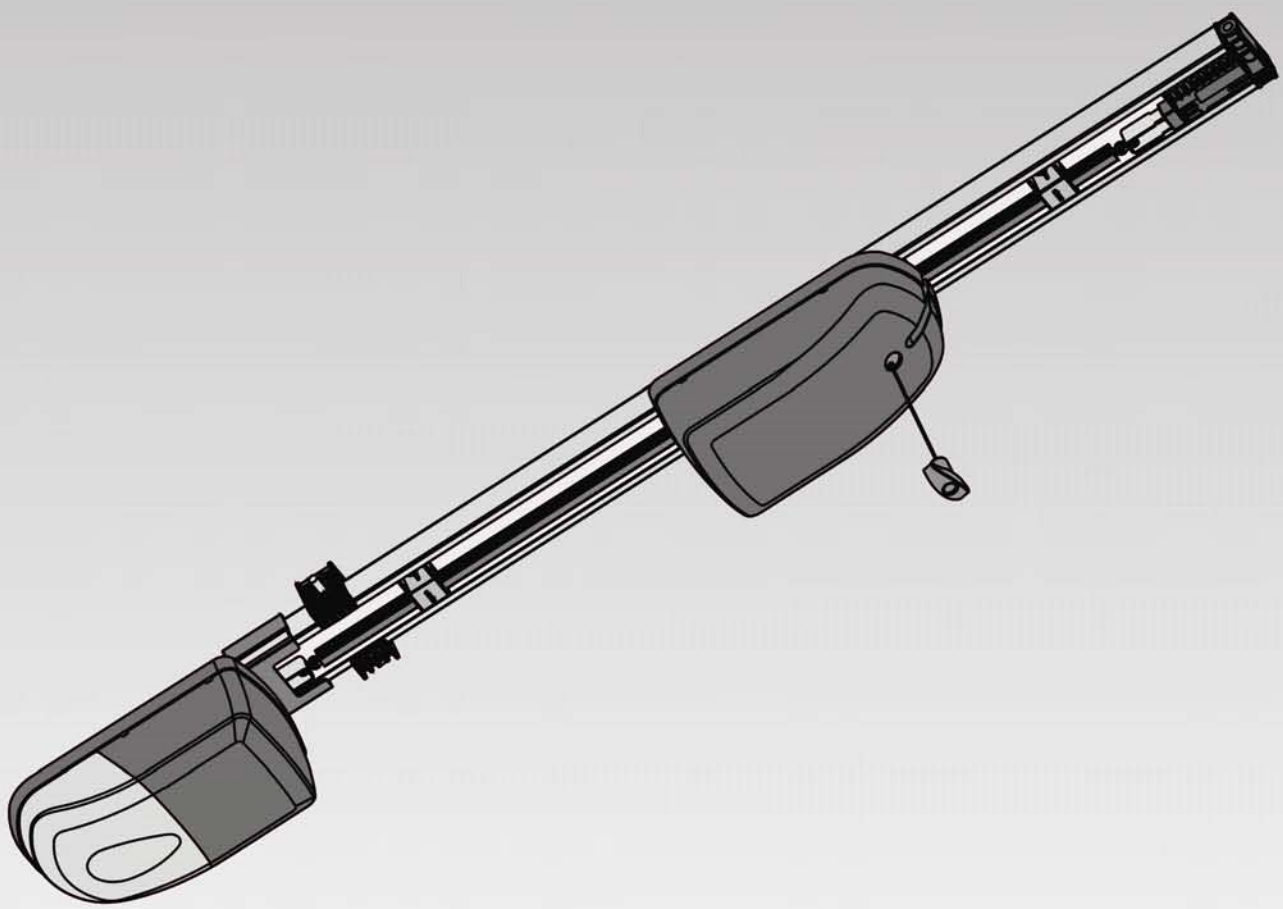
AVANTI



Installation Instructions and User Guide

安装和使用说明书

English / 英文 ..... Page 3 / 页 3

Chinese / 中文 ..... Page 14 / 页 14

IMPORTANT SAFETY RECOMMENDATIONS

FAILURE TO COMPLY WITH THE FOLLOWING SAFETY RECOMMENDATIONS MAY RESULT IN SERIOUS PERSONAL INJURY, DEATH AND / OR PROPERTY DAMAGE.

