PORTUGAL

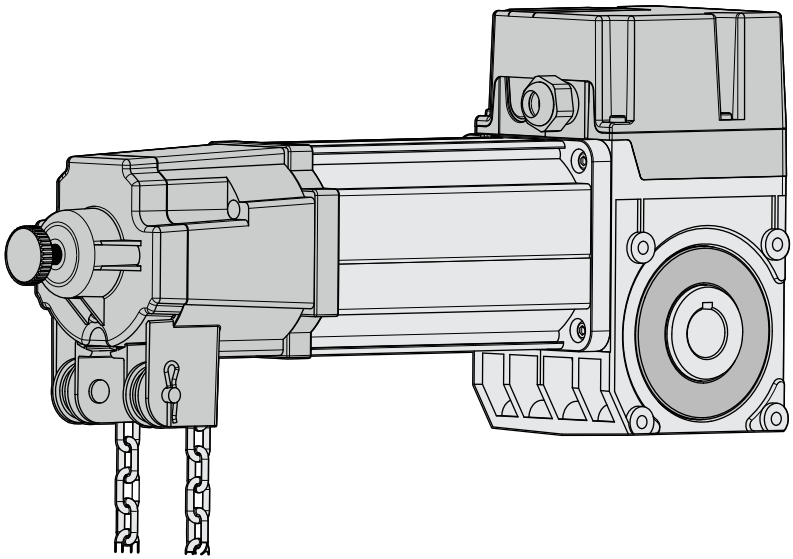
move automation

INDUSTRIAL DOOR DRIVE OPERATOR

INSTALLATION INSTRUCTIONS AND USER GUIDE

V20240607

base 120



EN

S/N

WARNING

Please read the manual carefully before installation and use.
The installation of your new door opener must be carried out by a technically qualified or licensed person.
Attempting to install or repair the door opener without suitable technical qualification may result in severe personal injury, death and / or property damage.

base 120

INDEX

IMPORTANT NOTICE FOR THE INSTALLER

Specified use
The industrial door drives is intended for a power-operated door with a drive unit.
The safe operation is only guaranteed with speci ed normal use. The drive unit is to be protected from rain, moisture and aggressive ambient conditions. No liability for damage caused by other applications or non-observance of the information in the manual.
Modifications are only permitted with the agreement of the manufacturer. Otherwise the Manufacturer's Declaration shall be rendered null and void.

Safety information
Installation and commissioning are to be performed by skilled personnel only.
Only trained electrical craftsmen are permitted to work on electrical equipment. They must assess the tasks assigned to them, recognize potential danger zones and be able to take appropriate safety measures.
Installation work is only to be carried out with the supply off.
Observe the applicable regulations and standards.

WARNING: Important safety instructions.
- It is vital for the safety of people to follow all instructions. Keep this manual.
- Do not let children play with the appliance or control devices including remote controls.
- Follow all instructions, as incorrect installation can lead to serious injuries.
- The actuating element of the dependent switch must be positioned so that it can be seen directly on the driven part, but out of reach of the moving parts. If it is not actuated by a key, it must be placed at a minimum height of 1.5 m and not accessible to the public; after installation, make sure that the mechanism is set correctly and that the protection system and any manual controls work properly.

Coverings and protective devices
Only operate with corresponding coverings and protective devices.
Ensure that gaskets are tted correctly and that cable glands are correctly tightened.

Mesured sound pressure emission level A of the motor
LpA less than or equal to 70 dB (A).

WARNING Z101 - The effect of noise emitted by the structure, including the driven part to which the drive will be connected, is not considered.

Spare parts
Only use original spare parts.

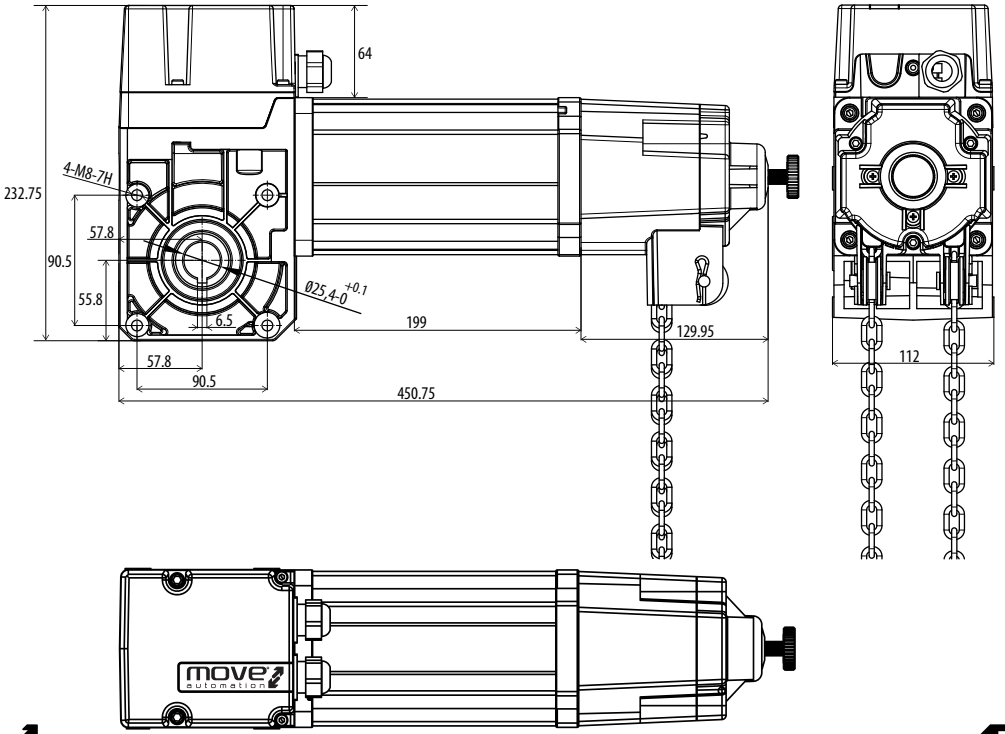
The manufacturer reserves the right to modify or improve products without prior notice. Any inaccuracies or errors found in this handbook will be corrected in the next edition. When opening the packing please check that the product is intact. Please recycle materials in compliance with current regulations. This product may only be installed by a qualified fitter. The manufacturer declines all liability for damage to property and/or personal injury deriving from the incorrect installation of the system or its non-compliance with current law (see Machinery Directive).

02) TECHNICAL DATA

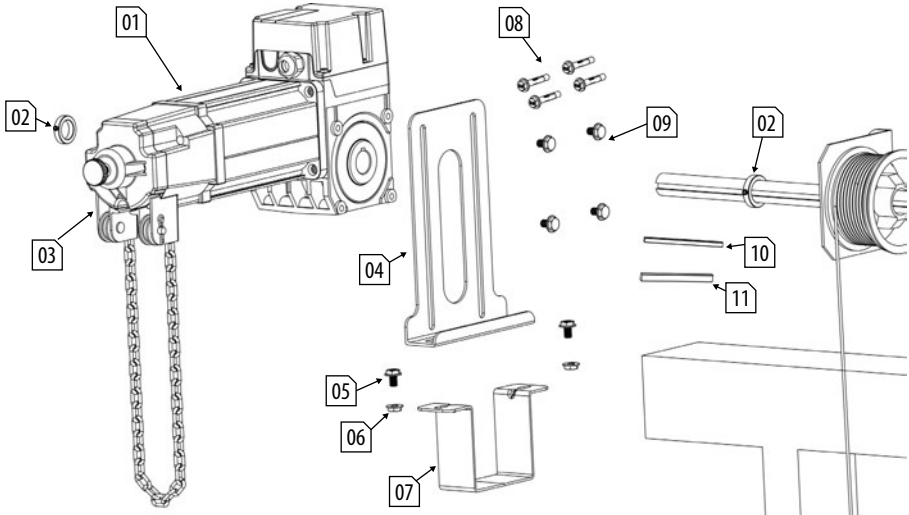
MODEL	base 120
Max. output torque (Nm)	140 Nm
Rated output torque (Nm)	120 Nm
Output speed (rpm) f= (20-65Hz)	12 - 32 rpm
Output shaft / hollow shaft (mm)	φ 25.4mm/31.75 mm
Static holding torque (Nm)	400 Nm
Door Area (m²)	≤40m2
Input Voltage (V)	220(1+10%)V 60Hz/50Hz 380V-420V
Frequency (Hz)	50HZ
Motor Power (W)	850W
Current (A)	3.1A
Control System	24V DC
Thermal Protection (°C)	105 °C
Max Cycles per hour (Cycle)	20 Cycles/hour
Class of protection	IP54
Limit Switch Range	15
Temperature Range (°C)	-20°C ~ +40°C (+60°C)

* When using a temperature range of +40°...+60°C use half of maximum cycles per hour.

03) DIMENSIONS



04) PRODUCT PACKING LIST



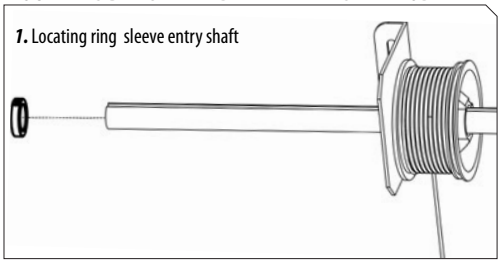
nr	description	Qty
01	Motor	1
02	Shaft Ring Ø25,4mm	2
03	Chain Hoist	1
04	Heavy Duty Mounting Bracket	1

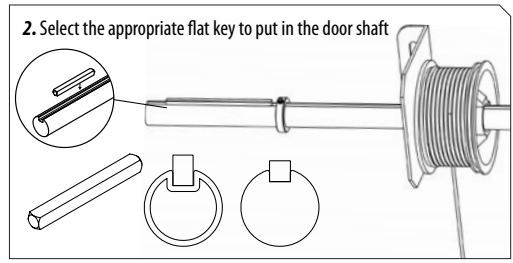
nr	description	Qty
05	Hex Bolts 8*20mm	2
06	Hex Flange Nuts	2
07	Industrial Door Opener Hoop	1
08	Metal Expansion Bolt	4

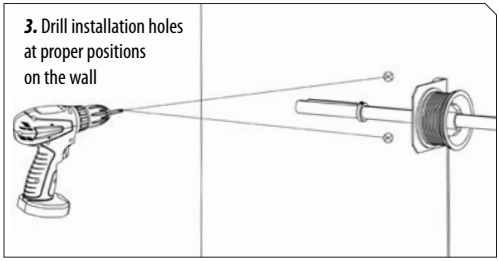
nr	description	Qty
09	Hexagon Flange Bolts 8*12mm	4
10	Thin Flat Key	1
11	Thick Flat Key	1

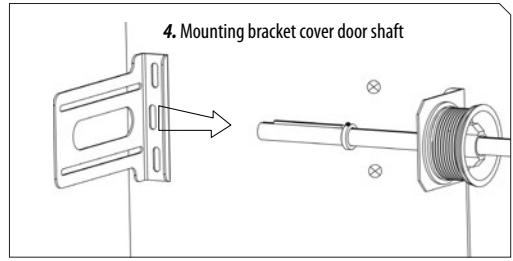
05) MECHANICAL INSTALLATION

MOUNTING BRACKET AND WALL FIXING METHOD

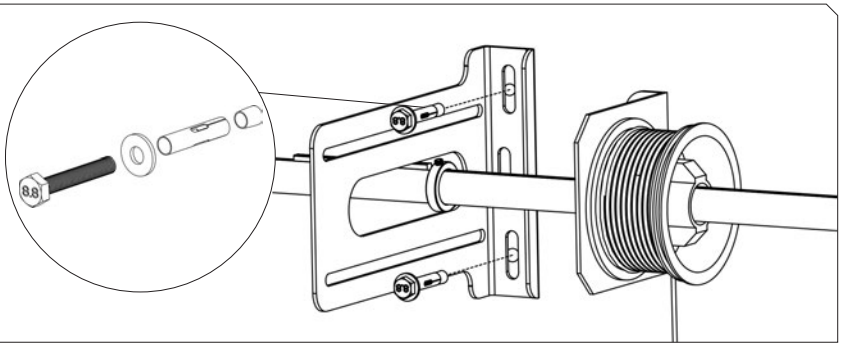




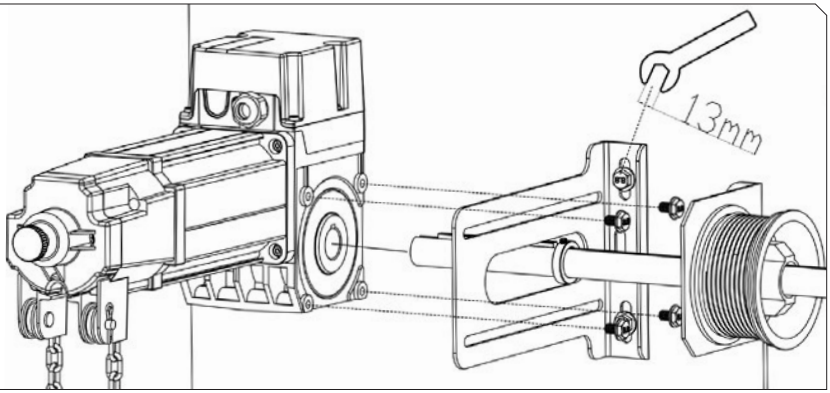




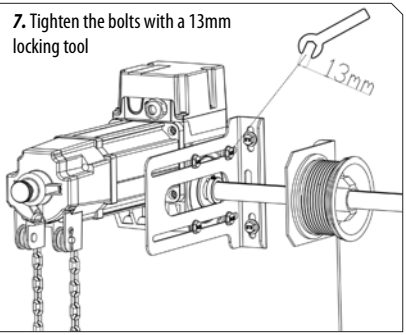
5. The bracket i s aligned and installed into the expansion bolt



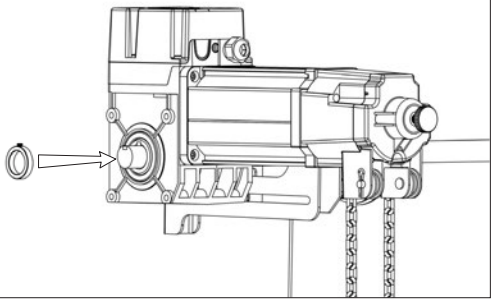
6. Use a 13mm locking tool on the opposite side to lock the bolt and the bracket (torque: 25Nm), put the motor on the door shaft and prepare 4 pieces of M8*1mm flange bolts



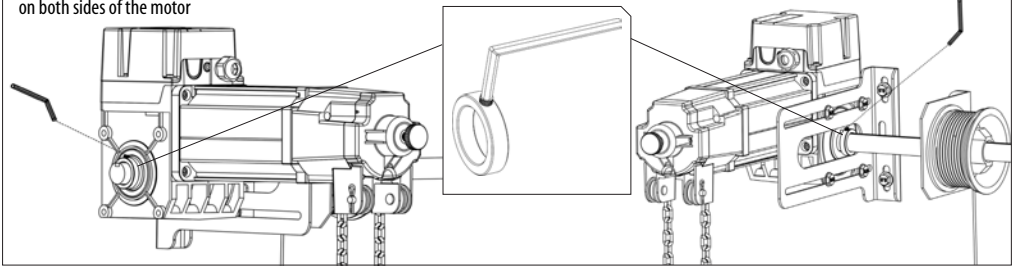
7. Tighten the bolts with a 13mm locking tool



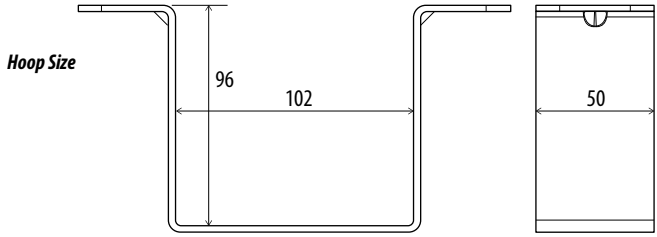
8. Set in to the positioning ring

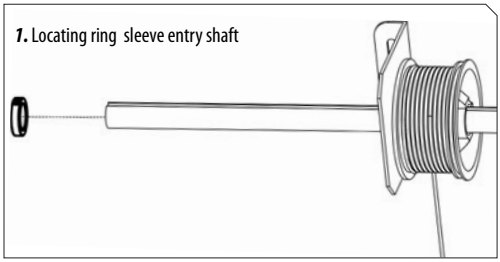


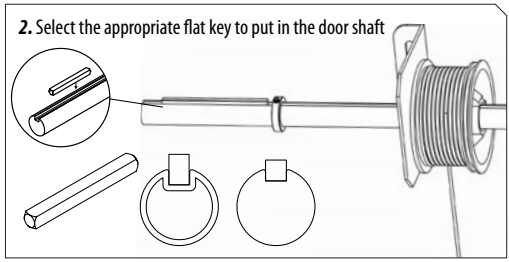
9. Use a 4 mm hexagonal tool on opposite sides to lock the retaining rings on both sides of the motor

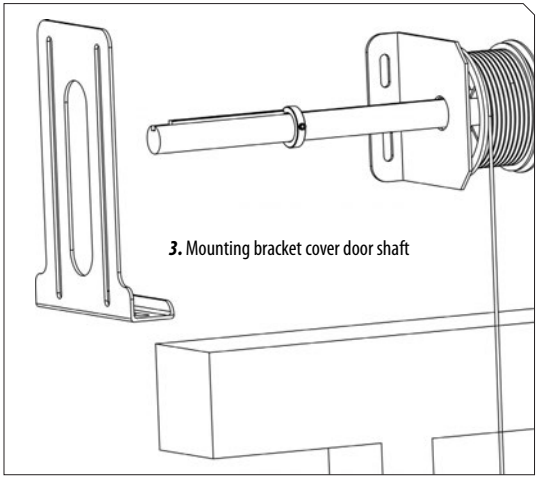


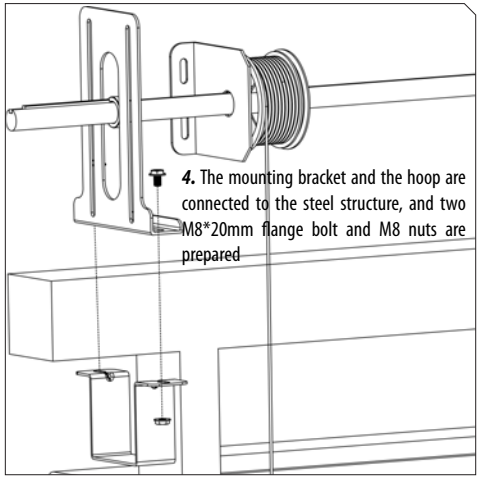
MOUNTING BRACKET AND WALL FIXING METHOD

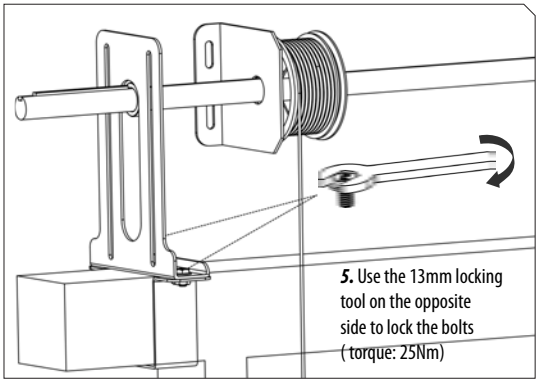


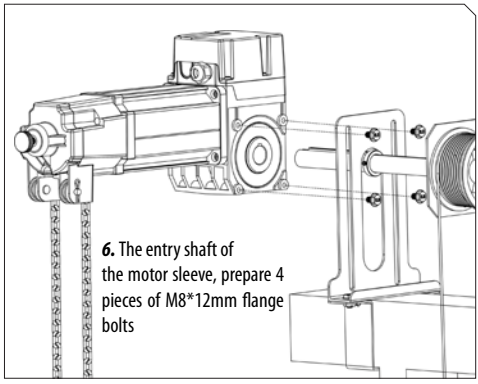




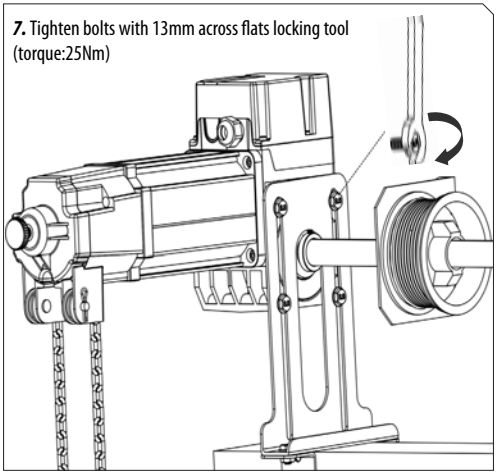




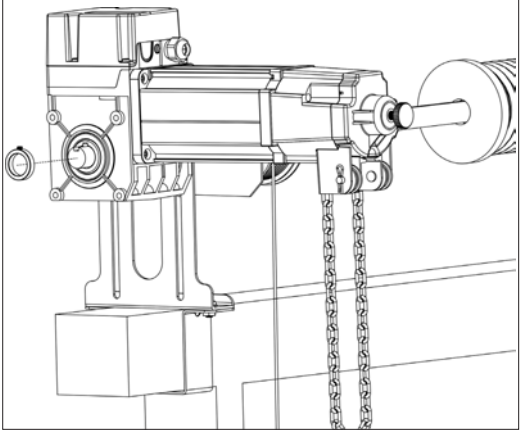




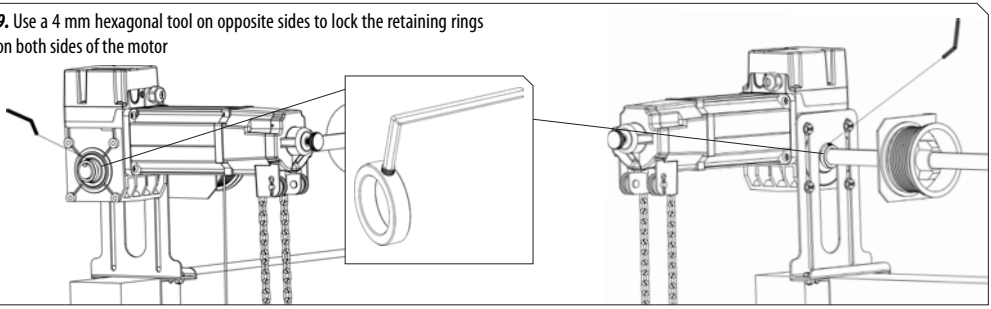
7. Tighten bolts with 13mm across flats locking tool (torque:25Nm)



8. Set in to the positioning ring

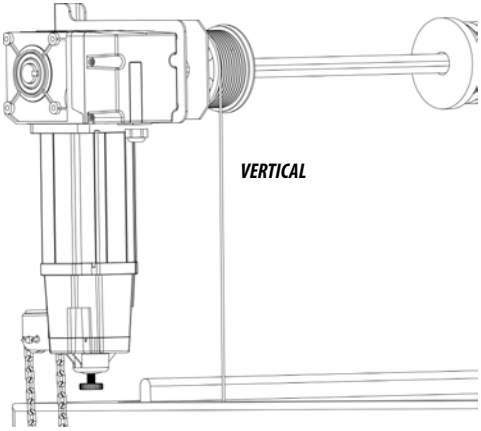


9. Use a 4 mm hexagonal tool on opposite sides to lock the retaining rings on both sides of the motor

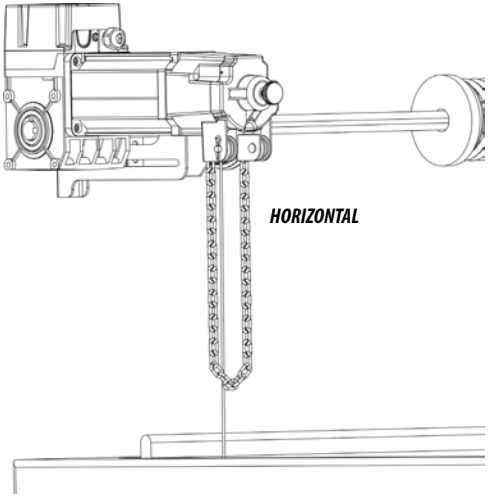


Allowed installation positioning:

You can install the engine horizontally or vertically, the procedure is the same.



