.
6.6	Safety edge function identification	Query function: View the current safety edge type	56
7.0	Courtesy light delay off function setting	03 : Delay 3 minutes to close (Default)	58
7.1	Restore factory setting	All function settings are set to factory settings! Except for the motor's cumulative running time and the number of maintenance alarms.	58
7.2	Customer version inquiry	Query function: query the customer code version information of the IDO controller	59
7.3	Software version inquiry	Software version information of IDO controller	59
7.4	Motor running cycles inquiry	Query function: query the cumulative running times of the motor	59
7.5	Inquiry of the latest 4 fault codes of the motor	Query function: query the last 4 fault codes of the motor	60
8.0	Maintenance alarm times setting	00 : The number of maintenance alarms is not enabled (Default)	61
8.1	Maintenance alarm times inquiry	Query function: query the remaining number of maintenance alarms	62
9.0	Fire alarm port function setting	03 : Fire Alarm Normally Open Port Triggers Door Opening for Emergency Escape (Default)	63
9.1	Transmitter invalid function setting	00 : Function off (can also be enabled by standard remote control) (Default)	64
9.2	Display button lock function	00 : Function off (Default)	65

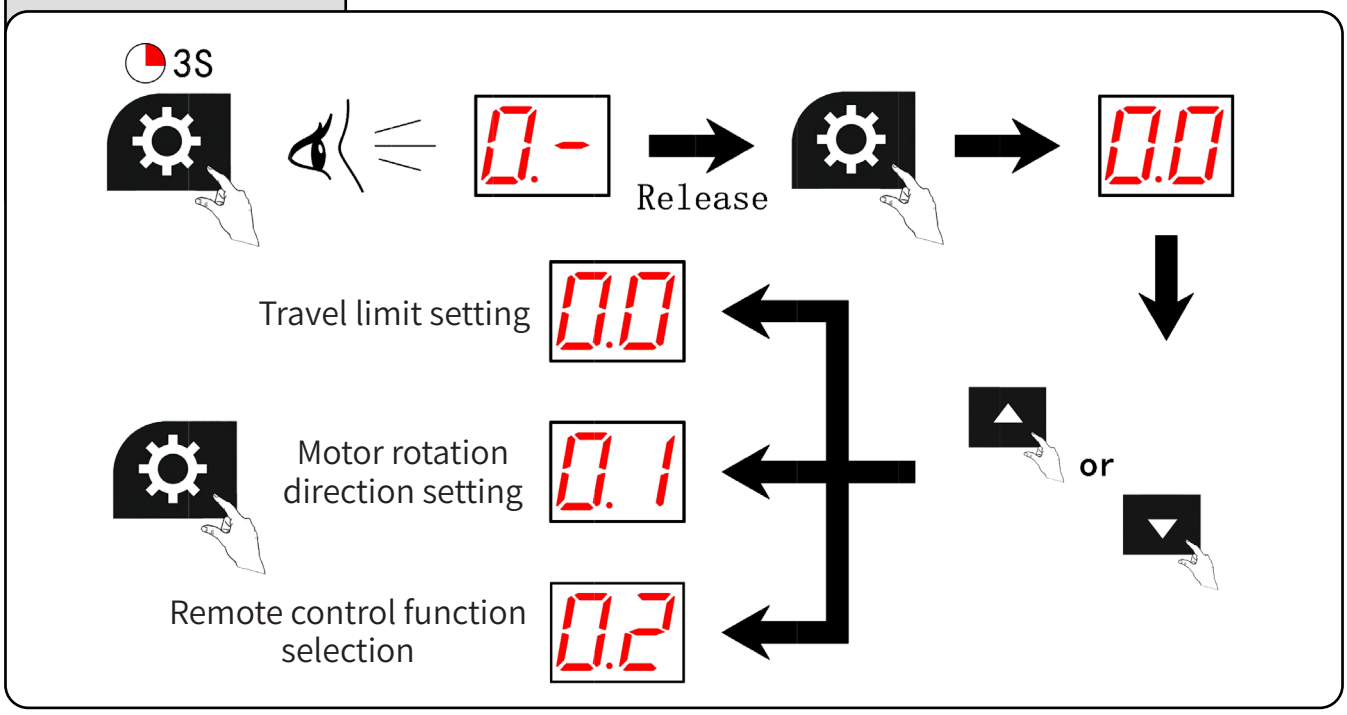
Par	Function Description	Description of default parameters	P.
9.3	Pre-warning time setting before door closing (The parameter time setting range is: 0 seconds to 9 seconds. Compatible with the warning light function port 00-06 in section 6.2, the corresponding function menu can be seen after it is enabled)	00 : Pre-operation warning time is set to 0 seconds (default)	65
9.4	Pre-warning time setting before auto - closing (compatible with the application of function 00-06 in section 6.2), and it is necessary to enable the automatic door closing function menu in section 4.0	00 : The warning time is 0 (Default)	66
9.5	Warning light flashing frequency setting (The warning light has a flashing frequency of 60 times per minute, compatible with the application of the warning light function port 00-06 in section 6.2, the corresponding function menu can be seen after it is enabled)	03 ： The flashing frequency of the warning light is 60 times per minute (Default)	66
9.6	Flash light off delay setting after door closed (Compatible with the warning light function port 00-06 in section 6.2, the corresponding function menu can be seen after it is enabled)	00 ： Warning light delay function off (Default)	67
A.0	Relay module function - traffic light pre-warning time setting before the dust operation (This menu is only visible when the traffic light function 01-06 is enabled for the relay port in menu 6.5.)	00 ： The warning time is 0 (Default)	69

Par	Function Description	Description of default parameters	P.
A. 1	Relay module function -traffic light pre-warning time setting before Auto-closing (The parameter time ranges from 0 to 120 seconds (x = nx 10). This menu only enables the 01-06 traffic light function in the trunk port of menu 6.5 and requires opening the 4.0 automatic door closing function menu)	00 ： The warning time is 0 (Default)	69
A.2	Relay module function - traffic light traffic light flash frequency setting (This function is used to adjust the flashing frequency of relay a. This menu is only visible when the traffic light function 01-06 is enabled for the relay port in menu 6.5)	03 ： Relay - X66 flashing frequency 60 times/minute (Default)	70
A.3	Relay module function traffic light Traffic light off delay time setting (This function is used to adjust the delay release time when the relay port reaches the lower limit. This menu is only visible when the traffic light function 01-06 is enabled for the relay port in menu 6.5)	00 ： Relay - X66 Release (Default)	71
A.4	Relay module function - traffic light Traffic light flash ranges setting during closing (This function is used to adjust the activation of the area above the relay port's lower limit. This menu is only visible after enabling function 30 for the relay port in menu 6.5)	00 ： 5% area above the close limit (Default)	72
A.5	Relay module function traffic light Traffic light flash ranges setting during opening (This function is used to adjust the activation area below the relay port upper limit. This menu is only visible after enabling function 31 in the relay port open function in menu 6.5)	00 ： 5% area below the open limit (Default)	73

10.Parameter Details

Menu 0： Motor travel limit setting

Function Guide



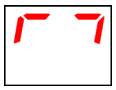
Travel limit setting

！ Avoid any damage caused by incorrect rotation during operation. Manually open the door halfway before setting the stroke for the first time.

！ Once you enter the itinerary setting menu, the previous itinerary will be cleared, and you need to learn the itinerary again.

After setting the upper and lower travel distances, the motor enters the self-learning state for one door opening and closing cycle. Please wait patiently for the self-learning state to complete.

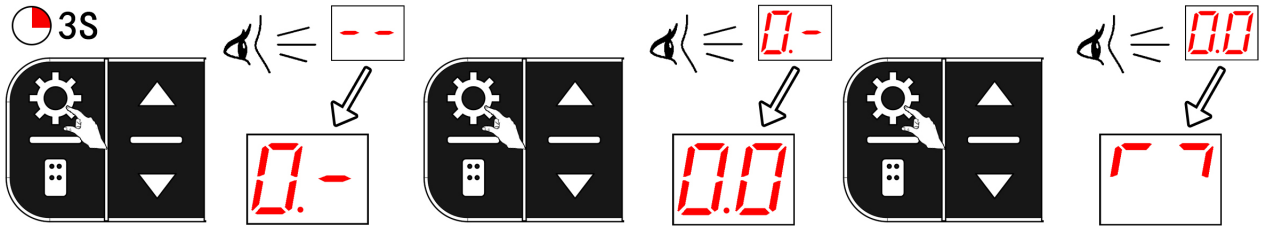
Motor travel limit setting:

First learn the open limit of the motor travel limit 

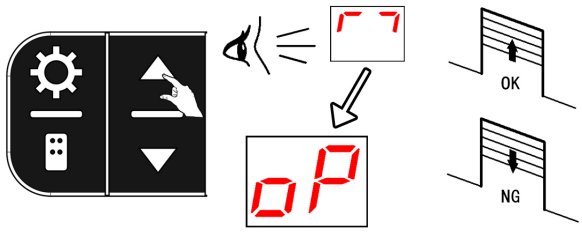
Re-learn the close limit of the motor travel limit 

For detailed operation steps, please see the figure below:

1. Enter motor travel setting

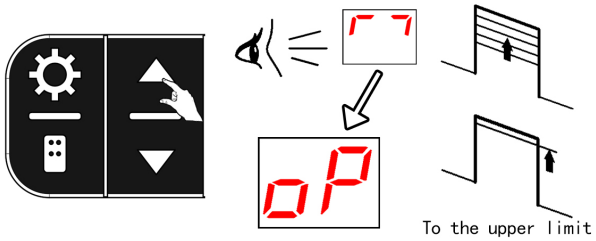


2.Check motor output direction and door running direction

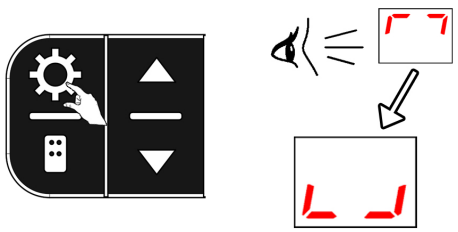


Note: If the motor running direction does not match the door running direction, please exit the learning process first and adjust the motor running direction in the 0.1 menu.

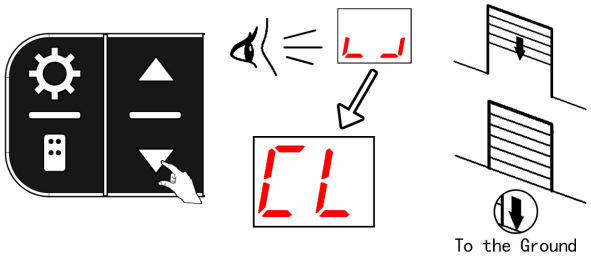
3.Start the travel limit set, open the door and move to the open limit position



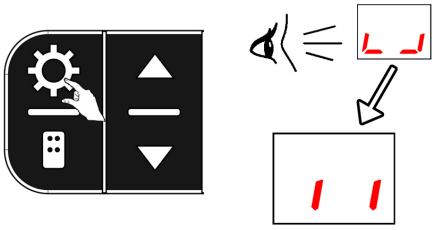
4.Save upper limit position



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



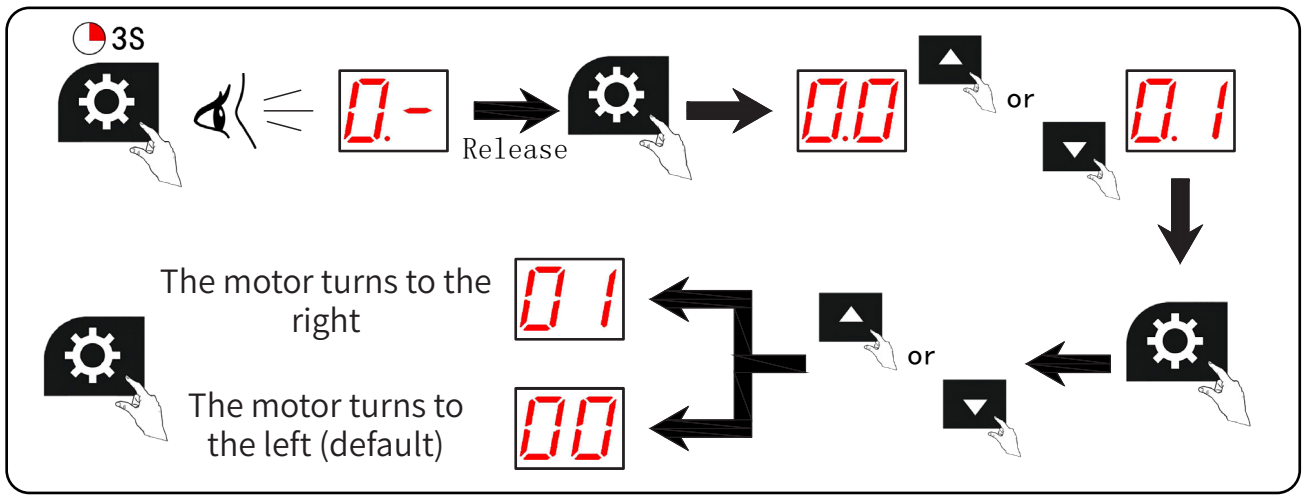
6.After confirming the close limit position, the motor enters into self-learning. When the motor self-learning is complete, the travel limit set is complete.



0.1 Motor rotation direction setting

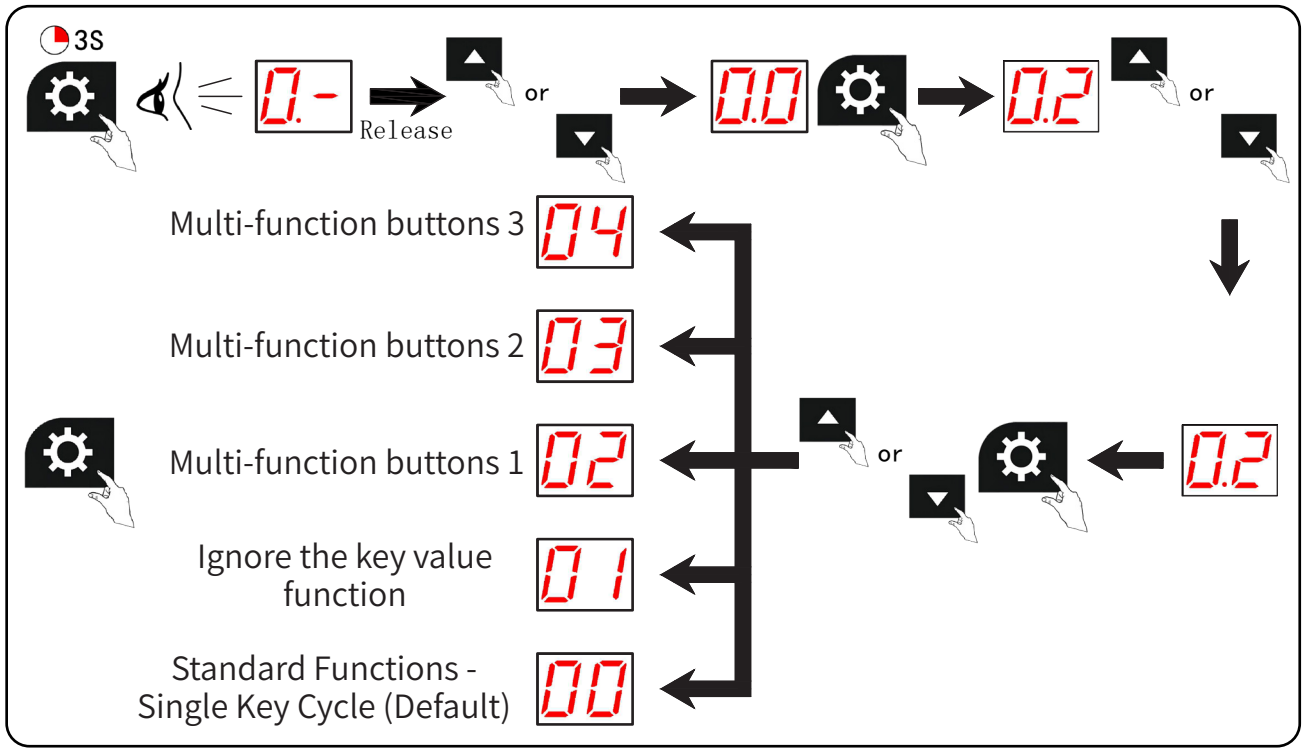
! Before setting the motor travel limit, please ensure that the motor's door-opening direction is consistent with the door body's operation direction before learning the Travel limit.

! If the motor's door-opening direction is inconsistent with the door body's operation direction, please change the motor's rotation direction.



0.2 Remote control function selection

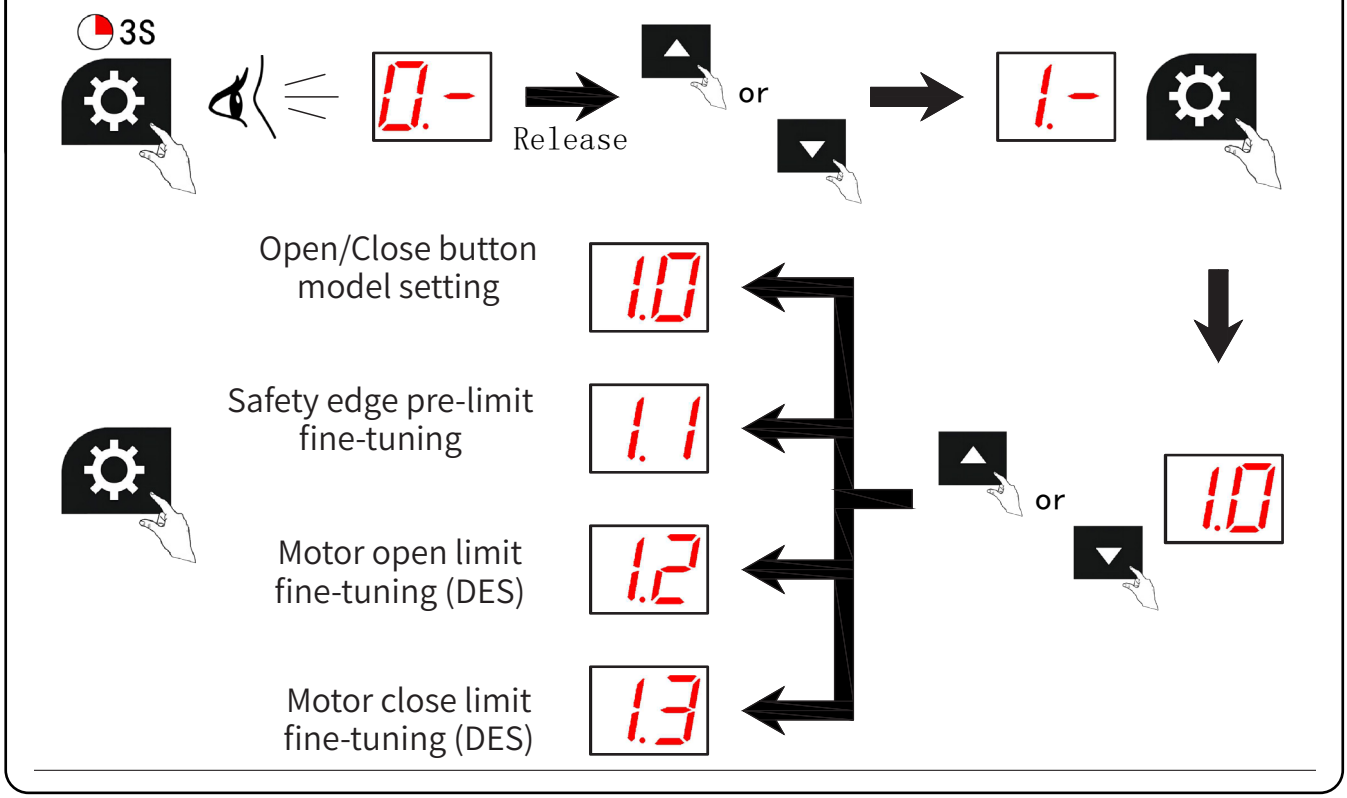
! Default maximum number of remotes to be stored is 50, when 50 remotes are learned, the 51st one will automatically overwrite the 1st one.



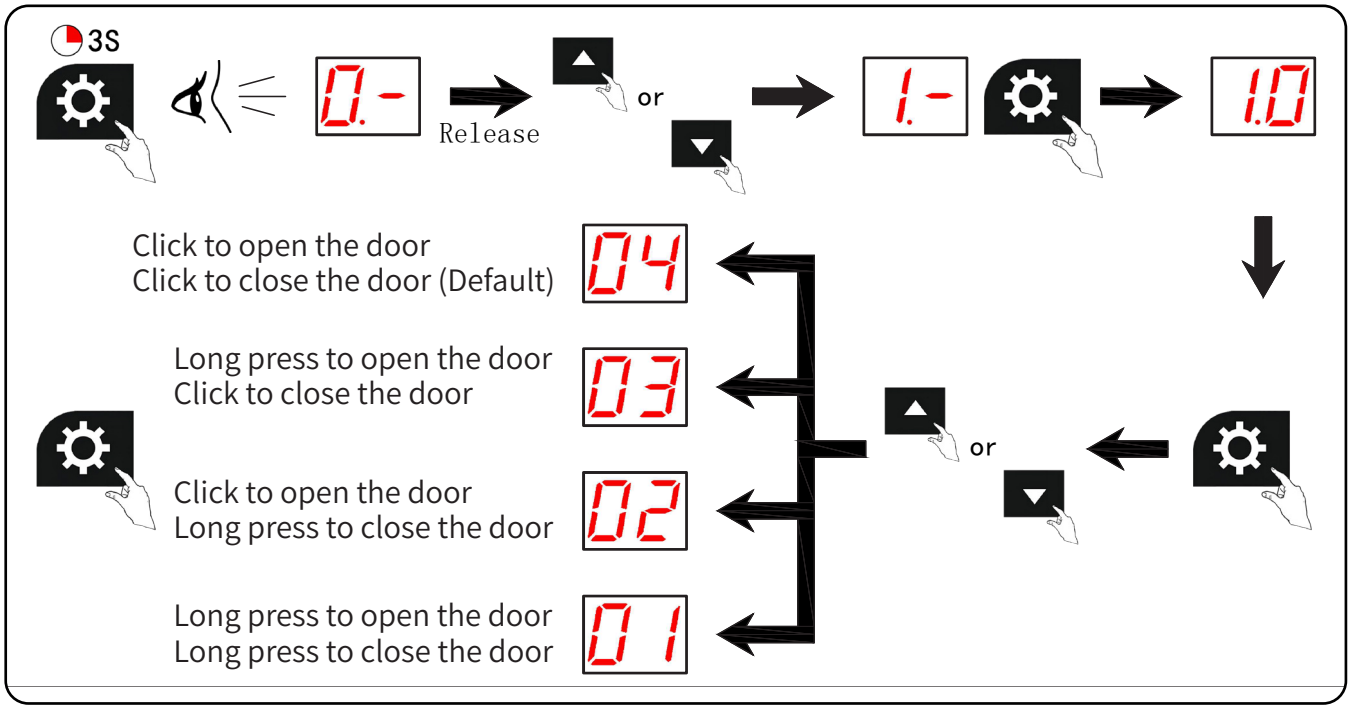
	Standard Functions - Single Key Cycle (Default)
	Ignore the key value function, all keys are valid, open-stop-close-cycle
	Multi-function button 1 : No. 1 key controls the motor on-off cycle; No. 2 partial open function; No. 3 key warning light on and off control; No. 4 key remote lock function;
	Multi-function button 2 : No. 1 to open the door; No. 2 keys to stop; No. 3 to close the door; No. 4 key remote lock function;
	Multi-function button 3 : No. 1 to open the door; No. 2 key to stop; No. 3 to close the door; No. 4 key CF function; ("CF" function means that pressing the 4th button will directly open the door without stopping, and it will directly execute the door opening action when closing the door)

Menu 1： Motor common function setting

Function Guide



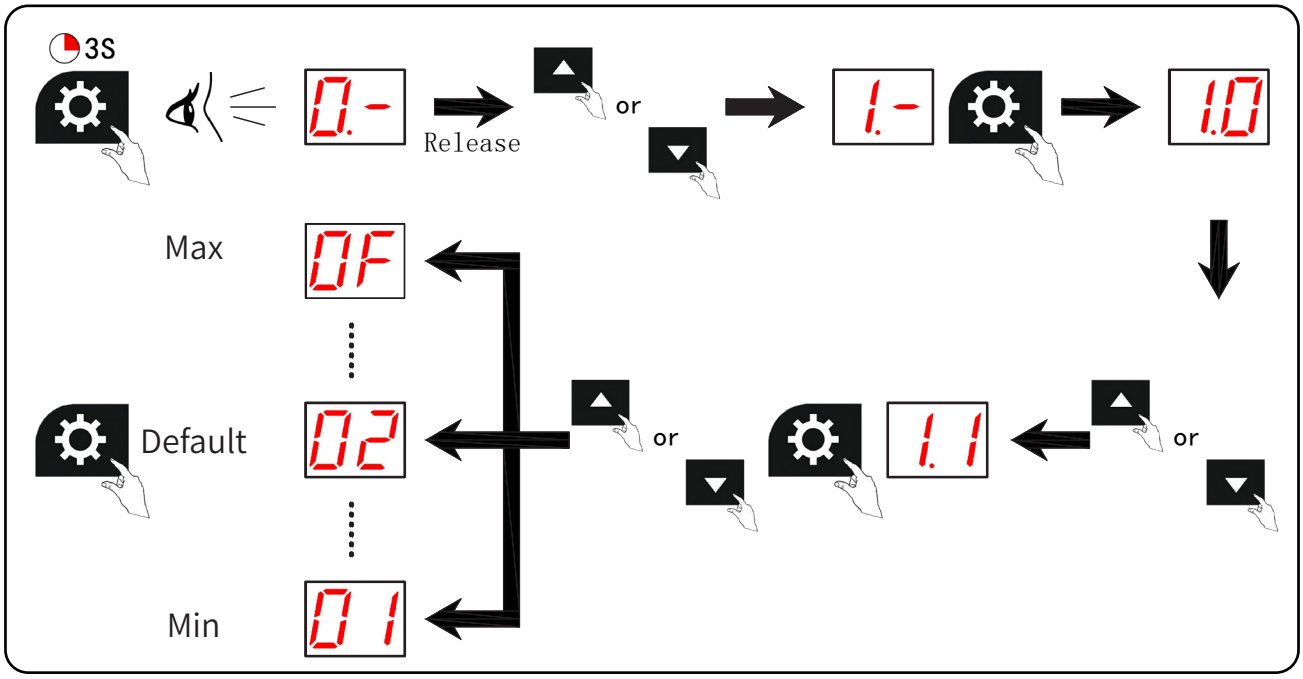
Open/Close button mode setting



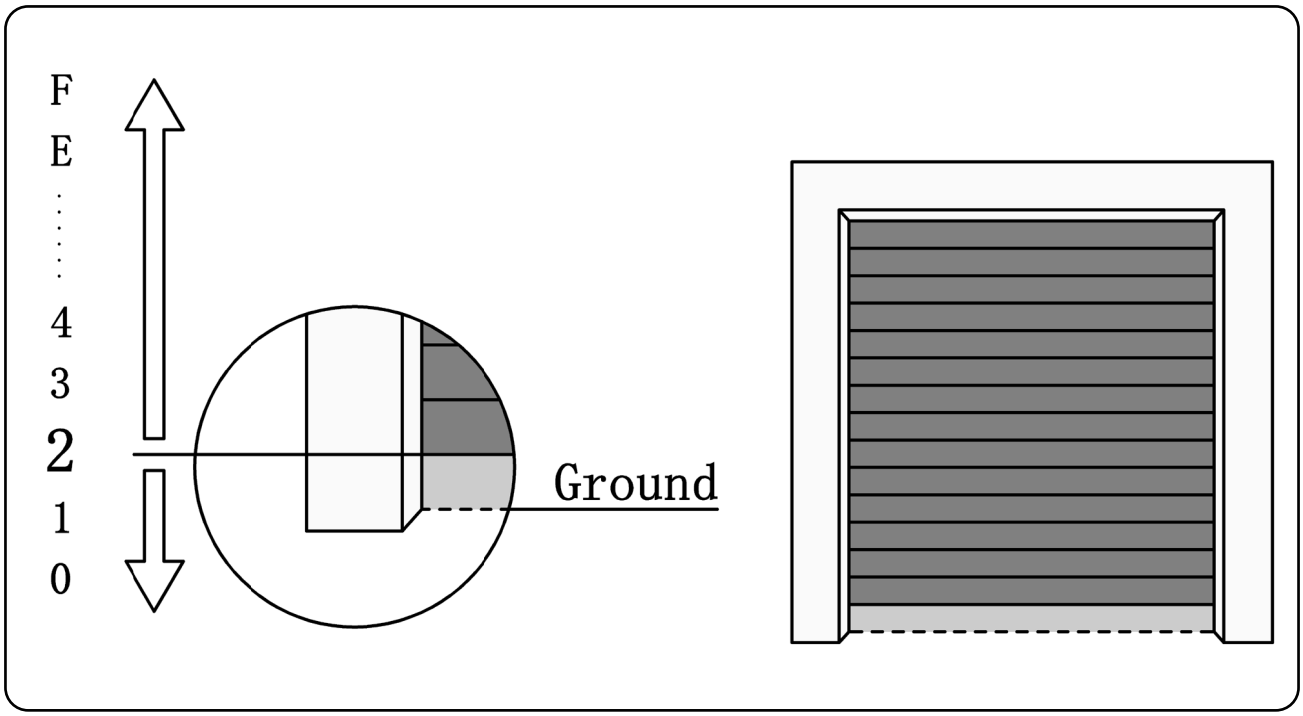
1.1 Safety edge pre-limit fine-tuning (DES)

! Please adjust the adjustment range between 2-5mm each time according to the size of the door rail system and the tower wheel. This parameter needs to be selected according to the actual state of the door.