- The Opener must be installed and adjusted in strict accordance with the instructions outlined in this manual.
- The garage door must be properly balanced and well functioning. It must not stick or bind during any part of its travel. An improperly balanced or malfunctioning garage door could cause serious personal injury, death or property damage.
  A garage door is deemed to be well balanced and aligned if it:
  a. requires an equivalent amount of applied force to either manually open or close, and
  b. requires no more than 150N (15kg) of applied force to either manually open or close, and
  c. does not rise or fall more than 100mm when released at any point between fully open or fully closed positions, and
  d. does not rub on or incorrectly make contact with any supporting or surrounding structures
  Have a qualified person check and make repairs if required.
- Remove or render inoperative all existing locks and ropes.
- Where possible, install the Opener at least 2 meters or more above the ground. Adjust the Engage/Disengage Cord so that it hangs approximately 1.8 meters from the ground.
- The Wall Bracket carries ALL of the opening and closing thrust of the Opener and as such must be securely fastened to a rigid, structural member of the garage wall or ceiling. It is entirely up to the installer to determine the fixing method and the structural suitability of the fixing points.
- The Engage/Disengage Instruction Tag must remain attached to the Engage/Disengage Cord.
- Locate the Wall Switch within sight of the garage door and at a minimum height of 1.5 meters above the ground so that it remains out of the reach of small children and away from all moving parts of the garage door.
- The Entrapment Warning Label must be secured in a prominent position adjacent to the Wall Switch.
- Subsequent to installation and adjustment, the garage door **must** stop and reverse direction when it comes into contact with a 35mm high solid object placed on the floor under the garage door.
- The correct function of the Safety Reverse system should be checked on a monthly basis.
- Never use the Opener unless the garage door is in full view and free from any object which may impede its movement such as cars or persons.
- Never allow children to operate the Opener.
- Never operate the Opener when any persons are under or near the path of the garage door. Children must be supervised at all times when near the garage door and when the Opener is in use.
- Always disengage the Opener with the garage door in the fully closed position.
- Before attempting to disengage the Opener from any position other than fully closed, ensure that there are no children/persons and/or solid objects including motor vehicles under or near the path of the garage door as the garage door may fall sharply upon disengagement.
- Never attempt to open or close the garage door by pulling on the Engage/Disengage Cord.
- Never attempt to make any repairs or remove covers from the Opener without first disconnecting the power cord from power supply.
- Removal of the protective covers must only be performed by a technically qualified person.
- For safety reasons always ensure that the garage door is fully open and stationary before driving into or out of the garage.
- For security reasons always ensure the garage door is fully closed and stationary before moving out of its view.
- Keep hands and loose clothing clear of the Opener and moving garage door at all times.
- In order for the Safety Reverse system to function it must first encounter an obstruction in the form of an object/person on to which some force **must** be exerted. As a result the object/person/garage door may suffer damage and/or injury.
- The Safety Reverse System is designed to work on STATIONARY objects only. Serious personal injury, death and/or property damage may occur if the garage door comes into contact with a moving object during an opening or closing movement.
- Adjustments to the Safety Reverse system settings must only be carried out by a technically qualified person.
- For additional safety we strongly recommend the inclusion of Safety Beams. Although the Opener incorporates a pressure sensitive Safety Reverse system, the addition of Safety Beams will greatly enhance the safety of an automatic garage door and provide additional peace of mind. In some countries it is a mandate of law to fit Safety Beams. It is the sole responsibility of the owner/installer to fit Safety Beams in those countries that so require.

CONTENTS

	Page	Diagram		Page	Diagram
Safety Recommendations	3		Back Jump	7	12A & B
Assembly Instructions	4	1 - 3	Door Service Monitor	7	12A & B
Installation Instructions	4	4 - 7	Courtesy Lamp	7	12A & B
Set-Up Instructions	5	8 - 11	LED Indicator	7	12A & B
Transmitter Learning	5	8A - H	Safety Beams	7	12A & B
Battery Replacement	5	8H	Soft Stop	7	12A & B
Engaging / Disengaging	5	9	Speed Control	7	12A & B
Door Travel Adjustment	5	10	Terminal Connections	7	12A & B
Safety Reverse	6	11	Vacation Mode	7	12A & B
Options and Features	7	12	Dual Powered Opener	8	12B
Auto Close	7	12	Maintenance	8	

The numbered sections in the manual correspond with numbered pictures at the end of the manual.