VERTICAL



HORIZONTAL

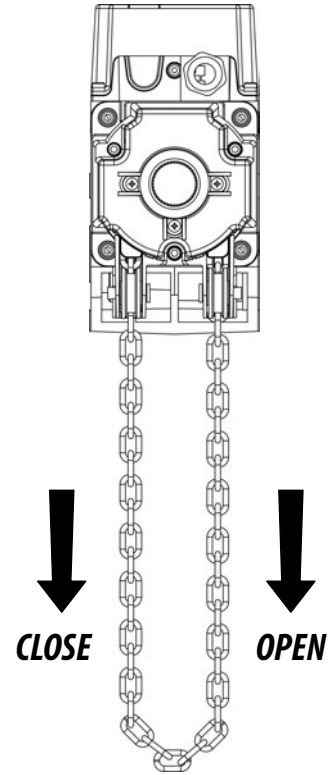
06) EMERGENCY MANUAL OPERATION (Rapid hand chain operator)

Emergency manual operation is designed for opening or closing the door without power supply. Its activation interrupts the control voltage. Electrical operation is no longer possible.

Warning – Injuries due to incorrect operation!
-Switch off voltage.
-Adopt a secure position.
-For drive units with brake, the emergency manual operation must be carried out against the closed brake.

Warning - Danger of the door dropping!
If you need to apply more than the permissible force of 390N (according to EN 12604/EN 12453) to move the door by emergency manual operation, this indicates a stalling on the drive unit or door. Releasing the stalling may cause the door to drop.
- Adopt a secure position.
- For drive units with brake, the emergency manual operation must be carried out against the closed brake.

Caution – Damage to components!
- Do not move the door beyond the final limit positions

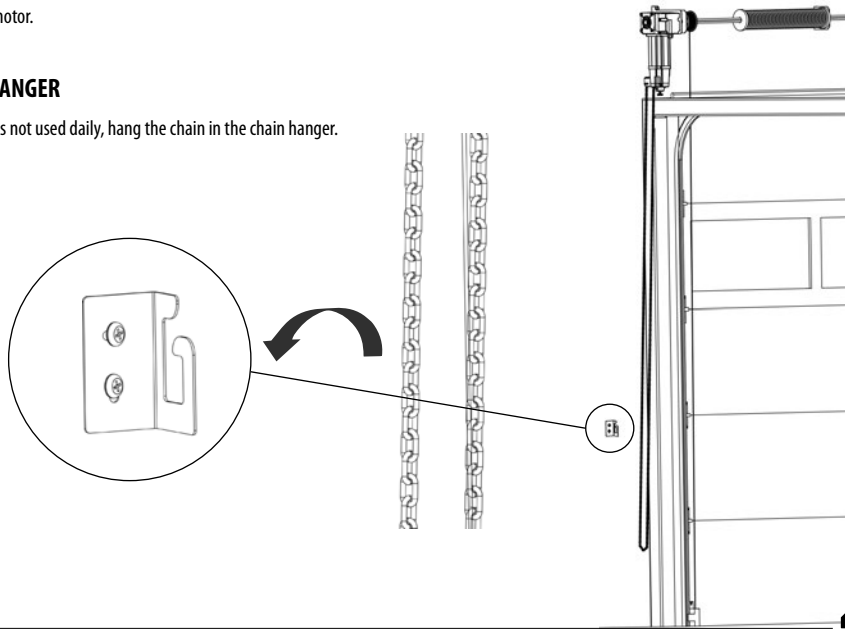


Pulling the red handle on the left side, the door drive will be powered off, the door can be moved manually. At this time, while operating the door drive again, the digital display will show EA;

At this mode you can:
- close the door by pulling the chain on the left side manually;
- open the door by pulling the chain on the right side manually;
- Loosen the chain, the motor returns to normal, and the control box can control the motor.

07) CHAIN HANGER

When the chain is not used daily, hang the chain in the chain hanger.



08) COMPLETE COMMISSIONING/INSPECTION

Check the following parts, then install all enclosures.

Gearbox

Check the industrial door opener for oil leaks (a few drops are negligible). The output shaft is protected against corrosion.

Connectors, Fasteners

Check that all connections, fasteners (motor, mounting brackets, bolts, retaining rings, etc.) are properly installed and in the correct position.

Electric Wire

Check the connection and power cords for damage or crushing. Check that the connector and power plug connections are installed correctly.

Emergency Manual Operation

In the case of power failure, check the function, and the door body cannot exceed the set upper and lower limit range.

Limit Switch

Check the set limit position by fully opening and closing. It cannot exceed the limit range of the door body, and cannot exceed the maximum limit circle of the product.

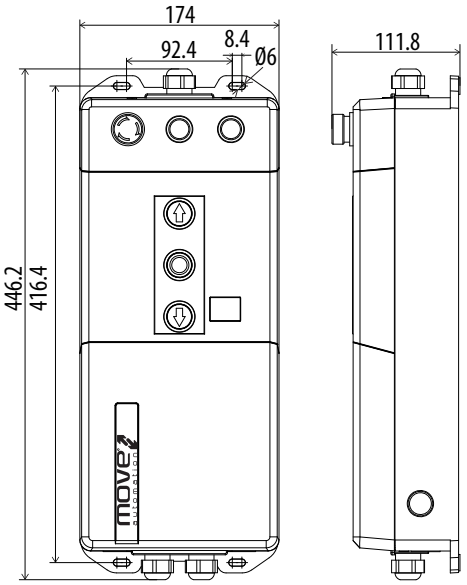
Industrial Door Opener

In the case of power failure, check the function, and the door body cannot exceed the set upper and lower limit range.

Notice

Have a qualified technician to inspect the drives annually, applying shorter inspection intervals to frequently operated doors..

09) CONTROL SYSTEM



dimensions

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 deviate.

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

Installation

- 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.*

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.

Maintenance

- The operator and control box are not 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

- 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.

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

Disposal

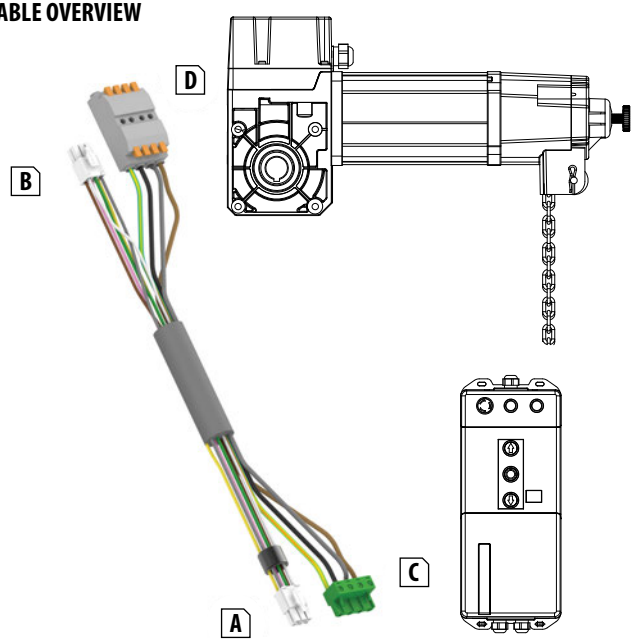
- When disposing of waste products, these must be separated into metals, plastics, electrical parts and lubricants.
- The applicable national rules must be taken into account for disposal of materials .
- The product must not be disposed of with regular household waste, and must be disposed of as electronic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

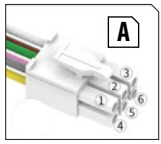
10) ELECTRICAL PARAMETERS

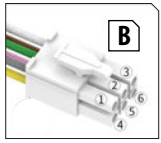
Check the following parts, then install all enclosures.

SERIES NAME	***FC-20113062/AC380-20113077***
Dimensions (L*W*H mm)	446 * 174 * 112
Installation	Vertical, No Vibration
Power supply frequency (HZ)	50/60 Hz
Power supply voltage (±10%)	1 N~220-230 V, PE / 3 N~220-400 V, PE
Drive unit output power max (KW)	1.5 Kw
Phase protection current (A)	10-12 A
External power supply 24V/GND	24V(DC) / 0.5A
Input Voltage (V)	220(1+10%)V 60Hz/50Hz 380V-420V
External power supplu X1(L/N) (Protection via F1 fuse)	1 N~230 V / 1.6A
Control input	24V(DC) / 500mA
Control power consumption	5W
Temperature range (° C)	-20ºC+60ºC
Thermal Protection (ºC)	105 ºC
Enclosure protection level	IP54
Limit switch	DES (Digital Limit Switch)

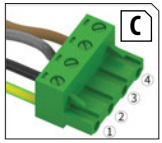
11) MOTOR CABLE OVERVIEW

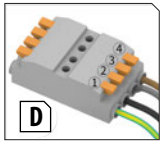






A → B			
SERIAL Nr.	***COLOR***	**SERIAL Nr.**	***Functional Description***
1	*Grey*	*1*	*Clutch / Temperature control switch 24V power supply*
2	*Green*	*2*	*Channel B (RS485)*
3	*White*	*3*	*GND*
4	*Yellow*	*4*	*Channel A (RS485)*
5	*Pink*	*5*	*Clutch / Temperature Control Switch Output*
6	*Brown*	*6*	*+13V DC Power Supply*

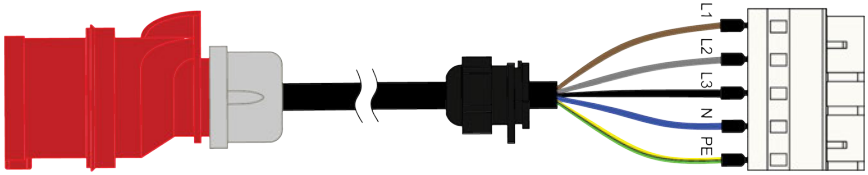




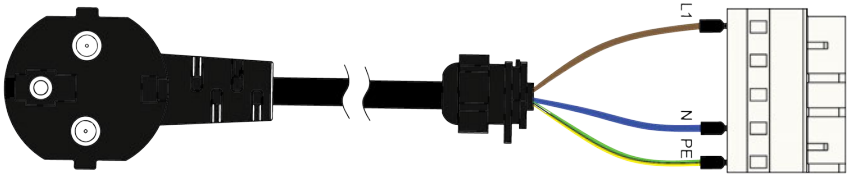
C → D			
SERIAL Nr.	***COLOR***	**NAME**	***Functional Description***
1	*Yellow-Green*	*PE*	*Grounding*
2	*Black*	*W*	*W Phase*
3	*Grey*	*V*	*V Phase*
4	*Brown*	*U*	*U Phase*

12) THREE-PHASE/SINGLE-PHASE POWER CABLE WIRING INSTRUCTIONS

1. Three-phase power line connection method *(applicable to all series of drives)*



2. Wiring method of single-phase power line *(applicable to FC/AC220V drive)*

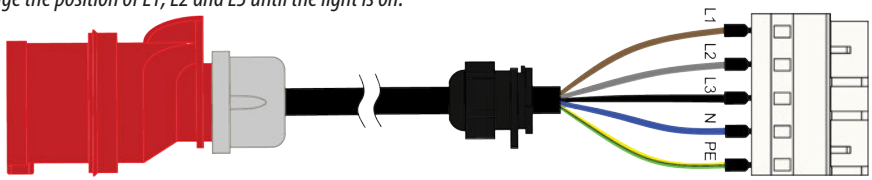


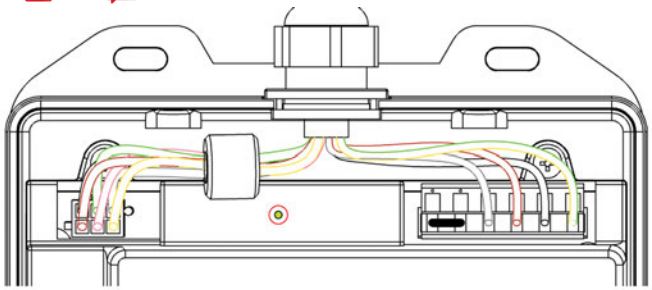
3. Instructions for changing the wiring sequence of the three-phase power line

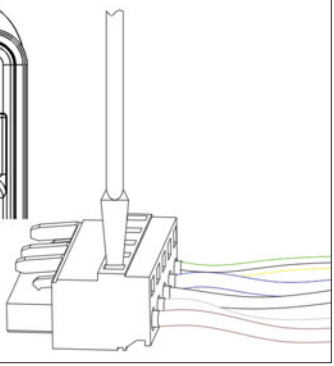
① . In order to ensure the normal and safe operation of AC380V motor, it is necessary to ensure that the phase sequence of the power input terminal is correct after power-on

② . First,confirm whether the LED light at the power input end is on. When the power is turned on, the LED lights up to indicate that the power line sequence is correct and needs to be adjusted.

③ . If the LED is Off, it means that the power line sequence is incorrect. After the power is completly cut off, please change the position of L1, L2 and L3 until the light is on.





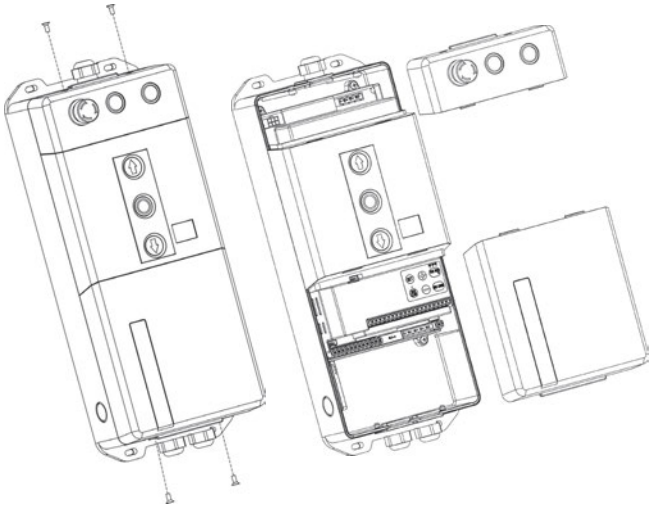


Note: Use a screwdriver to press down and then pull out or insert the connecting cable to replace the power cable L1, L2 and L3 positions.

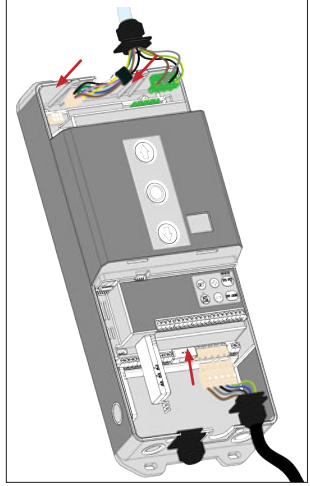
13) INSTRUCTIONS FOR CONNECTION OF MOTOR

CONTROL BOX CONNECTION WIRE AND POWER WIRE

1. Unscrew and Open the cover of Control Box

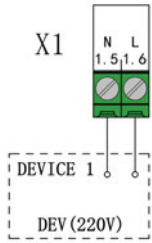


2. Connect the Control Box Cable / Control Box Power Cable



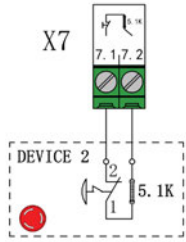
14) ELECTRICAL INSTALLATION WIRING INSTRUCTIONS

External power output X1



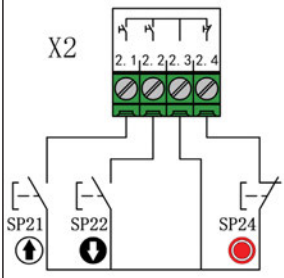
DEVICE 1	*External equipment (220V MAX：1.6A)*

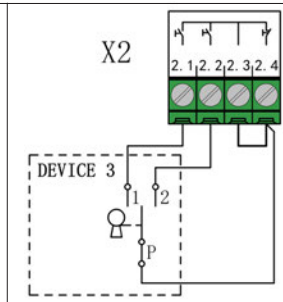
Emergency Stop self-locking switch X4



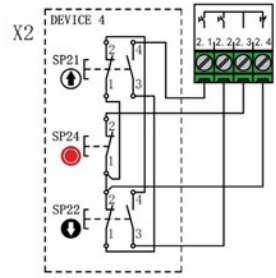
DEVICE 2	*Emergency Stop Switch*

External switch stop control port X2



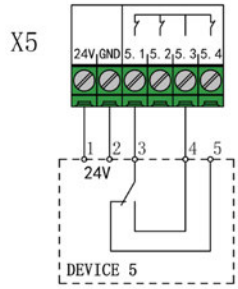


DEVICE 3	*Key self-resetting switch*

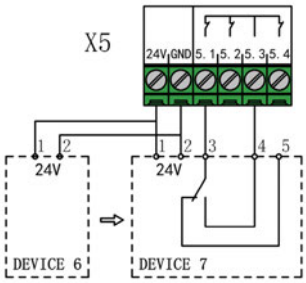


DEVICE 4	*Three-Button Wired Wall Switch*

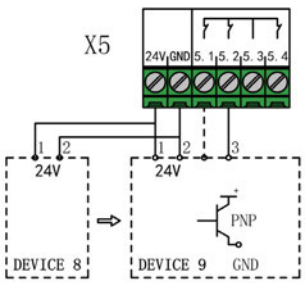
Infrared function port X5



DEVICE 5	*Reflective Photocell*

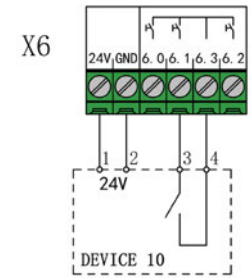


DEVICE 6 **DEVICE 7**	*Through-beam photocell* *Transmitter Receiver*



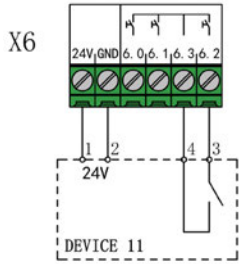
DEVICE 8 **DEVICE 9**	*Through-beam photocell* *Transmitter Receiver*

External receiver X6.1



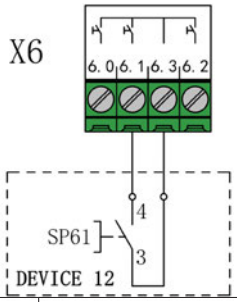
DEVICE 10	*X6.1/6.3 external receiver (For detailed function, refer to menu 6.1 to set P.XX)*

External receiver X6.2



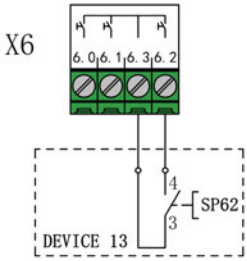
DEVICE 11	*X6.1/6.3 external receiver (For detailed function, refer to menu 6.2 to set P.XX)*

Self-resetting switch X6.1



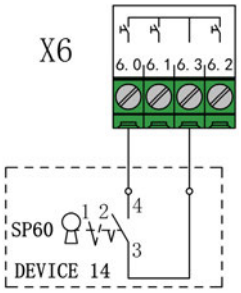
DEVICE 12	*X6.1/6.3 external receiver (For detailed function, refer to menu 6.1 to set P.XX)*

Self-resetting switch X6.2



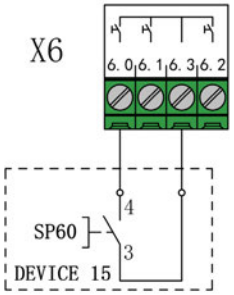
DEVICE13 **SP62**	*X6.2/6.3 self resetting switch (For detailed function, refer to menu 6.2 to set P.XX)*

Self-locking switch X6.0



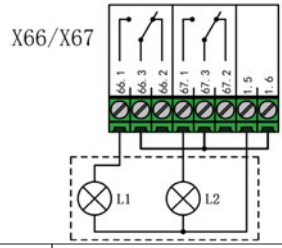
DEVICE14 **SP60**	*When closed: All door opening commands execute the pa door command (Enable:01-09 function selection in menu 6.0 _P.XX)*