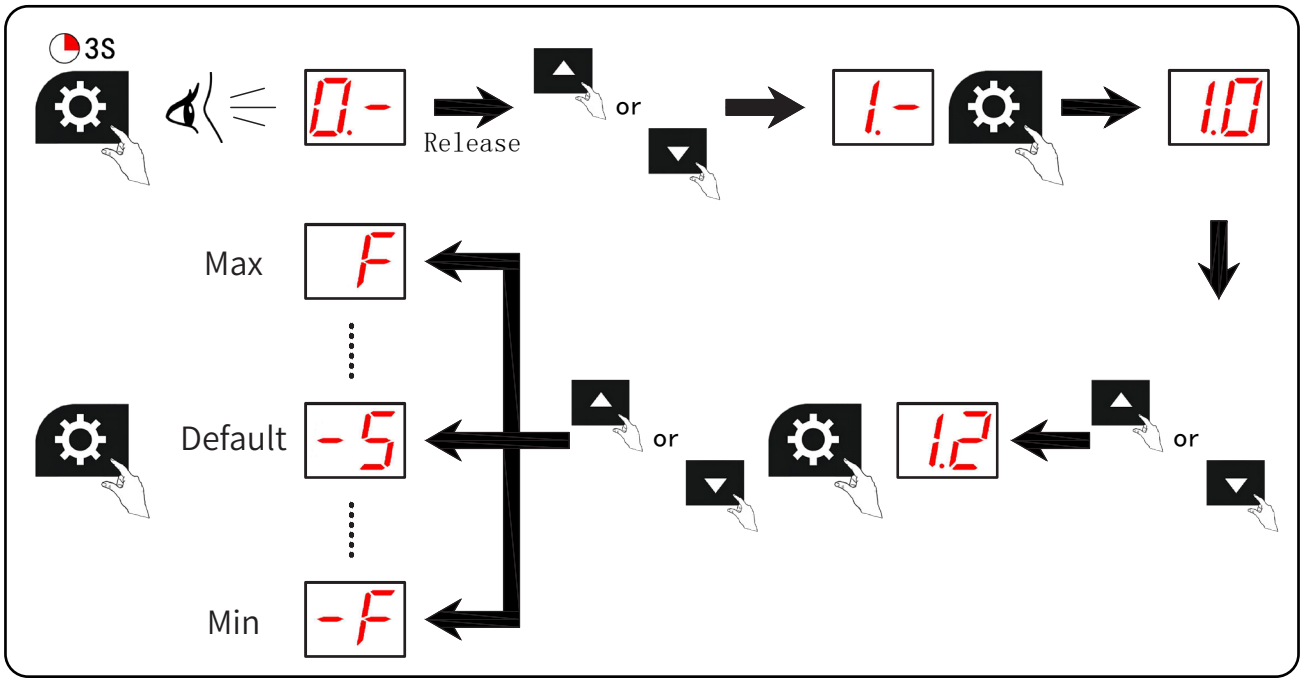
ⓘ In the area below the pre-limit position of the safety edge, the safety edge or the infrared trigger motor will perform the stop action.



ⓘ Take an 18-inch flat wheel (about 150MM in diameter) as an example： about 5CM
Function description： In this area, when the safety edge is blocked or the infrared is blocked, the motor does not perform the function of reversing when it is blocked, and it will stop when it is blocked; when using the DW function safety edge at the same time, this position is where the DW function starts self-test starting point.

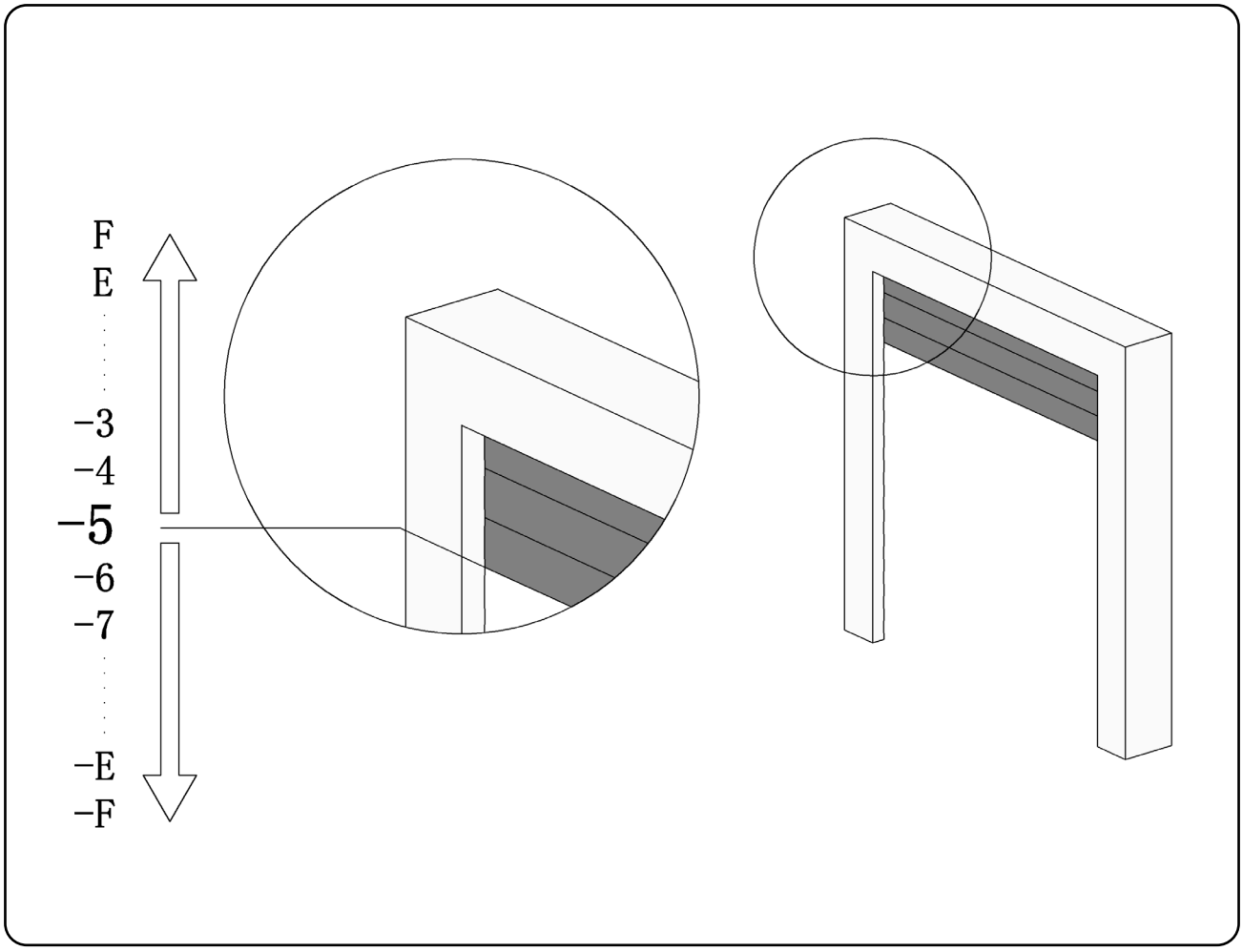


1.2 Motor open limit fine-tuning (DES)



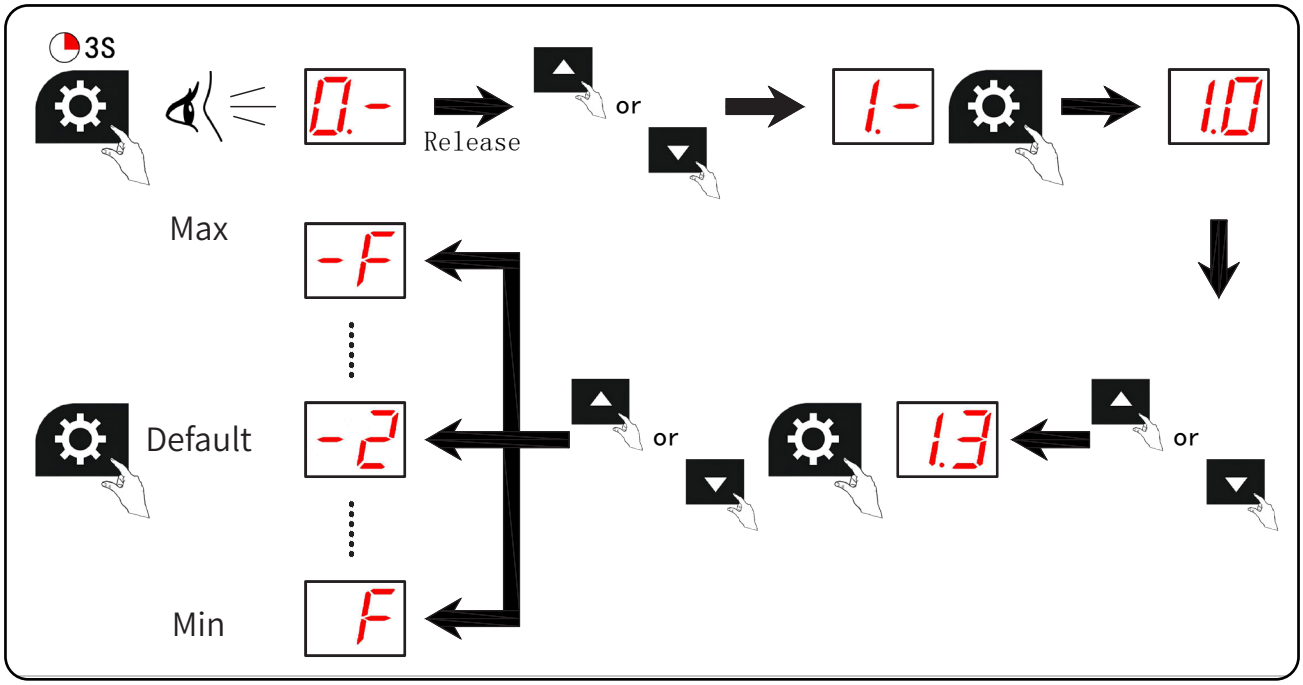
Function description:

This function fine-tunes the open limit of the motor.

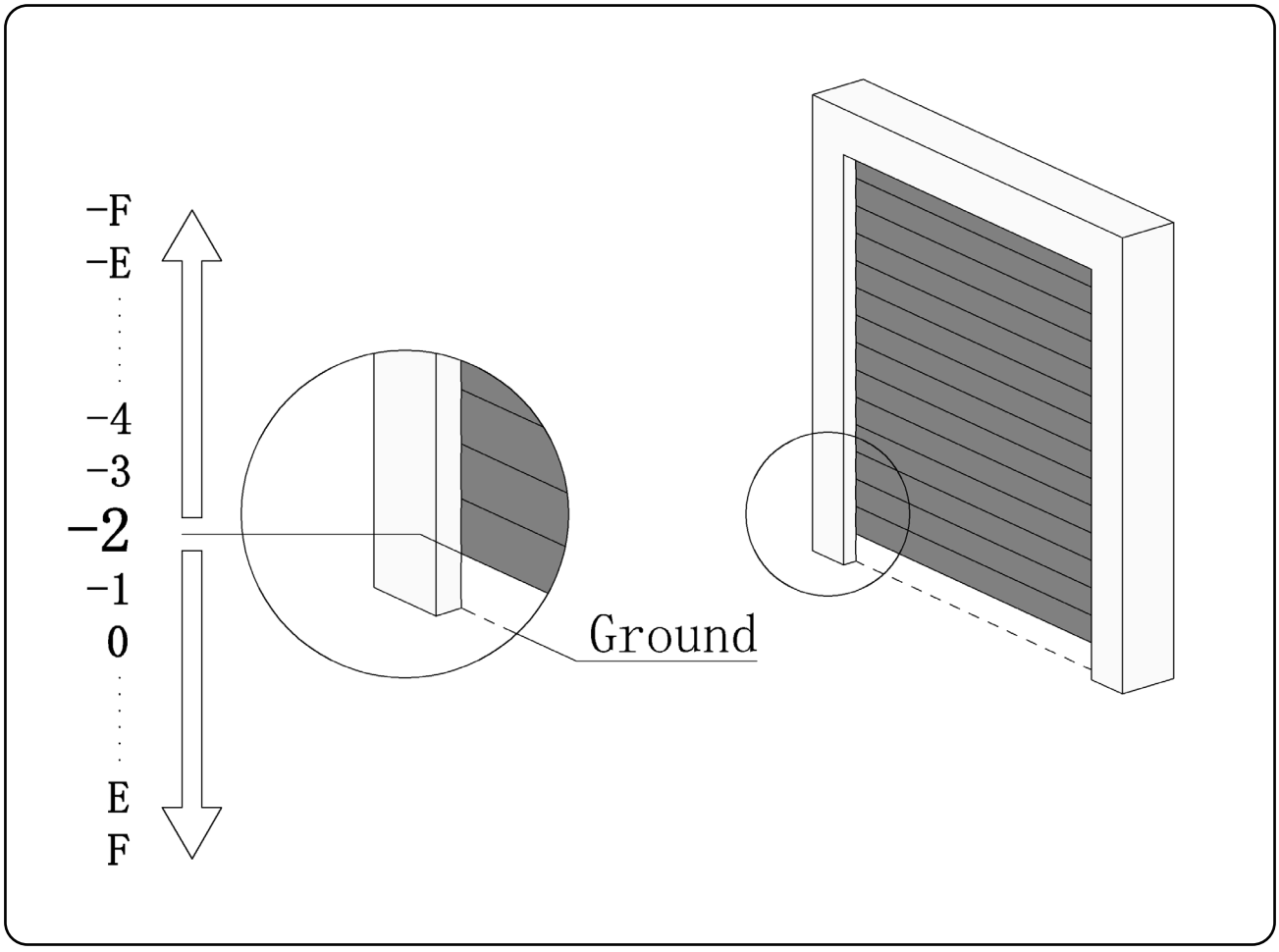


1.3 Motor close limit fine-tuning (DES)

ⓘ If the close limit fine-tuning setting exceeds the ground position, it is easy to cause the wire rope to loosen. Please adjust according to the actual situation .



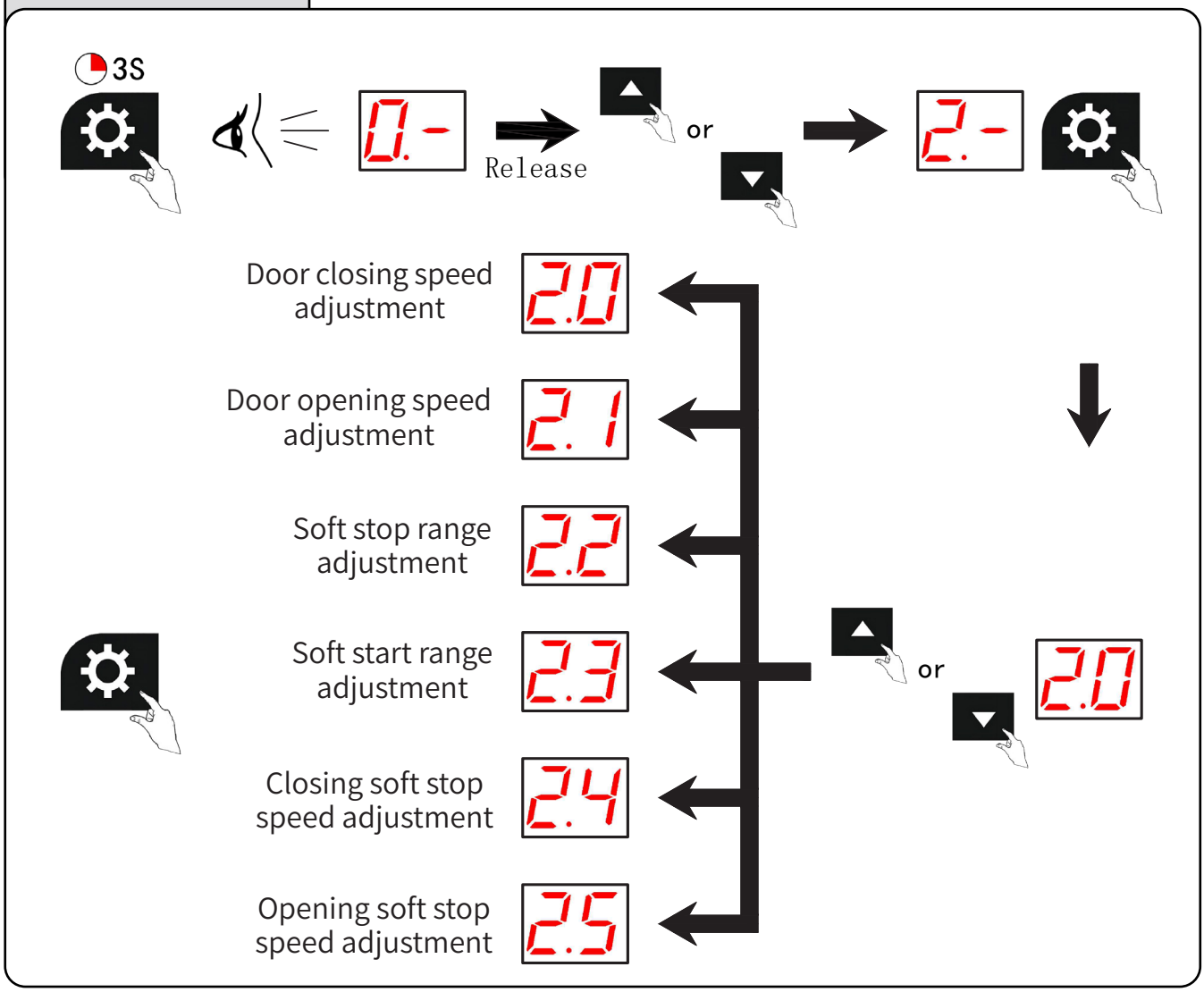
Function description： This function fine-tunes the close limit of motor.



Menu 2： Motor running parameter setting

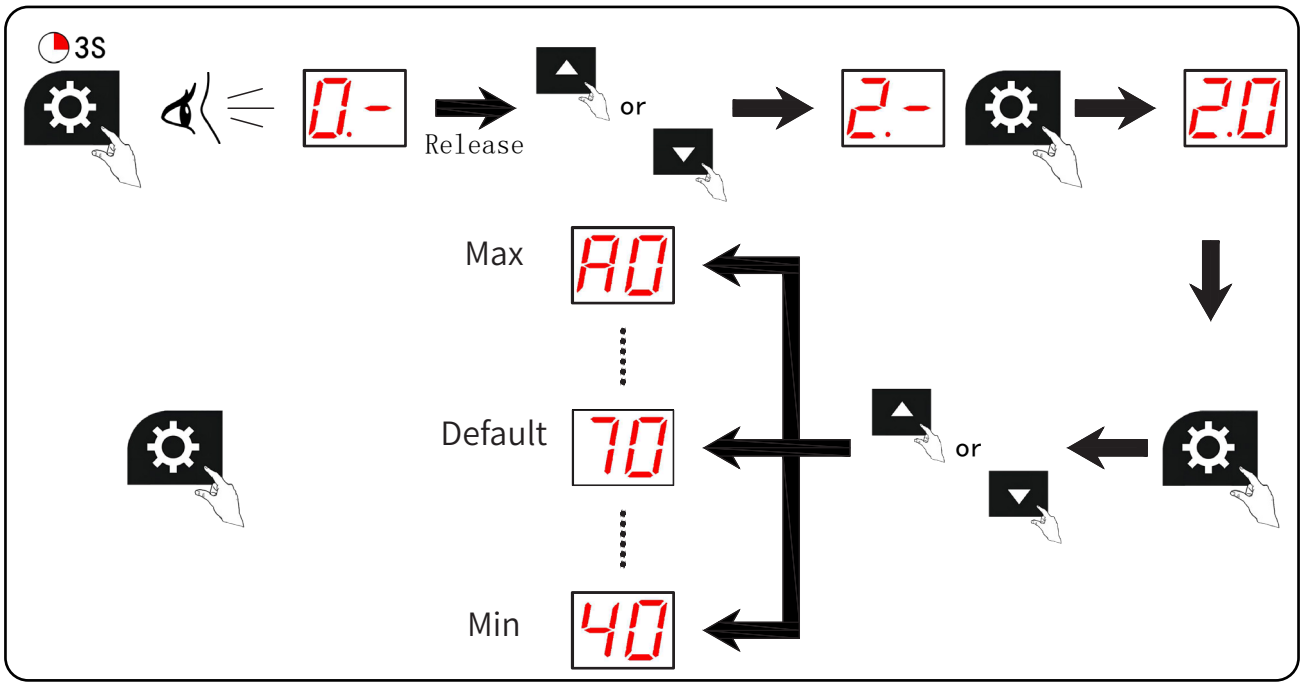
ⓘ This function is only applicable to inverter drive with DES electronic limit mode.

Function Guide



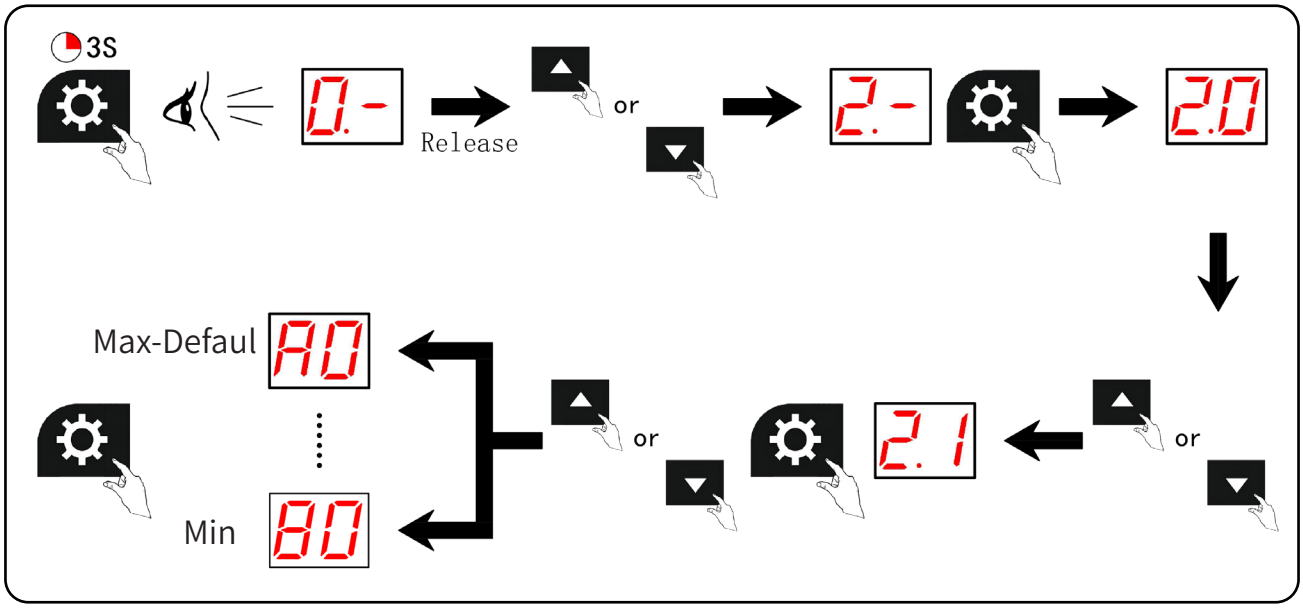
2.0 Door closing speed adjustment (FC drive mode)

ⓘ When the door closing speed is set to be close than the door closing soft end speed set in the 2.4 menu, the motor will automatically adjust the 2.4 soft end speed to be consistent with the 2.0 door closing speed.

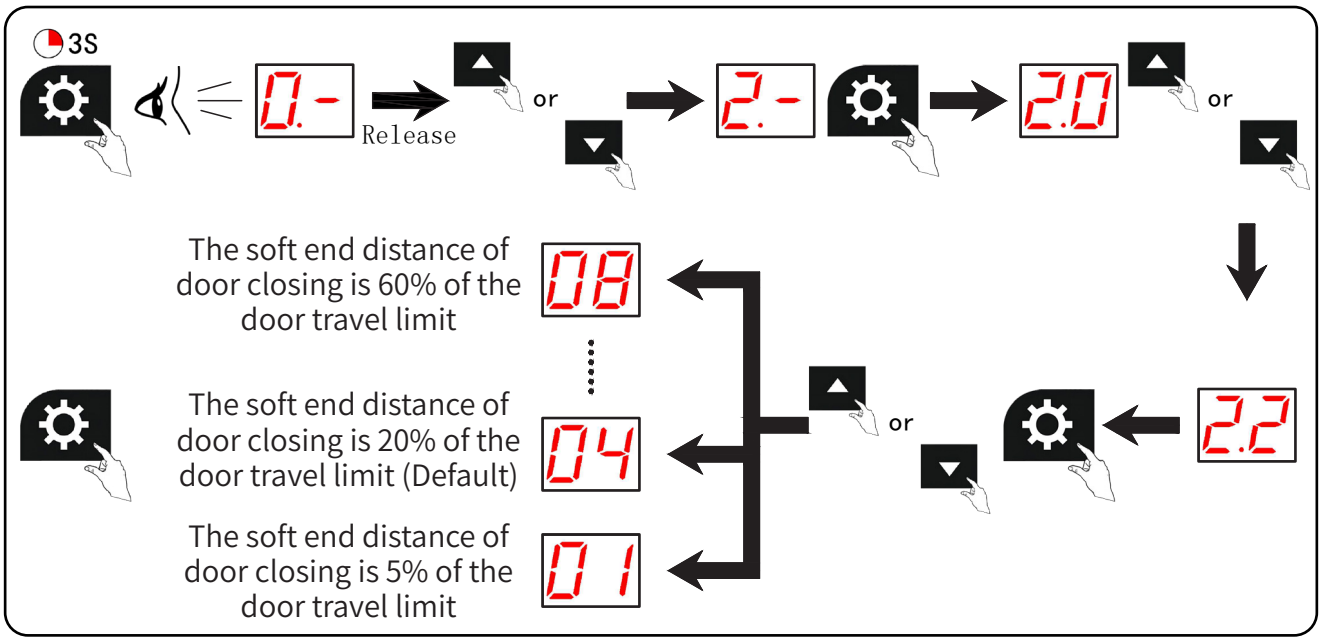


2.1 Door opening speed adjustment

ⓘ When the door opening speed is set to be close than the door opening soft end speed set in menu 2.5, the motor will automatically adjust the door opening soft end speed in 2.5 to be consistent with the door opening speed in 2.1.