ASSEMBLY INSTRUCTIONS

1 Identify Door Type and Assembly Method

From the diagrams select the installation combination which best suits the door/garage type. Note that the Control Box (1) may be mounted in the following ways: (A) on the end of the Rail, OR (B) independently on the ceiling adjacent to the Rail, OR (C) on a side wall of the garage(Requires optional cable extension kit).
Note: Options B & C are not applicable for Dual Powered Opener.

2A Attaching Nose Piece

Installation Method 1A
Securely attach the Socket Piece (1) to the Control Box (2) using the screws (3) provided.

Installation Methods 1B & 1C
Do not attach the Socket Piece to the Control Box.

2B Attaching Nose Piece & Power Supply(dual power opener only)

Installation Method 1A
Securely attach the Socket Piece (1) to the Control Box (2) using the screws (3) provided. Attach the Power Supply (4) to the Control Box (2) by connecting the cables and adhere it to the top of the Control Box.

Installation Method 1B & 1C
to the Control Box (2) by connecting the cables and adhere it to the top of the Control Box.

3A Assembling 1 Piece Opener

Slide the Drive Unit (2) into the Drive Rail (1) whilst at the same time engaging the Chain (3) into the Drive Unit. Slide the Limit Prong (4) into the Drive Rail and the Rail Hangar (5) onto the Drive Rail. Load the Control Box (6) onto the end of the Drive Rail then "Twist and Lock" (7) the Chain into place. Use a 12mm Socket Wrench (8) to tighten the Chain Tensioner Bolt (9) so that the underside of the Bolt Head aligns with the Indicator Arrow. The Opener is now fully assembled and ready for installation.

3B Assembling 3 Piece Rail Opener

Align and insert each Drive Rail Joiner (1) into a Drive Rail Segment (2) and push them together until they are fully abutted and form one continuous Drive Rail Assembly. Slide the Drive Rail Hanger (3) onto the Drive Rail Assembly. Slide the Control Box (4) onto the Drive Rail and then "Twist and Lock" (5) the Chain at both ends of the Drive Rail. Use a 12mm Socket Wrench (6) to tighten the Chain Tensioner Bolt (7) so that the underside of the Bolt Head aligns with the Indicator Arrow. The Opener is now fully assembled and ready for installations

INSTALLATION INSTRUCTIONS

Before commencing the installation ensure that you have carefully read & understood the Safety Recommendations outlined on Page 1 of this manual. In particular ensure that the functionality of the garage door complies with the requirements specified. Make any necessary adjustments to the garage door BEFORE commencing installation of the Opener!
The Wall Bracket carries ALL of the opening and closing thrust of the Opener and as such must be securely fastened to a rigid, structural member of the garage. It is entirely up to the installer to determine the fixing method and the structural suitability of the fixing points. Mounting the Drive Rail more than 50mm above the Highest Arcing Point of the garage door may cause the Rail to flex excessively. Always ensure that the bottom edge of the Drive Rail is located within 50mm of the top edge of the top panel of the garage door at its highest arcing point.

4 Mount Wall Bracket and Towing Bracket

Wall Bracket - determine the highest arcing point of the Garage Door and mark this as a Horizontal Line (1) on the wall above the door. Determine the Garage Door center line and mark a Vertical Line (2) on the wall above the door. Position the Wall Bracket (3) as depicted and ensure its bottom edge is **no more than 50mm** above the horizontal marked line (1). Now mark the location of the 2 outer most screw holes (4). Secure the Wall Bracket to the wall using screws of at least 8mm x 50mm.
Towing Bracket – Fix the Towing Bracket (5) to a structural member of the Garage Door as close to the top edge as possible and on the centerline of the door using 4 x self drilling screws or 2 x 6mm screws with nuts.

5 Attach Drive Rail to Wall Bracket

Important Note: Avoid scratches and potential damage to the plastic covers by placing the Opener on cardboard.
With the Garage Door (1) in the fully closed position - lay the assembled Opener on the floor in line with the centerline of the Garage Door so that the Control Box (2) is furthest from the Garage Door. Raise the Drive Rail (3) up to the Wall Bracket (4) so that the Drive Rail sits in between the ears of the Wall Bracket. Align the mounting holes of the Drive Rail and Wall Bracket and fully insert the Long Clevis Pin and secure it with the Spring Clip.