Self-locking switch X6.0



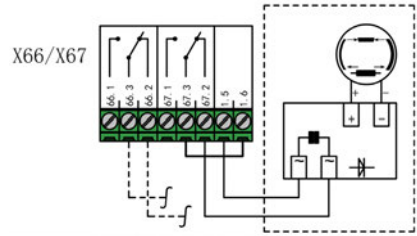
DEVICE15 **SP60**	*X6.0/6.3 Selfresetting switch, pulse-triggered partial open command (enable: menu 6.0 for function selection 10-18_ P.XX)*

Traffic lights (red/green) X66 / X67



L1	*Traffic Light - green light*
L2	*Traffic Light - red light*

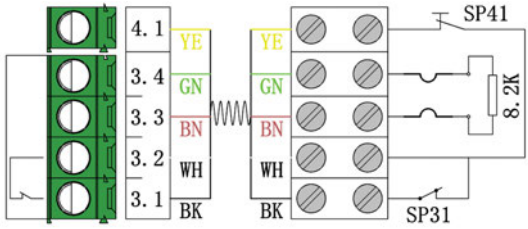
Brake Function X66/X67



The use of electromagnetic brakes needs to cooperate with the relay function 6.6/6.7- 25/26 (25/26 can be selected according to the characteristics of the brake device to trigger the brake with NO or NC)

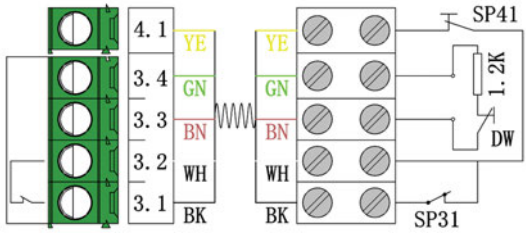
Safety Edge Port Wiring

Electrical safety edge



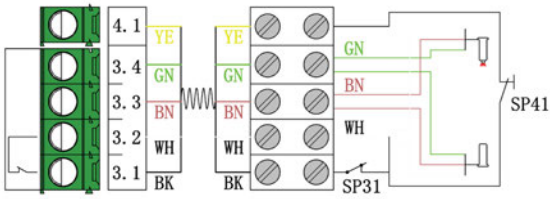
YE	*SP41 Rope switch*
GN	*Conductive strips(8.2K in series)*
BN	
WH	*GND*
BK	*SP31 door-in-door switch*

Pneumatic safety edge



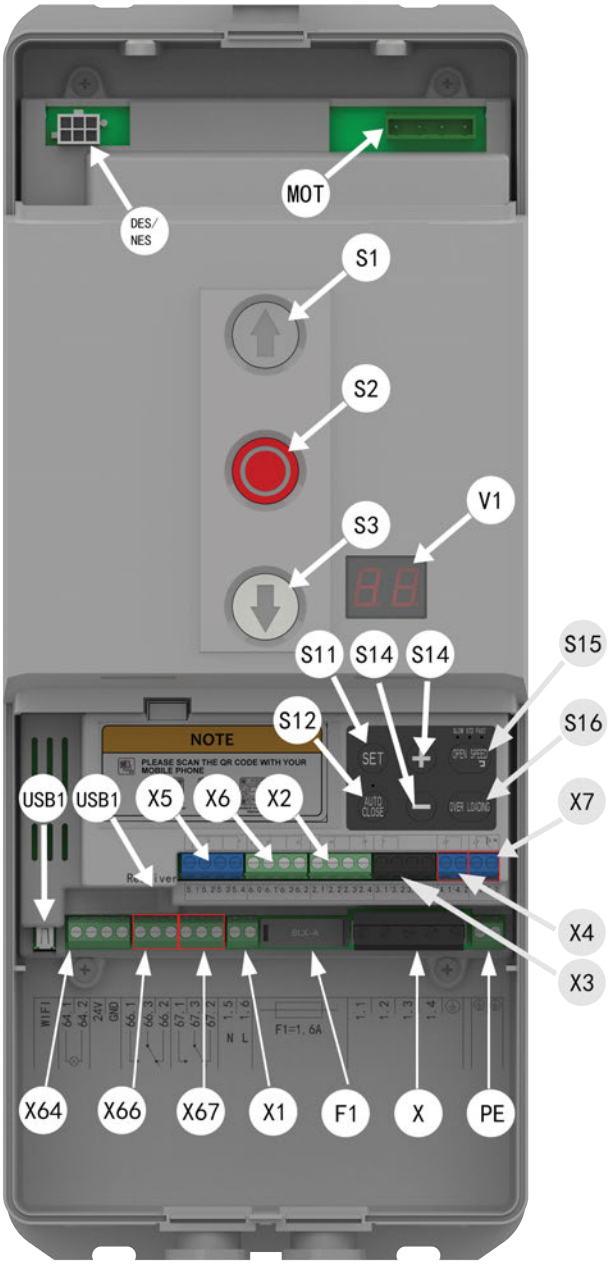
YE	*SP41 Rope switch*
GN	*DW airbag detection switch*
BN	*(1.2K in series)*
WH	*GND*
BK	*SP31 door-in-door switch*

Three-line infrared security edge



YE	*SP41 Rope switch*	
GN		*GN: 1Khz signal*
BN	*3line infrared*	*BR: +12V*
WH		*WT: GND*
BK	*SP31 door-in-door switch*	

15) CONTROL PORT OVERVIEW



DES/NES	DES/NES limit port
USB1	*USB Wi-Fi Module Port*
USB2	*USB External Receiving Module Port*

DES/NES	DES/NES limit port
MOT	*Motor wiring port*
F1	*X1 (220V) Output Port Blown Fuse 1.6A*
S1	*Open Button*
S2	*Stop button*
S3	*Close button*
S11	*Menu settings button*
S12	*Automatic close button*
S13	*Plus button / Open Limit Travel Setting Door Open Button*
S14	*Minus Button / Close Limit Travel Setting Door Closing Button*
S15	*Back button / Adjustment of Door Opening Speed Button*
S16	*Overload Adjustment Setting*
V1	*Digital Tube Display*
X	*AC Power Supply Port*
X1	*External Equipment Power Supply (220V/1.6A)*
X2	*Three/Push-Button Wall Switch Wiring Port*
X3	*Safety Edge Port / Door-in- Door Security Port (X3.1/3.2)*
X4	*Slack Line Port*
X5	*Infrared/Fire Alarm (X 5.3/5..4) Function Port*
X6	*External Function Port*
X7	*Emergency Stop Port*
X64	*Warning Light Wiring Port*
X66	*No Power Relay Port A*
X67	*No Power Relay Port b*

16) BASIC KEY OPERATION INSTRUCTIONS

Short press: Confirm setting
Long press: Enter the function menu setting (standby interface)

Short press: Move up to adjust the function menu / travel setting "door open" button
Long press: Restore to factory settings (standby interface)

Short press: Adjust the function menu
Long press: Running cycle counter inquiry (standby interface)

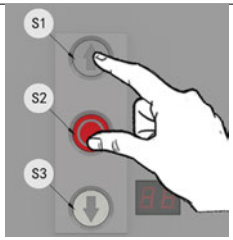
Short press: Return to Standby interface
Long press: Toggle door opening speed selection (See Quick Start Guide for details)

Short press: Quick activate "AUTO CLOSE" function

Long press: Adjust the "motor overload capacity" function (standby interface)

17) GENERAL FUNCTION QUICK SETUP INSTRUCTIONS

Function	*Operation*	*Description*
AUTOMATIC CLOSE	*Long press 3 sec.* 	*- Long press the "Auto Close" button, when the indicator light turns on. This means that the "automatic door closing" function has been activated.* *(Default condition: the door can only be closed automatically when it is in the upper limit position, and the automatic close gate time is 15 sec.).* ***Note**: If necessary, see Menu 4 to change the Auto Off any settings for closing conditions or timing.* ***Note**: If no safety edge or infrared is installed, the door cannot be closed and the LED* *- The display will show the letters " CS " as an indication.* *Long press the "Auto Close" button, when the light turns off, it means the "Auto Close" function is deactivated*
MOTOR OVERLOAD CAPACITY *(Only for FC inverter drives)*	*Long press 3 sec.* 	*-Press and hold the button for 3 seconds, the digital tube will increase and display the current motor overload capacity gear, and cycle through the L1, L2, and L3 gears.* *-Gear parameter:* L1 *Motor overload capacity 100% (Default)* L2 *Motor overload capacity 110%* L3 *Motor overload capacity 130%*
RUNNING CYCLE COUNTER INQUIRY	*Long press 5 sec.* 	*-The digital scrolls to display the running times* 00 00 10 *Indicates that the motor has run 10 times.* ***Note:** The running cycles is displayed in 6 digits*
RESTORE FACTORY SETTINGS	*Long press 5 sec.* 	*- Digital tube scrolling display*  *Indicates that the motor has been restored to factory settings* ***Remarks:** The running times are displayed in 6 digits (it is recommended to power off for 1 minute after restoring the factory and then power on again).*

Function	*Action*	*Description*
QUICKLY SET THE DOOR OPENING SPEED (ONLY FOR FC INVERTER DRIVES)	*Long press 3 sec.* 	*- Door opening speed gear LED indicator switch*  *The indicator light is on to represent the current door opening speed status. SLOW: 40HZ STD: 50HZ FAST: 75HZ* ***Remarks:*** *After each long press for 3 seconds, the door opening speed gear will cycle through SLOW-STD-FAST*
QUICK LOCK (UNLOCK) FUNCTION (S1, S2, S3)	 *Simultaneously press and hold the S1 and S2 buttons for 3 sec.*	*- Quickly lock (unlock) control box buttons (S1, S2, S3) function* *After long pressing for three seconds, the digital tube will display* LC *this is the control box button S1, S2, S3 invalid, will display after triggering* LC *indicates that the button is locked; After pressing again for three seconds, the digital tube will display* UL *at this time, the buttons S1, S2, and S3 of the control box is unlocked and can be used normally.* *Lock* LC *Unlock* UL

18) PARAMETER OVERVIEW

Parameter	*Function Description*	*Description of default parameters*	*Page*
0.0	TRAVEL LIMIT SETTINGS	Learning the upper limit and lower limit of motor travel.	*22*
0.1	MOTOR ROTATION DIRECTION ADJUSTMENT	00 Motor standard direction (Default)	*23*
1.0	DOOR OPENING AND CLOSING OPERATION MODE	04 Switch gate pulse trigger (Default)	*24*
1.1	SAFETY EDGE PRE-LIMIT FINE TUNING (only applicable to DES electronic limit)	8 Safety edge pre-limit area parameters (Default)	*24*
1.2	MOTOR UPPER LIMIT FINE-TUNING (only applicable to DES electronic limit)	-5 The actual upper limit shifts toward the door closing direction (Default)	*25*
1.3	MOTOR LOWER LIMIT FINE-TUNING (only applicable to DES electronic limit)	-2 The actual lower limit shifts toward the door opening direction (Default)	*25*
2.0	DOOR CLOSING SPEED ADJUSTMENT (only applicable to FC inverter drive matching DES electronic limit)	50 50HZ-24 rpm (Default)	*26*
2.1	DOOR OPENING SPEED ADJUSTMENT (only applicable to FC inverter drive matching DES electronic limit)	50 50HZ-24 rpm (Default)	*26*
2.2	DOOR CLOSING SOFT END DISTANCE ADJUSTMENT (only applicable to FC inverter drive matching DES electronic limit)	02 The soft end distance of closing the door is 10% of the door stroke (Default)	*27*

Parameter	Function Description	Description of default parameters	Page
	DOOR OPENING SOFT END DISTANCE ADJUSTMENT (only applicable to FC inverter drive matching DES electronic limit)	 The soft end distance of door opening is 10% of the door travel (Default)	27
	S6 AUXILIARY LIMIT COORDINATE FUNCTION SETTING (only applicable to NES mechanical imit: default safety side pre-lower limit function)	 Mechanical limit safety edge pre-limit (Default)	27
	DOOR CLOSING SOFT END SPEED ADJUSTMENT (only applicable to FC inverter drive matching DES electronic limit)	 30HZ-14 rpm (Default)	28
	DOOR OPENING SOFT END SPEED ADJUSTMENT (only applicable to FC inverter drive matching DES electronic limit)	 30HZ-14 rpm (Default)	28
	SLOW STOP TIME SETTING WHEN THE MOTOR IS RUNNING AT FULL SPEED (only applicable to FC inverter drive)	 Slow stop time of 1.0 seconds during motor running (Default)	29
	MOTOR STARTUP ACCELERATION TIME SETTING (only applicable to FC inverter drive)	 Slow stop time of 1.0 seconds during motor running (Default)	29
	MOTOR LOWER LIMIT OVERFLOW TIME SETTING	 Overflow time 250ms (Default)	29
	WIRE ROPE ANTI-LOOSE REVERSE TIME SETTING	 Function not active (Default)	30
	X3 (3.3-3.4) PORT SAFETY EDGE ENCOUNTER RESISTANCE REACTION TIME SETTING	 Response time of safety edge encountering obstacles 0.005 seconds (Default)	30
	(X5.1-X5.3/X5.2-X5.3) RESPONSE TIME SETTING FOR INFRARED RESISTANCE	 Infrared resistance reaction time 0.5 seconds (Default)	30
	REVERSAL TIME SETTING IN CASE OF RESISTANCE	 Motor reverse running time 0.005 seconds after encountering resistance (Default)	31
	MOTOR MONITORING RUNNING TIME FUNCTION SETTING (only applicable to NES mechanical limit)	 The monitoring runtime function is not activated (Default)	31
	AUTOMATIC DOOR CLOSING FUNCTION	 Automatic door closing function off (Default)	32
	AUTOMATIC DOOR CLOSING CONDITION FUNCTION SETTING	 Upper limit executes automatic door closing (Default)	32
	ASSOCIATION SETTING OF AUTOMATIC DOOR CLOSING AND INFRARED FUNCTION	 After the PE port is triggered, stop the automatic door closing timer and turn off the automatic door closing function (Default)	33
	ASSOCIATION SETTING OF AUTOMATIC DOOR CLOSING AND STOP&STP PORT (S3 AND (X2.4-X2.3)) FUNCTION	 STOP triggers to stop this automatic door closing (Default)	33
	X5.1/X5.3 INFRARED PORT FUNCTION SETTING	 Feature not enabled (Default)	34
	X5.2/X5.3 INFRARED PORT FUNCTION SETTING	 Feature not enabled (Default)	34

Parameter	Function Description	Description of default parameters	Page
	PARTIAL OPEN DOOR FUNCTION SETTING	 Feature not enabled (Default)	35
	X6.1/6.3 PORT FUNCTION SETTING	 Switch stop cycle function (Default)	36
	X6.2/6.3 PORT FUNCTION SETTING	 Door closing process executes door opening (Default)	36
	ELECTRONIC LOCK FUNCTION (only for DC - IDO, the mode menu is visible)	 Function off (Default)	36
	WARNING LIGHT FUNCTION SETTING	 Standard Application of Warning Lights (Default)	37
	BUZZER FUNCTION SETTING	 Buzzer function off (Default)	37
	RELAY A-X66 FUNCTION SETTING	 Relay A-X66 port function is closed (Default)	37
	RELAY B-X67 FUNCTION SETTING	 Relay B-X67 port function is closed (Default)	38
	SAFETY EDGE FUNCTION (security edge port self-adaptation, only for query)	Query function: View the current safety edge type	40
	COURTESY LIGHT FUNCTION (only for DC - IDO, mode menu visible)	 Courtesy light turns off after 3 minutes delay (Default)	40
	RESTORE FACTORY FUNCTION SETTINGS	For factory reset	41
	SOFTWARE VERSION QUERY FUNCTION	Query function: query all software versions of the IDO controller	41
	HARDWARE VERSION QUERY FUNCTION	Query function: query all hardware versions of the IDO controller	41
	MOTOR CUMULATIVE RUNNING TIMES QUERY FUNCTION	Query function: query the cumulative running times of the motor	41
	MOTOR LAST 4 FAULT QUERY FUNCTION CODES	Query function: query the last 4 fault codes of the motor	42
	MAINTENANCE ALARM TIMES FUNCTION SETTING	 The number of maintenance alarms is not enabled (Default)	42
	MOTOR PERFORMANCE FUNCTION SETTING AFTER THE NUMBER OF MAINTENANCE TIMES IS REACHED	 The running state of the motor after the number of maintenance times is reached (Default)	42
	INQUIRY FUNCTION FOR THE REMAINING NUMBER OF MAINTENANCE ALARMS	 Query function: query the remaining number of maintenance alarms	43

Parameter	Function Description	Description of default parameters		Page
	X5.4/5.3 FIRE ALARM PORT FUNCTION CONTROL MODE SETTING		The port triggers to open the door, only emergency stop, in the closed state, the door cannot be closed (Default)	43
	REMOTE CONTROL LOCK FUNCTION SETTING (HOLIDAY MODE)		Function off (can also be enabled by standard remote control) (Default)	43
	CONTROL BOX ON/OFF/STOP (S1/S2/S3) KEY LOCK FUNCTION		Function off (Default)	44
	WARNING LIGHT X64 PRE-WARNING TIME BEFORE CLOSING THE DOOR (cooperate with X64 port 01- 06 application, open the corresponding function menu to see)		The warning time is 0 (Default)	44
	WARNING LIGHT X64 EXTRA WARNING TIME FOR AUTOMATIC DOOR CLOSING (cooperate with the application of X64 port 01-06, and the automatic door closing function menu can be seen at the same time)		The warning time is 0 (Default)	44
	THE WARNING LIGHT X64 FLASHES AT A FREQUENCY OF 60 TIMES/MINUTE (cooperate with the X64 port 00-06 application, and the corresponding function menu can be seen when it is turned on)		Flashing frequency 60 times/min (Default)	44
	WARNING LIGHT X64 DELAY OFF SETTING (with the application of X64 port 01-06, the corresponding function menu can be seen when it is turned on)		Warning light delay function off (Default)	45
	RELAY A-X66 EARLY WARNING TIME BEFORE CLOSING THE DOOR (cooperate with X66 port 01-06 traffic light application, open the corresponding function menu to see)		The warning time is 0 (Default)	45
	RELAY A-X66 EXTRA WARNING TIME FOR AUTOMATIC DOOR CLOSING (cooperate with X66 port 01-06 traffic light application, and open the automatic door closing function menu at the same time)		The warning time is 0 (Default)	46
	RELAY A-X66 FLASHING FREQUENCY FUNCTION SETTING (cooperate with X66 port 01-06 traffic light application, open the corresponding function menu to see)		Relay X66 flashing frequency 60 times/minute (Default)	46
	RELAY A-X66 DELAY OFF TRAFFIC LIGHT FUNCTION SETTING (cooperate with X66 port 01-06 traffic light application, open the corresponding function menu to see)		Relay - X66 Release (Default)	46
	RELAY A-X66 IS IN AN ACTIVE STATE IN THE AREA OF 5% OF THE FULL STROKE ABOVE THE LOWER LIMIT (cooperate with X66 port 30 function application, open the corresponding function menu to see)		5% area above the lower limit (Default)	47
	RELAY A-X66 IS IN AN ACTIVE STATE WITHIN 5% OF THE FULL STROKE BELOW THE UPPER LIMIT (cooperate with X66 port 31 function application, open the corresponding function menu to see)		5% area below the upper limit (Default)	47
	RELAY b-X67 EARLY WARNING TIME TRAFFIC LIGHT SETTING (cooperate with X67 port 01-06 traffic light application, open the corresponding function menu to see)		The warning time is 0 (Default)	48
	RELAY B-X67 AUTOMATIC DOOR CLOSING EXTRA WARNING TIME TRAFFIC LIGHT FUNCTION SETTING (cooperate with X67 port 01-06 traffic light application, and open the automatic door closing function menu at the same time)		The warning time is 0 (Default)	48
	RELAY B-X67 FLASHING FREQUENCY FUNCTION SETTING (cooperate with X67 port 01-06 traffic light application, and open the automatic door closing function menu at the same time)		Relay X67 flashing frequency 60 times/min (Default)	48

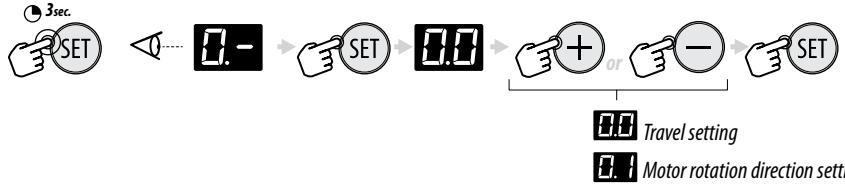
Parameter	Function Description	Description of default parameters	Page
b.3	RELAY B-X67 DELAY OFF TRAFFIC LIGHT FUNCTION SETTING (cooperate with X67 port 01-06 traffic light application, open the corresponding function menu to see)	03 Relay - X66 Release (Default)	49
b.4	THE RELAY B-X67 IS IN AN ACTIVE STATE IN THE AREA OF 5% OF THE FULL STROKE ABOVE THE LOWER LIMIT (cooperate with. X67 port 30 function application, open the corresponding function menu to see)	00 5% area above the lower limit (Default)	49
b.5	RELAY B-X67 IS IN AN ACTIVE STATE WITHIN 5% OF THE FULL STROKE AREA BELOW THE UPPER LIMIT (cooperate with X67 port 31 function application, open the corresponding function menu to see)	00 5% area above the lower limit (Default)	49

MENU 0.- *MOTOR STROKE SETTING*

-- ***The motor has no stroke, and the door can be opened and closed in long press mode.***

.. ***The motor has a stroke.***

Function Guide



MENU 0.0 *TRAVEL 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.

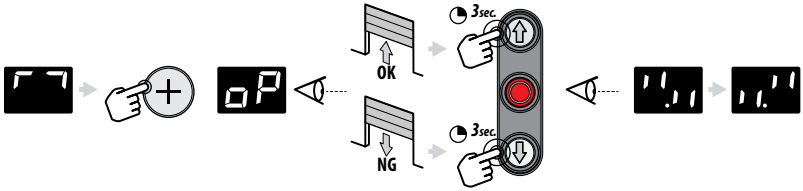
ⓘ When using an AC380V motor, it is recommended to learn the lower limit position about 2cm from the ground, and then fine-tune the lower limit in menu 1.3.