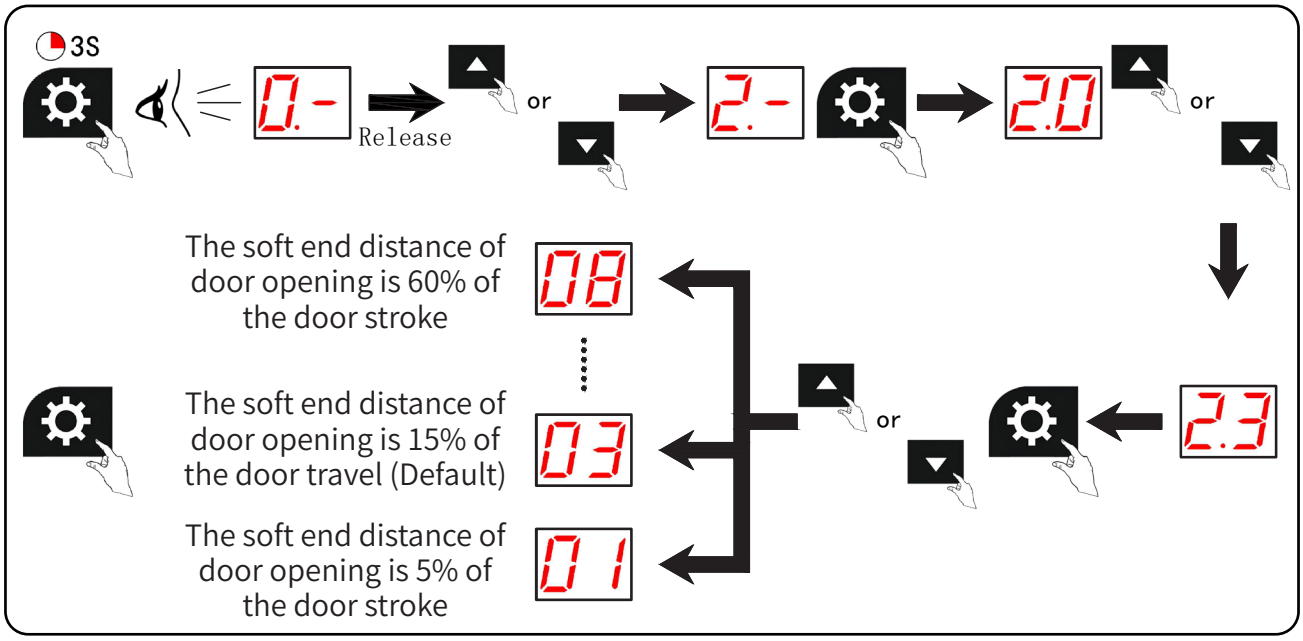


2.2 Soft stop range adjustment



01	The soft end distance of door closing is 5% of the door travel limit
02	The soft end distance of door closing is 10% of the door travel limit
03	The soft end distance of door closing is 15% of the door travel limit
04	The soft end distance of door closing is 20% of the door travel limit(Default)
05	The soft end distance of door closing is 30% of the door travel limit
06	The soft end distance of door closing is 40% of the door travel limit
07	The soft end distance of door closing is 50% of the door travel limit
08	The soft end distance of door closing is 60% of the door travel limit

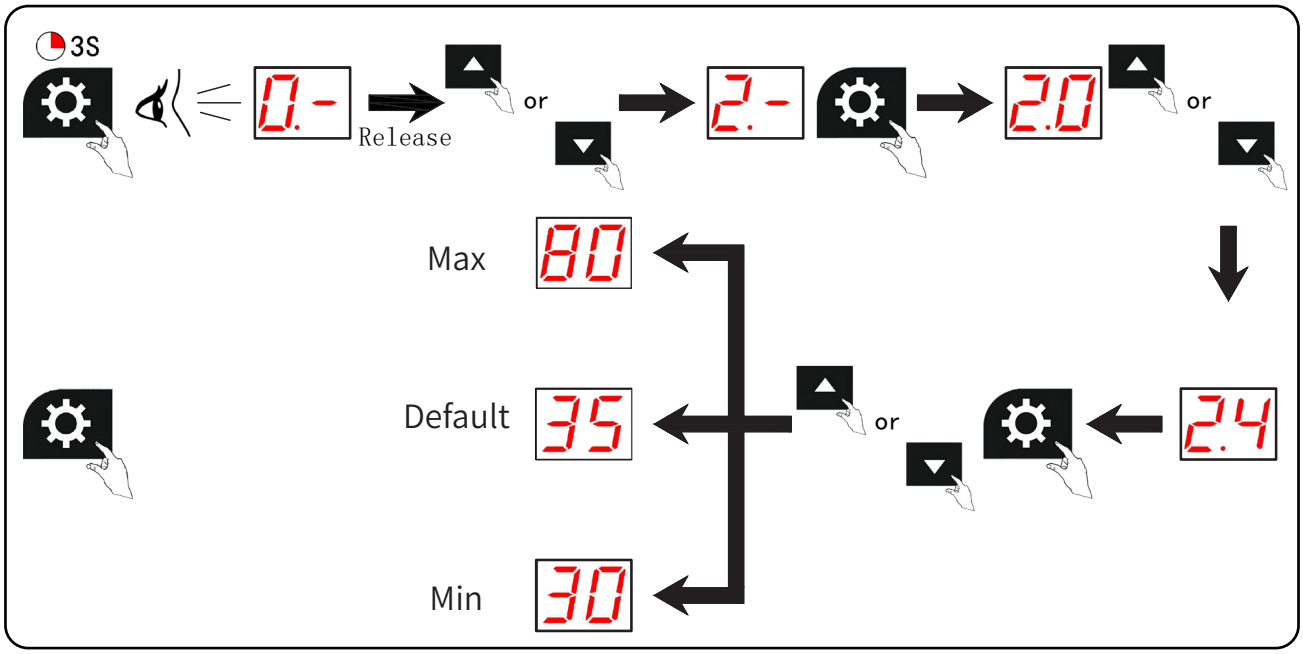
2.3 Soft start range adjustment



01	The soft end distance of door opening is 5% of the door travel limit
02	The soft end distance of door opening is 10% of the door travel limit
03	The soft end distance of door opening is 15% of the door travel limit(Default)
04	The soft end distance of door opening is 20% of the door travel limit
05	The soft end distance of door opening is 30% of the door travel limit
06	The soft end distance of door opening is 40% of the door travel limit
07	The soft end distance of door opening is 50% of the door travel limit
08	The soft end distance of door opening is 60% of the door travel limit

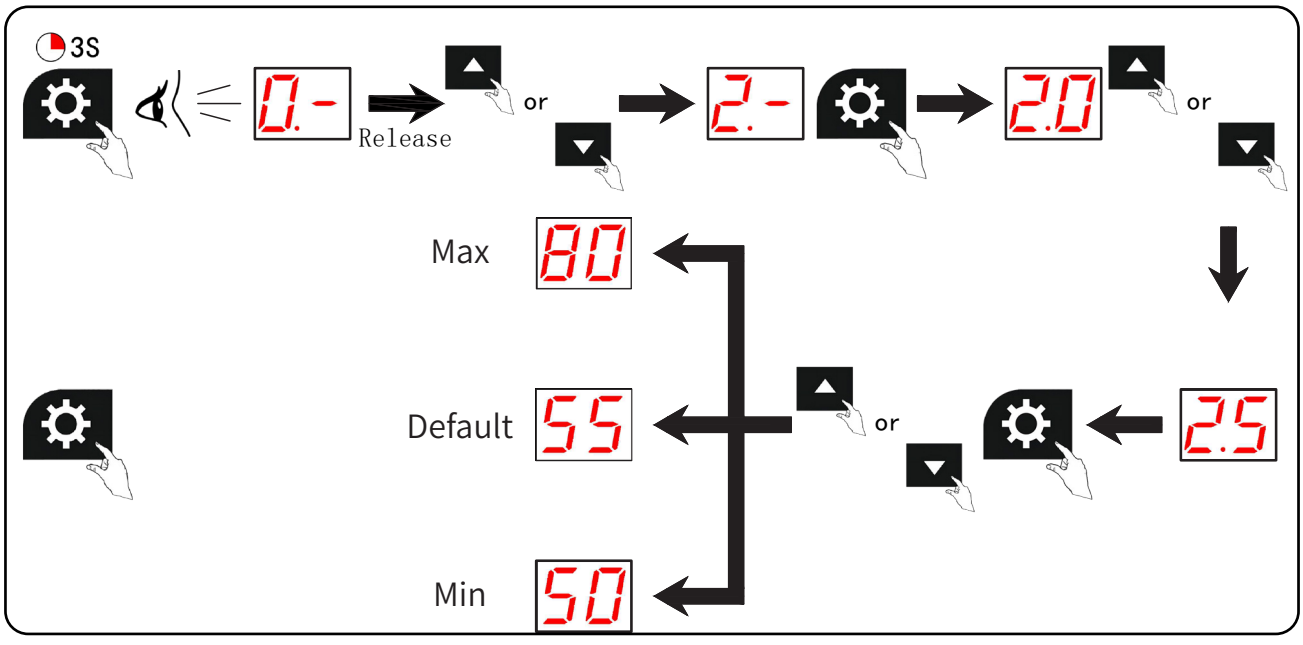
2.4 Closing soft stop speed adjustment

ⓘ If the set door closing soft end speed is greater than 2.0 door closing speed, the door soft closing end speed will be automatically adjusted to be consistent with 2.0 door closing speed.



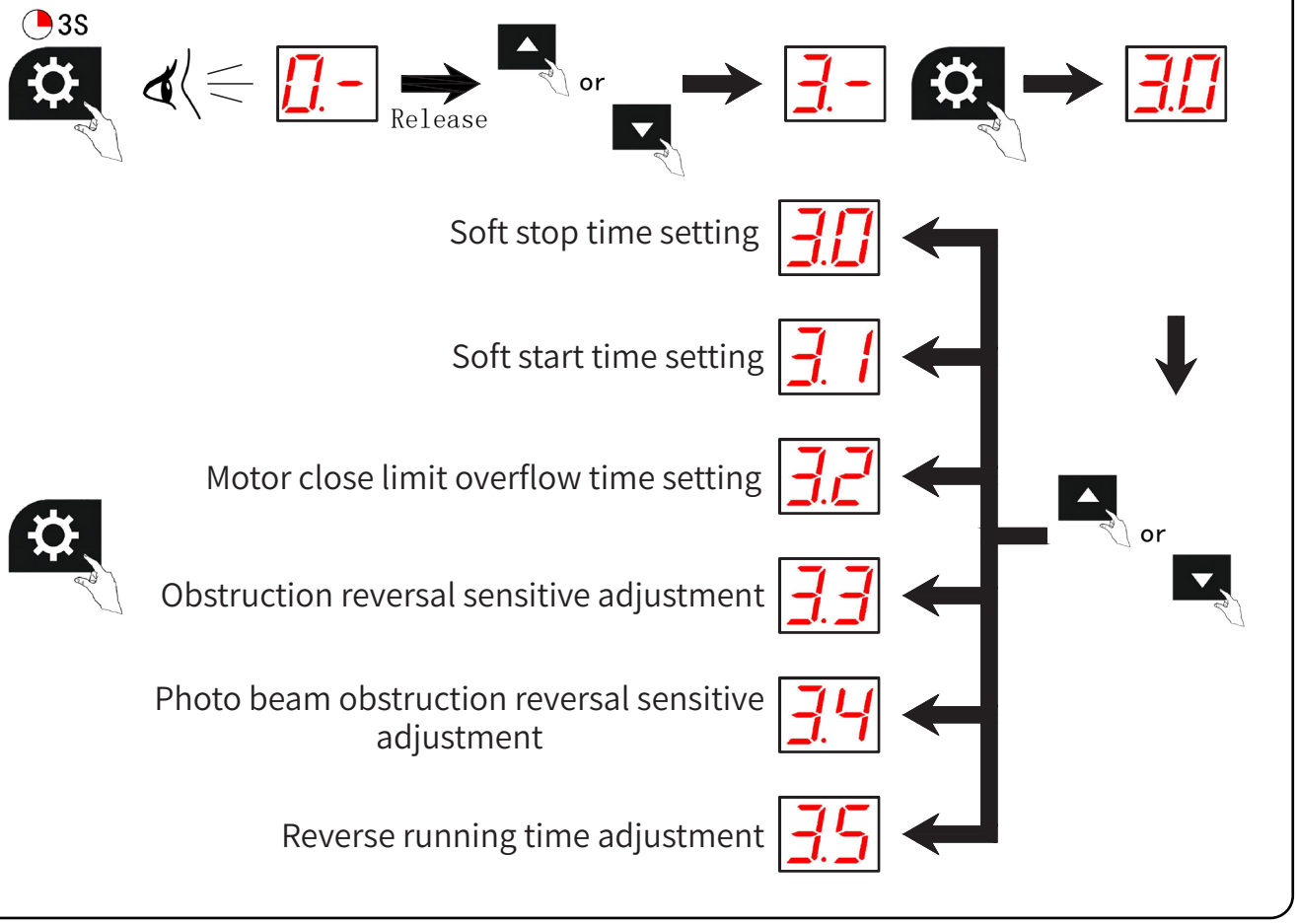
2.5 Opening soft stop speed adjustment

ⓘ If the set soft close end speed of door opening is greater than 2.1 door opening speed, the soft end speed of door opening will be automatically adjusted to be consistent with the parameters of 2.1 door opening speed.



Menu 3： Motor parameter time setting

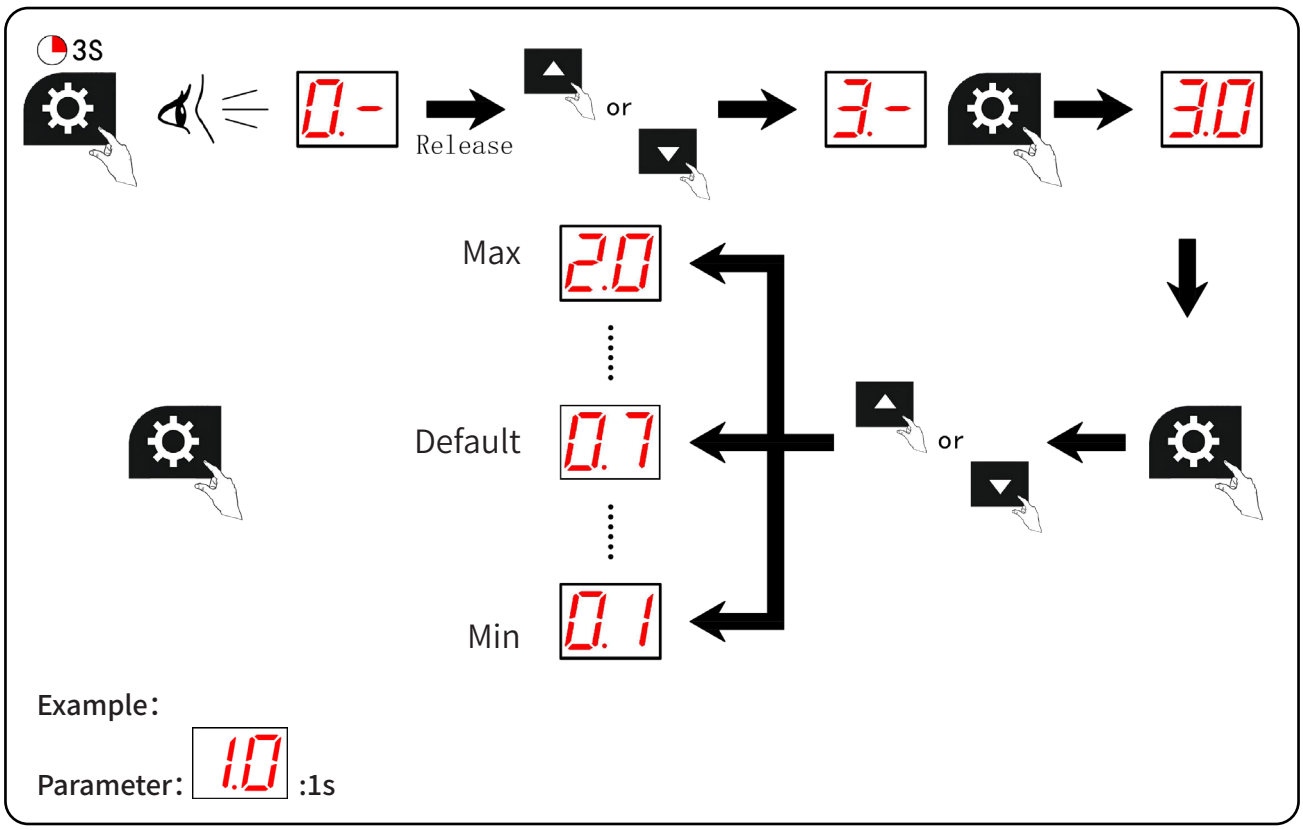
Function Guide



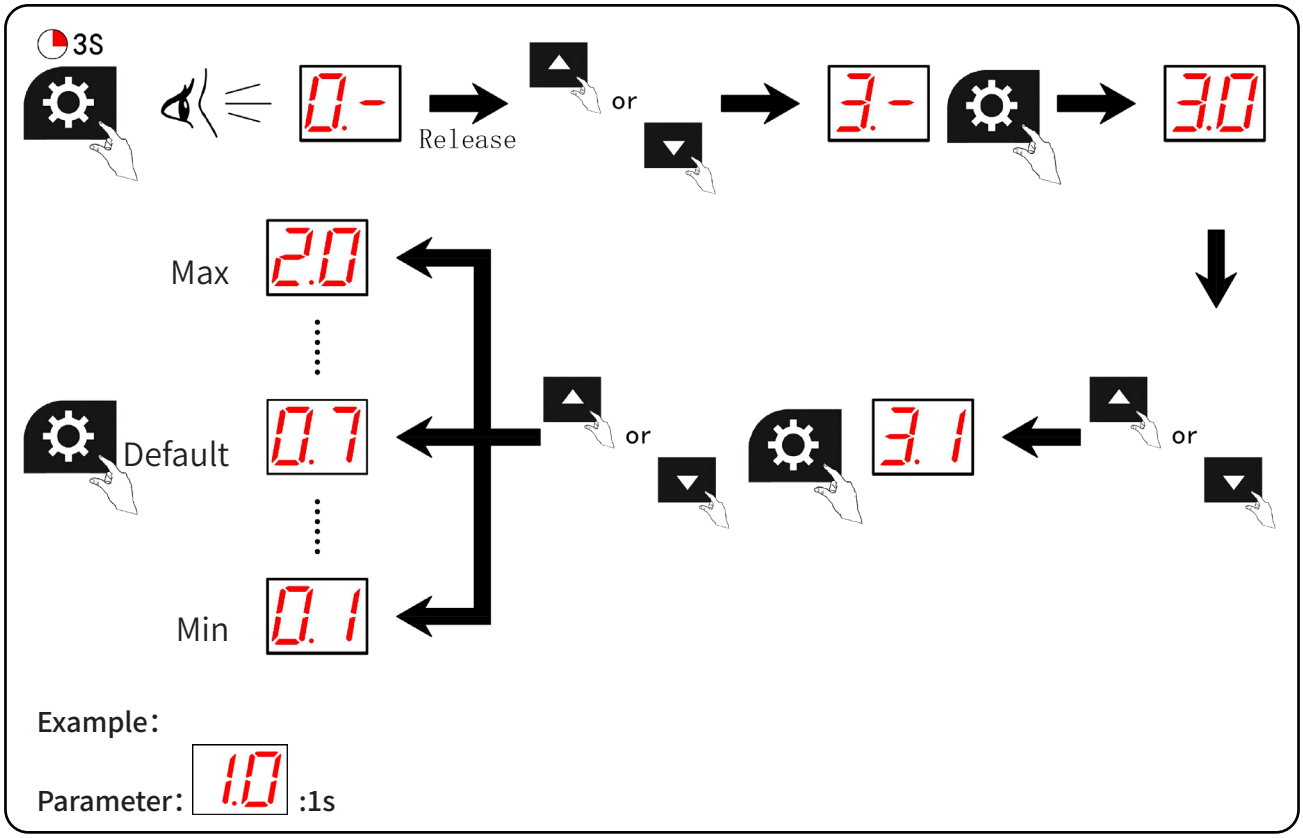
Soft stop time setting

ⓘ This function is only applicable to motors with DES (electronic limit).

ⓘ The slow stop time setting during the motor running refers to the setting of the time required for the motor to stop when it is not running in the soft end zone, so as to reduce the buffer for the door body and the motor.



3.1 Soft start time setting



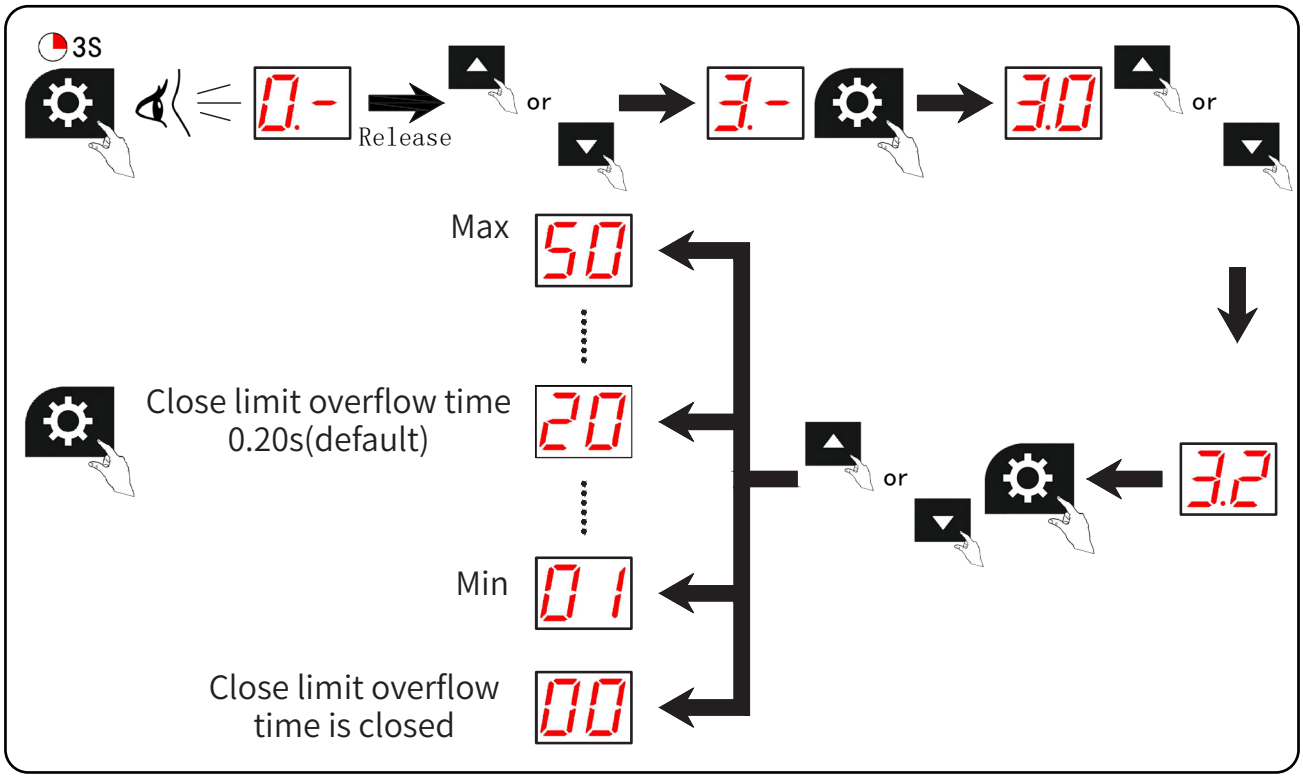
Motor close limit overflow time setting

! If you use the DW air switch on the safety side, it is recommended to turn on the overflow time. If you do not turn on the DW self-test function, it may fail.

ⓘ During the overflow time of the close limit, the motor will also detect the activation of the safety edge and perform an obstruction stop.

ⓘ Adjust the overflow time of the lower limit according to the condition of the door. This setting is mainly to complement the lower limit in the user's travel limit. Closing the door by motor through this setting will ensure that the door is on the ground.

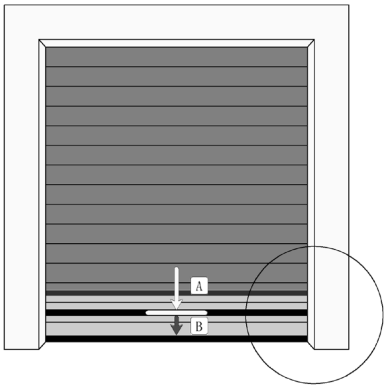
ⓘ In the case of ensuring that the DW air switch is safe and works normally, if the DW self-test cycle cannot be completed when the door is closed, please adjust the overflow time according to the actual situation.

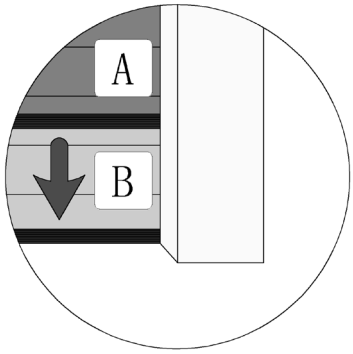


Example:

Parameter: 20 :0.20s

Graphical description (right picture):
A: The set close limit position
B: The location after setting the overflow time

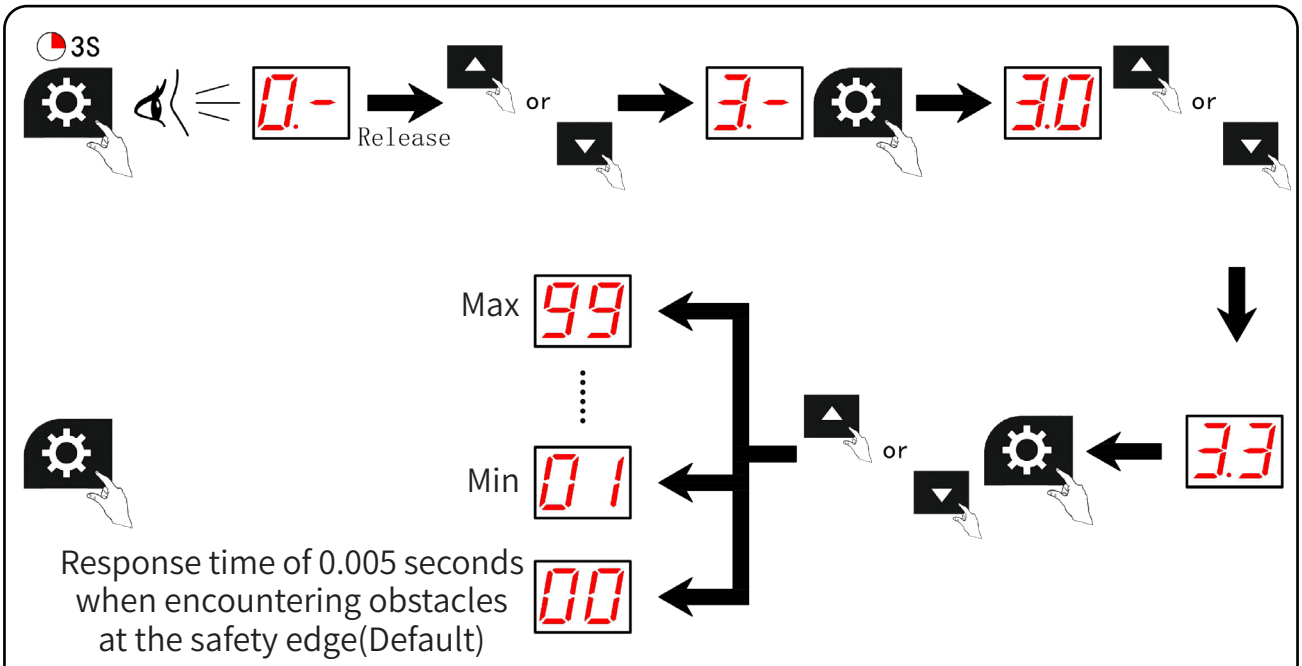




3.3 Obstruction reversal sensitive adjustment

ⓘ The safety edge reaction time is the time between the reversing of the control door after the door detects an obstacle.

ⓘ The time setting range of this parameter is : 0.01 seconds -0.99 seconds.