6 Mount Opener to Ceiling

Important Note: Do not lift the Opener by the Control Box or damage may occur. Always lift the Opener by the Drive Rail.
Raise the Opener off the floor and rest it on a Support (1) high enough that the Drive Rail (2) runs parallel to the ground. Slide the Drive Rail Hanger (3) along the Drive Rail (up to max 600mm from the Control Box) and align it with a structural member of the garage. Securely fasten 2 Metal Hangers (4) to the structural member and then attach the Metal Hangars to the Drive Rail Hanger.

7 Attach Towing Arms

Close the Garage Door and remove the Drive Unit Cover (1). Insert the Straight Towing Arm (2) through the slot in the cover. Attach the Straight Towing Arm to the Drive Unit (1) using the clevis pin and spring clip provided and then replace the Cover. Attach the Bent Towing Arm (3) to the Towing Bracket (4) using the clevis pin and spring pin provided. Bring the 2 Arms together and align the 2 sets of holes which are furthest apart from each other. Securely fix the Towing Arms together using the 2 x 8mm screws and nuts provided. Plug the Opener into a properly earthed power outlet and ensure that no excess power cord hangs below Control Box.

SET-UP INSTRUCTIONS

8 TRANSMITTERS – Learning and Deleting

A. Mass Learning
Function – Learns ALL 4 transmitter buttons as follows:
1. Run 2. Auto Close Override 3. Courtesy Light 4. Sleep
To Learn – Press (red) Learn Button (1) **–** LED single blinks
Press any Transmitter (2) button twice – Learning complete

B. Run A Function Learning
Function – Learns only Run button.
To Learn – Press (red) Learn button (1) twice **–** LED double blinks. Press desired Transmitter (2) button twice – Learning complete

C. Run B Function Learning
Function – Door will not auto close when opened with this button.
To Learn – Press (red) Learn button (1) 3 times **–** LED triple blinks
Press desired Transmitter button (2) twice – Learning complete

D. Courtesy Light On/Off Function Learning
Function – Turns courtesy light on/off
To Learn – Press (red) Learn button (1) 4 times **–** LED quadruple blinks
Press desired Transmitter button (2) twice **–** Learning complete

E. Vacation Mode Function Learning
Function – Disables most opener functions
To Learn – Press (red) Learn button (1) 5 times **–** LED quintuple blinks
Press desired Transmitter button (2) twice **–** Learning complete

F. Wireless Wall Switch
The wireless wall switch can be programmed in the same way as a transmitter. Select one of the Learn methods in parts A **–** E from the list above and Learn accordingly.

G. Deleting all Transmitters
Momentarily press (red) Learn button (1) **–** LED single blinks
Press and hold (black) Run button (3) **–** LED rapid blinks
Transmitters all deleted once LED stops blinking

H. Battery Replacement
Follow the procedure outlined in diagram 8H
Replace the battery with one of identical specification

9 ENGAGING / DISENGAGING

Important Note*: *Always disengage the Opener with the garage door in the fully closed position. If disengaging from any position other than the door fully closed ensure that there are no persons and/or property near or directly under the path of the door.

To Disengage
Pull down on the release handle (1) until a click is “felt” and then release the handle

To Engage
Pull down on the release handle (1) once again until a click is “felt” and then release the handle

10 DOOR TRAVEL ADJUSTMENT

Close Direction
Loosen the Limit Prong Lock Screw (1) by half a turn and slide the Limit Prong (2) towards the front wall of the garage to increase garage door travel and away from the front wall to decrease garage door travel. Retighten the Limit Prong Lock Screw once correctly adjusted.

Open Direction
Loosen the Limit Prong Lock Screw (1) by half a turn and slide the Limit Prong (3) towards the Control Box to increase garage door travel and away from the Control Box to decrease travel. Re-tighten the Limit Prong Lock Screw once correctly adjusted.

11 SAFETY REVERSE

During a closing movement Safety Reverse ensures that the garage door will stop and reverse (Safety Reverse) when it encounters an obstruction thus ensuring the safety of people and property. During an opening movement the garage door will stop (Safety Stop) when it encounters an obstruction. The amount of force required to make the garage door Safety Reverse or Safety Stop can be adjusted. A low force value ensures maximum safety, but requires a very well sprung and installed door in order to avoid ghosting (false safety reversing or stopping). A high force value ensures that even a badly sprung or worn door will work without ghosting. The following details the correct force value set up and adjustment procedure.