⌜¬ ***First learn the upper limit of the motor stroke***

⌞_ ***Re-learn the lower limit of the motor stroke***

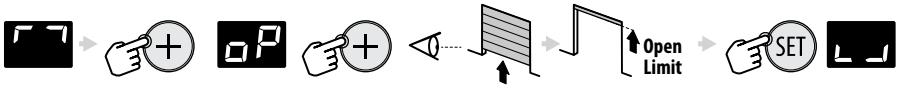
1. Enter motor travel setting

2. Check motor output direction and door direction



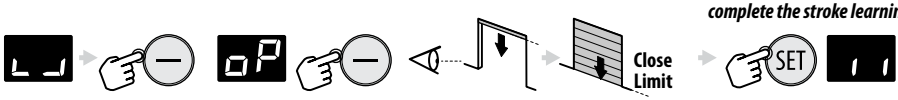
3. Start the learning travel limits, open the door and move to the upper limit position

4. Save upper limit position



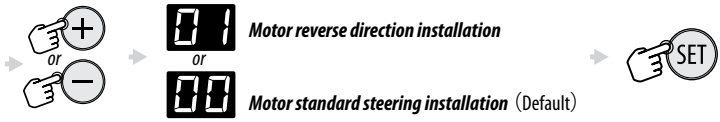
5. Close the door and move to the lower limit

6. Save the lower limit position and complete the stroke learning



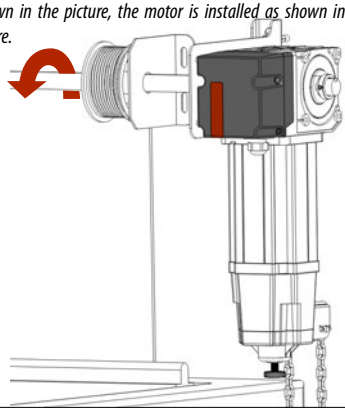
MENU **0.1** ***MOTOR ROTATION DIRECTION SETTING***

⚠ - The motor steering adjustment must be confirmed when the stroke is set, and then learn the stroke after confirmation to avoid damage to the door body by the motor.



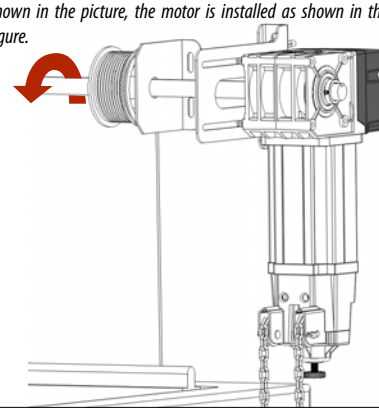
00 ***Motor Standard Steering Installation*** *(default)*

ⓘ *When the door is opened, when the tower wheel rotates as shown in the picture, the motor is installed as shown in the figure.*



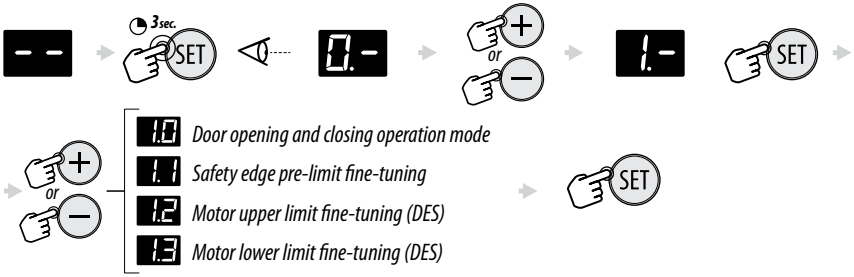
01 ***Motor reverse direction installation***

ⓘ *When the door is opened, when the tower wheel rotates as shown in the picture, the motor is installed as shown in the figure.*

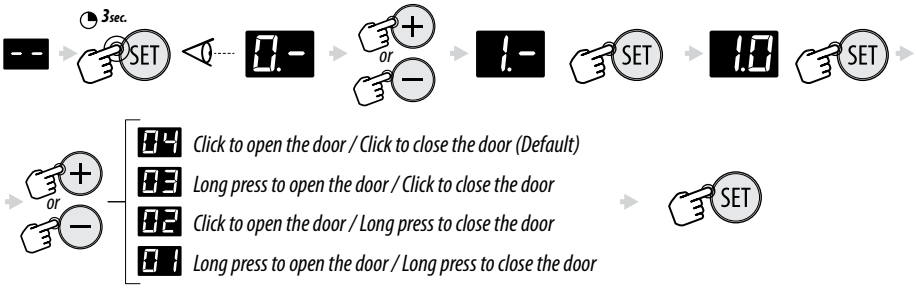


MENU **1.-** ***MOTOR COMMON FUNCTION SETTING***

Function Guide



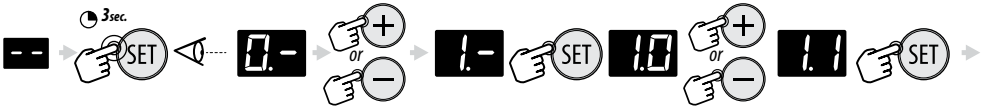
MENU **1.0** ***DOOR OPENING AND CLOSING OPERATION MODE***

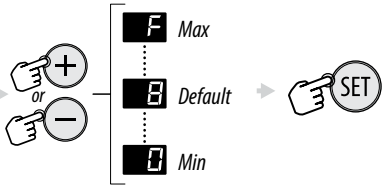


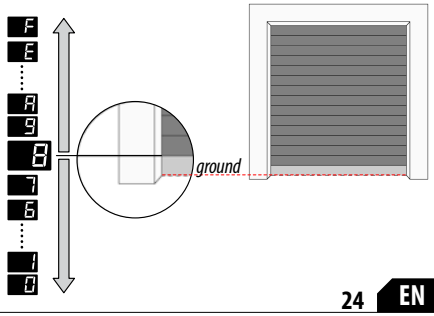
MENU **1.1** ***SAFETY EDGE PRE-LIMIT FINE-TUNING (DES)***

⚠ 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.





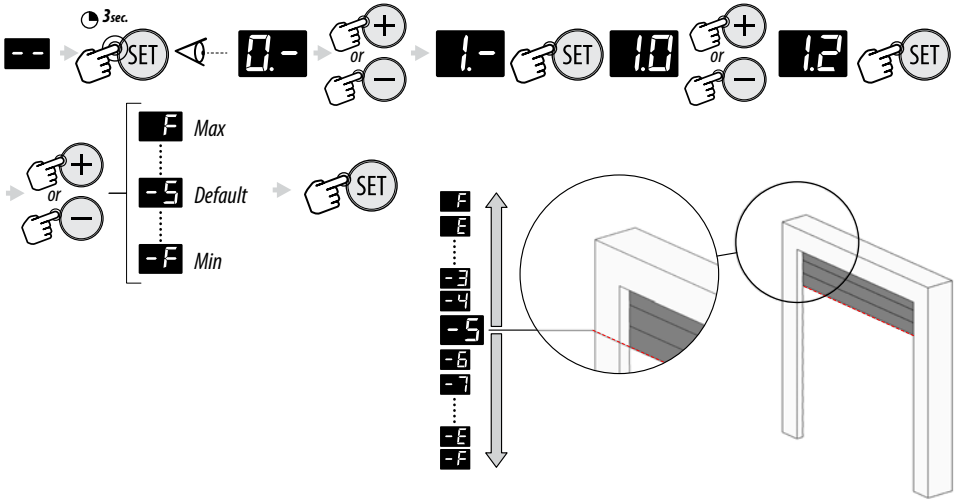


ⓘ Take an 18-inch flat wheel (about 150mm in diameter) as an example: about 5cm

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.*

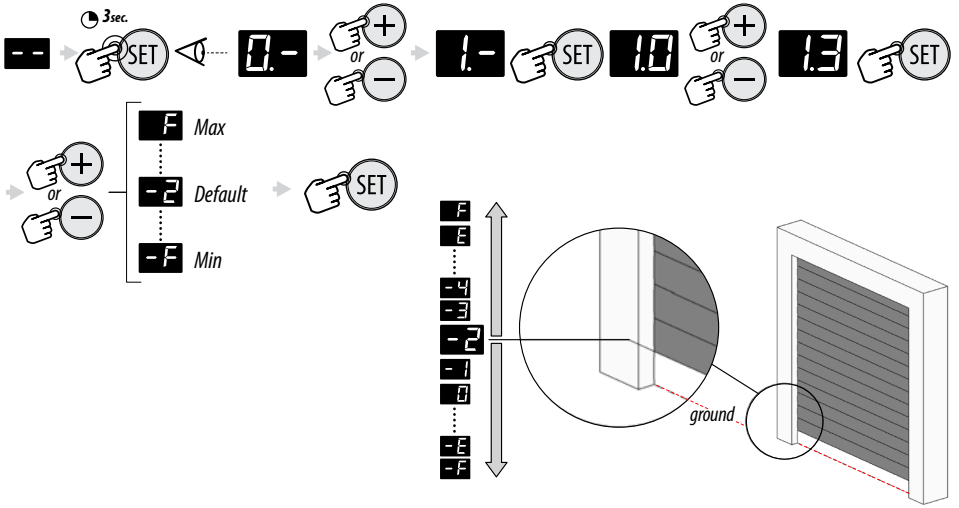
MENU 1.2 **MOTOR UPPER LIMIT FINE TUNING (DES)**

Function description: *This function fine-tunes the upper limit of the motor*



MENU 1.3 **MOTOR LOWER LIMIT FINE TUNING (DES)**

Function description: *This function fine-tunes the lower limit of the motor*

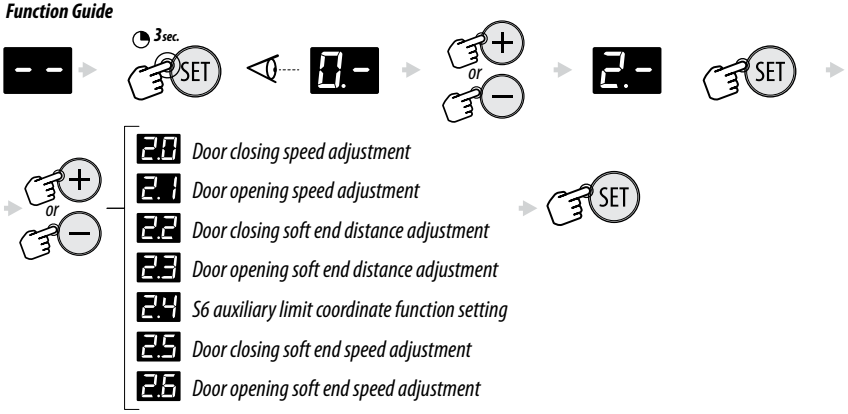


ⓘ *If the lower limit fine-tuning setting exceeds the ground position, it is easy to cause the wire rope to loosen. Please adjust according to the actual situation.*

MENU 2.- ***MOTOR RUNNING PARAMETER SETTING***

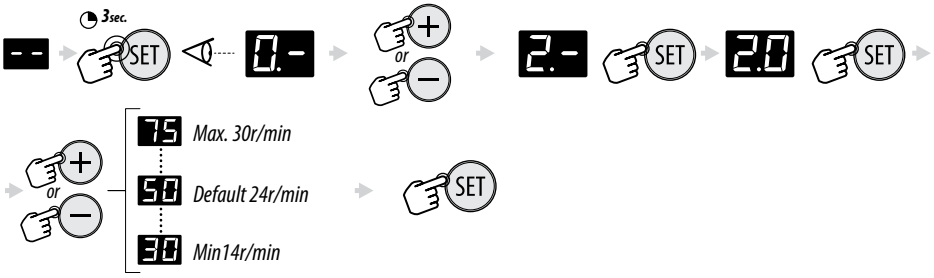
ⓘ *This function is only applicable to FC inverter drive with DES electronic limit mode.*

Function Guide



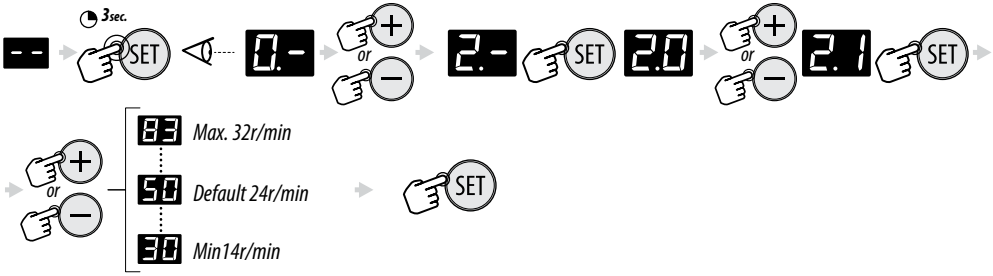
MENU 2.0 ***DOOR CLOSING SPEED ADJUSTMENT*** *(FC drive mode)*

ⓘ *When the door closing speed is set to be lower than the door closing soft end speed set in the 2.5 menu, the motor will automatically adjust the 2.5 soft end speed to be consistent with the 2.0 door closing speed.*



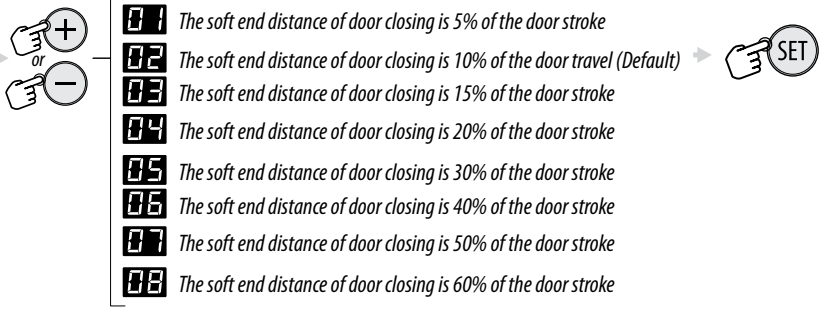
MENU 2.1 ***DOOR OPENING SPEED ADJUSTMENT*** *(FC drive mode)*

ⓘ *When the door opening speed is set to be lower than the door opening soft end speed set in menu 2.6, the motor will automatically adjust the door opening soft end speed in 2.6 to be consistent with the door opening speed in 2.1.*



MENU **2.2** ***DOOR CLOSING SOFT END DISTANCE ADJUSTMENT*** *(FC variable frequency drive mode with electronic limit)*

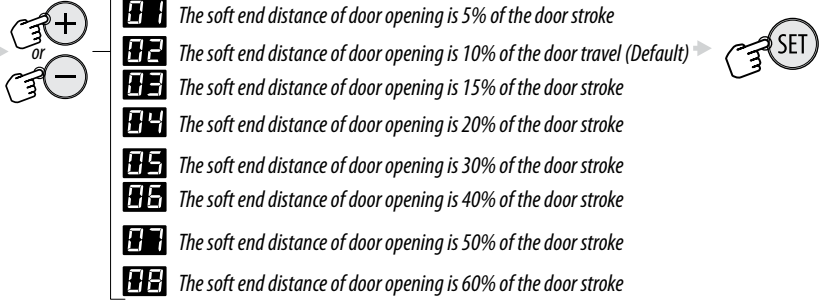
ⓘ *This function is only applicable to the FC inverter drive system and the motor using DES (electronic limit)*



- 0.1 *The soft end distance of door closing is 5% of the door stroke*
- 0.2 *The soft end distance of door closing is 10% of the door travel (Default)*
- 0.3 *The soft end distance of door closing is 15% of the door stroke*
- 0.4 *The soft end distance of door closing is 20% of the door stroke*
- 0.5 *The soft end distance of door closing is 30% of the door stroke*
- 0.6 *The soft end distance of door closing is 40% of the door stroke*
- 0.7 *The soft end distance of door closing is 50% of the door stroke*
- 0.8 *The soft end distance of door closing is 60% of the door stroke*

MENU **2.3** ***DOOR OPENING SOFT END DISTANCE ADJUSTMENT*** *(FC variable frequency drive mode with electronic limit)*

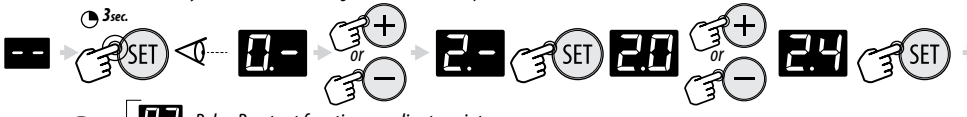
ⓘ *This function is only applicable to the FC inverter drive system and the motor using DES (electronic limit)*

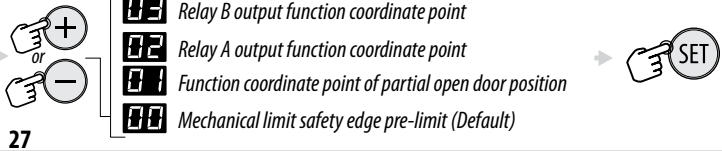


- 0.1 *The soft end distance of door opening is 5% of the door stroke*
- 0.2 *The soft end distance of door opening is 10% of the door travel (Default)*
- 0.3 *The soft end distance of door opening is 15% of the door stroke*
- 0.4 *The soft end distance of door opening is 20% of the door stroke*
- 0.5 *The soft end distance of door opening is 30% of the door stroke*
- 0.6 *The soft end distance of door opening is 40% of the door stroke*
- 0.7 *The soft end distance of door opening is 50% of the door stroke*
- 0.8 *The soft end distance of door opening is 60% of the door stroke*

MENU **2.4** ***S6 AUXILIARY LIMIT COORDINATE FUNCTION SETTING*** *(NES mechanical limit)*

ⓘ *This feature is only visible for motors using NES mechanical stops.*



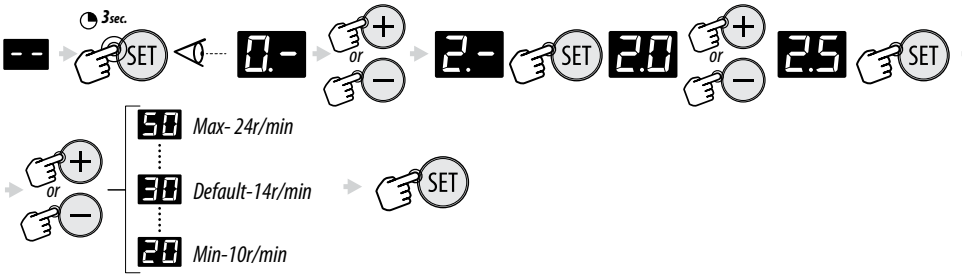


- 0.3 *Relay B output function coordinate point*
- 0.2 *Relay A output function coordinate point*
- 0.1 *Function coordinate point of partial open door position*
- 0.0 *Mechanical limit safety edge pre-limit (Default)*

MENU **2.5** ***DOOR CLOSING SOFT END SPEED ADJUSTMENT*** *(FC variable frequency drive mode with electronic limit)*

ⓘ *This function is only applicable to the FC inverter drive system and the motor using DES (electronic limit)*

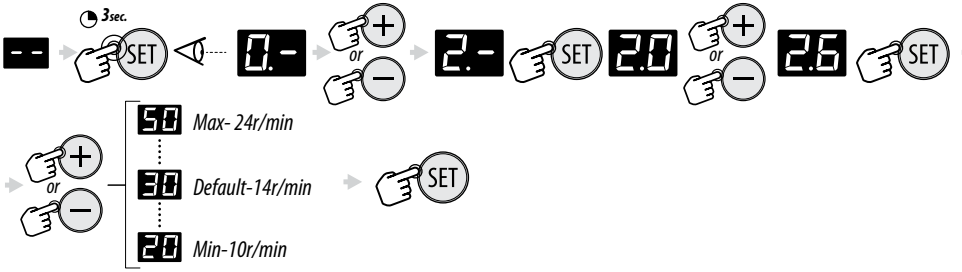
ⓘ *If the set door closing soft end speed is greater than 2.0 door closing speed, the door closing soft end speed will be automatically adjusted to be consistent with 2.0 door closing speed.*



MENU **2.6** ***DOOR OPENING SOFT END SPEED ADJUSTMENT*** *(FC variable frequency drive mode with electronic limit)*

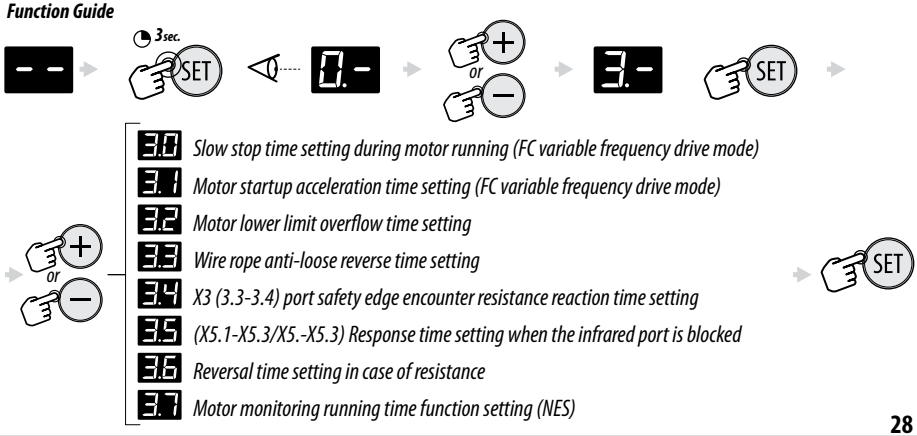
ⓘ *This function is only applicable to the FC inverter drive system and the motor using DES (electronic limit)*

ⓘ *If the set soft 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 TIME PARAMETER SETTING***