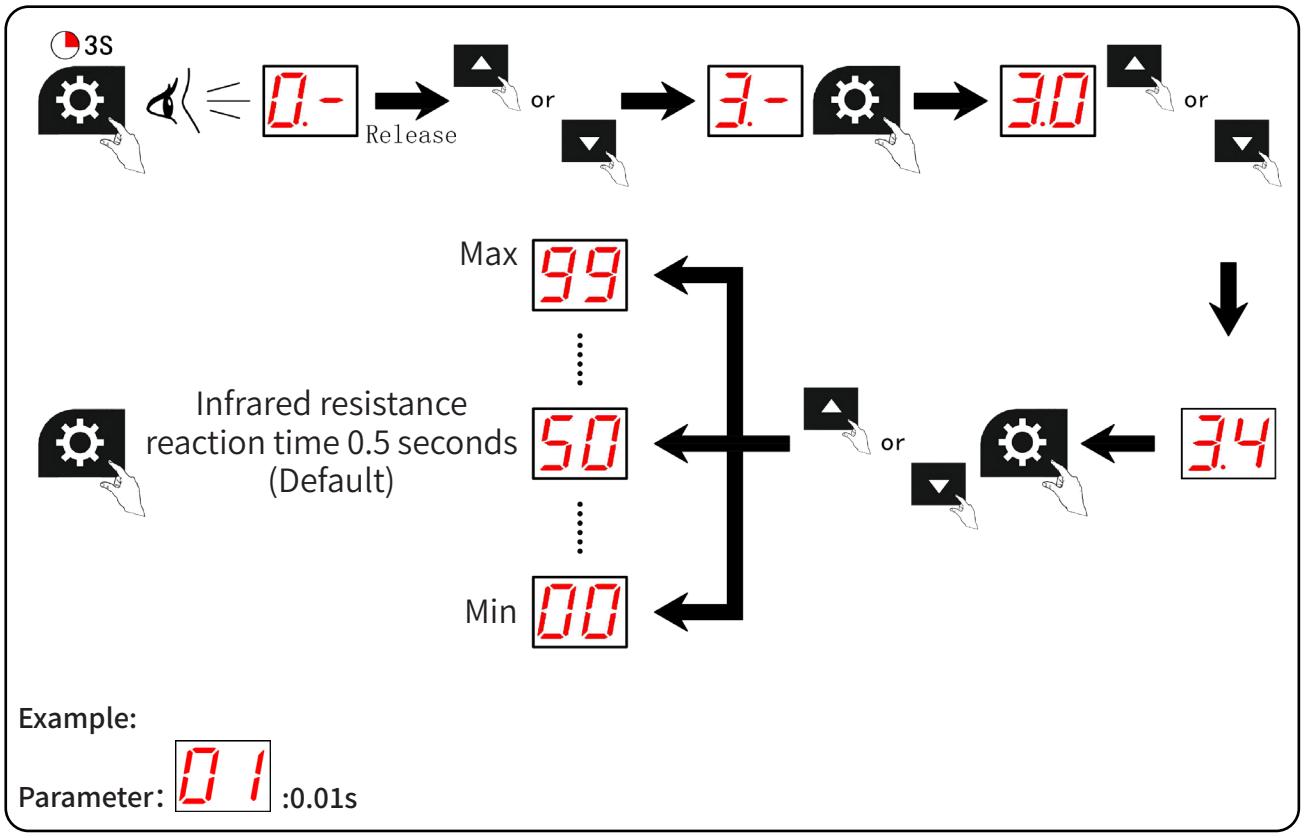
Example:

Parameter: 1.0 :0.01s

Photo beam obstruction reversal sensitive adjustment

ⓘ The time setting range of this parameter is : 0.01 seconds-0.99 seconds.

ⓘ According to the actual situation of the door body or the needs of the scene, the reaction time of the safety edge is adjusted.

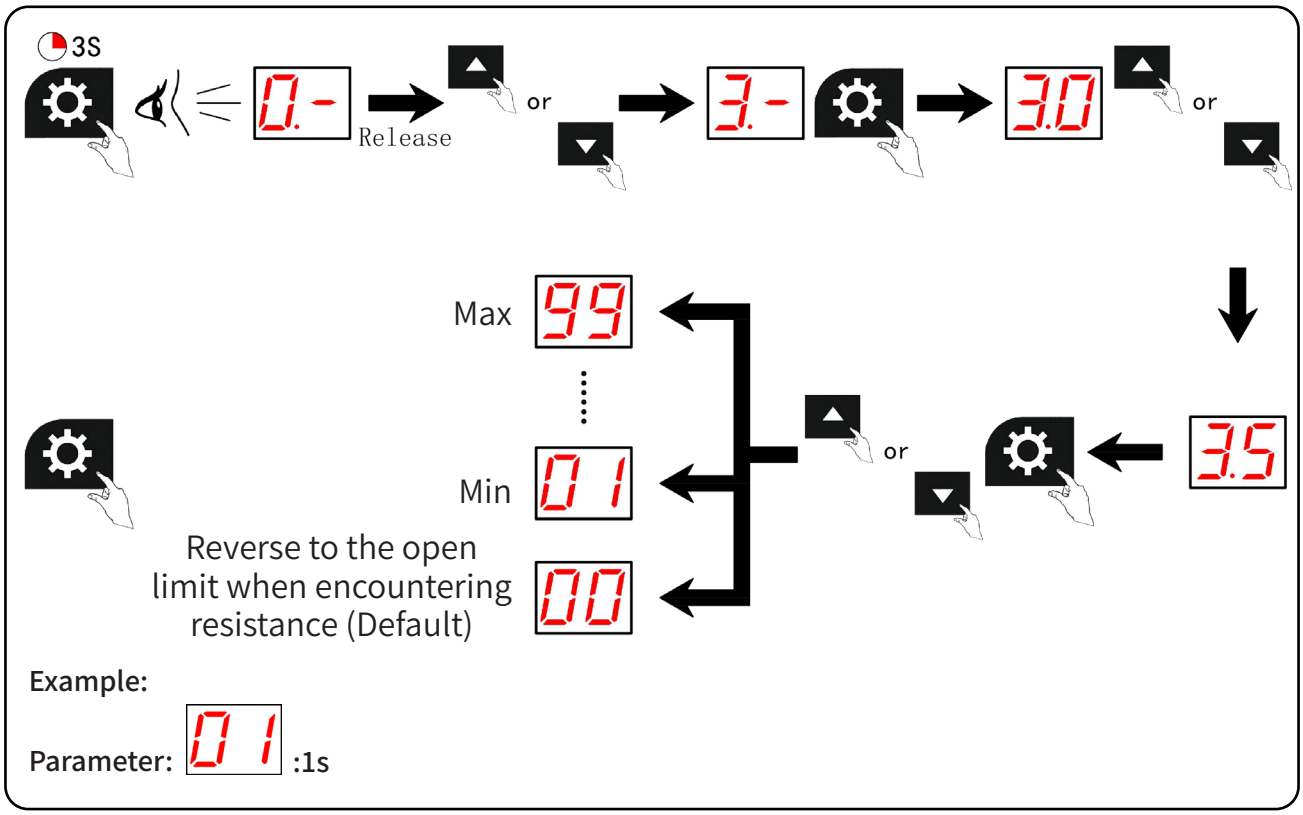


Reverse running time adjustment

ⓘ Reversal time in case of resistance refers to the running time for the motor to open the door in the opposite direction after the safety edge or infrared or door closing over current during the door closing process.

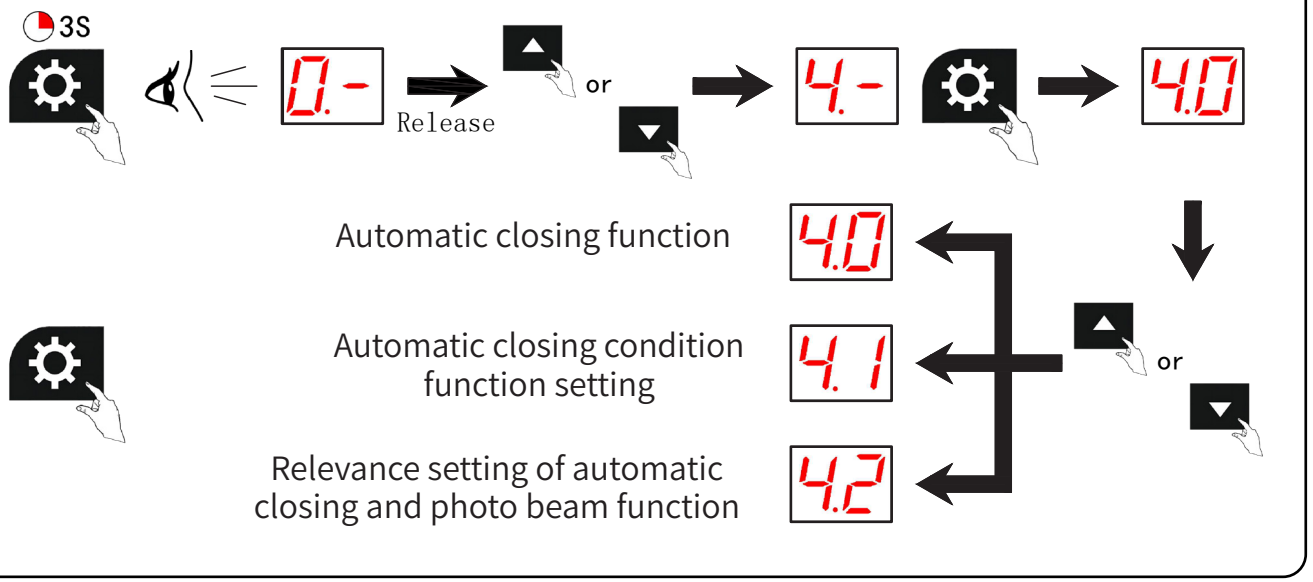
ⓘ The time setting range of this parameter is : 1 second - 9 seconds (if the time is not up, the motor will stop first when it reaches the open limit)

ⓘ According to the actual situation of the door body or the needs of the scene, the reaction time of the safety edge is adjusted.



Menu 4： Automatic door closing function setting

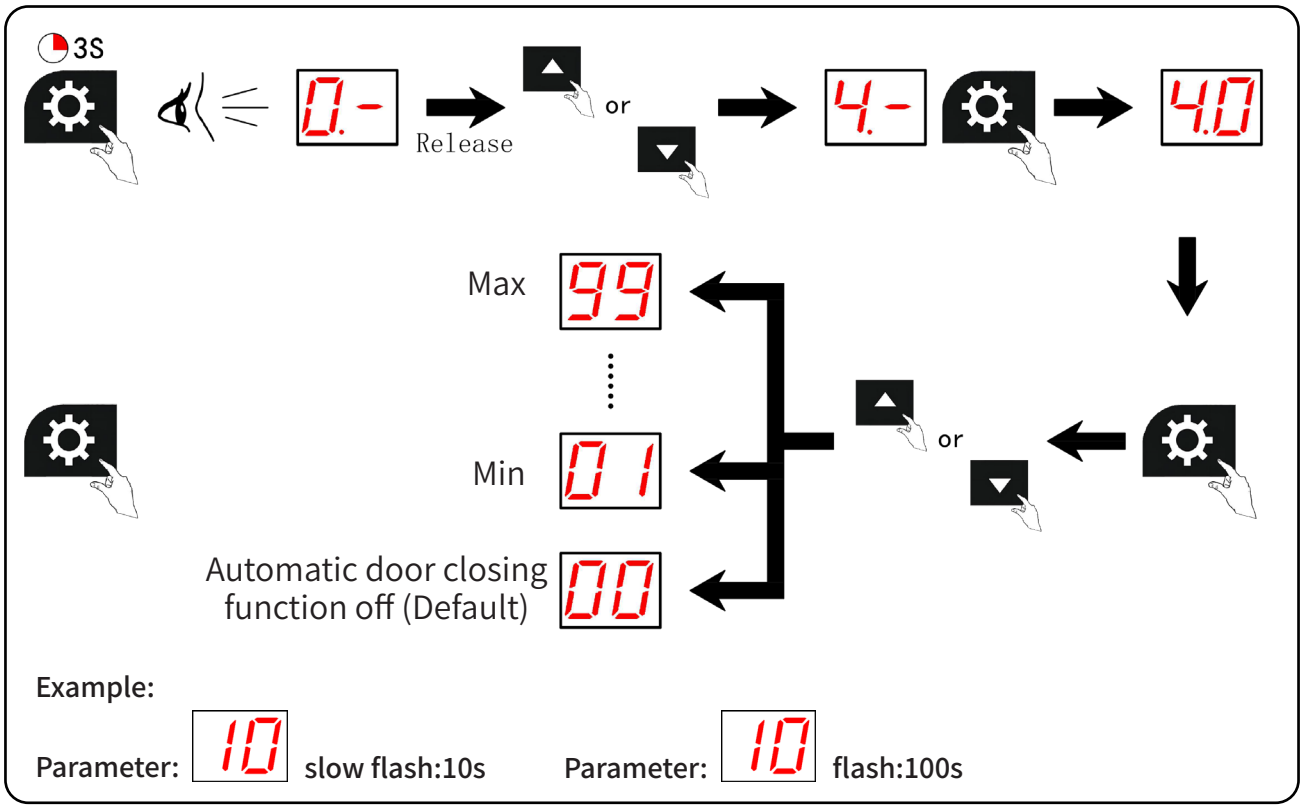
Function Guide



Automatic closing function

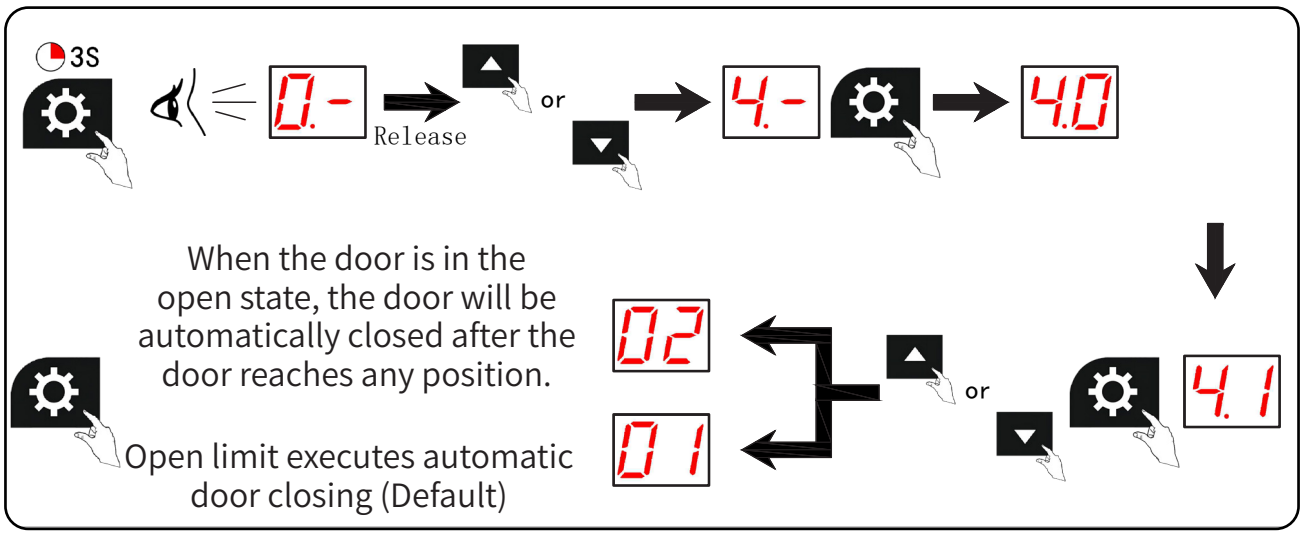
ⓘ The time setting range of this parameter is : 1 second - 990 seconds.

ⓘ Press the + button to set the parameter per second to flash slowly 1-99, and when the + button exceeds 99, the parameter resets to flash 1-99 quickly, and each parameter is 1*10 seconds at this time.



4.1 Automatic closing condition function setting

ⓘ **The automatic door closing condition is only used with the 4.0 automatic door closing function.**

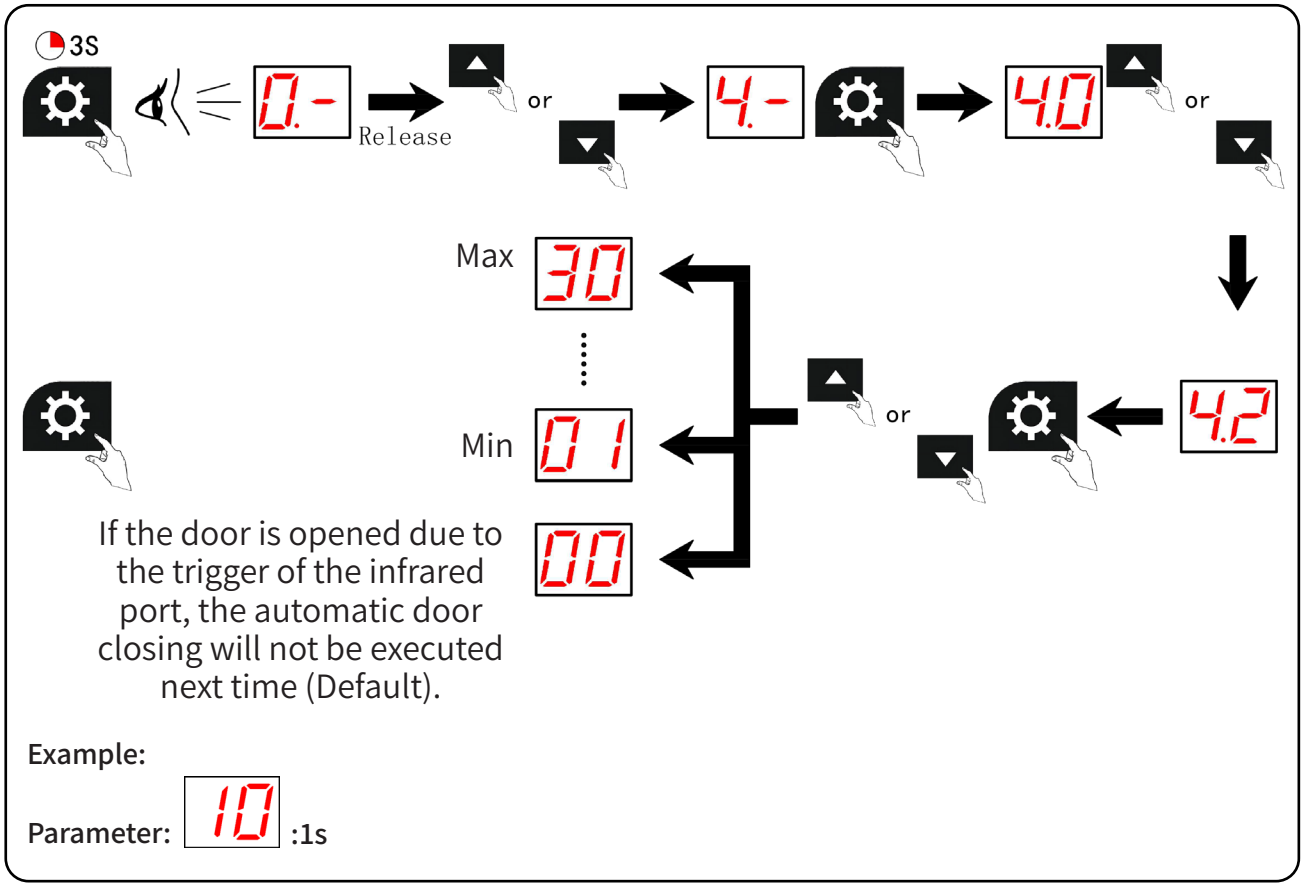


4.2 Relevance setting of automatic closing and photo beam function

ⓘ The association setting of automatic door closing and PE function can only be used with the infrared function of menu 5.

ⓘ Default parameters 00: The door opening triggered by the infrared port does not perform automatic door closing this time, and the door will resume automatic closing after the door is opened normally in the next cycle (the door opening triggered by the infrared port does not perform automatic door closing)

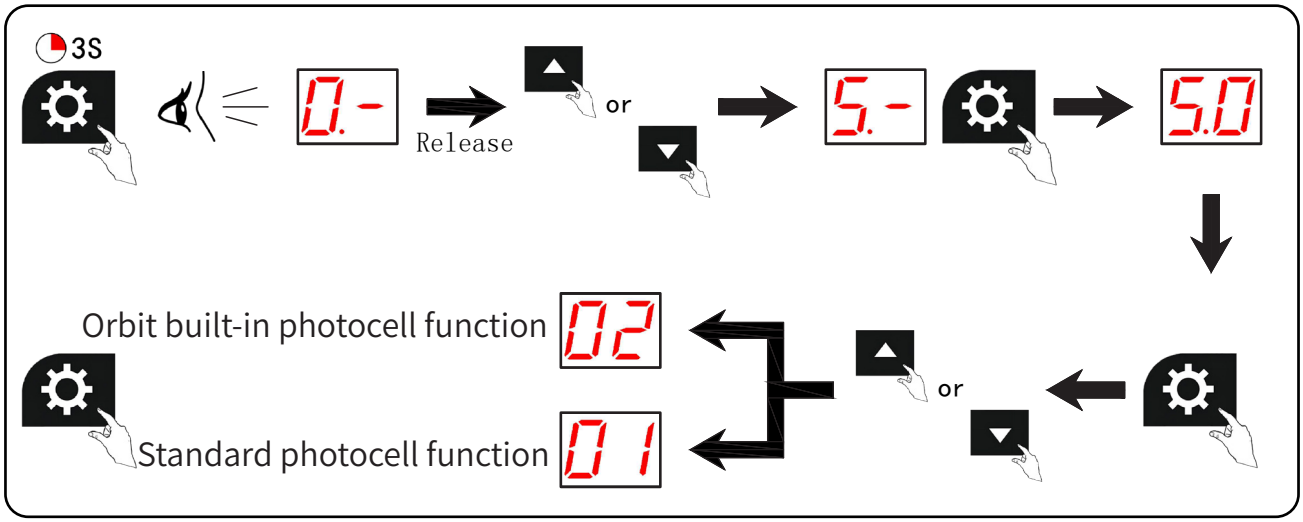
ⓘ After the timing is set, the door body can still close the door automatically when the infrared triggers the opening. After the infrared port is triggered, the automatic closing timing will resume. The setting range is: 0.1 seconds to 3 seconds.



Menu 5： Photo beam function

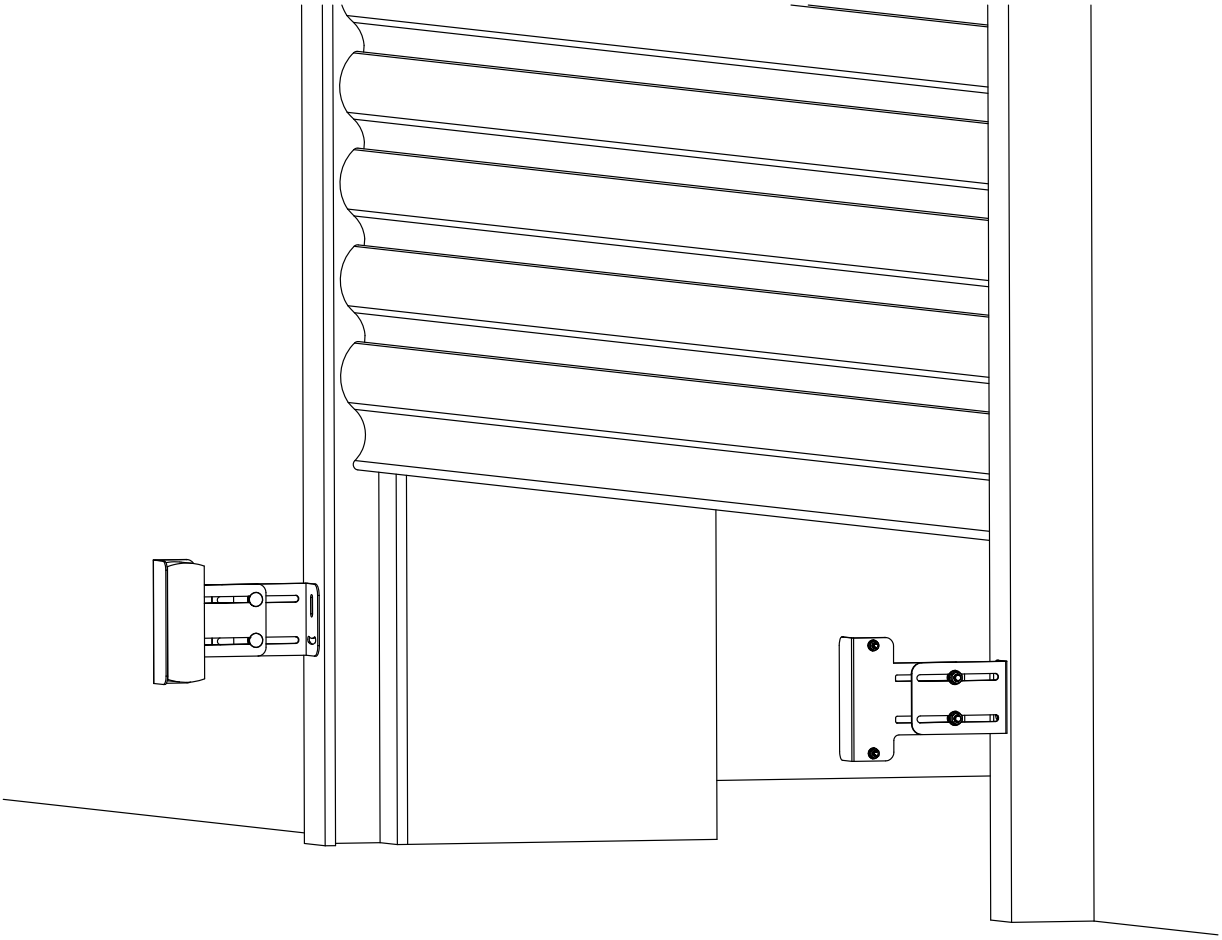
PE port function setting

ⓘ Connection Description: PE-GND port



01 Standard photo beam function

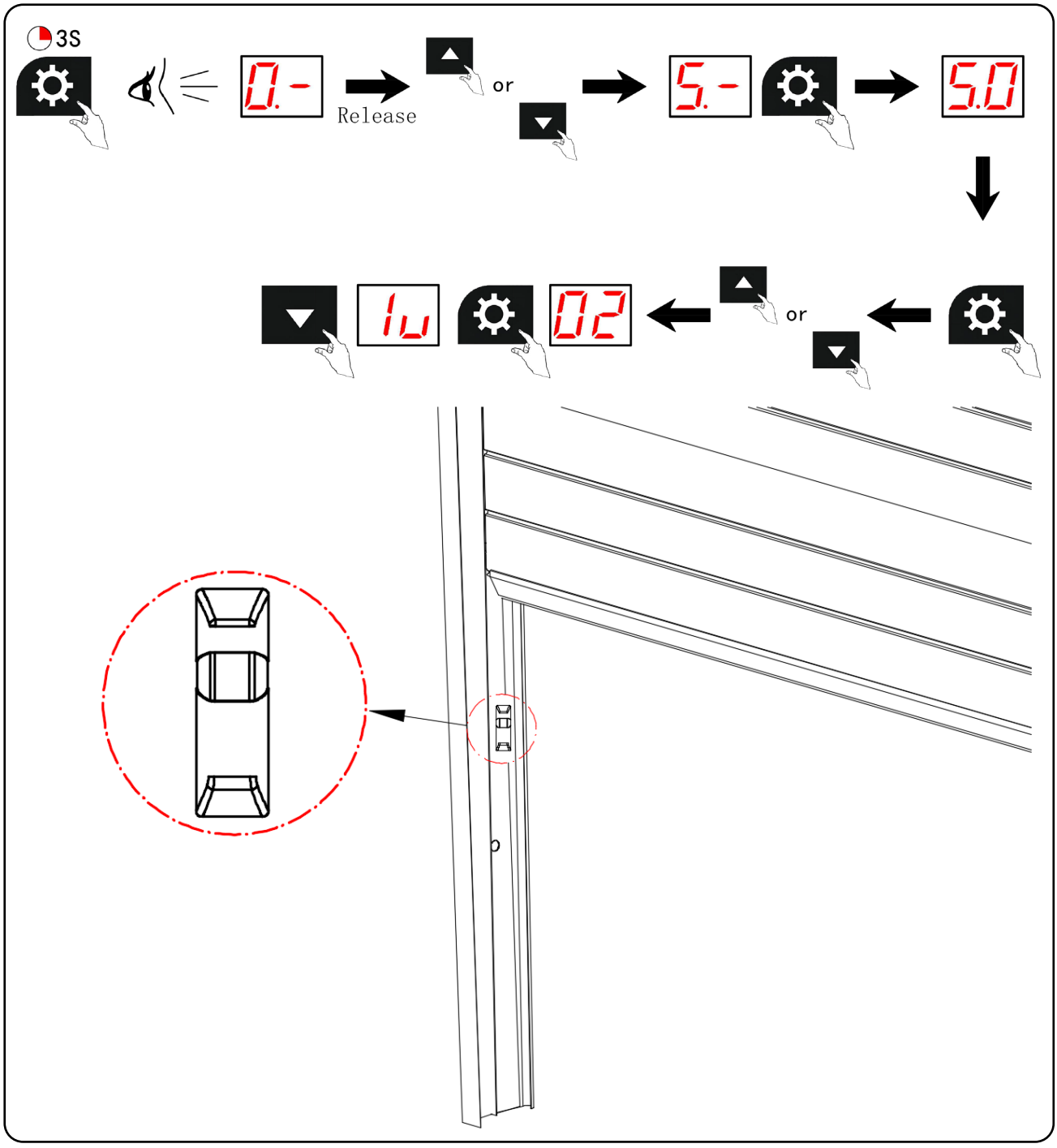
ⓘ Before using this function, the infrared device needs to be installed on both sides of the door.