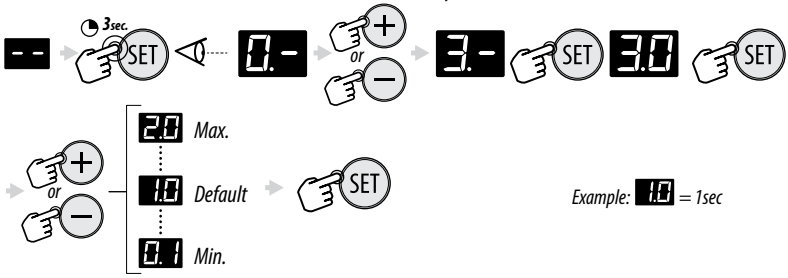
Function Guide



MENU **3.0** ***SLOW STOP TIME SETTING DURING MOTOR RUNNING*** *(FC variable frequency drive mode)*

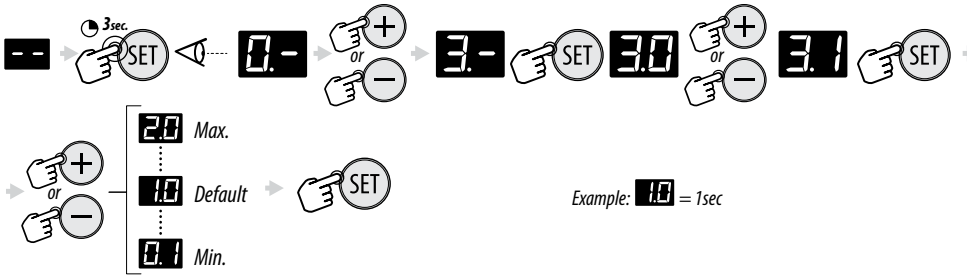
ⓘ *This function is only applicable to the FC inverter drive system and the motor using DES (electronic limit)*

ⓘ *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.*



MENU **3.1** ***MOTOR STARTUP ACCELERATION TIME SETTING*** *(FC variable frequency drive mode)*

ⓘ *This function is only applicable to the FC inverter drive system and the motor using DES (electronic limit)*



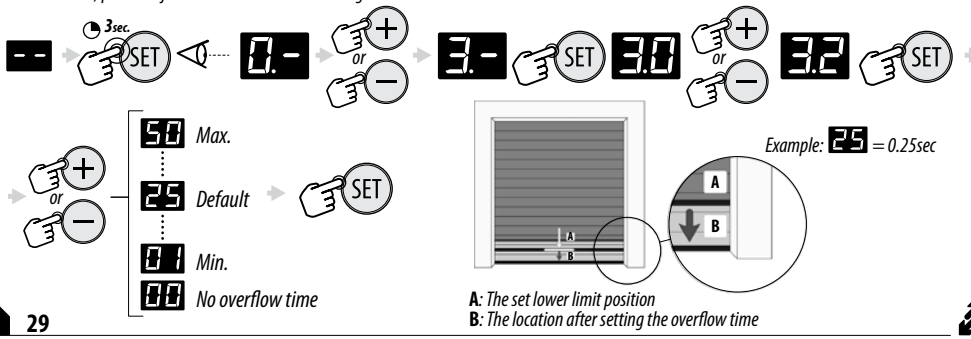
MENU **3.2** ***MOTOR LOWER LIMIT OVERFLOW TIME SETTING*** *(FC variable frequency drive mode)*

⚠ *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 lower 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 stroke. 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.*

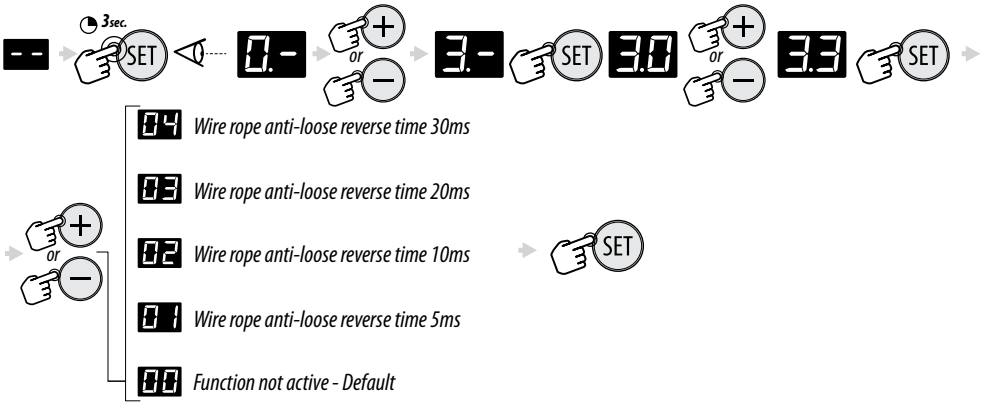


A: *The set lower limit position*
B: *The location after setting the overflow time*

MENU 3.3 ***WIRE ROPE ANTI-LOOSE REVERSE TIME SETTING*** *(Lifting cable tensioning function)*

ⓘ *When using this function, after the door body is closed to the lower limit position, the door body will reverse and run in the direction of door opening for the time set in the parameters to prevent the door body wire rope from loosening.*

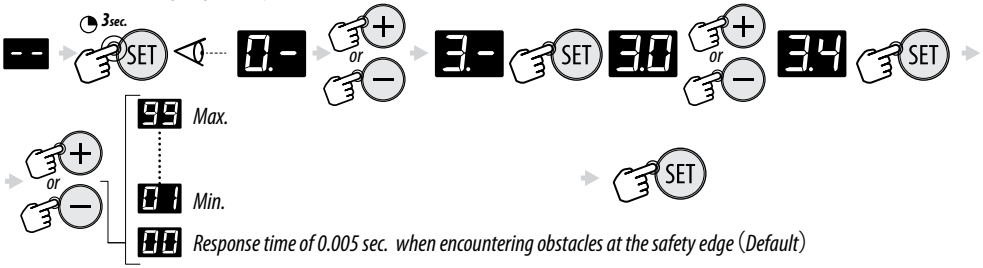
ⓘ *The time setting range of this parameter is: (AC drive: 5m-s-30ms) (FC variable frequency drive is based on 3.1 start time, corresponding to the actual time between 300ms-2000ms, the system will automatically adjust according to 3.1 actual).*



MENU 3.4 ***X3 (3.3-3.4) PORT SAFETY EDGE ENCOUNTER RESISTANCE REACTION TIME SETTING***

ⓘ *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.*

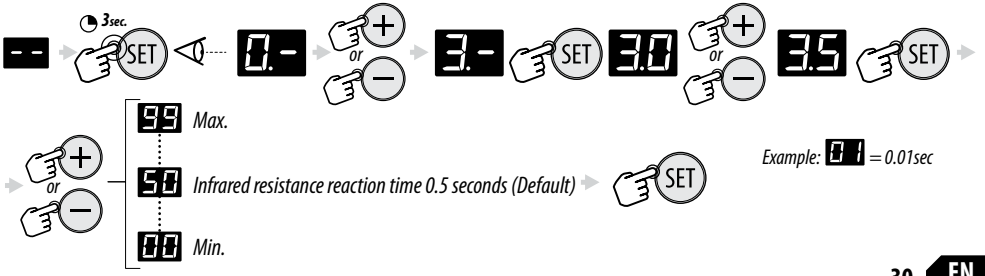


MENU 3.5 ***(X5.1-X5.3/X5.-X5.3) RESPONSE TIME SETTING FOR INFRARED RESISTANCE***

ⓘ *The reaction time of the infrared port is the time from when the door detects an obstacle to control the door to reverse operation.*

ⓘ *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.*

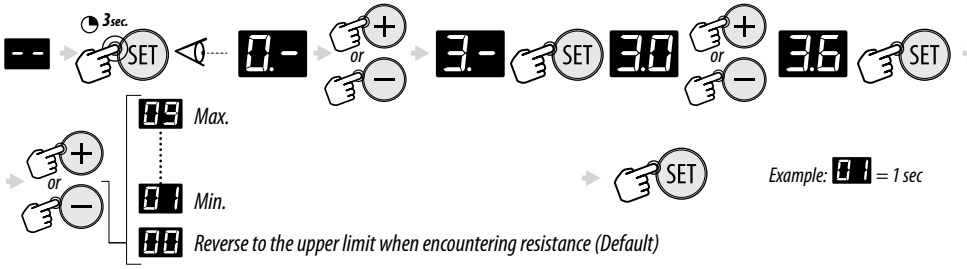


MENU 3.6 *REVERSAL TIME SETTING IN CASE OF RESISTANCE*

ⓘ *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 overcurrent 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 upper limit)*

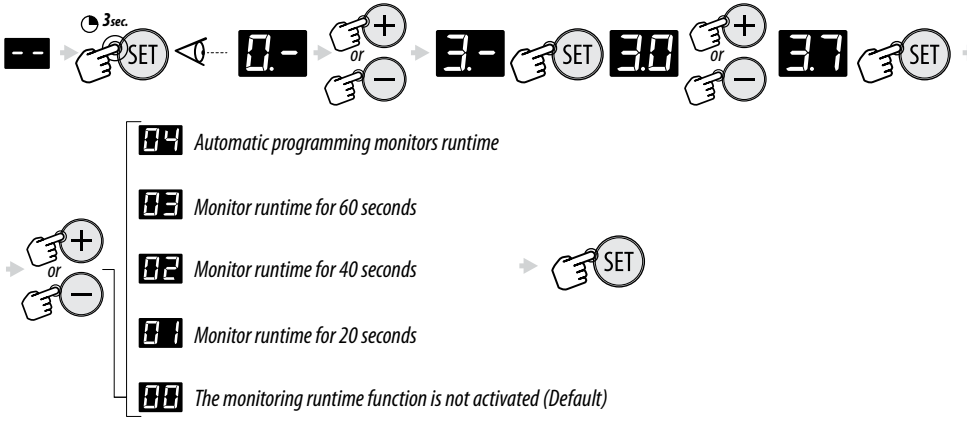
ⓘ *According to the actual situation of the door body or the needs of the scene, the reaction time of the safety edge is adjusted.*



MENU 3.7 *MOTOR MONITORING RUNNING TIME FUNCTION SETTING (NES)*

ⓘ *This feature is only visible for motors using NES (Mechanical Limits).*

ⓘ *Once the motor runs beyond the set monitoring time, the motor will stop running.*



04 *Automatic programming monitors runtime*

ⓘ *Before using this function, the door must be closed to the lower limit of the learned stroke.*

ⓘ *The door must be closed to the lower limit to see this option.*

ⓘ *Using this function, the door body will automatically open and close the door once, calculate and record the opening and closing time.*

ⓘ *Automatic programming monitoring running time:*

1. Door opening monitoring time = door opening learning time × 112%

2. Door closing monitoring time = door closing learning time × 112%

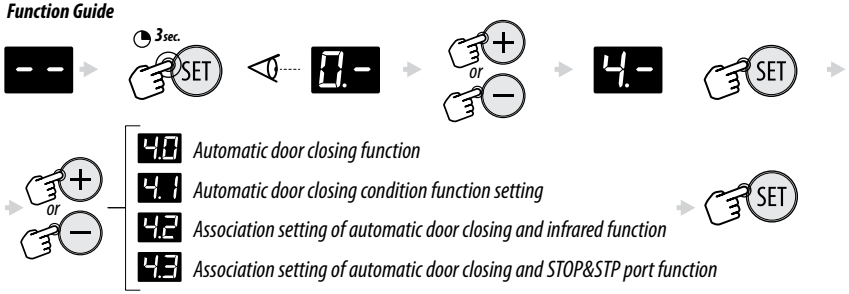
Function usage steps:

1. Close the door to the lower limit.

2. After selecting this function, wait for the door to automatically open and close once.

MENU **4.-** ***AUTOMATIC DOOR CLOSING FUNCTION SETTING***

Function Guide

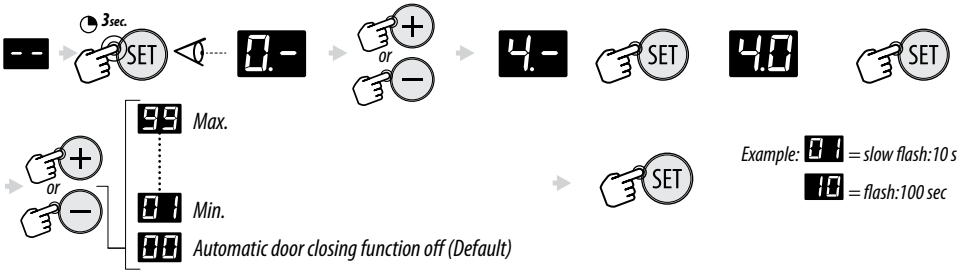


MENU **4.0** ***AUTOMATIC DOOR CLOSING FUNCTION*** *(Automatic closure)*

ⓘ *To use the automatic door closing function, a safety edge protection device or infrared safety protection must be installed. And the motor door is in jog mode (menu 1.0)*

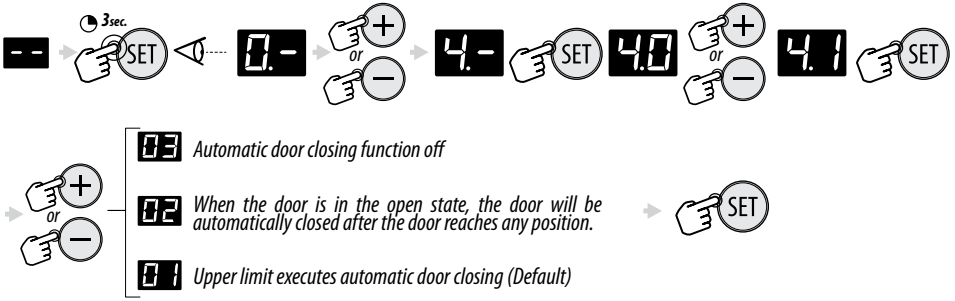
ⓘ *The time setting range of this parameter is: 1 second - 990 seconds.*

ⓘ *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.*



MENU **4.1** ***AUTOMATIC DOOR CLOSING CONDITION FUNCTION SETTING***

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

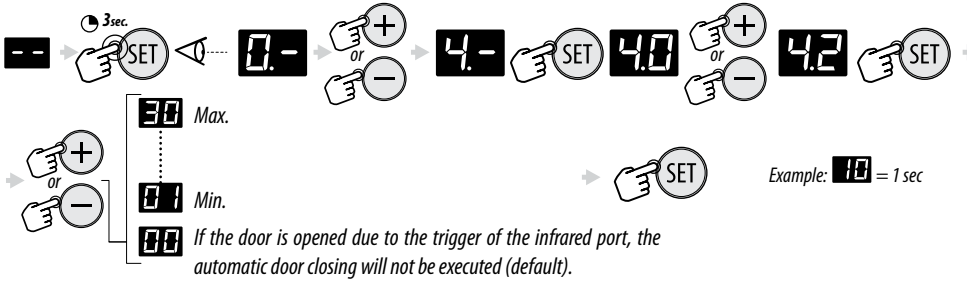


MENU **4.2** ***ASSOCIATION SETTING OF AUTOMATIC DOOR CLOSING AND INFRARED FUNCTION***

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

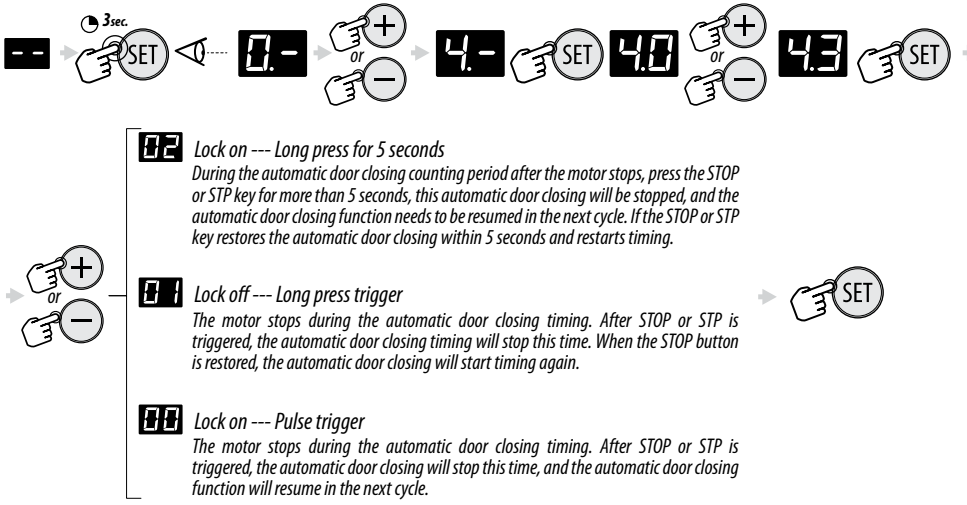
ⓘ *Default parameters"□□": The door opening triggered by the infrared port does not perform automatic door closing this time, and the door will resume automatic closing after the door is opened normally in the next cycle (the door opening triggered by the infrared port does not perform automatic door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



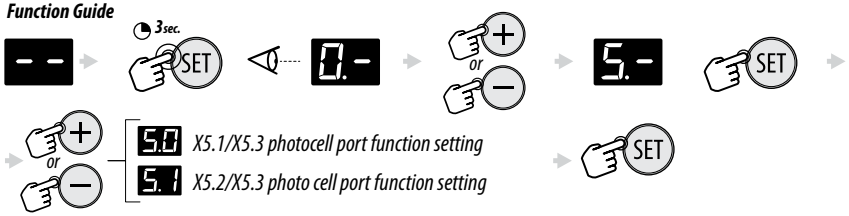
MENU **4.3** ***ASSOCIATION SETTING OF AUTOMATIC DOOR CLOSING AND STOP&STP PORT*** *(S3 AND (X2.4-X2.3))* ***FUNCTION***

ⓘ *S3 and STP (X2.4-X2.3) ports can only be executed on one port at the same time.*



MENU **5.-** ***PHOTOCELL FUNCTION***

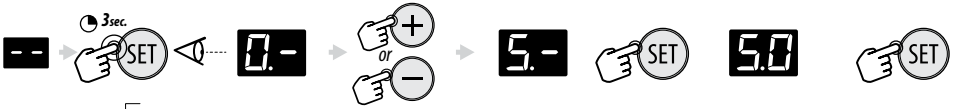
Function Guide

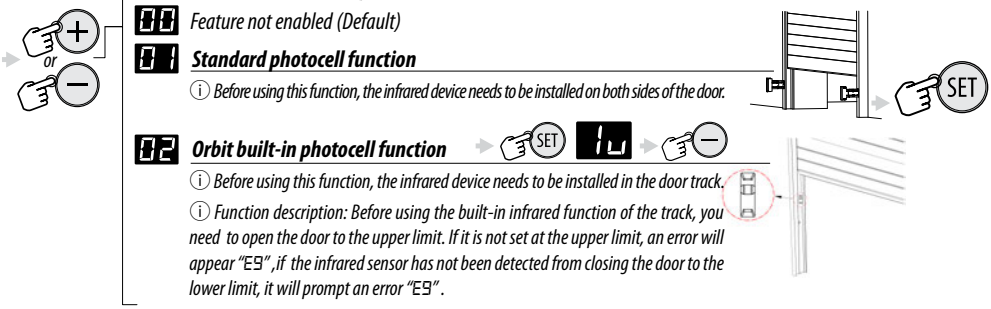


MENU **5.0** ***X5.1/X5.3 PHOTOCELL PORT FUNCTION SETTING***

ⓘ *Connection Description: Port X5.1/5.3*

ⓘ *Only one track can be set in menu 5.0 and menu 5.1 Built-in photocell.*





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

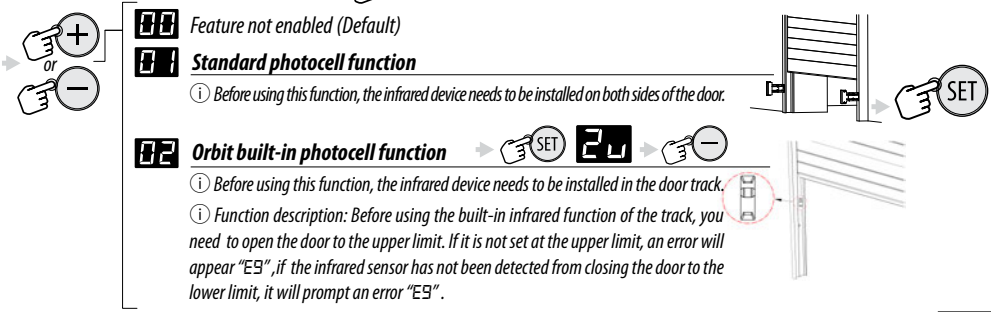
ⓘ *Before using this function, the infrared device needs to be installed in the door track.*

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

MENU **5.1** ***X5.2/X5.3 PORT FUNCTION SETTING***

ⓘ *Connection Description: Port X5.2/5.3.*

ⓘ *In menu 5.0 and menu 5.1, only one track built-in IR can be set.*



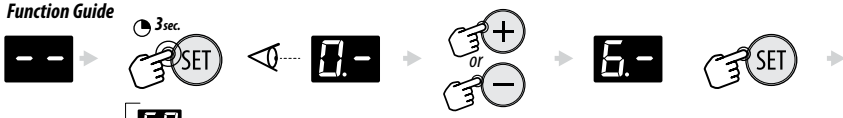
ⓘ *Before using this function, the infrared device needs to be installed on both sides of the door.*

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

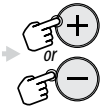
ⓘ *Function description: Before using the built-in infrared function of the track, you need to open the door to the upper limit. If it is not set at the upper limit, an error will appear "E9", if the infrared sensor has not been detected from closing the door to the lower limit, it will prompt an error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

MENU 6.- EXTERNAL PORT FUNCTION SETTING

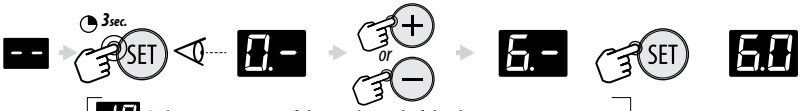
Function Guide



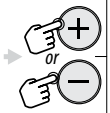
- 6.0 *Partial open door function setting*
- 6.1 *X6.1/6.3 port function setting*
- 6.2 *X6.2/6.3 port function setting*
- 6.3 *Electronic lock function setting (DC/DES)*
- 6.4 *Warning light function setting*
- 6.5 *Buzzer function setting*
- 6.6 *RL -A function setting*
- 6.7 *RL -B function setting*
- 6.8 *Safety edge function query*