02 Orbit built-in photo beam function

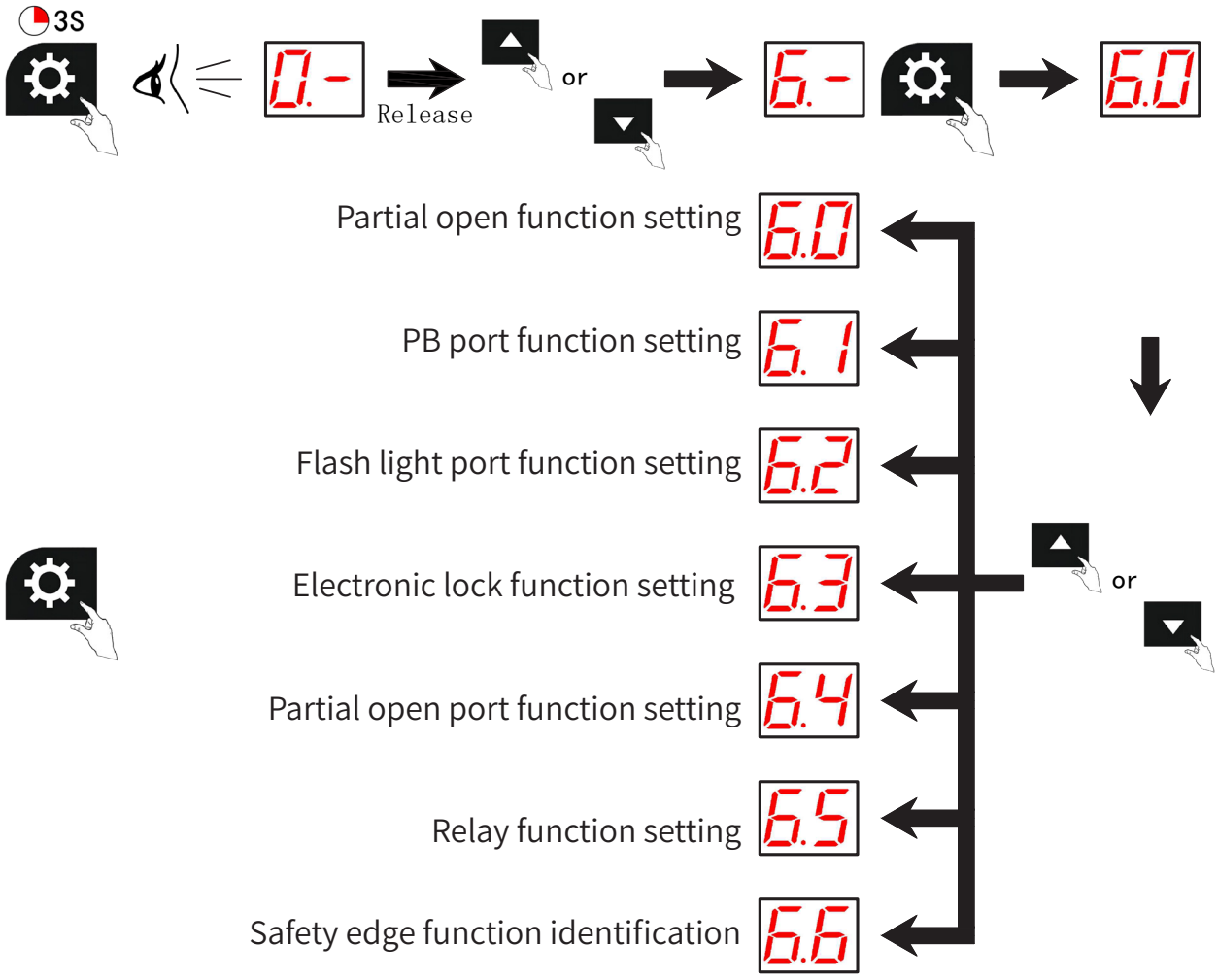
ⓘ Before using this function, the infrared device needs to be installed in the door track.

ⓘ Function description: Before using the built-in infrared function of the track, you need to open the door to the open limit. If it is not set at the open limit, an error will appear E9 ,If the infrared sensor has not been detected from closing the door to the close limit, it will prompt an error E9.



Menu 6： External port function setting

Function Guide

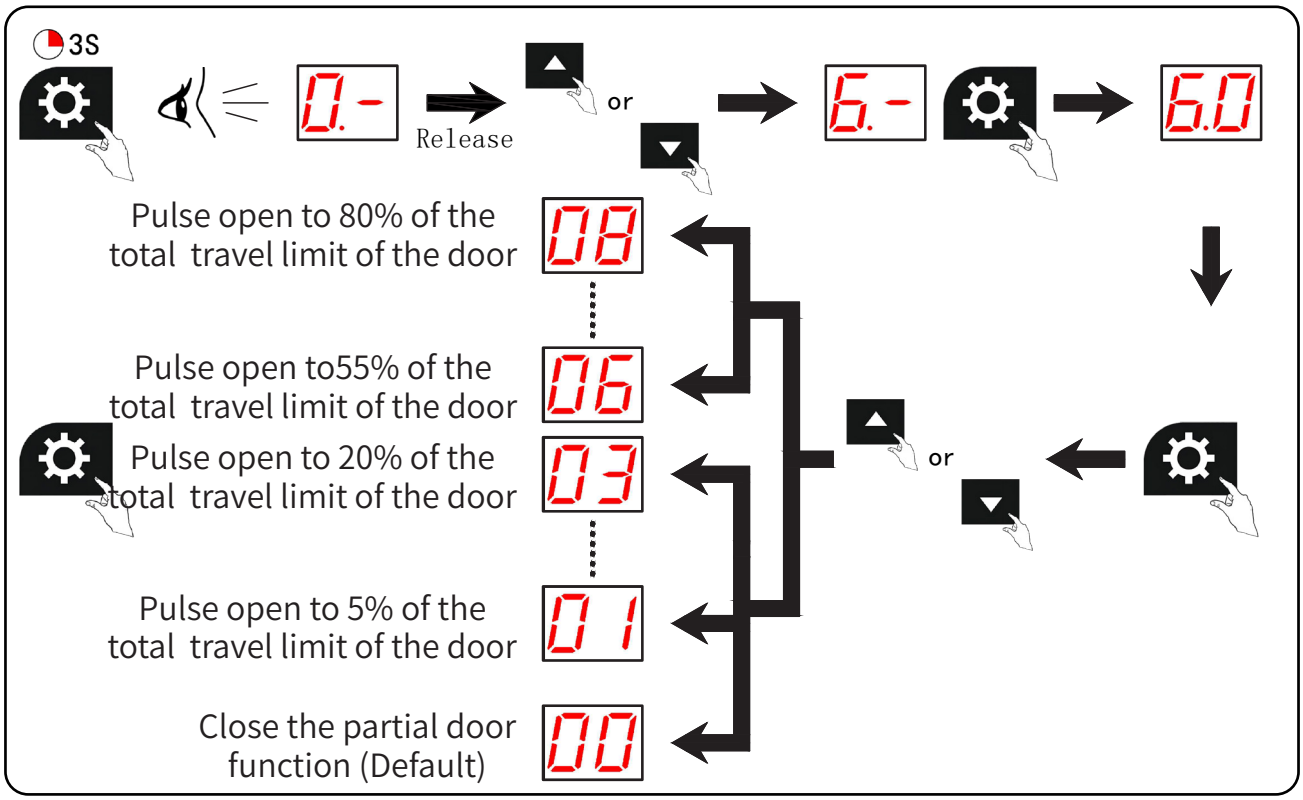


Partial open function setting

Parameter 01—08:

ⓘ Connection instructions: HB-GND port.

ⓘ Set the door opening position, the partial open door port contact activates the door opening state.



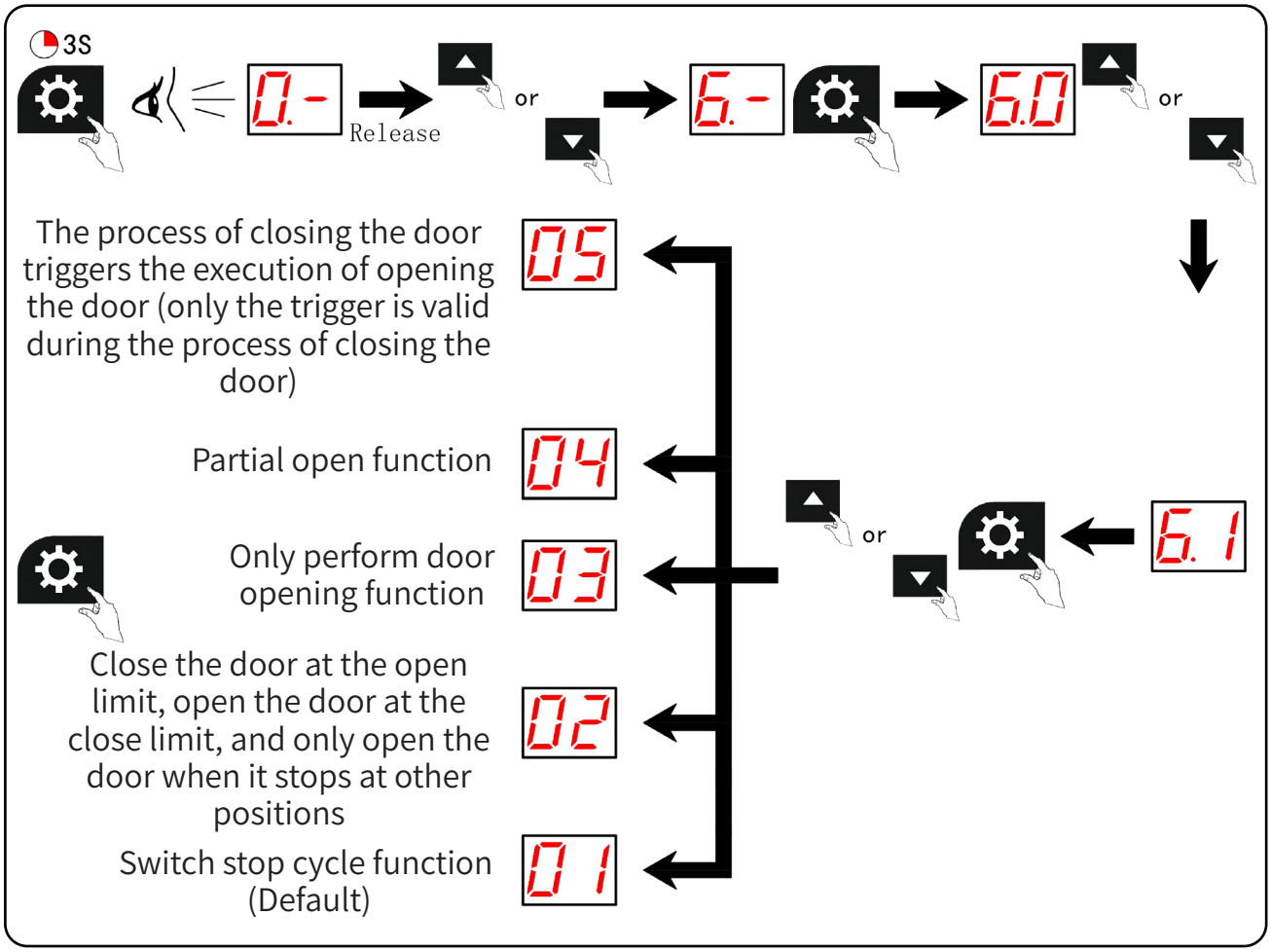
00	Close the partial door function (Default)
01	The partial open position is 5% of the total travel limit of the door movement
02	The partial open position is 10 % of the total travel limit of the door movement
03	The partial open position is 20 % of the total travel limit of the door movement
04	The partial open position is 40 % of the total travel limit of the door movement
05	The partial open position is 50 % of the total travel limit of the door movement
06	The partial open position is 55 % of the total travel limit of the door movement
07	The partial open position is 60 % of the total travel limit of the door movement
08	The partial open position is 80 % of the total travel limit of the door movement

6.1 PB port function setting

ⓘ Connection Description: PB-GND port.

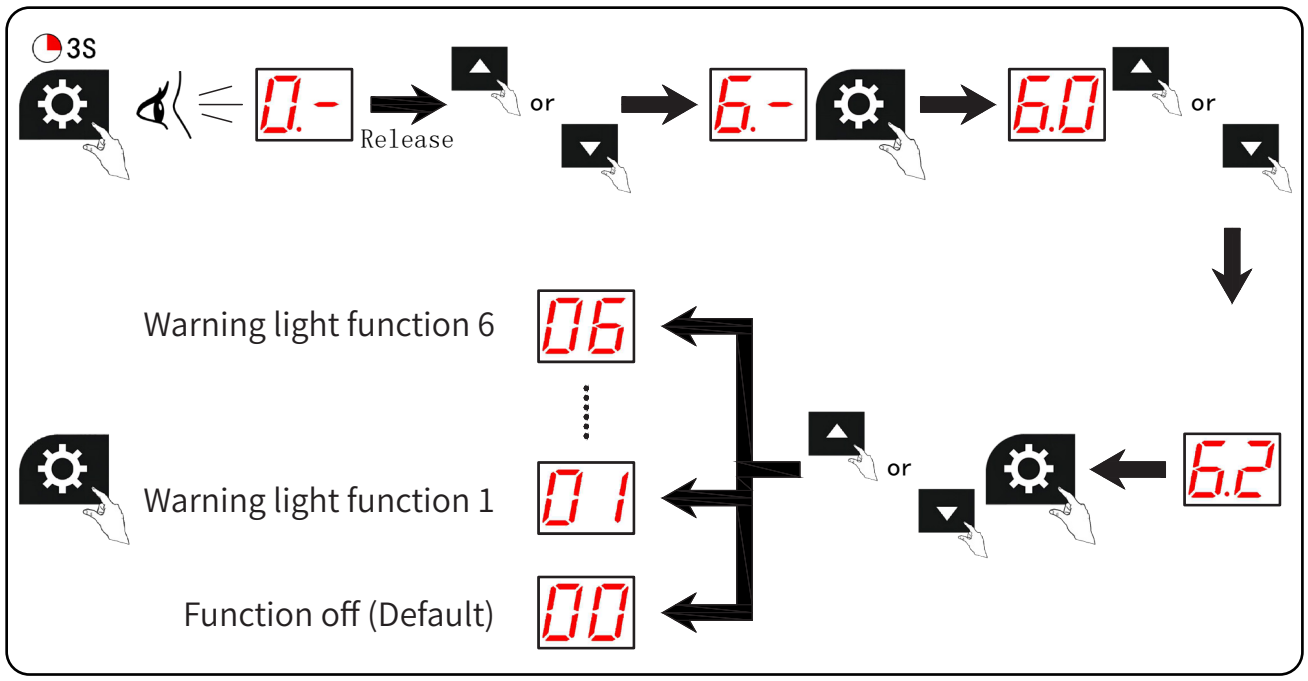
ⓘ Port performs the pulse trigger function.

ⓘ When using the 04 Partial open function, the parameters in menu 6.0 need to be set.



6.2 Flash light port function setting

ⓘ Connection Description: FLA-GND port.



Standard warning light features

ⓘ Standard warning light: no warning function, flashes when running, and turns off when stopped.

ⓘ The flashing frequency of the warning light depends on parameter 9.5 Flashing frequency of the warning light.

CODE	Function	Close limit state	Open limit state	Alert status	Operating status
00	standard application (Default)	OFF	OFF	OFF (without warning)	Flashing[2]

Other warning light functions

ⓘ 1.The warning light warning time depends on the setting of parameter 9.3 warning light closing operation warning time function.

ⓘ 2.The flashing frequency of the warning light depends on the function setting of parameter 9.5 Flashing frequency of the warning light.

ⓘ 3.The state of the warning light at the close limit depends on the setting of parameter 9.6 Warning light delay off.

CODE	Function	Close limit state[3]	Open limit state	Alert status[1]	Operating status
01	Warning light function 1	OFF	OFF	Flashing[2]	ON
02	Warning light function 2	OFF	OFF	Flashing	Flashing
03	Warning light function 3	OFF	OFF	ON	ON
04	Warning light function 4	OFF	OFF	Flashing	OFF
05	Warning light function 5	OFF	ON	Flashing	OFF
06	Warning light function 6	OFF	ON	OFF	OFF

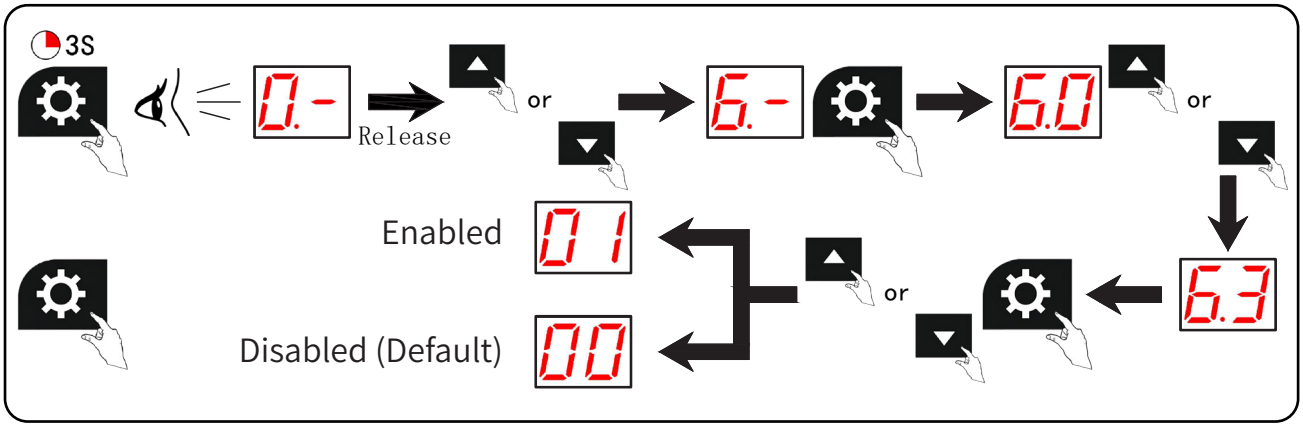
6.3 Electronic lock function setting

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

Electronic lock "+" connect to Realy module "+"

Electronic lock "-" connect to Realy module "-"

ⓘ After the electronic lock is successfully connected and the door is closed to the close limit , the electronic lock cylinder extends. (If the electronic lock is connected in reverse, the door body and the electronic lock will be damaged when the door is opened. Pay attention to the order of connecting the wires)

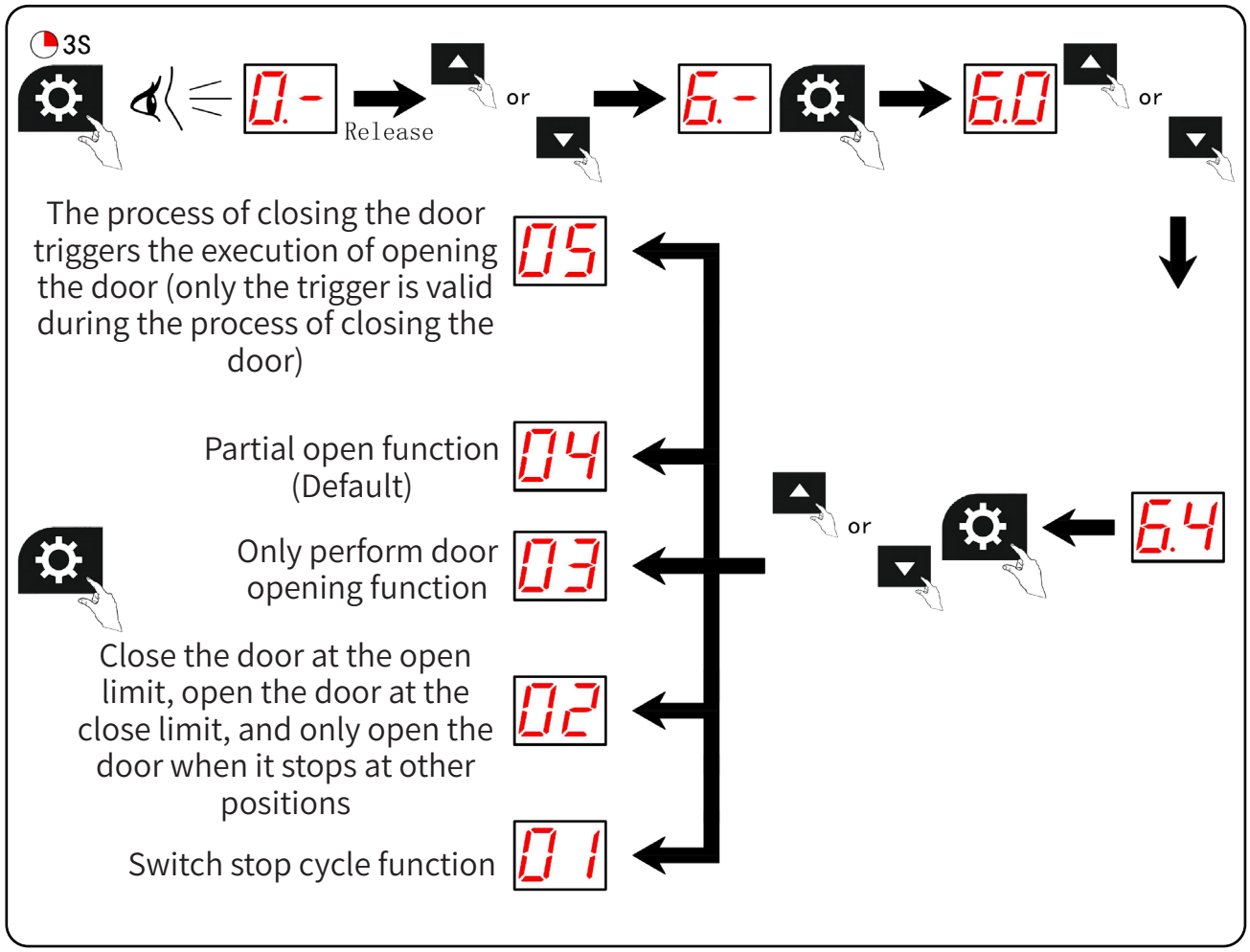


6.4 Partial open port function setting

ⓘ Connection Description： HB-GND port

ⓘ port performs the pulse trigger function.

ⓘ When using the 04 Partial open function, the parameters in menu 6.0 need to be set.



Relay function setting

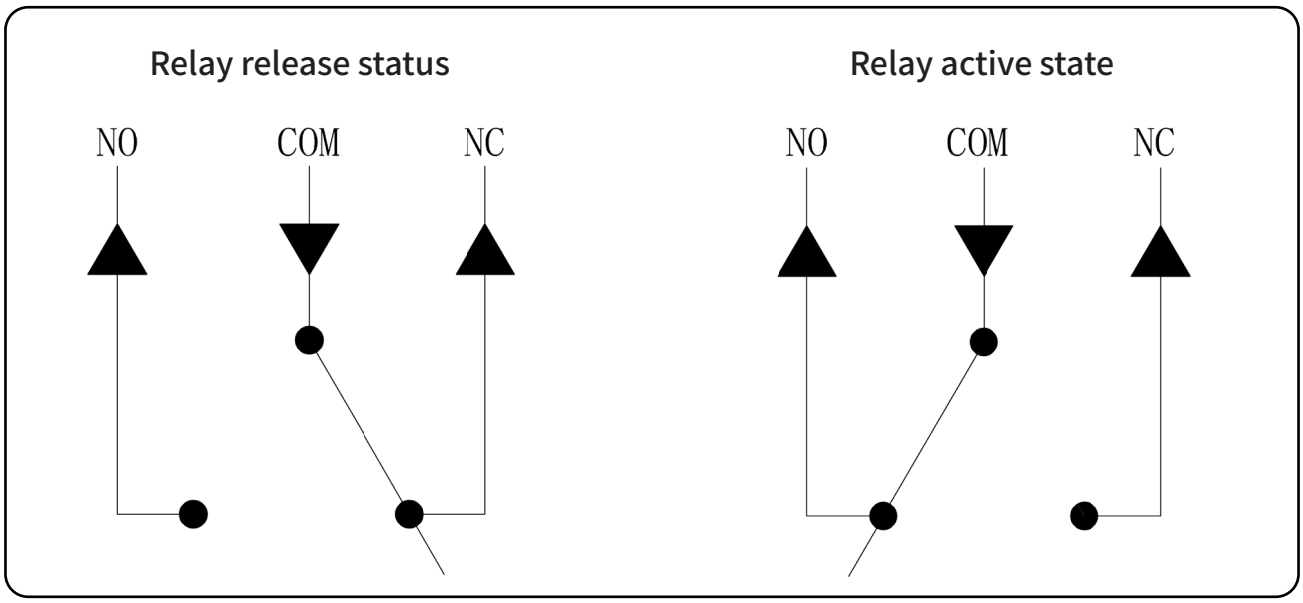
ⓘ Connection instructions：NO-COM-NC port.

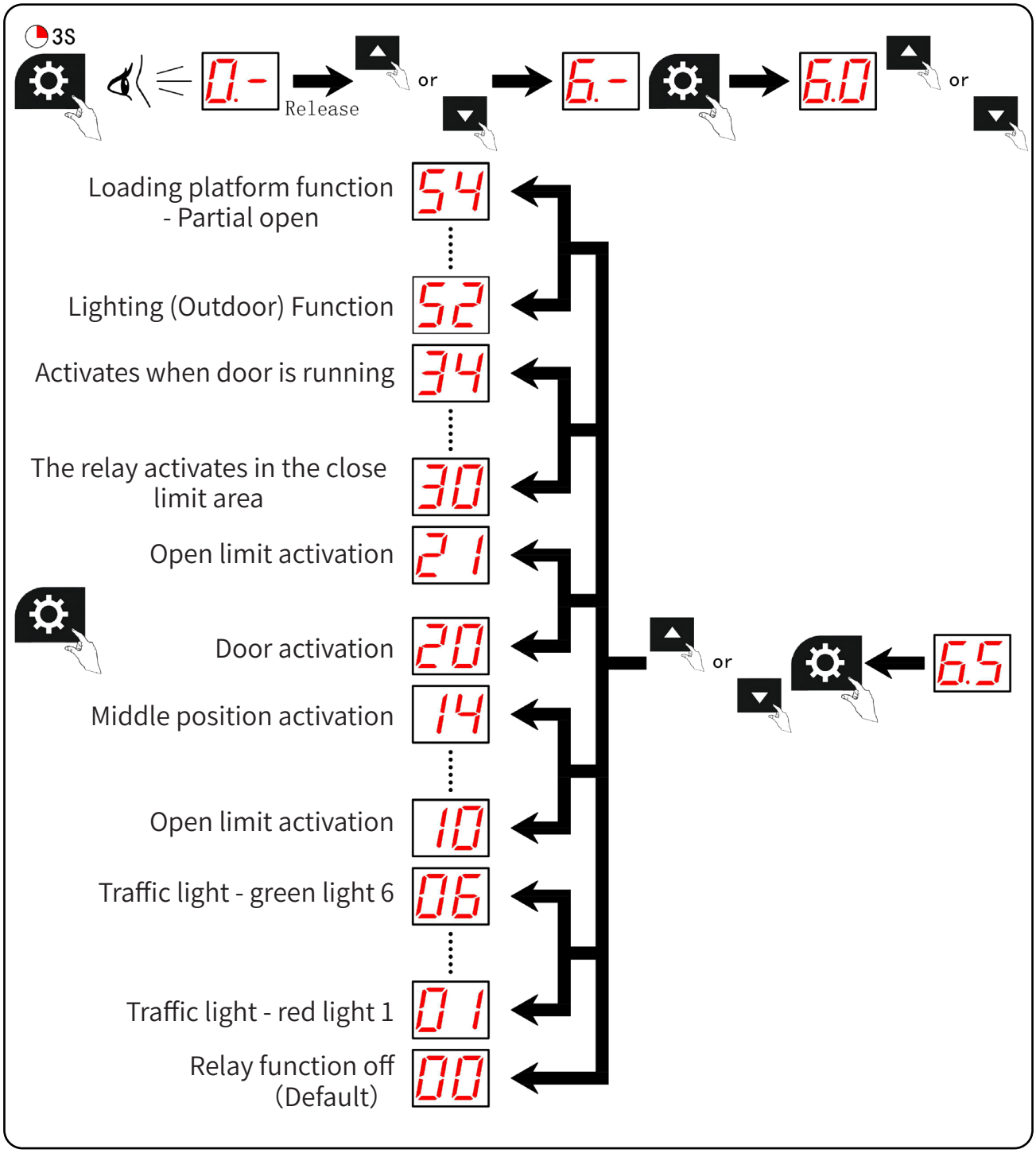
ⓘ Menu A.0/A.1/A.2/A.3 is visible when using relay RL - A traffic light function group.

ⓘ Menu A.4 is visible when using function 30 in relay RL - A (relay active in close limit zone).

ⓘ Menu A.5 is visible when using function 31 in relay RL - A (relay active in open limit zone).

ⓘ Relay status description：




3S
0.-
Release
or
6.-
6.0
or
Loading platform function
- Partial open
54
Lighting (Outdoor) Function
52
Activates when door is running
34
The relay activates in the close
limit area
30
Open limit activation
21
Door activation
20
Middle position activation
14
Open limit activation
10
Traffic light - green light 6
06
Traffic light - red light 1
01
Relay function off
(Default)
00
or
6.5

Code	Function	Function Description
	Relay function off (Default)	No function - Relay released state

Traffic light function group:

ⓘ 1: The pre-warning state depends on the setting of the pre-warning time for closing the door of the traffic light function of the parameter A.0 relay A.

ⓘ 2: The flashing frequency depends on the flashing frequency setting of parameter A.2 relay A traffic light function.

ⓘ 3: The state of the close limit depends on the parameter A.3 relay A traffic light function delay off setting.

Code	Traffic light function	Close limit state[3]	Open limit state	Alert status[1]	Operating status
	Traffic light - red light1	OFF	OFF	Flashing[2]	ON
	Traffic light - red light2	OFF	OFF	Flashing	Flashing
	Traffic light - red light3	OFF	OFF	ON	ON
	Traffic light - red light4	OFF	OFF	Flashing	OFF
	Traffic light - green light5	OFF	ON	Flashing	OFF
	Traffic light - green light6	OFF	ON	OFF	OFF

Door Position Function Group

ⓘ **Relay triggering based on door position.**

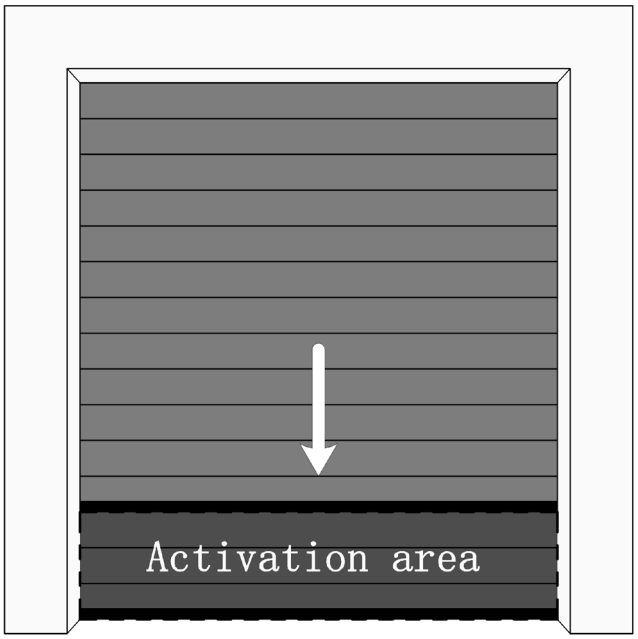
Code	Function	Close imit state	Open limit state	Centre position	Operating status
	Open limit activation	OFF	ON	ON	OFF
	Close limit activation	ON	OFF	OFF	OFF
	Open limit closed	ON	OFF	OFF	ON
	Close limit closed	OFF	ON	ON	ON
	Middle position activation	OFF	OFF	ON	OFF

Pulse function group

Code	Function	Function Description
	Door activation	Each time the motor executes a door open, the relay activates for one second
	Open limit activation	After the motor opens the door and reaches the open limit, the relay is activated for two seconds

Gate Runtime Function Group

ⓘ Relay triggering based on the door movement state

Code	Function	Function Description
30	The relay activates in the close limit area	When the door travel limits below the set position, the relay activates. The position at which the relay activates can be set using parameter A.4. 
31	The relay activates in the open limit area	When the door travel limits above the set position, the relay activates. The position at which the relay activates is programmable using parameter A.5. 

Code	Function	Function Description
	Activation with door open	When the door is open and running, the relay is activated
	Activate with door closed	When the door body is closed, the relay is activated
	Activates when the door is running	When the door is opened or closed, the relay is activated

Add-on function group

ⓘ **Relay triggering based on the door movement state**

Code	Function	Function Description
	Lighting (outdoor) function	The relay activates when there is a door open command and remains active for 2 minutes at the open limit.
	Loading platform function - fully open	The relay establishes communication with the dock leveler. Doors are fully open during dock leveler operations.
	Loading platform function - partial door	The relay establishes communication with the dock leveler. Doors are in the partial open position when the leveler is in operation.

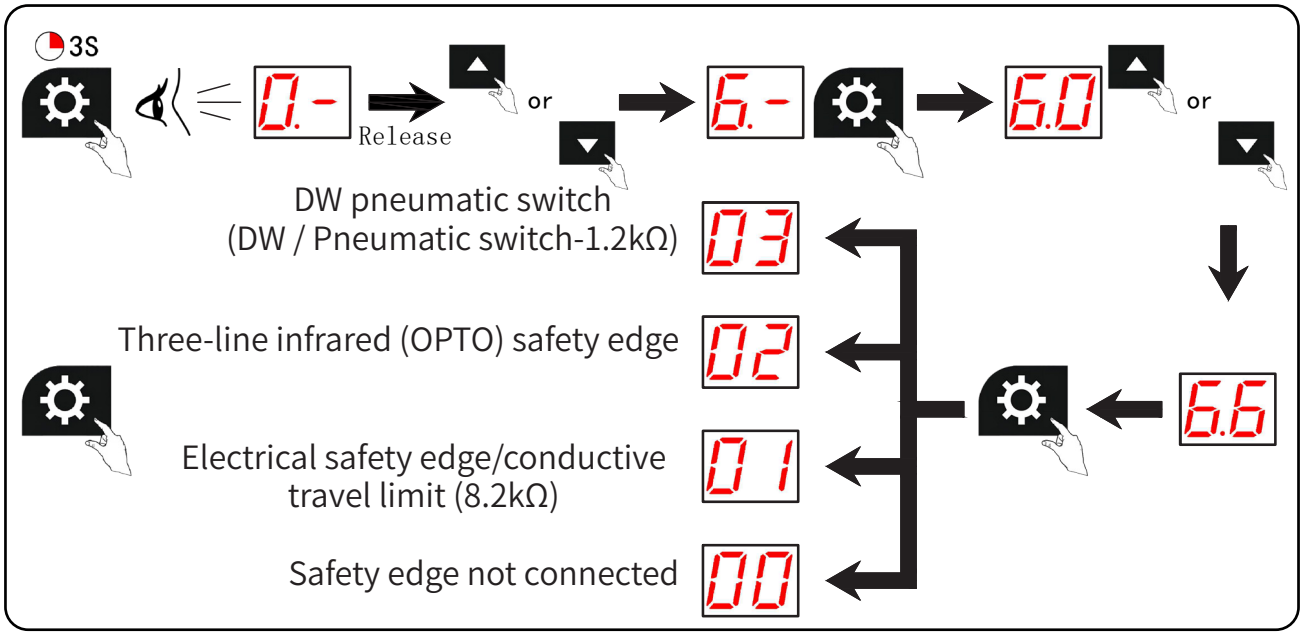
6.6 Safety edge function identification

! The following types of safety edge devices are automatically recognized by the devices connected to the control box. Remember to properly connect the corresponding safety side before starting.

! The safety side must be connected, otherwise the motor will run in long press mode when closing the door.

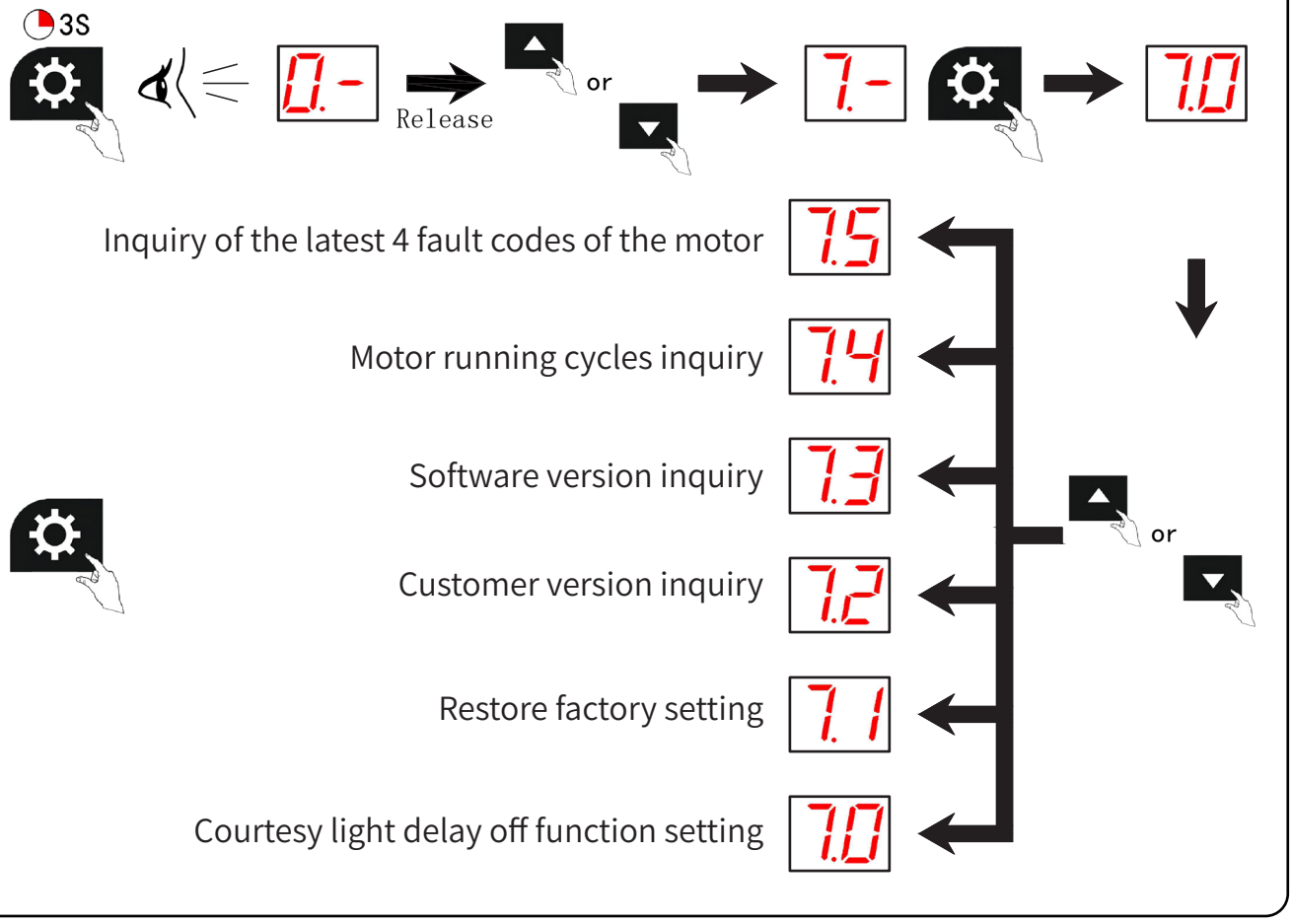
ⓘ This function can only query the current safety edge type.

ⓘ When the door is closed, the trigger on the safety side will perform reverse, and the reverse running time is set by parameter 3.3 Rebound time when encountering resistance; the reverse sensitivity is set by parameter 3.4 Reaction time when encountering resistance when the safety side is encountered.



Menu 7： Motor query function setting

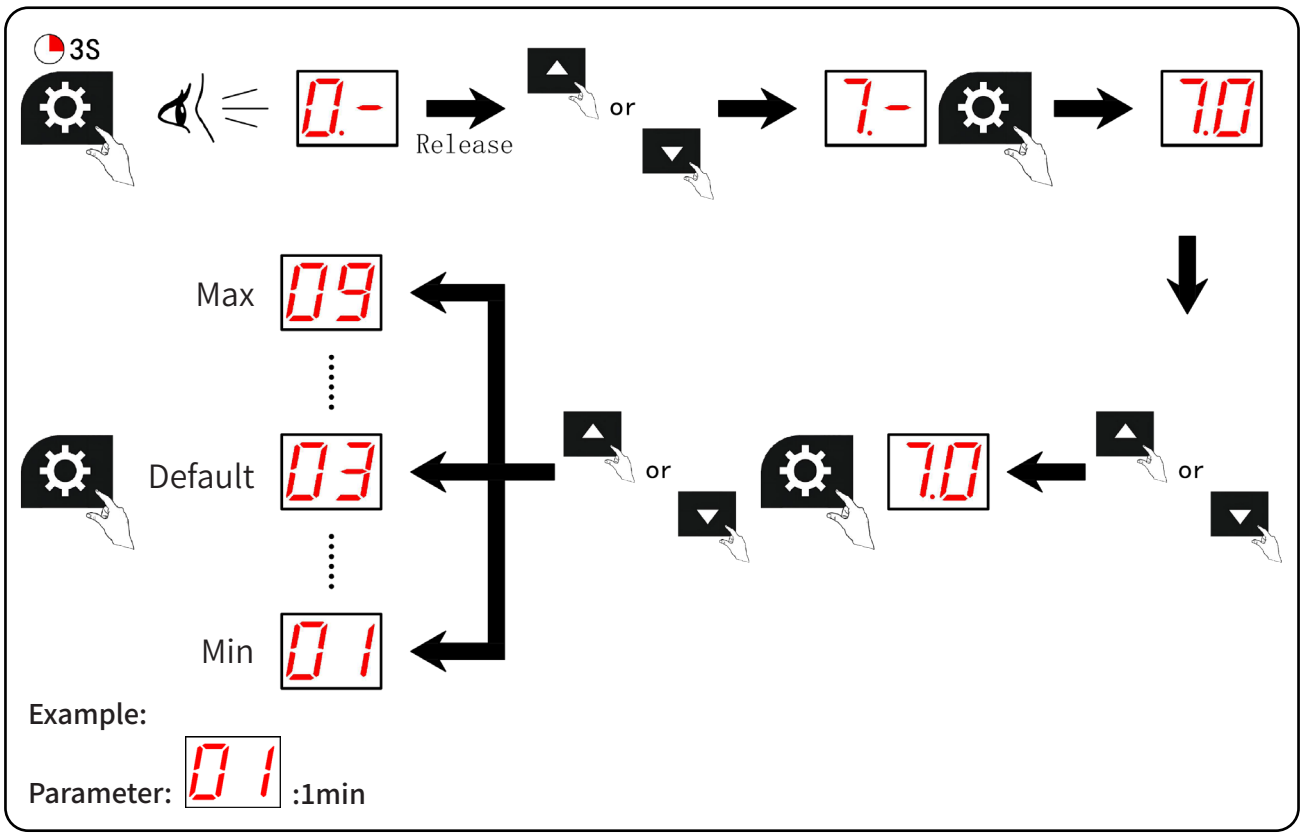
Function Guide



7.0 Courtesy light delay off function setting

ⓘ This function menu is only visible on DC - IDO motors.

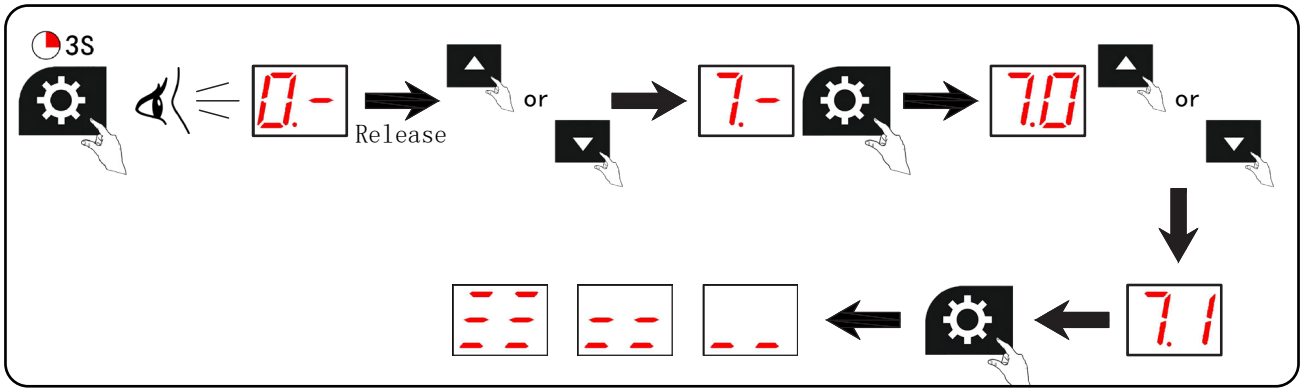
ⓘ Used to set the delay time for the courtesy light to turn off after the motor stops running.



7.1 Restore factory setting

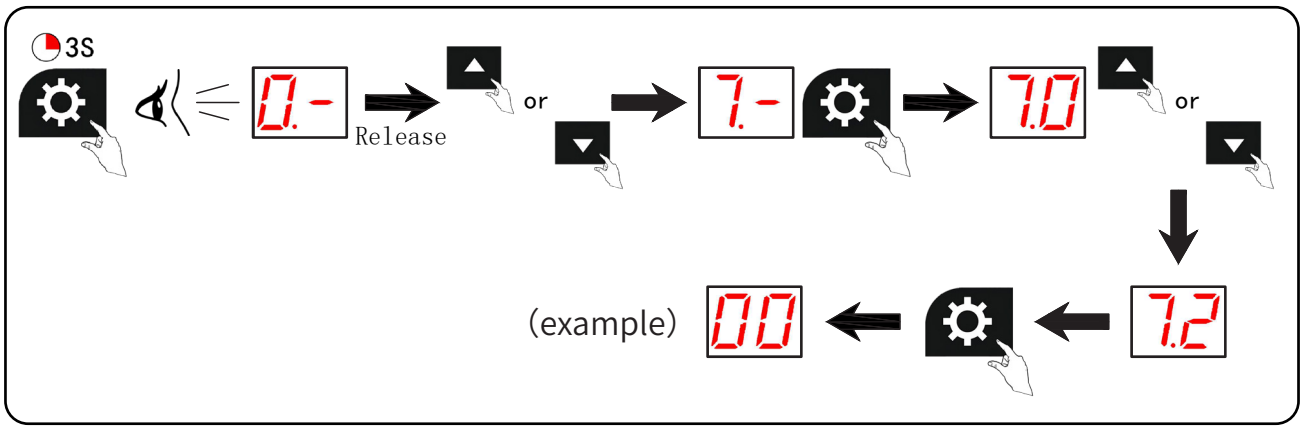
ⓘ All settings are set to factory settings! In addition to the cumulative running times of the motor and the number of maintenance alarms.

ⓘ After restoring the factory settings, power off the system for 1 minute and then power on again.



7.2 Customer version inquiry

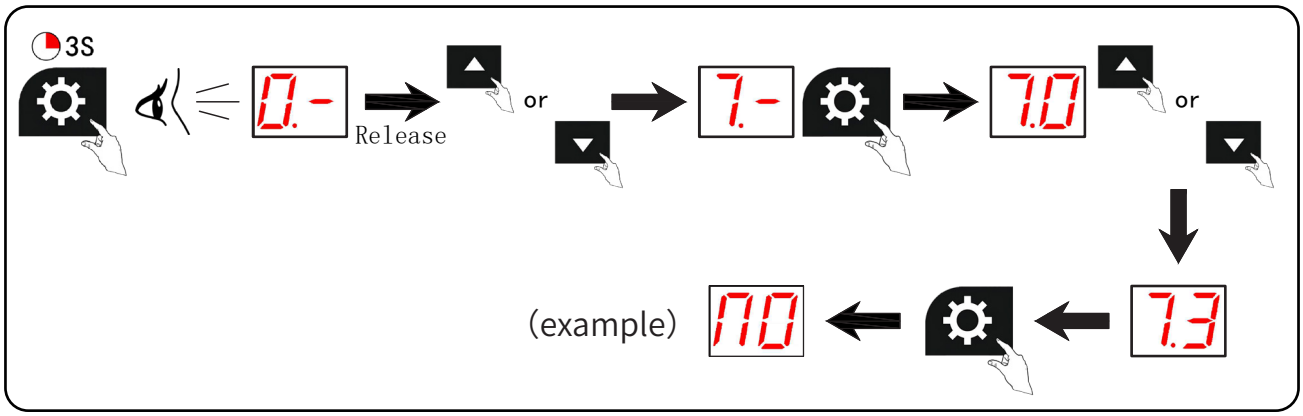
ⓘ This function can query the customer code.



7.3 Software version inquiry

ⓘ This function can query the hardware versions of the control module, encoder module, power limit module and inverter module.

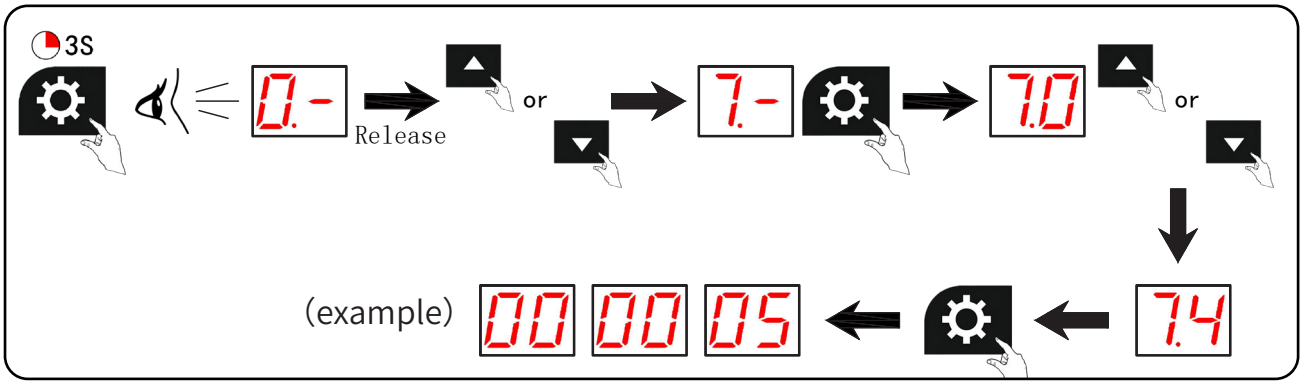
ⓘ Example： Display in the order of A0-10-C0-b0.



7.4 Motor running cycles inquiry

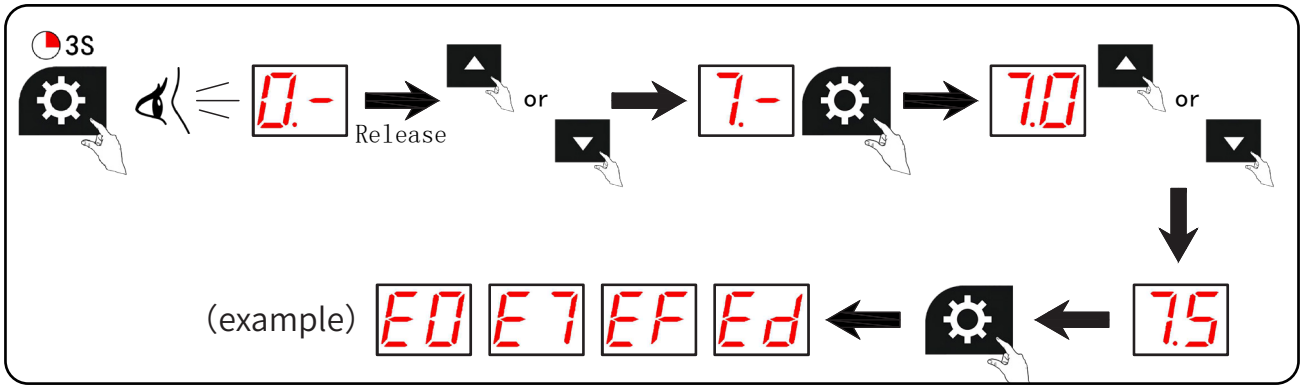
ⓘ This function can query the accumulative running times of the motor.

ⓘ The accumulative running times of the motor will not be cleared after the motor is restored to factory settings.



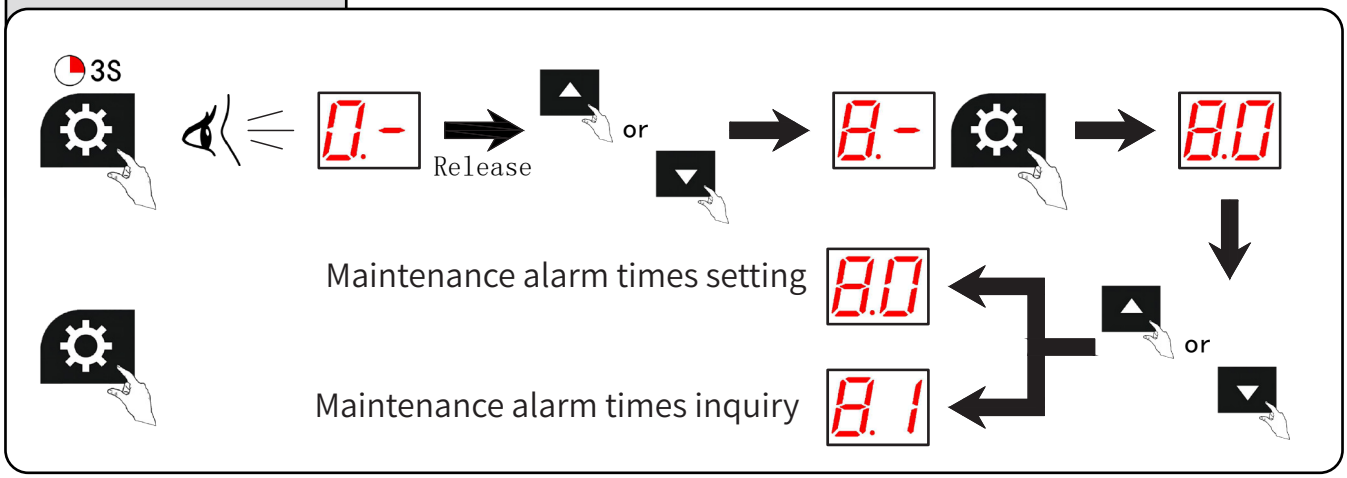
7.5 Inquiry of the latest 4 fault codes of the motor

ⓘ This function can query the last four fault codes of the motor.