MENU 6.0 PARTIAL OPEN FUNCTION SETTING



- 18 *Pulse open to 80% of the total travel of the door*
- 17 *Pulse open to the partial open position of 60% of the total travel of the door*
- 16 *Pulse open to the partial open position of 55% of the total travel of the door*
- 15 *Pulse open to the partial open position of 50% of the total travel of the door*
- 14 *Pulse open to the partial open position of 40% of the total travel of the door*
- 13 *Pulse open to the partial open position of 20% of the total travel of the door*
- 12 *Pulse open to the partial open position of 10% of the total travel of the door*
- 11 *Pulse open to the partial open position of 5% of the total travel of the door*
- 10 *Enable mechanical limit S6 partial open door position (NES-2.4 option 3) X6.0/6.3 port executes partial open door pulse trigger switch (enable the mechanical limit motor, the menu is visible)*



- 09 *The partial open position is 80% of the total travel of the door*
- 08 *The partial open position is 60% of the total travel of the door*
- 07 *The partial open position is 55% of the total travel of the door*
- 06 *The partial open position is 50% of the total travel of the door*
- 05 *The partial open position is 40% of the total travel of the door*
- 04 *The partial open position is 20% of the total travel of the door*
- 03 *The partial open position is 10% of the total travel of the door*
- 02 *The partial open position is 5% of the total travel of the door*
- 01 *Enable mechanical limit S6 patial open door position (NES-2.4 option 2) X6.0/6.3 port executes the global function partial-open door after closing (enable the mechanical limit motor, the menu is visible)*
- 00 *Close the partial door function (Default)*

ⓘ *Connection Description: X6.0/6.3 (Normal Open) in X6 port.*

ⓘ *After setting the partial open door position, the normally open contact of X6.0/6.3 in the X6 port executes the jog to execute the partial open door command.*

ⓘ *Parameter 10~18 Partial open door function: When the X6.0/6.3 port pulse triggers, the door will open to the set partial open door set value position, and display "hh".*

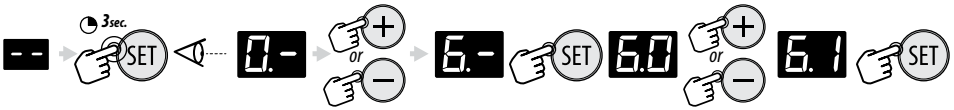
ⓘ *Connection instructions: X6.0/6.3 in X6 port.*

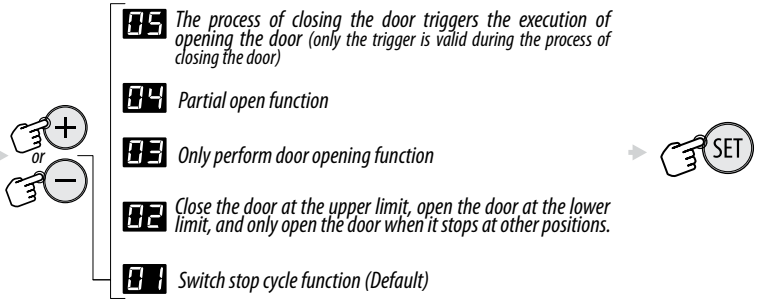
ⓘ *The partial open door position is set, and the normally open contact of X6.0/6.3 in the X6 port performs a long press to activate the global partial open door state.*

ⓘ *Parameter 01~09 Partial open door function: When the X6.0/6.3 port is closed, the door opening position will not exceed the set value of the partial open door, and display "hh".*

MENU **6.1** ***X6.1/6.3 PORT FUNCTION SETTING***

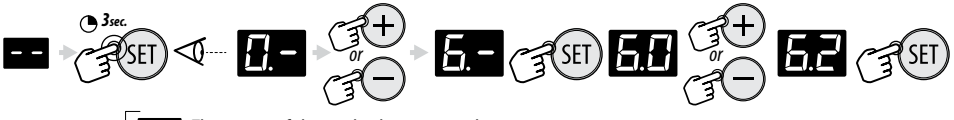
ⓘ *Connection Description: Port X6.1/6.3.*
ⓘ *The PB2 port performs the pulse trigger function.*
ⓘ *When using the 04 Partial open function, the parameters in menu 6.0 need to be set.*

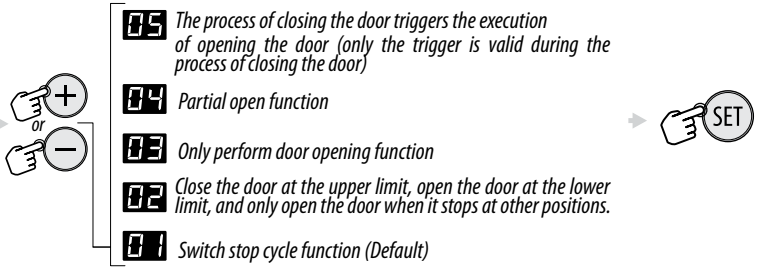




MENU **6.2** ***X6.2/6.3 PORT FUNCTION SETTING***

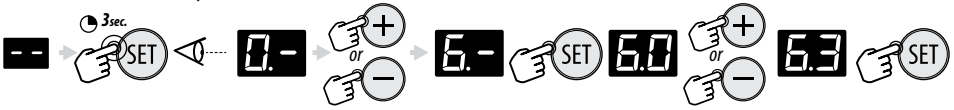
ⓘ *Connection Description: Port X6.2/6.3.*
ⓘ *The X6.1/6.3 port performs the pulse trigger function.*
ⓘ *When using the 04 Partial open function, the parameters in menu 6.0 need to be set.*

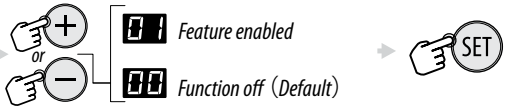




MENU **6.3** ***ELECTRONIC LOCK FUNCTION SETTING (DC/DES)***

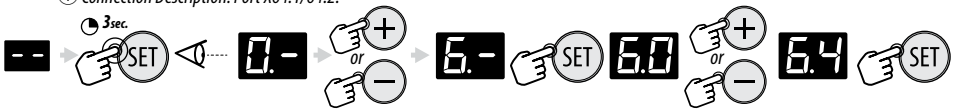
ⓘ *This function is only visible on DC motors.*





MENU 6.4 ***WARNING LIGHT FUNCTION SETTING***

ⓘ *Connection Description: Port X64.1/64.2.*

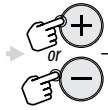


Other warning light features		***Lower limit state*** *(3)*	***Upper limit state***	***Operating Status***	***Alert Status*** *(1)*
06	*Warning light function 6*	**OFF**	**ON**	**OFF**	**OFF**
05	*Warning light function 5*	**OFF**	**ON**	**FLASHING**	**OFF**
04	*Warning light function 4*	**OFF**	**OFF**	**FLASHING**	**OFF**
03	*Warning light function 3*	**OFF**	**OFF**	**ON**	**ON**
02	*Warning light function 2*	**OFF**	**OFF**	**FLASHING**	**FLASHING**
01	*Warning light function 1*	**OFF**	**OFF**	**FLASHING** *(2)*	**ON**

(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 lower limit depends on the setting of parameter 9.6 Warning light delay off.

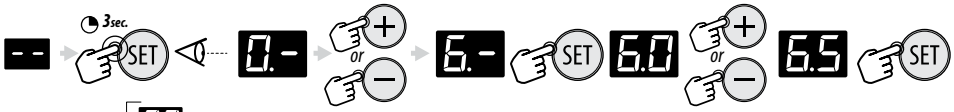


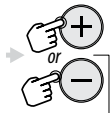
00 ***Standard warning light features / Function off (default)***

- 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.

MENU 6.5 ***BUZZER FUNCTION SETTING***





03 *The buzzer sounds when the motor is running*

02 *The buzzer sounds when the door is closed, but not when the door is opened*

01 *The buzzer sounds when the door is opened, but not when the door is closed*

00 *Buzzer function off (Default)*

MENU 6.6 ***RL - A FUNCTION SETTINGS***

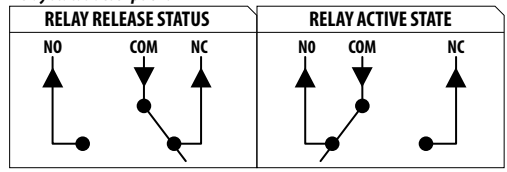
ⓘ *Connection instructions: X66 port X66.1(NO) / 66.3(COM) / 66.2(NC).*

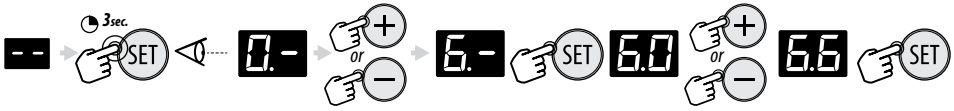
ⓘ *Menu A.0/A.1/A.2/A.3 is visible when using relay RL - A traffic light function group.*

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

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

Relay status description:





6.6

SET

or

00 ***Relay function off (Default)*** *- No function - Relay released state*

Traffic light function group	*Lower limit state (3)*	*Upper limit state*	*Alert Status*	*Operating Status(1)*
01 *Traffic light -red light 1*	**OFF**	**OFF**	**FLASHING** *(2)*	**ON**
02 *Traffic light -red light 2*	**OFF**	**OFF**	**FLASHING**	**FLASHING**
03 *Traffic light -red light 3*	**OFF**	**OFF**	**ON**	**ON**
04 *Traffic light -red light 4*	**OFF**	**OFF**	**FLASHING**	**OFF**
05 *Traffic light -red light 5*	**OFF**	**ON**	**FLASHING**	**OFF**
06 *Traffic light -red light 6*	**OFF**	**ON**	**OFF**	**OFF**

(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 lower limit depends on the parameter A.3 relay A traffic light function delay off setting.

Door Position Function Group *Relay triggering based on door position*	*Lower limit state*	*Upper limit state*	*Center position*	*Operating Status*
10 *Upper limit activation*	**OFF**	**ON**	**ON**	**OFF**
11 *Lower limit activation*	**ON**	**OFF**	**OFF**	**OFF**
12 *Upper limit closed*	**ON**	**OFF**	**OFF**	**ON**
13 *Lower limit closed*	**OFF**	**ON**	**ON**	**ON**
14 *Middle position activation*	**OFF**	**OFF**	**ON**	**OFF**

SET

Pulse Function Group

20 *Door activation - Each time the motor executes a door open, the relay activates for one second*

21 *Upper limit activation - After the motor opens the door and reaches the upper limit, the relay is activated for 2 sec.*

Brake function group *- Please select 25 or 26 function options according to the actual brake device function description.*

25 *Activates when the door is running - Brake function - relay activates while motor is running*

26 *Released when the door is running - Brake function - relay activates when motor is stopped*

Gate Runtime Function Group *- Relay triggering based on the door movement state.*

30 *The relay activates in the lower limit area- When the door travels 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 upper limit area- When the door travels above the set position, the relay activates. The position at which the relay activates is programmable using parameter A.5.*

32 *Activation with door open - When the door is open and running, the relay is activated*

33 *Activate with door closed - When the door body is closed, the relay is activated*

34 *Activates when the door is running - When the door is opened or closed, the relay is activated*

Fault code function group *- Relay triggering based on fault code*

40 *Error code - When the motor reports errors EA, Ed, EF, E7, the relay activates*

41 *Safety edge - When the safety edge is triggered, the relay activates*

42 *Maintenance alarm times - When the number of maintenance alarms reaches (8.0 menu setting), the relay will activate*

43 *Photocells and Light Curtains -When the photocell and light curtain (x5.1/5.3,x5.2/5.3) are triggered, the relay is activated*

44 *Encoder failure error -When the encoder fault E0 reports an error, the relay activates*

Add-on function group *-Relay triggering based on the door movement state*

50 *The function of the electronic lock - The relay is inactive in the lower limit position; the relay is active during door operation and in any position except the lower limit position. The switching delay time of the relay switch is 0.4 seconds.*

51 *Start capacitor function - The relay activates a 1 second pulse every time the motor starts.*

52 *Lighting (outdoor) function - Relay activates when there is a door open command and remains active for 2 min. at the upper limit.*

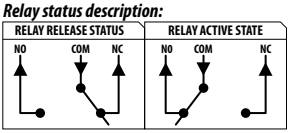
53 *Loading platform function - fully open - The relay establishes communication with the dock leveler. Doors are fully open during dock leveler operations*

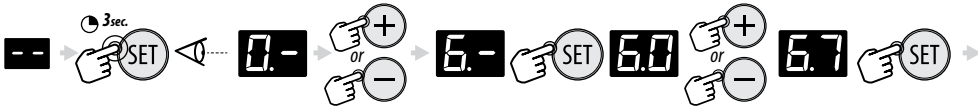
54 *Loading platform function - partial open -The relay establishes communication with the dock leveler. Doors are in the partial open position when the leveler is in operation.*

MENU **6.7** ***RL - B Function settings***

ⓘ *Connection instructions: X67 port X67.1(NO) / 67.3(COM) / 67.2(NC)*
ⓘ *When using the relay RL -b traffic light function group 01-06 (see menu b.0/b.1/b.2/ b.3 for related settings).*
ⓘ *Menu b.4 is visible when using function 30 in relay RL-b (relay activated in the area above the lower limit).*
ⓘ *Menu b.5 is visible when using function 31 in relay RL-b (relay active in the area below the upper limit).*

Relay status description:



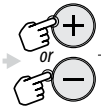


00 ***Relay function off (Default)*** *- No function - Relay released state*

Traffic light function group		***Lower limit state*** *(3)*	***Upper limit state***	***Alert Status***	***Operating Status****(1)*
01	*Traffic light -red light 1*	**OFF**	**OFF**	**FLASHING** *(2)*	**ON**
02	*Traffic light -red light 2*	**OFF**	**OFF**	**FLASHING**	**FLASHING**
03	*Traffic light -red light 3*	**OFF**	**OFF**	**ON**	**ON**
04	*Traffic light -red light 4*	**OFF**	**OFF**	**FLASHING**	**OFF**
05	*Traffic light -red light 5*	**OFF**	**ON**	**FLASHING**	**OFF**
06	*Traffic light -red light 6*	**OFF**	**ON**	**OFF**	**OFF**

(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 b.0 relay B.
(2).The flashing frequency depends on the flashing frequency setting of parameter b.2 relay B traffic light function.
(3).The state of the lower limit depends on the parameter b.3 relay B traffic light function delay off setting.

Door Position Function Group *Relay triggering based on door position*		***Lower limit state***	***Upper limit state***	***Center position***	***Operating Status***
10	*Upper limit activation*	**OFF**	**ON**	**ON**	**OFF**
11	*Lower limit activation*	**ON**	**OFF**	**OFF**	**OFF**
12	*Upper limit closed*	**ON**	**OFF**	**OFF**	**ON**
13	*Lower limit closed*	**OFF**	**ON**	**ON**	**ON**
14	*Middle position activation*	**OFF**	**OFF**	**ON**	**OFF**



Pulse Function Group

20 *Door activation - Each time the motor executes a door open, the relay activates for one second*

21 *Upper limit activation - After the motor opens the door and reaches the upper limit, the relay is activated for 2 sec.*

Brake function group *- Please select 25 or 26 function options according to the actual brake device function description.*

25 *Activates when the door is running - Brake function - relay activates while motor is running*

26 *Released when the door is running - Brake function - relay activates when motor is stopped*

Gate Runtime Function Group *- Relay triggering based on the door movement state.*

30 *The relay activates in the lower limit area- When the door travels below the set position, the relay activates. The position at which the relay activates can be set using parameter b.4.*

31 *The relay activates in the upper limit area- When the door travels above the set position, the relay activates. The position at which the relay activates is programmable using parameter b.5.*

32 *Activation with door open - When the door is open and running, the relay is activated*

33 *Activate with door closed - When the door body is closed, the relay is activated*

34 *Activates when the door is running - When the door is opened or closed, the relay is activated*

Fault code function group *- Relay triggering based on fault code*

40 *Error code - When the motor reports errors ER, Ed, EF, E7, the relay activates*

41 *Safety edge - When the safety edge is triggered, the relay activates*

42 *Maintenance alarm times - When the number of maintenance alarms reaches (H.□ menu setting), the relay will activate*

43 *Photocells and Light Curtains -When the photocell and light curtain (x5.1/5.3,x5.2/5.3) are triggered, the relay is activated*

44 *Encoder failure error -When the encoder fault E□ reports an error, the relay activates*

Add-on function group *-Relay triggering based on the door movement state*

50 *The function of the electronic lock - The relay is inactive in the lower limit position; the relay is active during door operation and in any position except the lower limit position. The switching delay time of the relay switch is 0.4 seconds.*

51 *Start capacitor function - The relay activates a 1 second pulse every time the motor starts.*

52 *Lighting (outdoor) function - Relay activates when there is a door open command and remains active for 2 min. at the upper limit.*

53 *Loading platform function - fully open - The relay establishes communication with the dock leveler. Doors are fully open during dock leveler operations*

54 *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.*

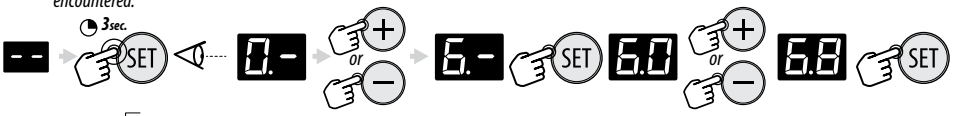
MENU 6.8 ***SAFETY EDGE FUNCTION QUERY*** (safety edge)

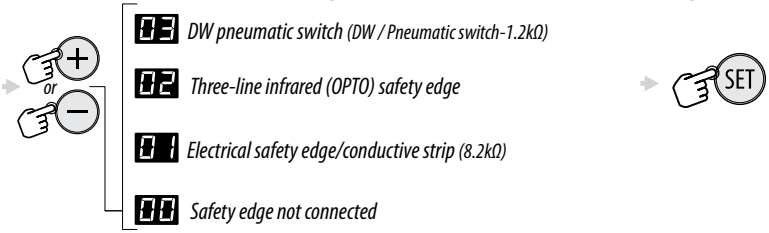
⚠ *! The following types of safety edge devices are automatically recognized by the devices connected to the control box. Remember to properly connect the corresponding safety side before starting.*

! 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.*

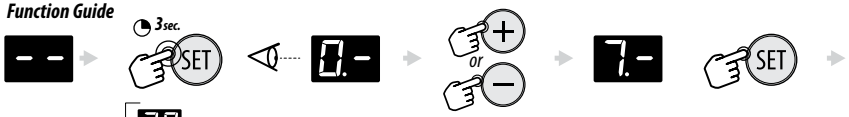
ⓘ *When the door is closed, the trigger on the safety side will perform reverse, and the reverse running time is set by parameter 3.6 Rebound time when encountering resistance; the reverse sensitivity is set by parameter 3.4 Reaction time when encountering resistance when the safety side is encountered.*

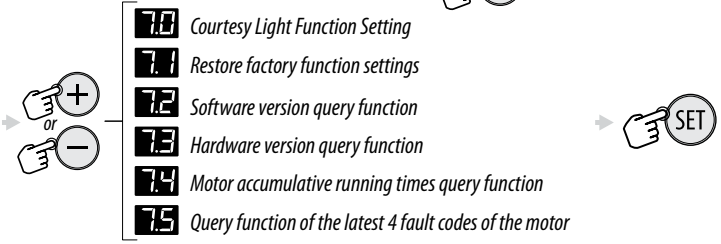




MENU 7.- ***EXTERNAL PORT FUNCTION SETTING***

Function Guide

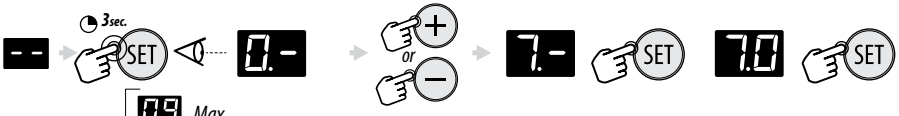


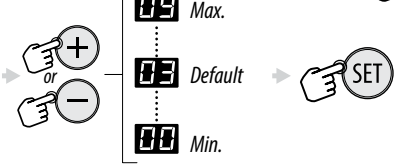


MENU 7.0 ***COURTESY LIGHT FUNCTION SETTING***

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

ⓘ *It is used to set the delay extinguishing time of the courtesy light after the motor stops running.*



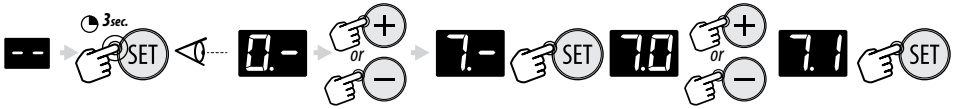


Example: 01 = 1min

MENU **7.1** ***RESTORE FACTORY FUNCTION SETTINGS***

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

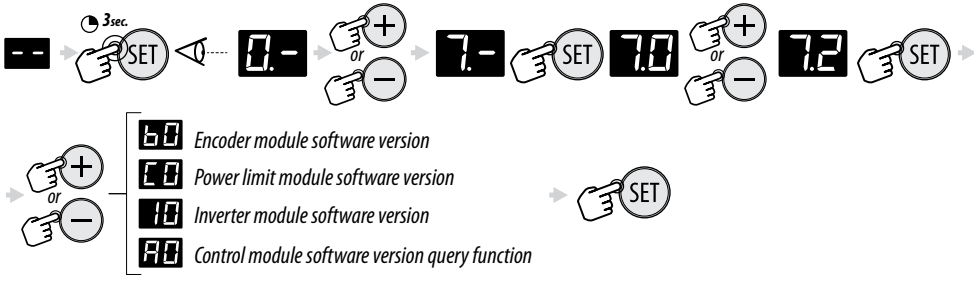
ⓘ *After restoring the factory settings, power off the system for 1 minute and then power on again.*