Menu 8: Maintenance alarm function setting

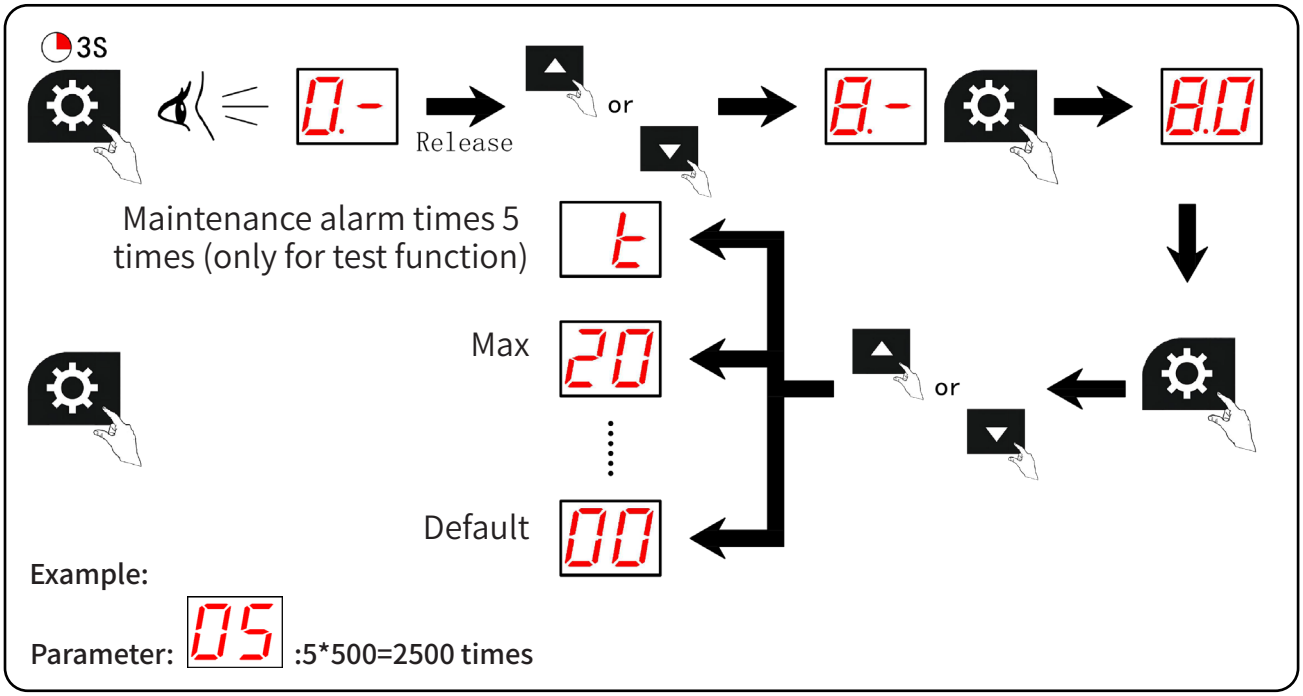
Function Guide



Maintenance alarm times setting

ⓘ After the number of maintenance alarm cycles is reached, the digital tube of the motor switch door will display a prompt code. To restore, you need to re-enter the 8.0 menu to set the maintenance alarm level.

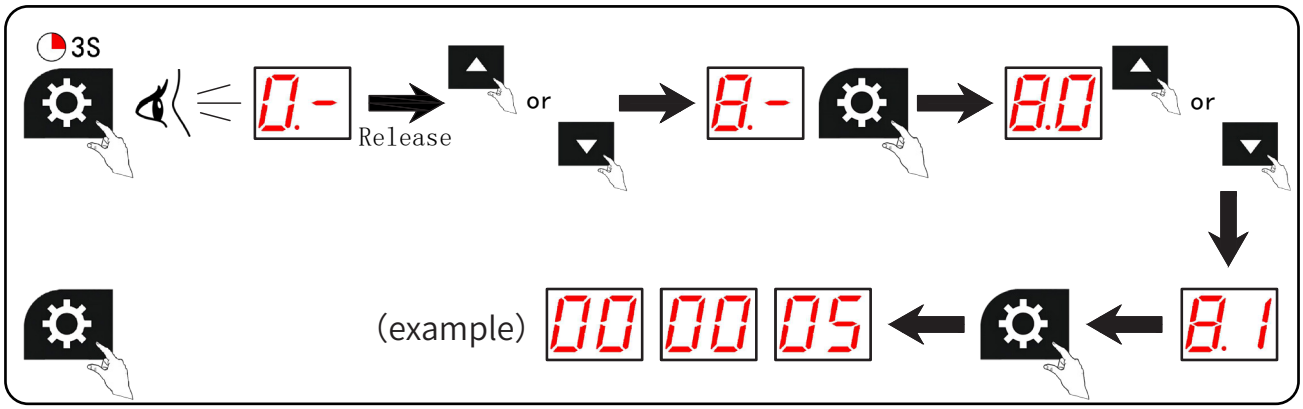
ⓘ The behavior of the motor after the number of maintenance alarm cycles is reached is determined by the parameter  The beh  of the motor after the number of maintenance alarm cycles is reached is determined by the parameter.



Maintenance alarm times inquiry

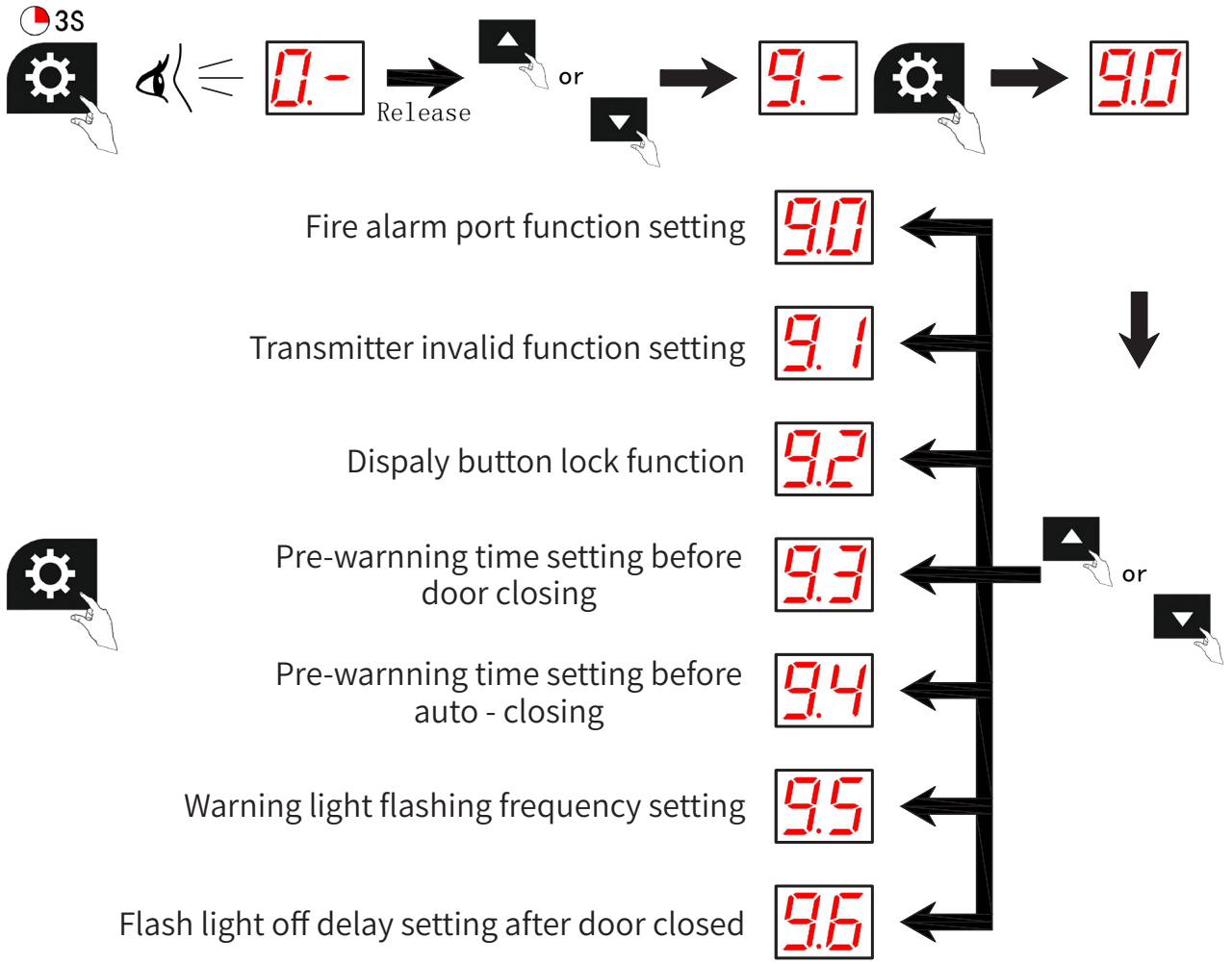
ⓘ The number of maintenance alarms will not be cleared after the motor is restored to factory settings.

ⓘ After the maintenance of the door body is completed, the maintenance personnel need to re-enter the menu to set the maintenance times, and the number of motor maintenance alarms will start counting again.



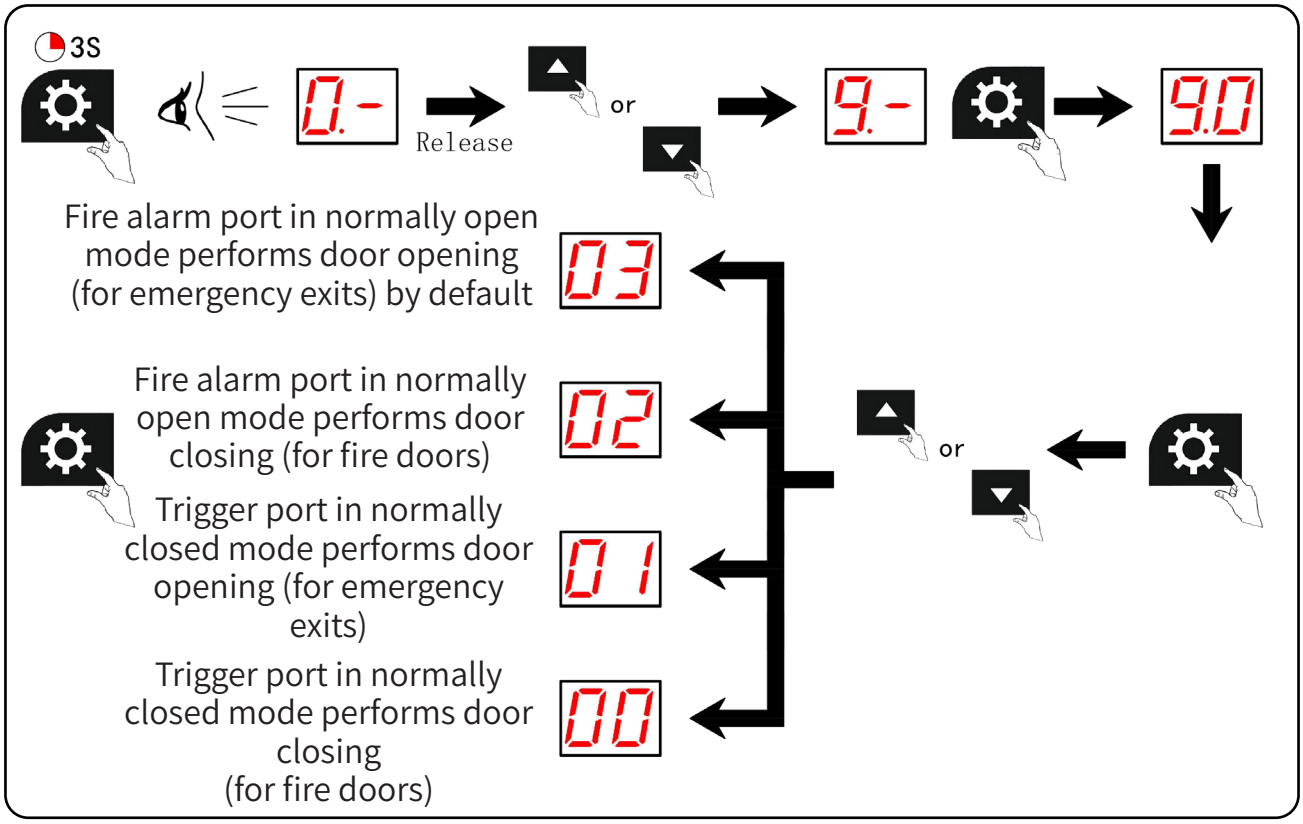
Menu 9： Other function settings of the motor

Function Guide



Fire alarm port function setting

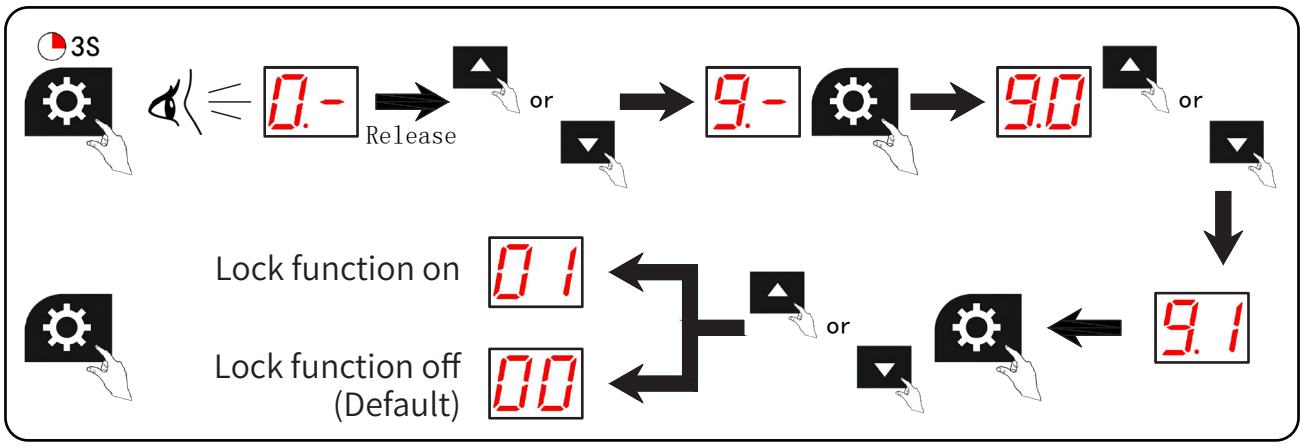
ⓘ This function is used to change the door body operation after the fire alarm function is triggered. After the fire alarm triggers the door body action, only (FA-GND) port can control the motor to stop, and other stop operation commands cannot stop the door body run.



Transmitter invalid function setting

ⓘ **The remote controller control will be locked after the function is turned on. Can be unlocked and locked via this menu or the remote control receiver**

ⓘ **Displayed when the remote lock is locked**  **,Show when unlocked**  **.**

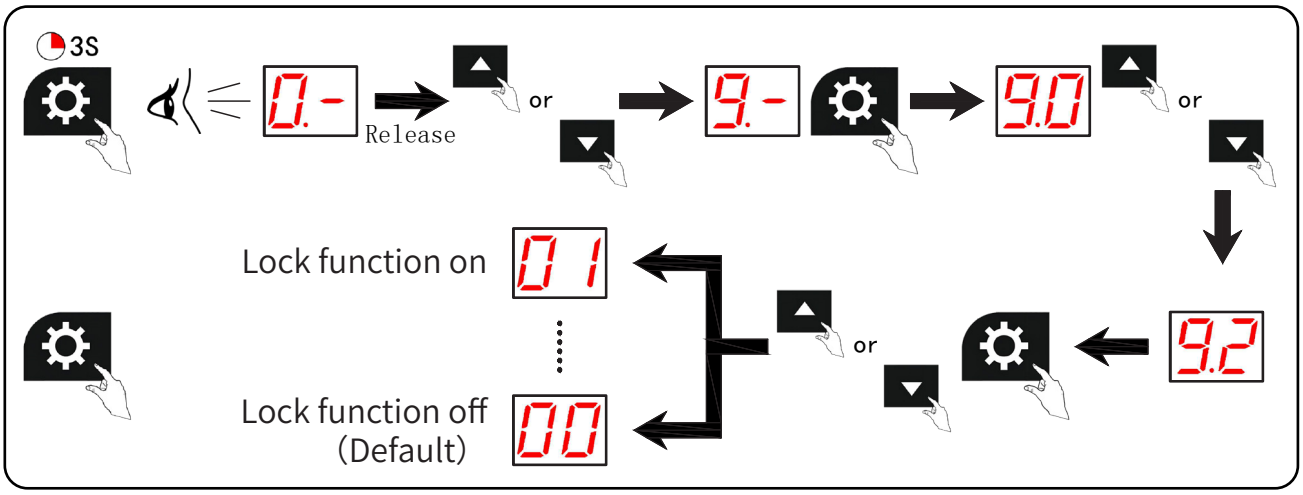


9.2 Dispaly button lock function

ⓘ After turning on the child lock function, the control panel buttons are invalid, except for long pressing the SET button to enter the menu settings.

ⓘ After the lock is turned on, the control box button triggers the display: UL

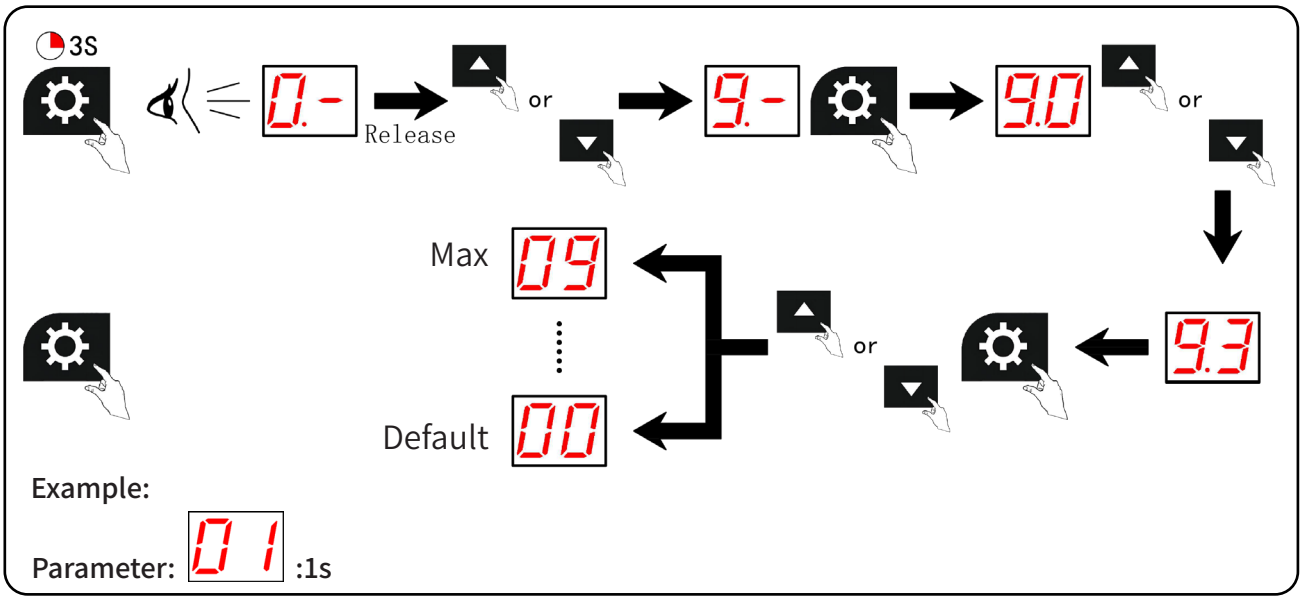
Lock off display: LC



9.3 Pre-warnning time setting before door closing

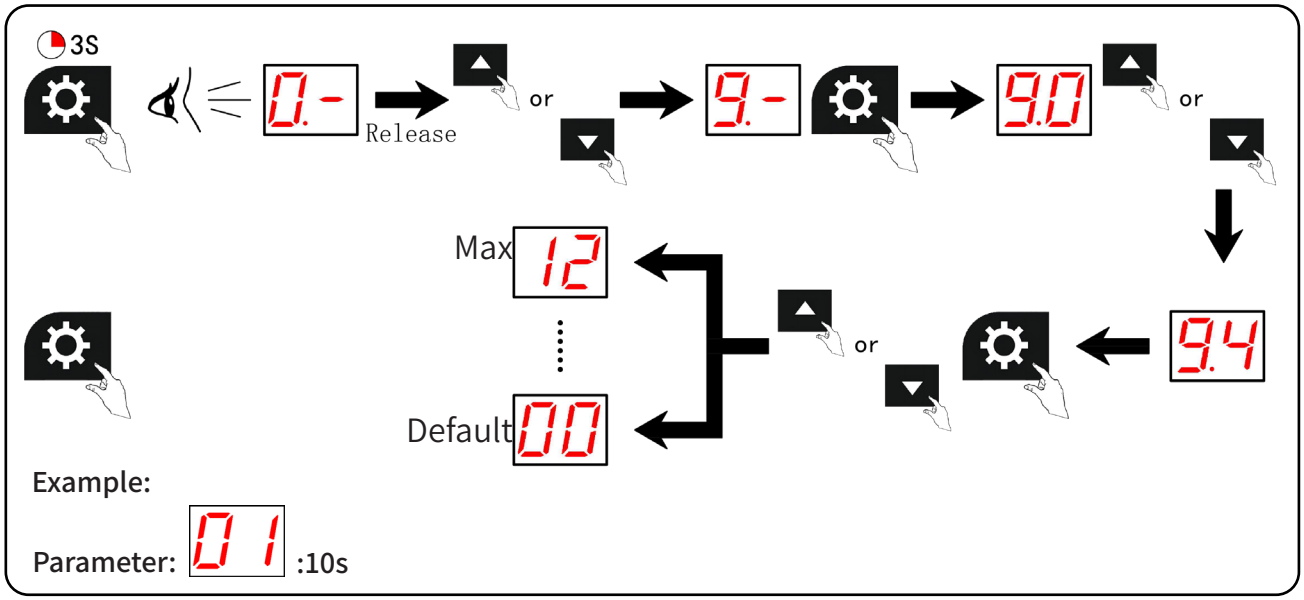
ⓘ The time setting range of this parameter is : 0 seconds-9 seconds.

ⓘ This menu is only visible after the warning light turns on the 01-06 traffic light function in menu 6.2



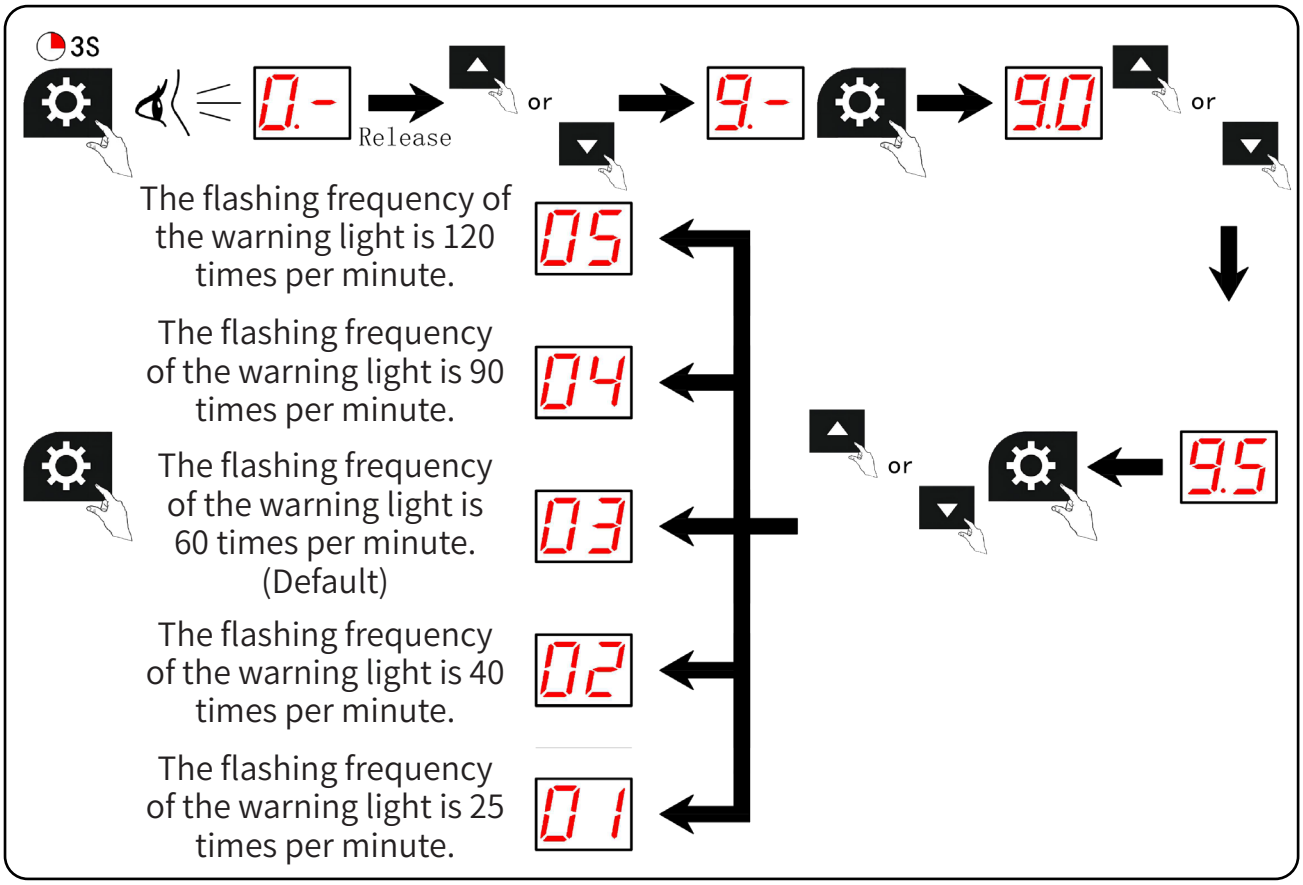
9.4 Pre-warnning time setting before auto - closing

ⓘ The time setting range of this parameter is: 0 seconds-120 seconds (X=n*10 seconds).
ⓘ Before using this function, you need to turn on the 01-06 traffic light function in menu 6.2.
ⓘ To use this function, you need to enable the automatic door closing function in menu 4.0.



9.5 Warning light flashing frequency setting

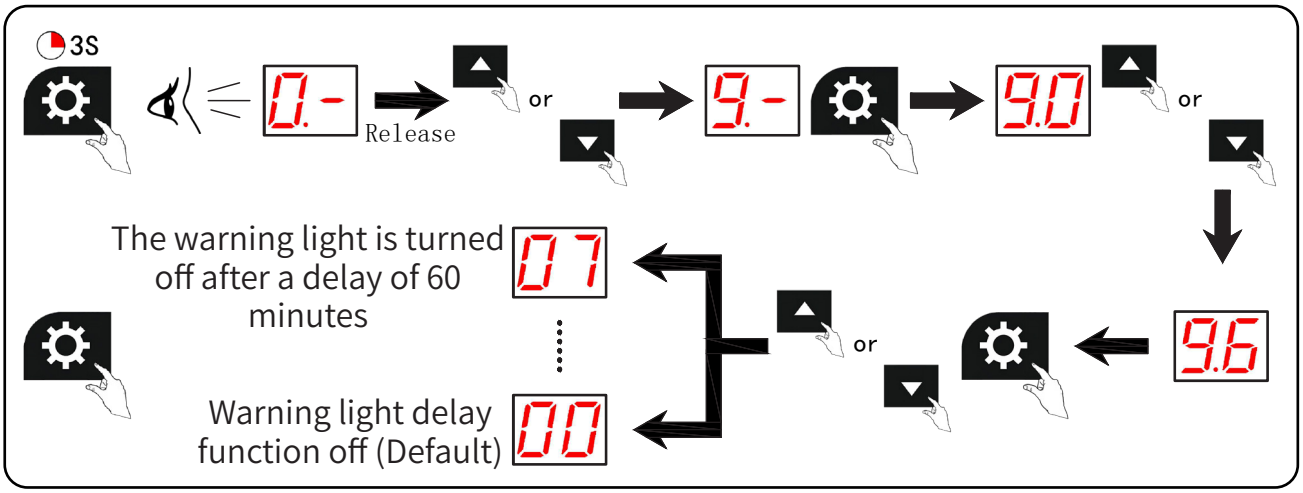
ⓘ This function is used to adjust the flashing frequency of the warning light.
ⓘ The flashing frequency of the warning light is 60 times/minute (this function menu can only be seen after turning on the 6.2 warning light function port 0 1 -06)



9.6 Flash light off delay setting after door closed

ⓘ This function is used to adjust the delay off time after the warning light reaches the close limit.

ⓘ Before using this function, you need to turn on the 01-06 traffic light function in menu 6.4.

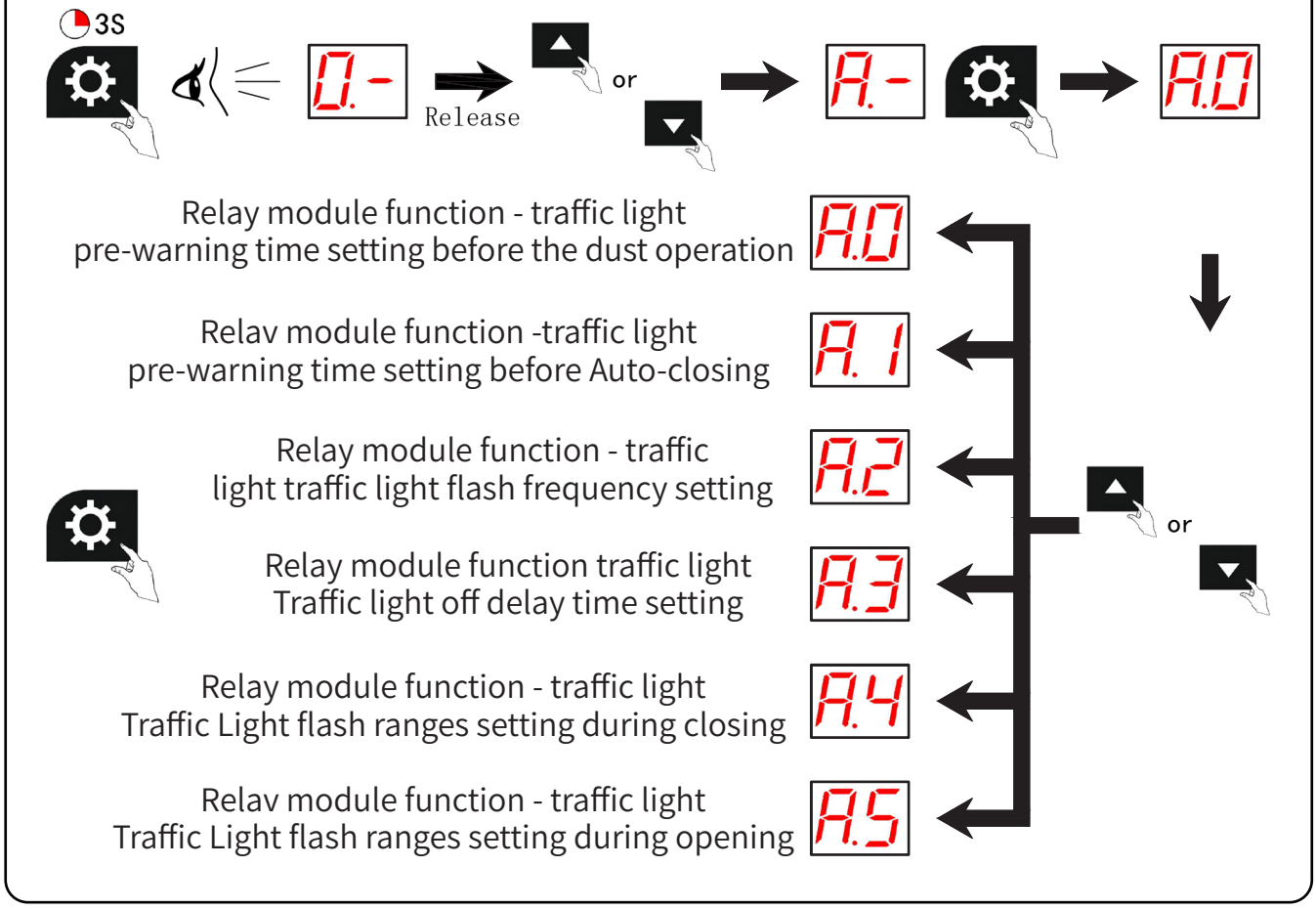


00	The warning light delay function is turned off. (Default)
01	The warning light delay function is on.
02	The warning light turns off after a delay of 1 minute.
03	The warning light will be turned off after a 3-minute delay.
04	The warning light will be turned off after a 5-minute delay.
05	The warning lights are turned off after a 20-minute delay.
06	The warning lights are turned off after a 30-minute delay.
07	The warning light will be turned off after a delay of 60 minutes.

Menu A: Relay A function setting

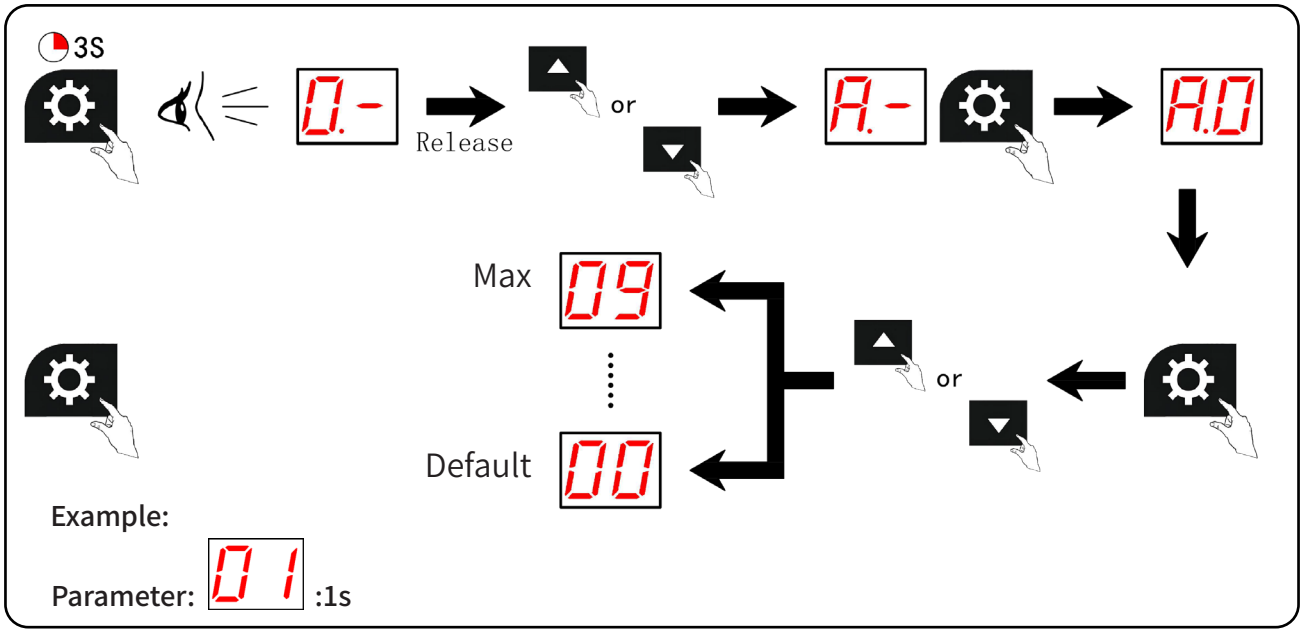
ⓘ This menu is only visible if the relay port 6.5 menu function is enabled.

Function Guide



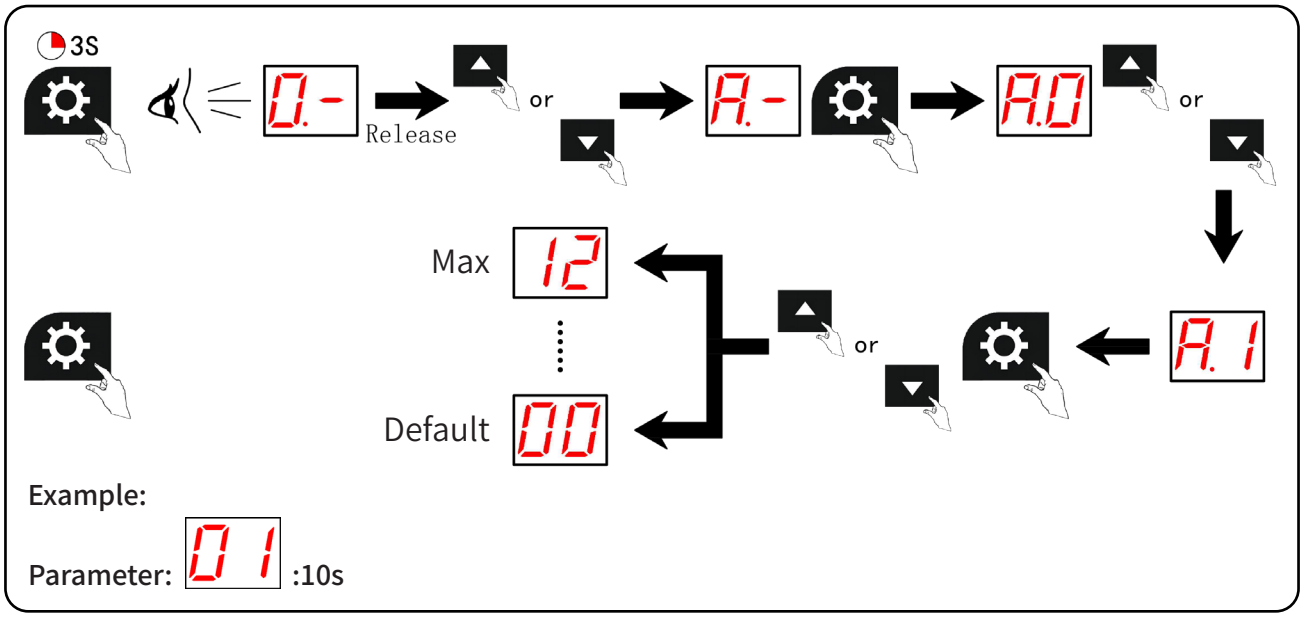
A.0 Relay module function - traffic light
pre-warning time setting before the dust operation

ⓘ The time setting range of this parameter is: 0 seconds ~ 9 seconds.
ⓘ This menu is only visible when the relay port is turned on in 6.5 function and the 01-06 traffic light function is turned on.



A.1 Relay module function -traffic light
pre-warning time setting before Auto-closing

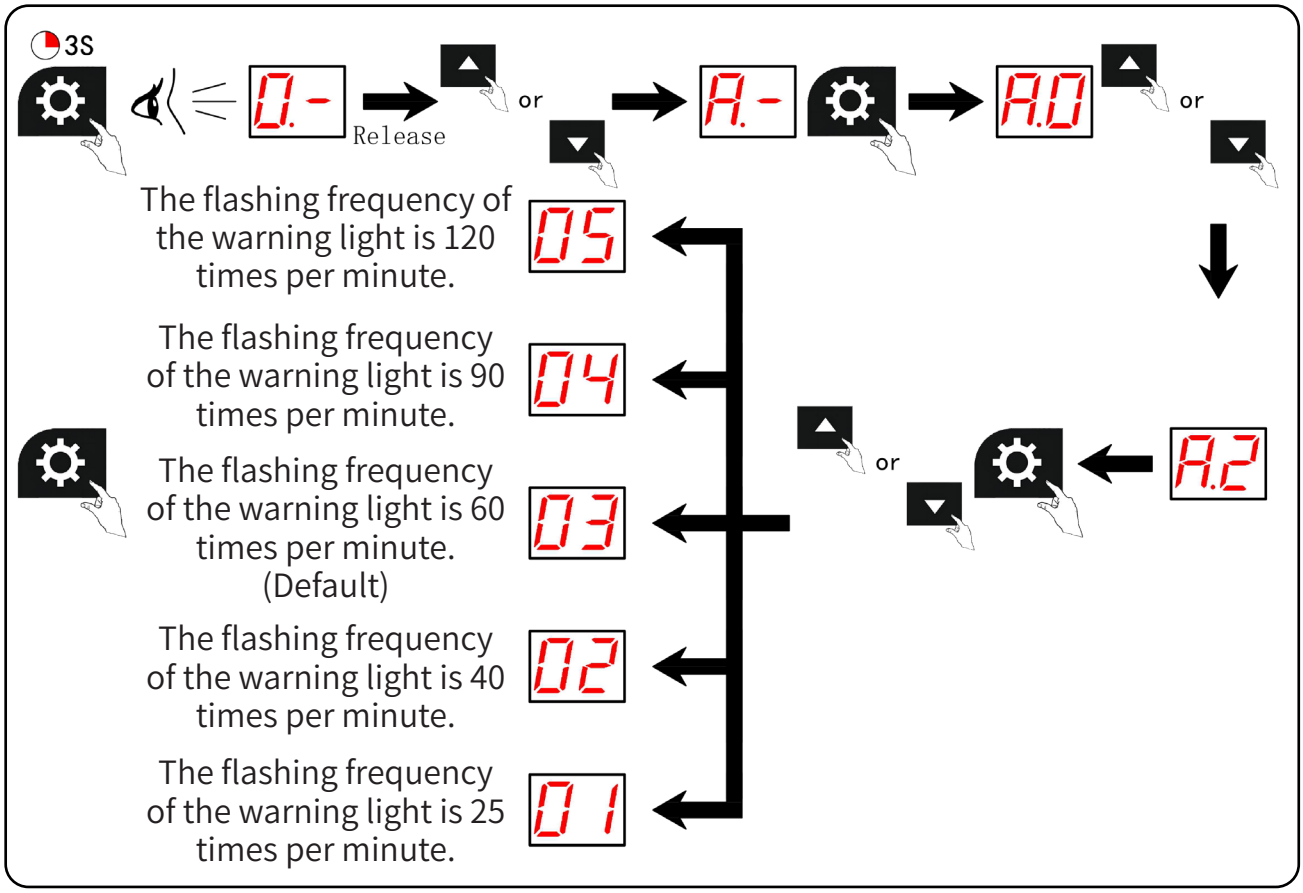
ⓘ The time setting range of this parameter is: 0 seconds ~ 120 seconds (x=n*10).
ⓘ This menu is only visible when the relay port in the 6.5 function turns on the 01-06 traffic light function and the 4.0 automatic door closing function menu is turned on



Relay module function - traffic light
traffic light flash frequency setting

ⓘ **This function is used to adjust the flashing frequency of the relay .**

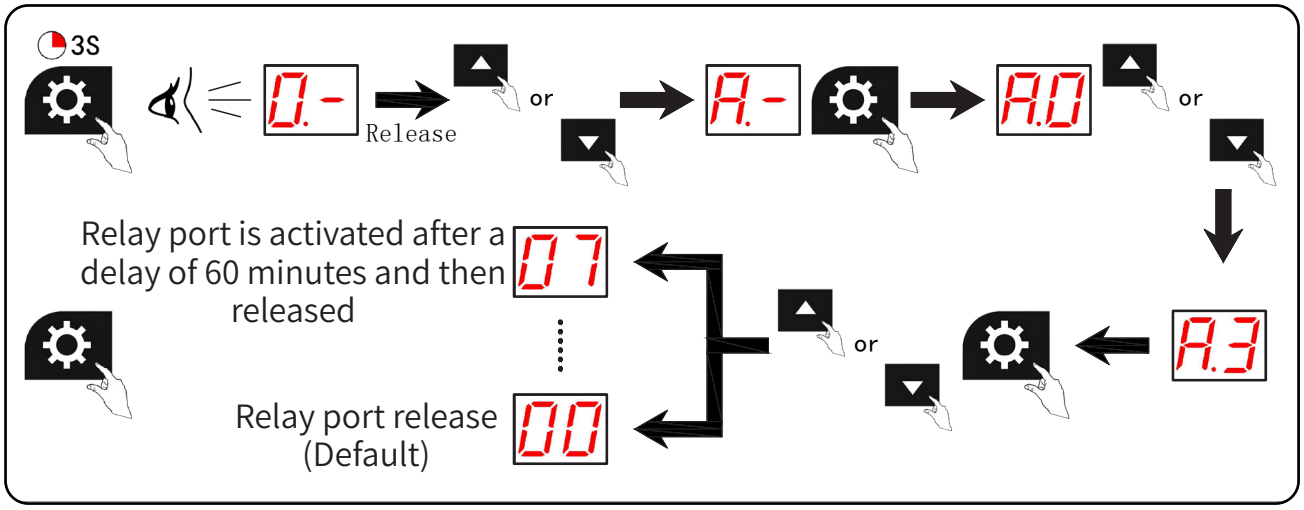
ⓘ **This menu is only visible when the relay port is turned on in function 6.5 and the 01-06 traffic light function is turned on.**



Relay module function - traffic light
traffic light flash frequency setting

ⓘ **This function is used to adjust the delayed release time when the relay port reaches the close limit.**

ⓘ **This menu is only visible when the relay port in 6.5 function is turned on and 01-06 traffic light function is turned on.**

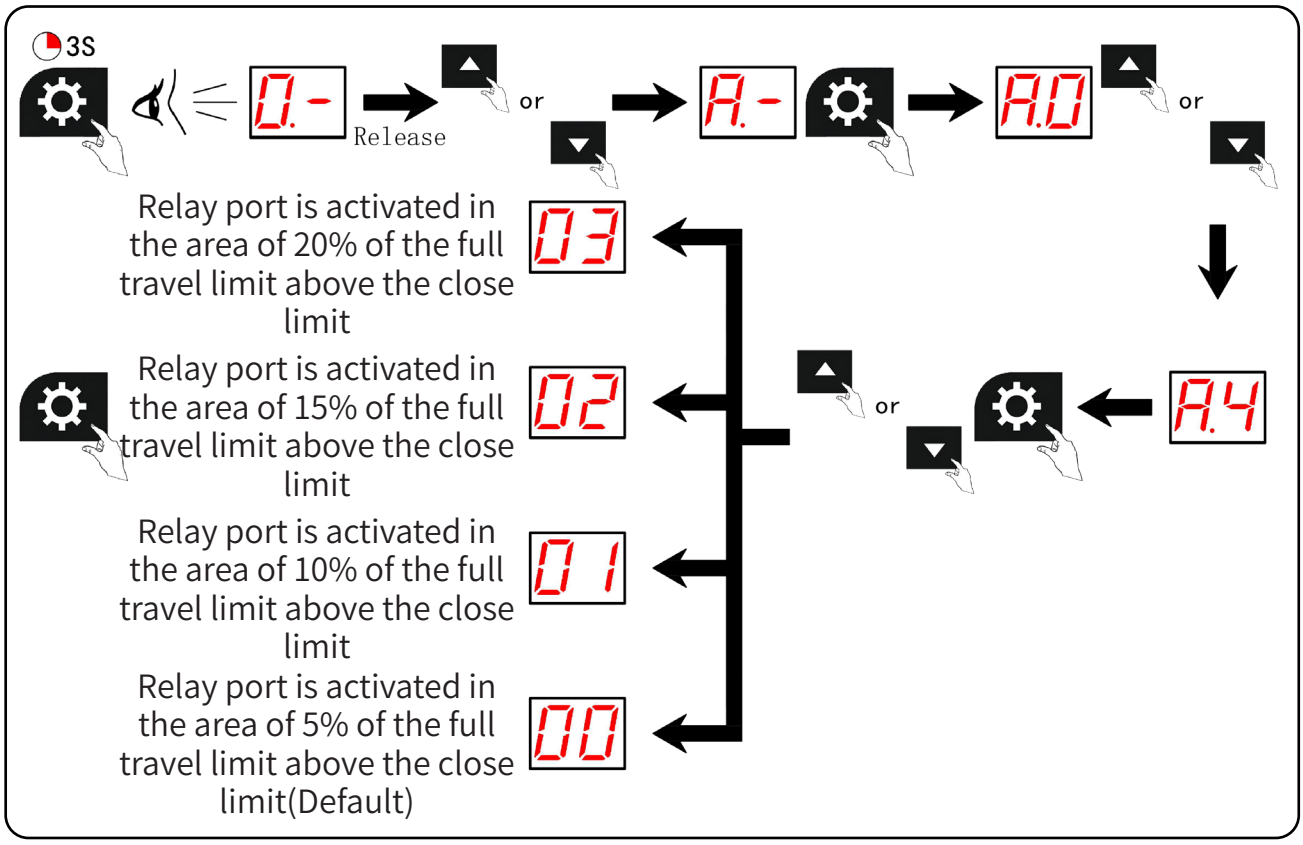


	Relay -X66 released. (Default)
	Relay -X66 is activated.
	Relay -X66 is released after 1 minute delay activation.
	Relay -X66 is released after 3 minutes of delayed activation.
	Relay -X66 is released after 5 minutes of delayed activation.
	Relay -X66 is activated after a delay of 20 minutes and released.
	Relay -X66 is released after 30 minutes of delayed activation.
	Relay -X66 releases after 60 minutes of delayed activation.

A.4 Relay module function - traffic light
Traffic Light flash ranges setting during closing

ⓘ This function is used to adjust the activation of the area above the close limit of the relay.

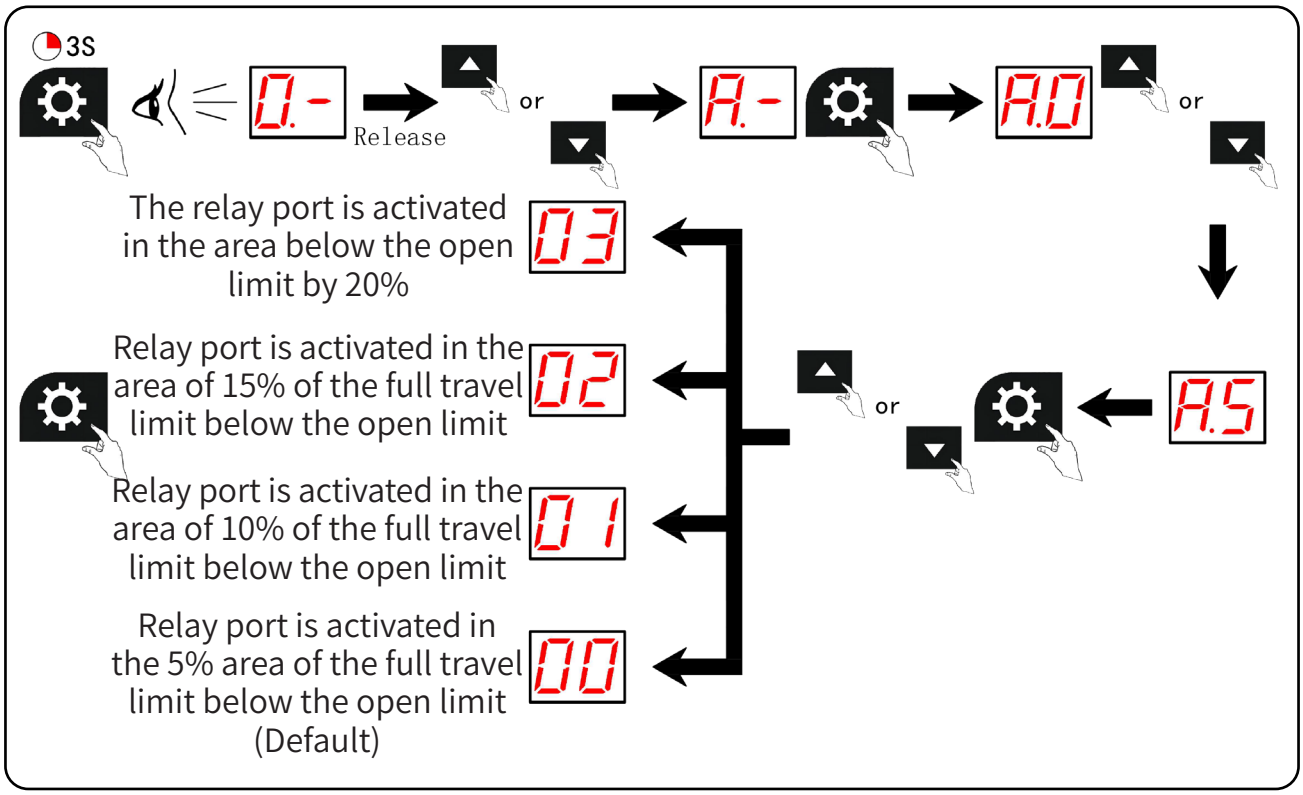
ⓘ This menu is only visible after the relay port is turned on in function 6.5 and function 30 is turned on.



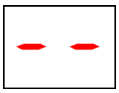
Relay module function traffic light
Traffic Light flash ranges setting during opening

ⓘ This function is used to adjust the activation of the area below the open limit of the relay port.

ⓘ This menu is only visible after the relay port in function 6.5 is turned on and function 31 is turned on .



11.Control System Running Display Code

Display information	
	No travel limit state, can run in long press mode
	With travel limit status display
	Open limit learning status display
	Close limit learning status display
	Door open display
	Closed door operation display
	PE/GND port is triggered
	ST/GND port three-button wall switch stop trigger
	BN/GN port safety edge conductive strip is triggered
	BN/GN Port safety edge DW is triggered by the port
	BN/GN port safety edge three-line infrared is triggered
	BN/GN Port safety edge DW self-test failure fault
	FA/GND The port fire alarm port is triggered
	Motor fuse blown
	Emergency stop port is triggered
	After the number of maintenance alarms in menu 8.0 is reached, it will be displayed every time

Display information	
	Remote control function lock display
	Remote control function unlock display
	Control box child lock status
	Control box child lock unlock status
	Wireless infrared is triggered
	Wireless slack rope switch is triggered
	Wireless wicket door is triggered
	Wireless electronic lock is triggered
	Wireless safety edge is triggered
	Wireless electronic lock device communication failed
	Wireless safety edge junction box device communication failed
	Wireless infrared device communication failed
	Wireless infrared device battery is low
	Wireless electronic lock device battery is low
	Wireless safety device battery is low
	Wireless wicket door device battery is low

12.Control System Fault Codes

Fault display code	Problem Description	Solution
	Encoder can't get data during door running. Motor can't open or close the door.	1.Stuck point in the door, check door and track. 2. Door running speed is too slow, adjust speed from Menu 2.0 and 2.1. 3. Travel limit gear structure problem, change a new motor.
	Encoder failure.	Replace the encoder.
	Communication failure between travel limit module and encoder.	1 Eliminate the interference source and re-execute the control operation. 2.Replace a new connection cable. 3.Replace a new encoder.
	Travel limit module not detected.	1. Replace the encoder accessories. 2. Replace the encoder chip. 3. If the travel limit system fails, replace the control module.
	Motor overload.	1. Check door running is proper and smooth enough. 2. Replace a new motor.
	Slack rope switch port.	Check and fix steel rope.
	Safety edge port is not connected with any device.	No safety edge device is connected, motor only can be operated in Deadman mode. Connect with a safety edge device to solve the problem.

Fault display code	Problem Description	Solution
	1. During setting the door open/close limit, it appears when pressing SET. 2. Motor operation exceeds the limit turns. 3. It appears when the built-in infrared coordinate setting condition is not at the door open limit, or appears when both are built-in infrared. 4. When the automatic closing is executed, the door can not be closed due to related faults or DW setting in Deadman mode.	According to the operating instructions, adjust the settings when meeting the relevant conditions.
	Door travel limit set failure, travel is too short or exceed encoder turns.	Reset door open/close position limit.
	Wicket door port triggers the emergency stop.	Check wicket door device.
	Motor wiring sequence mistake.	Adjust the correct wiring sequence.

13. Drive System Fault Codes

Fault display code	Problem Description	Solution
	The program and the circuit board do not match.	Check whether the PRO version and STD version display control module, WiFi module, terminal wiring module are consistent.
 	The connection between the driver module and the display control module is abnormal.	1. Check whether the display control module connection cable is damaged. 2. Check whether the wiring of the drive module and display control module is loose. 3. Check whether the driver module is connected normally. 4. Replace the driver module or display control module.