MENU **7.2** ***SOFTWARE VERSION QUERY FUNCTION***

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

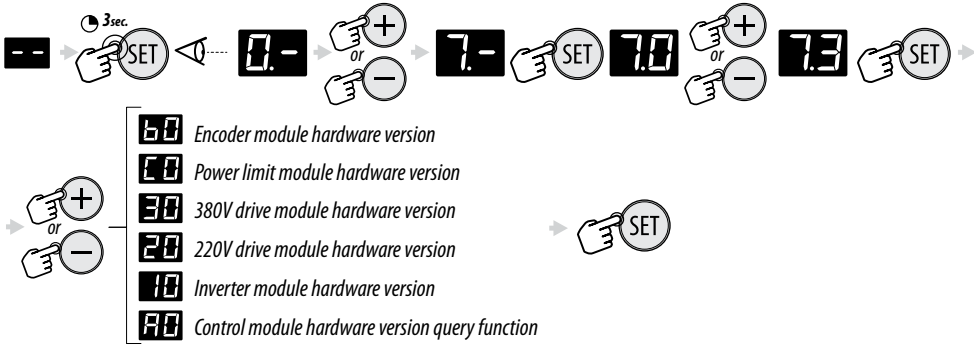
ⓘ *Example: Display in the order of A0-10-C0-b0.*



MENU **7.3** ***HARDWARE VERSION QUERY FUNCTION***

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

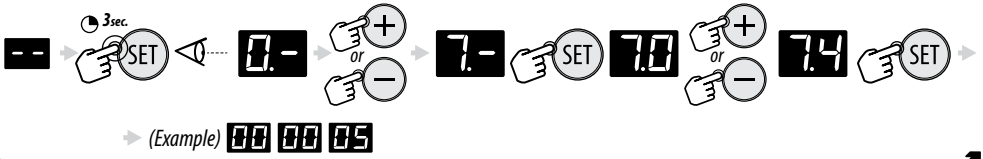
ⓘ *Example: Display in the order of A0-10-C0-b0.*



MENU **7.4** ***MOTOR ACCUMULATIVE RUNNING TIMES QUERY FUNCTION***

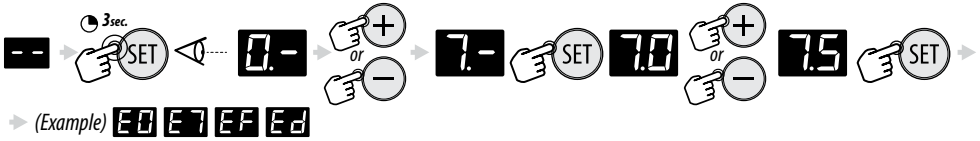
ⓘ *This function can query the accumulative running times of the motor.*

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



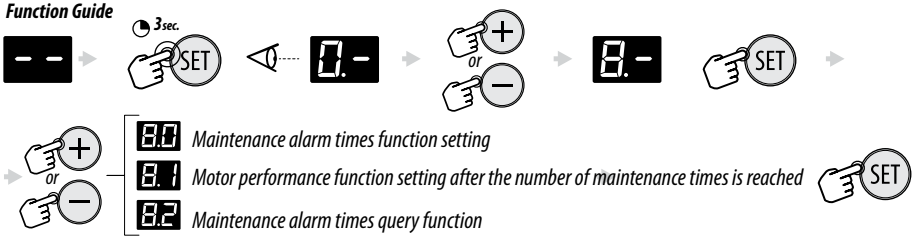
MENU 7.5 ***QUERY FUNCTION OF THE LATEST 4 FAULT CODES OF THE MOTOR***

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



MENU 8.- ***MAINTENANCE ALARM TIMES FUNCTION SETTING***

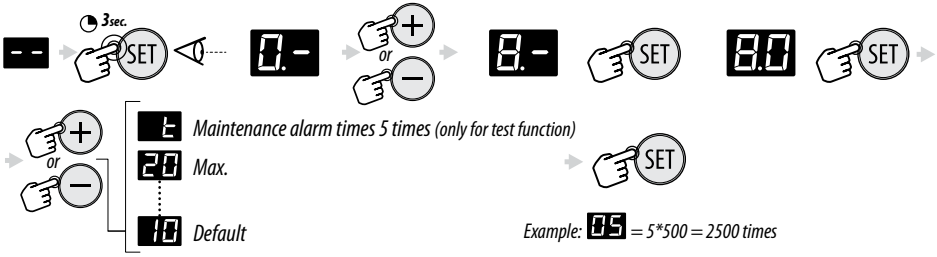
Function Guide



MENU 8.0 ***MAINTENANCE ALARM TIMES FUNCTION SETTING***

ⓘ *After the number of maintenance alarm cycles is reached, the digital tube of the motor switch door will display a prompt code CA ,And the motor executes the long press operation mode of opening and closing the door.*

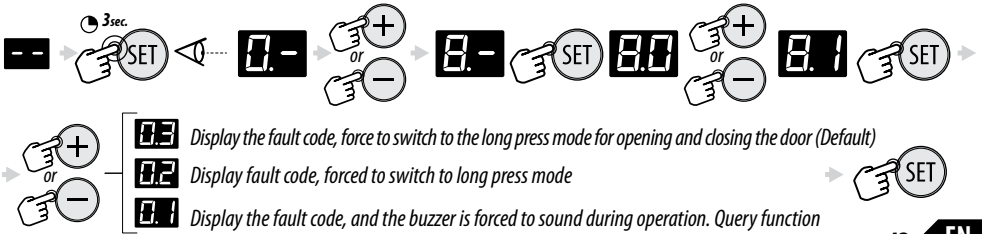
ⓘ *The behavior of the motor after the number of maintenance alarm cycles is reached is determined by the parameter 8.1*



MENU 8.1 ***MOTOR PERFORMANCE FUNCTION SETTING AFTER THE NUMBER OF MAINTENANCE TIMES IS REACHED***

ⓘ *Motor behavior after the number of maintenance alarm cycles is reached and display fault codes CA .*

ⓘ *Function 03 Details: display the fault code, force to switch to the long press mode of opening and closing the door, and press the STOP button for 3 seconds to set the number of maintenance alarms to 500 times, and display H8 (Default).*



MENU 8.2 ***MAINTENANCE ALARM TIMES QUERY FUNCTION***

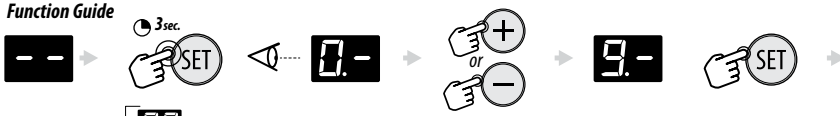
ⓘ *The number of maintenance alarms will not be cleared after the motor is restored to factory settings.*

ⓘ *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.*

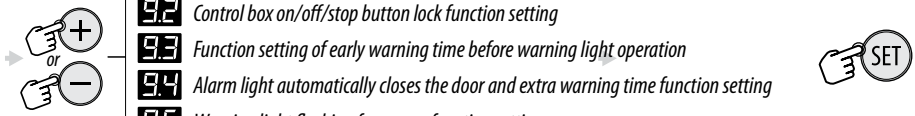
(Example) 00 00 05

MENU 9.- ***OTHER FUNCTION SETTINGS OF THE MOTOR***

Function Guide

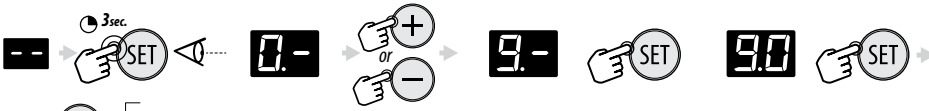


- 9.0 *Fire alarm (X5.4/X5.3) port function control mode setting*
- 9.1 *Remote control lock function setting (holiday mode)*
- 9.2 *Control box on/off/stop button lock function setting*
- 9.3 *Function setting of early warning time before warning light operation*
- 9.4 *Alarm light automatically closes the door and extra warning time function setting*
- 9.5 *Warning light flashing frequency function setting*
- 9.6 *Warning light delay off setting*

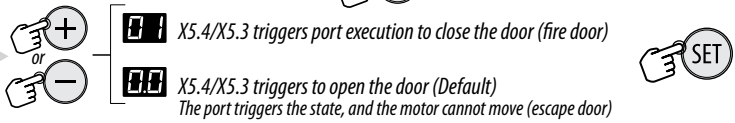


MENU 9.0 ***FIRE ALARM (X5.4/X5.3) PORT FUNCTION CONTROL MODE SETTING***

ⓘ *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 X7/X4/(X3.1/X3.2) can control the motor to stop, and other stop operation commands cannot stop the door body run.*



- 0.1 *X5.4/X5.3 triggers port execution to close the door (fire door)*
- 0.0 *X5.4/X5.3 triggers to open the door (Default)*
  The port triggers the state, and the motor cannot move (escape door)

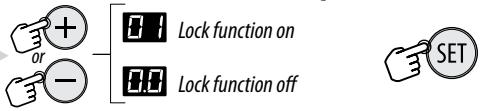


MENU 9.1 ***REMOTE CONTROL LOCK FUNCTION SETTING (HOLIDAY MODE)***

ⓘ *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* LC *,Show when unlocked* CL .

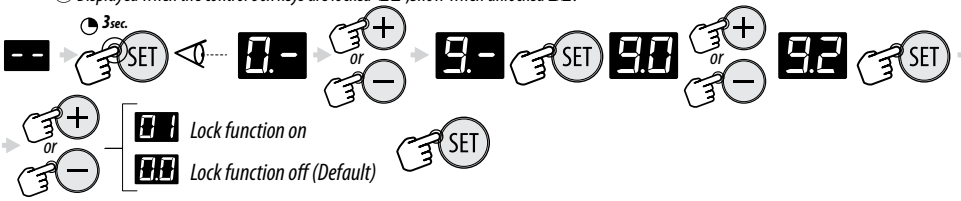
- 0.1 *Lock function on*
- 0.0 *Lock function off*



MENU 9.2 ***CONTROL BOX ON/STOP/CLOSE (S1/S2/S3) KEY LOCK FUNCTION SETTING***

ⓘ *After the function is turned on, the ON/STOP/CLOSE (S1/S2/S3) buttons of the control box will be locked. It can be set directly in the menu, or use quick operation settings (see general function quick setting instructions for details)*

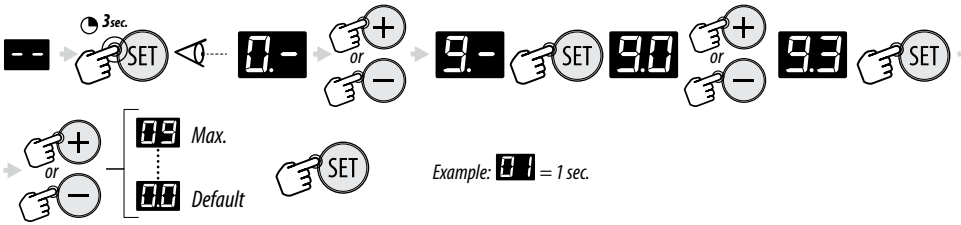
ⓘ *Displayed when the control box keys are locked LC ,Show when unlocked UL.*



MENU 9.3 ***FUNCTION SETTING OF EARLY WARNING TIME BEFORE WARNING LIGHT OPERATION***

ⓘ *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 6.4 .*

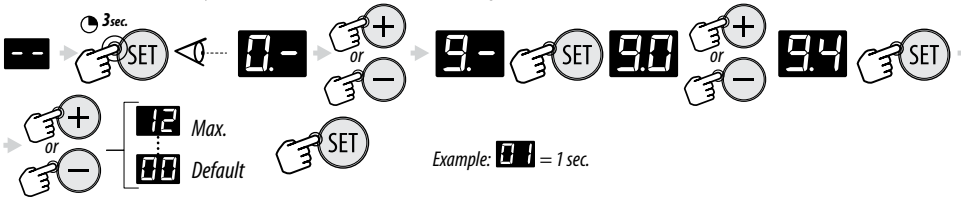


MENU 9.4 ***ALARM LIGHT AUTOMATICALLY CLOSES THE DOOR AND EXTRA WARNING TIME FUNCTION SETTING***

ⓘ *The time setting range of this parameter is: 0 seconds-120 seconds (X=n*10 seconds).*

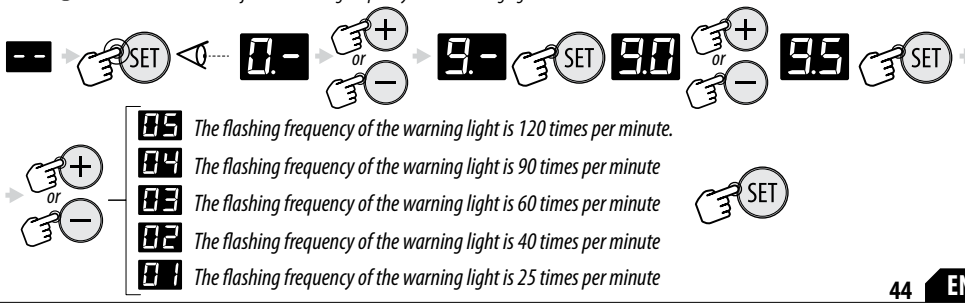
ⓘ *Before using this function, you need to turn on the 01-06 traffic light function in menu 6.4.*

ⓘ *To use this function, you need to enable the automatic door closing function in menu 4.0.*



MENU 9.5 ***WARNING LIGHT FLASHING FREQUENCY FUNCTION SETTING***

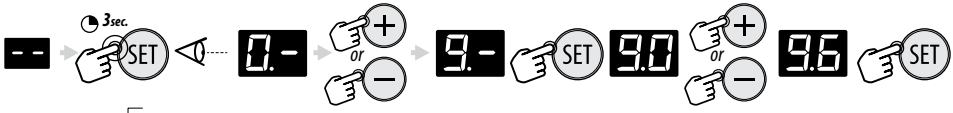
ⓘ *This function is used to adjust the flashing frequency of the warning light.*

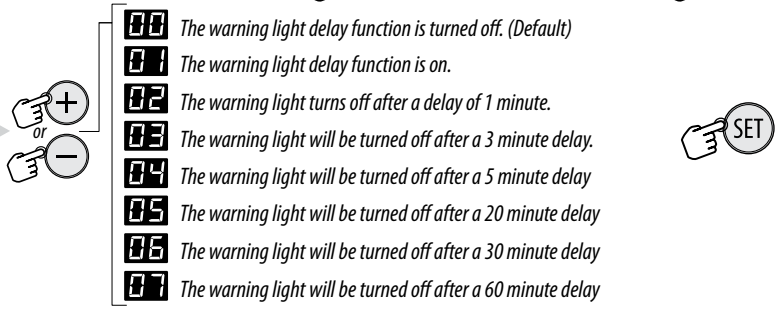


MENU 9.6 ***WARNING LIGHT DELAY OFF SETTING***

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

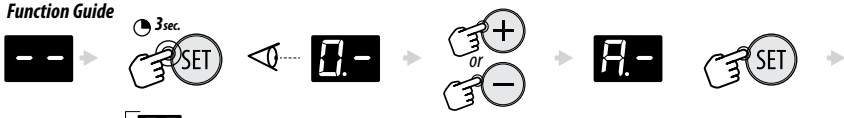
ⓘ *Before using this function, you need to turn on the 01-06 traffic light function in menu 6.4.*

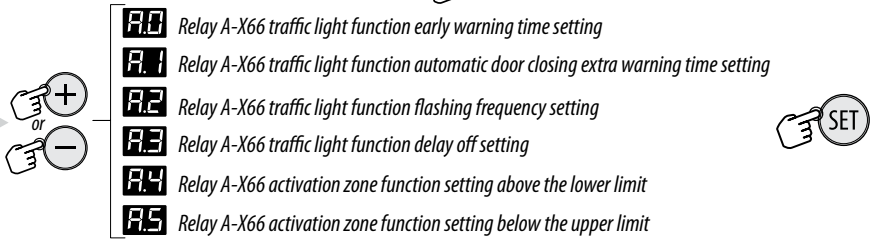




MENU A.- ***RELAY A FUNCTION SETTING***

Function Guide

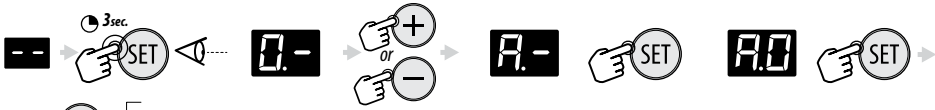


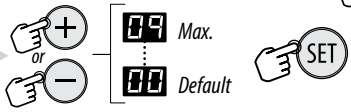


MENU A.0 ***RELAY A-X66 TRAFFIC LIGHT FUNCTION EARLY WARNING TIME SETTING***

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

ⓘ *This menu is only visible when the relay A-X66 is turned on in menu 6.6 and the 01-06 traffic light function is turned on.*





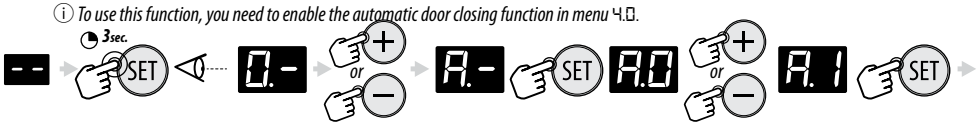
Example: 01 *= 1 sec.*

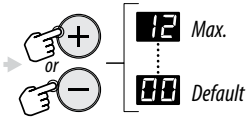
MENU A.1 **RELAY A-X66 TRAFFIC LIGHT FUNCTION AUTOMATIC DOOR CLOSING EXTRA WARNING TIME SETTING**

ⓘ *The time setting range of this parameter is: 0 seconds-120 seconds (x=n*10).*

ⓘ *This menu is only visible when the relay A-X66 is turned on in menu 6.6 and the 01-06 traffic light function is turned on.*

ⓘ *To use this function, you need to enable the automatic door closing function in menu 4.0.*



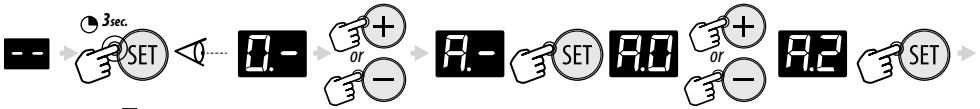


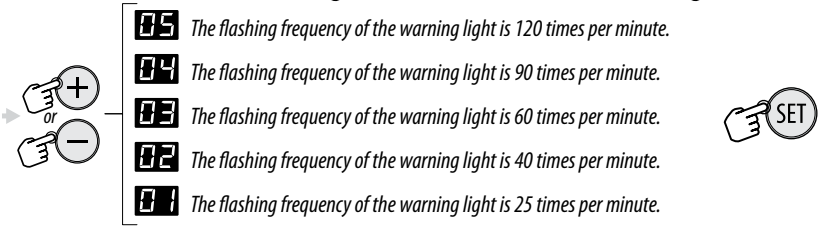
Example: 01 *= 10 sec.*

MENU A.2 **RELAY A-X66 TRAFFIC LIGHT FUNCTION FLASHING FREQUENCY SETTING**

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

ⓘ *This menu is only visible when the relay A-X66 is turned on in menu 6.6 and the 01-06 traffic light function is turned on.*

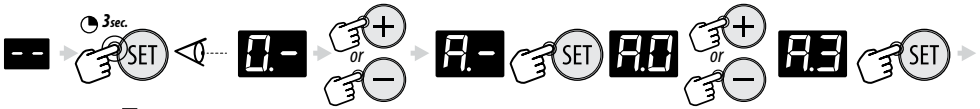


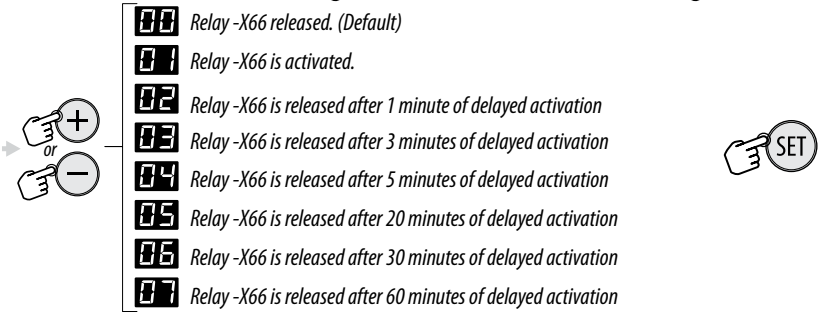


MENU A.3 **RELAY A-X66 TRAFFIC LIGHT FUNCTION DELAY OFF SETTING**

ⓘ *This function is used to adjust the delay release time after the relay A-X66 reaches the lower limit.*

ⓘ *This menu is only visible when the relay A-X66 is turned on in menu 6.6 and the 01-06 traffic light function is turned on.*

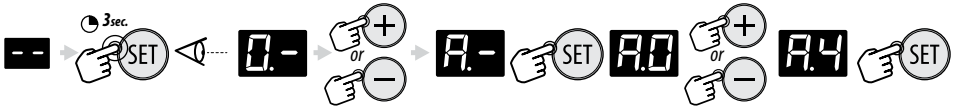


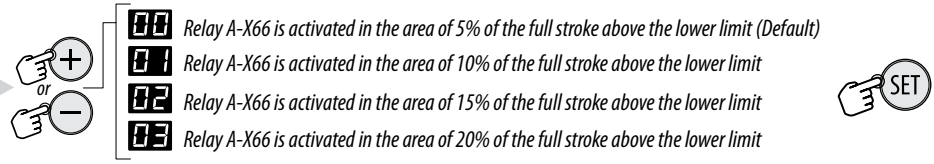


MENU A.4 **RELAY A-X66 ACTIVATION ZONE FUNCTION SETTING ABOVE THE LOWER LIMIT**

ⓘ *This function is used to adjust the activation in the area above the lower limit of relay A-X66.*

ⓘ *This menu is only visible after the relay A-X66 is turned on in menu b.6 and the 30 function is turned on.*

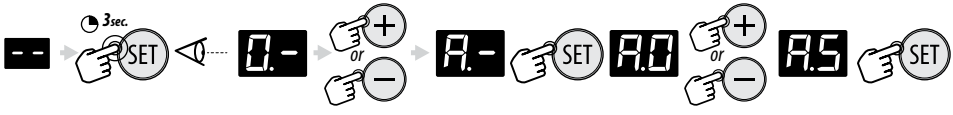


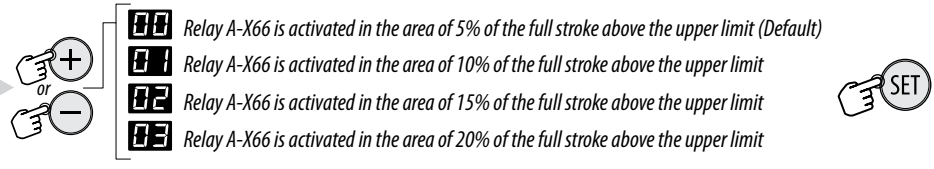


MENU A.5 **RELAY A-X66 ACTIVATION ZONE FUNCTION SETTING ABOVE THE UPPER LIMIT**

ⓘ *This function is used to adjust the activation in the area above the lower limit of relay A-X66.*

ⓘ *This menu is only visible after the relay A-X66 is turned on in menu b.6 and the 31 function is turned on.*

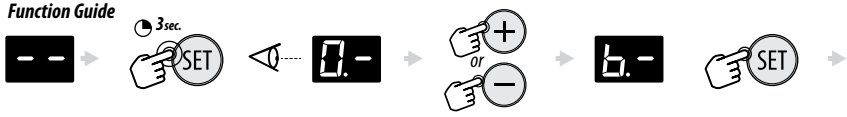


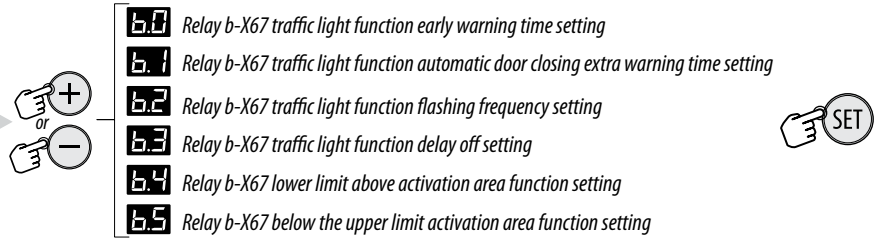


MENU b.- **RELAY B-X67 FUNCTION SETTING**

ⓘ *This menu is only visible if relay b-X67 has enabled the relay A-X67 function in menu b.7.*

Function Guide

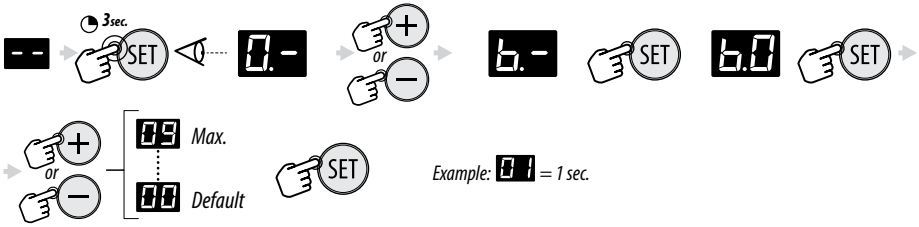




MENU b.0 ***RELAY B-X67 TRAFFIC LIGHT FUNCTION WARNING TIME SETTING***

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

ⓘ *This menu is only visible after the relay b-X67 is turned on in menu 6.7 and the 01-06 traffic light function is turned on.*

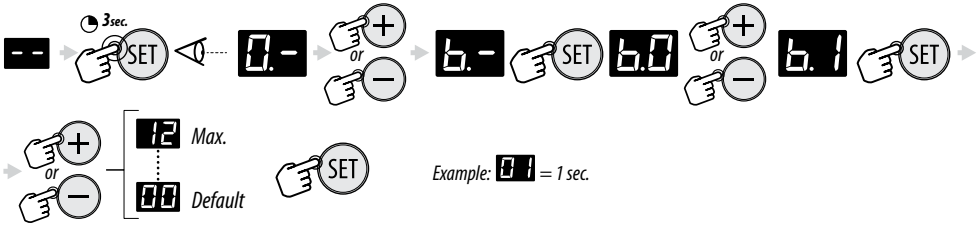


MENU b.1 ***RELAY B-X67 TRAFFIC LIGHT FUNCTION AUTOMATIC DOOR CLOSING EXTRA WARNING TIME SETTING***

ⓘ *The time setting range of this parameter is: 0 seconds-120 seconds (x=n*10).*

ⓘ *This menu is only visible when the relay b-X67 is turned on in menu 6.7 and the 01-06 traffic light function is turned on.*

ⓘ *To use this function, you need to enable the automatic door closing function in menu 4.0.*

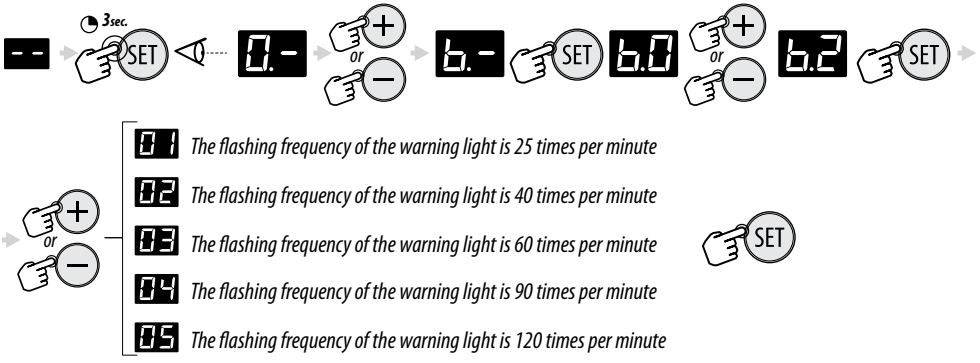


MENU b.2 ***RELAY B-X67 LIGHT FUNCTION FLASHING FREQUENCY SETTING***

ⓘ *Relay b-X67 traffic light function flashing frequency setting*

ⓘ *This function is used to adjust the blinking frequency of the relay b-x67.*

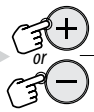
ⓘ *This menu is only visible when the relay b-X67 is turned on in menu 6.7 and the 01-06 traffic light function is turned on.*



MENU b.3 ***RELAY B-X67 TRAFFIC LIGHT FUNCTION DELAY OFF SETTING***

ⓘ *This function is used to adjust the delay closing of relay B-X67.*

ⓘ *This menu is only visible when the relay b-X67 is turned on in menu b.1 and the 01-06 traffic light function is turned on*

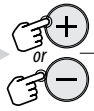


- 00 *Relay b-X67 release (Default)*
- 01 *Relay b-x67 is activated.*
- 02 *Relay b-x67 delays activation for 1 minute and then releases.*
- 03 *Relay b-x67 is released after 3 minutes of delayed activation.*
- 04 *Relay b-x67 is released after 5 minutes of delayed activation.*
- 05 *Relay b-x67 is released after 20 minutes of delayed activation.*
- 06 *Relay b-x67 is released after 30 minutes of delayed activation.*
- 07 *Relay b-X67 is activated after a delay of 60 minutes of delayed activation and then released.*

MENU b.3 ***RELAY B-X67 TRAFFIC LIGHT FUNCTION DELAY OFF SETTING***

ⓘ *This function is used to adjust the activation of the area above the lower limit of the relay b-x67.*

ⓘ *This menu is only visible after the relay B-X67 is turned on in menu b.1 and the 30 function is turned on*

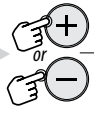


- 00 *Relay b-x67 is activated in the area of 5% of the full stroke above the lower limit (Default)*
- 01 *Relay b-x67 is activated in the area of 10% of the full travel above the lower limit*
- 02 *Relay b-x67 is activated in the area of 15% of the full travel above the lower limit*
- 03 *Relay b-x67 is activated in the area of 20% of the full travel above the lower limit*

MENU b.5 ***RELAY B BELOW THE UPPER LIMIT ACTIVATES THE AREA FUNCTION SETTING***

ⓘ *This function is used to adjust the activation area below the upper limit of relay B.*

ⓘ *This menu is only visible after the relay b-X67 is turned on in menu b.1 and the 31 function is turned on.*

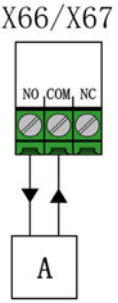
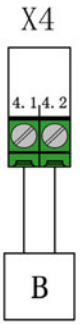


- 00 *Relay b-x67 is activated in the area of 5% of the full stroke above the lower limit (Default)*
- 01 *Relay b-X67 is activated in the area of 10% of the full travel above the lower limit*
- 02 *Relay b-X67 is activated in the area of 15% of the full travel above the lower limit*
- 03 *Relay b-X67 is activated in the area of 20% of the full travel above the lower limit*

Loading and dock leveller function - 53 functions in relay A-X66/b-X67

⚠ *! For use with dock levelers only.*

ⓘ *Parameter 53 is used in conjunction with the dock leveler, which can only be operated with the door fully open.*

LOADING PLATFORM FUNCTION - FULLY OPEN	**LOADING AND DOCK LEVELLER FUNCTION**	**CONNECTION INSTRUCTIONS**
53 *The relay establishes communication with the dock leveler. Doors are fully open during dock leveler operations.*	***Relay output (X66/67 port)***  ***Dock leveler stop input*** 	***1.*** *The relay output of the door control device is connected to the stop port of the dock leveller controller (A). When the door is at the upper limit, the control device will release the loading and unloading platform to stop. Other states active dock leveler stopped.* ***2.*** *The dock leveler's external relay (B) is connected to the stop port of the door control.* *For example X4-4.1/4.2* ⚠ *! Emergency stop devices such as door controls must be locked when the dock leveller is not in the idle position.*

Parameter 53 - Working principle of dock leveler

1. *When the door is closed (The dock leveler cannot be locked by releasing the relay A-X66/b-X67 of the door control device).*

2. *The door is opened to the upper limit position (when the door is fully opened, the relay A-X66/b-X67 is activated, and the dock leveler is unlocked and can be operated).*

3. *The dock leveler moves to the operating position (the door control device will be locked by the loading and unloading platform controller B, and the door cannot operate).*

4. *The dock leveler moves to the idle position (the door control device will be released by the loading and unloading platform controller B, and the door can be closed).*

5. *When the dock leveler stops at the idle position, the door control device will not be locked by the loading and unloading platform controller B at this time, and the door can be operated.*

6. *The door is closed, and the loading and unloading platform cannot be operated by locking the loading and unloading platform through the relay X17.*

Loading and dock leveller function - 54 functions in relay A-X66/b-X67

⚠ *! For use with dock levelers only.*

ⓘ *Parameter 54 is used in conjunction with the dock leveler, which can only be operated with the door fully open.*

DOCK LEVELER FUNCTION - PARTIAL DOOR	**LOADING AND DOCK LEVELLER FUNCTION**	**CONNECTION INSTRUCTIONS**
54 *The relay establishes communication with the dock leveler. Doors are in the partial open position when the leveler is in operation.*	X66/X67 NO COM NC A ***Relay output (X66/67 port)***	***1.*** *Connect the relay output of the door control unit to the stop port of the dock leveler controller (A), the control unit will release the dock leveler when the door is in the partial open position.*
	X4 4.1 4.2 B ***Dock leveler stop input***	***2.*** *Connect the dock leveler's external relay (B) to the stop port on the door control.* *For example X4-4.1/4.2* ⚠ *! Door controls must be locked when the dock leveler is not in the idle position.*
	X6 6.0 6.1 6.3 6.2 C ***Middle position output***	***3.*** *The external relay (C) of the dock leveler is connected to the terminal X6-6.0/6.3 of the door control device.* ⚠ *! Relay C must remain active when the dock leveler is not in the idle position.*

Parameter 54 - Working principle of dock leveler

1. *1. When the door is closed (the dock leveler cannot be locked by releasing the relay A-X66/b-X67 of the door control device).*

2. *Open the door to the partial open position (when the door is in the partial open position, the relay A-X66/b-X67 is activated, and the dock leveler can be released to run).*

3. *The dock leveler moves to the operating position (the loading and unloading platform is in the operating position, and the door control device will be locked by the dock leveler relay B).*

4. *The dock leveler moves to the working position, the dock leveler relay C is released, the global partial opening function is canceled, and the door can be opened to the upper limit.*

5. *When the door is opened to the upper limit, the relay A-X66/b-X67 of the door control device is released to lock the dock leveler and cannot move.*

6. *Close the door to the partial open position.*

7. *The dock leveler moves to the idle position (the door control device will be locked by the dock leveler controller B, and the door cannot operate)*

8. *When the door is closed to the lower limit, the door control device relay A-X66/b-X67 is released to lock the dock leveler and cannot move*

20) CONTROL SYSTEM RUNNING DISPLAY CODES

Display information	
	*No travel state, can run in long press mode*
	*With travel status display*
	*Upper limit learning status display*
	*Lower limit learning status display*
	*Door open display*
	*Closed door operation display*
	*Partial open door trigger/global partial open door trigger standby display*
	*Built-in track infrared learning display in menu 5.0*
	*Built-in track infrared learning display-in menu 5.1*
	*X5.1/X5.3 ports are triggered*
	*X5.2/X5.3 ports are triggered*
	*X2.1/X2.3 ports are triggered*
	*X2.4/X2.3 ports are triggered*
	*X2.4/X2.3 ports are triggered*
	*X3.3/3.4 safety edge conductive strip is triggered*

Display information	
	*X3.3/3.4 safety edge DW is triggered by the port*
	*X3.3/3.4 safety edge three-line infrared is triggered*
	*XX3.3/3.4 safety edge DW self-test failure fault*
	*X5.4/X5.3 ports are triggered*
	*ST port is triggered*
	***FC motor**: prompt when the motor current is overloaded and stops during door opening, and prompts when the door is overloaded and reversed when closing the door; check the locked-rotor point of the door, or replace a highpower motor or adjust the overload capacity of the motor through FORCE MARGIN AC380V motor: it means that the motor is out of phase.*
	*After the number of maintenance alarms in menu 8.0 is reached, it will be displayed every time*
	*Maintenance alarm recovery, long press 3 sec. recovery 500 maintenance times clear CA display*
	*Remote control function lock display*
	*Remote control function unlock display*
	*Control box key function lock display*
	*Control box button function unlock display*

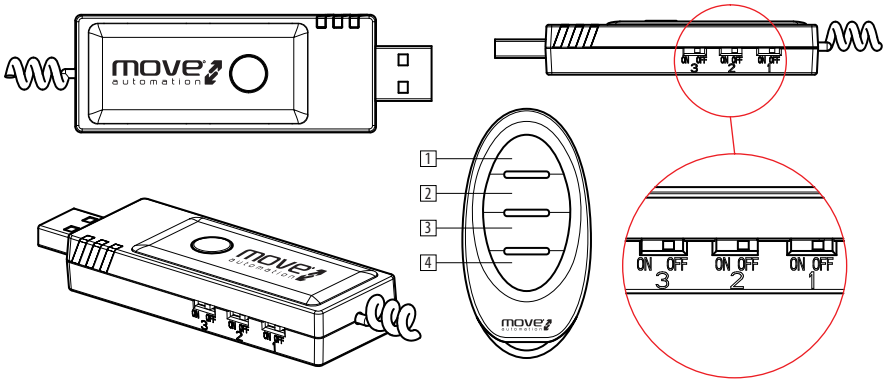
21) CONTROL SYSTEM FAULT CODES

display code	*Problem Description*	*Solution*
	*There is no change in position data during operation*	*- The door body is blocked, check the blocked point.* *- The running speed of the door body is too slow, adjust the running speed of the door opening and closing.* *- Motor limit structure failure, replace the motor.*
	*Encoder chip data failure*	*- Replace the encoder*
	*Limit and encoder communication failed*	*- There is some interference in the operation site, eliminate the source of interference on site and execute the control operation again.* *- The communication line is broken, replace the communication line.* *- Encoder failure.* *- Control system failure replacement.* *- Control system accessories.*
	*Limit module not detected*	*- Encoder failure and replacement of encoder accessories.* *- Encoder wire connection, replace the 10- core wire* *- The limit system is faulty, replace the control module.*
	*Inverter communication failure / control system failure*	*- The motor control operation is triggered too quickly, and there is some interference on site, press stop to restart the operation.* *- Restart after 1 minute of power failure, or replace the control module*
	*Inverter parameter writing failure*	*- There is some interference in the operation site, eliminate the source of interference on the site, re-execute the control operation, or replace the FC drive module*
	*Inverter parameter reading failure*	*- There is some interference in the operation site, eliminate the source of interference on the site, re-execute the control operation, or replace the FC drive module*
	*The slack port is triggered*	*- Check the status of the steel wire rope on the door body, and then run it after repairing.*
	*Safety edge port not connected*	*- Without the safety edge device installed, the door operator can only execute the dead man mode, and it must be connected to the safety side device correctly.*
	*1. Appears when the stroke is set, and the motor does not operate, press SET to appear .* *2. Over-limit coordinates appear during standby operation* *3. Appears when the builtin infrared coordinate setting condition is not at the upper limit, or appears when both are built-in infrared* *4. When the automatic door is closed this time, the door closing prompt cannot be performed due to related failures or dead man mode DW.*	*- According to the operation instructions, after the relevant conditions are met, perform the operation setting.*
	*Clutch port, or motor temperature is too high.*	*- Check whether the clutch device is triggered, check whether the temperature of the motor is too high, AC drive the motor, and check whether the MOT port of the motor is connected to the motor.*
	*Communication failure between the control system and the limit and limit system.*	*- Occasional failure of communication interference, re-execute the operation, failure of the connection line between the control system and the limit system, replace the connection line again, or replace the control system.*
	*The stroke setting failed, the distance is too short, or the limit is exceeded.*	*- Reset itinerary*
	*Door-in-door port triggers emergency stop.*	*- Check the door-in-door switch*
	*The motor wiring sequence is reversed.*	*- - Adjust the UVW line sequence of the MOT port*
	*Emergency stop port 5.1k is triggered*	*- Emergency stop button is pressed*

22) FC/AC DRIVE SYSTEM FAULT CODES

Display Code	Problem Description	Solution
	*AC drive failure*	*1. Check the fault indicator light of the AC drive board and check whether the AC drive fuse is burnt out.*
	*Inverter short circuit protection*	*1. Check the wiring for short circuits.* *2. Properly prolong the acceleration and deceleration time (menu 2.1).* *3. Investigate the cause, implement the corresponding countermeasures and reset.* *4. Seek technical support and replace the drive module*
	*Frequency converter instantaneous overcurrent* *frequency converter* *Frequency converter overload*	*1. Extend the acceleration and deceleration time.* *2. Reasonably set the V/F curve.* *3. Set the speed tracking start to be valid or start DC braking.* *4. Replace the matching motor or inverter.* *5. Check the wiring for short circuits.* *6. Replace the inverter with the one that matches the load.* *7. Seek technical support to replace the drive module.*
	*Short to ground*	*1. Check whether the output cable is broken or whether the motor penetrates the shell.* *2. Investigate the cause, implement the corresponding countermeasures, and reset.* *3. Seek technical support to replace the drive module.*
	*Inverter temperature sensor is abnormal*	*1. Check whether the wiring of the inverter temperature sensor is properly connected.* *2. Seek technical support to replace the drive module.*
	*Inverter over voltage*	*1. Extend the deceleration time.* *2. Check wiring of braking unit and braking resistor* *3. Match the appropriate braking unit/braking resistor.* *4. Reduce the power supply voltage to within the specified range.* *5. Replace the drive module for the braking function.*
	*Inverter under voltage*	*1. Check the input power and wiring.* *2. Tighten the input terminal screws.* *3. Check the air switch and contactor.*
	*Inverter input phase loss*	*1. Check the input power.* *2. Check the input power wiring.* *3. Check for loose terminals.* *4. Add a voltage regulator on the input side*
	*Inverter output phase loss*	*1. Check the connection between the inverter and the motor.* *2. Check whether the output MOT terminal is loose.* *3. Check whether the motor winding is broken.*
	*Inverter Overheating*	*1. The operating environment of the inverter should meet the specificationsbeg.* *2. Improve the ventilation environment and check whether the air duct is blocked or stuffed.* *3. Power off for 20 minutes and start running again.*

23) TRANSMIT/RECEIVER FUNCTION MODULE DESCRIPTION



1. *The external decoding module uses the standard HCS300 format open code, and the frequency 433MHZ/868MHZ is optional.*

2. *Remote control design 4 button design, remote control key value 1,8,2,4.*

3. *The remote control module and the control box are connected by USB standard interface.*

4. *Short press the LEARN button, the LED lights up, and press the remote control to pair. Press and hold the learn button for 6S, and the LED will flash for 5S to clear the code.*

5. *The default maximum number of remote storage is 50.*

6. *Remote control module function:*

- ***a.*** *Standard function: single key cycle*
- ***b.*** *Ignore the key value function, all keys are valid, open-stop-close-cycle*
- ***c.*** *Multifunction 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;*
- ***d.*** *Multi-function button 2:*
  - *No. 1 to open the door;*
  - *No. 2 key to stop;*
  - *No. 3 to close the door;*
  - *No. 4 key remote lock function;*
- ***e.*** *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)*

7. *Adjust the remote control function through the 3-way DIP switch*

3	2	1	Function Description
OFF	OFF	OFF	*Standard features (factory default)*
OFF	OFF	ON	*Ignore key-value function*
OFF	ON	OFF	*Multifunction button 1*
ON	OFF	OFF	*Multifunction button 2*
OFF	ON	ON	*Multifunction button 3*

Important note: *When using the multi-function buttons, you must use Move Automation standard remote control, and the customer should prepare the remote control The key value is inconsistent, and there is a possibility of function failure.*

base 120

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