A MODE

The most sensitive Safety Reverse system best suited for use on well sprung new doors.
Function – Automatically compensates for door wear and ageing for the lifetime of the garage door. During a closing movement the Opener will stop and commence to Safety Reverse upon encountering an obstruction.
Enabling – Switch power off at power outlet. Remove Control Box cover. Select Dip 1 to "ON" position. (Refer diag. 12)
Learning – In order to Learn Safety Reverse and Safety Stop values the Opener will be required to complete 6 (Transmitter or Run button initiated) uninterrupted open and close cycles. During the learning process the LED (1) will rapid blink. Once learning has been completed the LED will slow blink.
Adjustment – Rotate the green "Offset" Adjust Pin (2) in a clockwise direction (Max) to INCREASE the amount of force required to make the garage door Safety Reverse or Safety Stop and in an anti clockwise direction (Min) to DECREASE the amount of Force required to make the garage door Safety Reverse or Safety Stop.
Testing Open Direction – During an open cycle apply some firm downward force to the garage door. If the Safety Stop value is correct the Opener will stop upon sensing the resistance. If too little or too much force is required to make the opener stop turn the green "Offset" Adjust Pin (2) 5 degrees in the appropriate direction – clockwise (Max) to INCREASE the amount of force – anti clockwise (Min) to DECREASE the amount of force – and then repeat the test.
Testing Close Direction – Ensure that garage door is resting firmly against the ground. Open the door and place a 35mm thick block of wood on the ground under it. Now close the door – if the drive force value is correct the opener will stop and reverse direction upon encountering the block of wood. If too little or too much force is required to make the opener reverse direction – turn the green "Offset" Adjust Pin (2) 5 degrees in the appropriate direction – clockwise to INCREASE the amount of force – anti clockwise to DECREASE the amount of force – and then repeat the test.
Forced Learn – may be initiated by holding down the red "Learn" Button (3) for 2 sec – LED Indicator will begin to rapid blink. Cycle the opener through 6 complete uninterrupted strokes in order for it to complete the learning process. The LED Indicator will slow blink once learning has been completed.
Automatic Re-Learn – A re-learn of drive force parameters will be automatically initiated immediately subsequent to either one of the following 3 occurrences: (a) run time deviation becoming excessive, or (b) safety reversing on 3 consecutive occasions, or (c) safety stopping on 3 consecutive occasions.

M MODE

A less sensitive Safety Reverse system best suited for use on large, heavy or badly worn doors.
Function – features conventional one time force adjustment and is more suited for use on badly worn doors.
Enabling – switch power off at power outlet. Remove Control Box cover. Select Dip 1 to "OFF" position (Refer diag. 12)
Adjustment – Press and hold down red "Learn" Button (3) for 2 sec – LED Indicator will commence a paused double blink.
Force adjustment can be carried out while LED Indicator is "paused double blinking".
Rotate the green "Open" Adjust Pin (2) to adjust force for open direction travel and the red "Close" Adjust Pin (4) to adjust close direction travel – clockwise to INCREASE the amount of force and anti clockwise to decrease the amount of force.
To close out Force Adjustment Mode momentarily press "Learn" Button or alternatively the mode will close out automatically after 10 min.
Testing – Follow the testing procedures outlined in the section "**A MODE TESTING"**

OPTIONS AND FEATURES

The following section outlines the selectable options and features which are available to the user. The Control Box cover must be removed in order to access the components which control these features. Switch off power at power outlet - hinge down the light cover and remove the single retaining screw and then unclip the cover from its base.

12A AUTO CLOSE

Important Note – Auto Close will only function when Safety Beams have been fitted and enabled.
Function – Auto Close will automatically close the garage door, either (A) 5 sec after a car/person has passed through the doorway, or (B) after 30 sec if a car/object has not passed through the doorway thus ensuring that the garage door is never unintentionally left open.
To Enable - Select Dips 2 & 3 to the "ON" position.

12A BACK JUMP

Function – Upon closing, Back Jump reverses the garage door slightly and so ensures effortless disengagement.

To Enable – Select Dip 6 to the "ON" position

12A DOOR SERVICE MONITOR

Function – Constantly monitors the spring balance of the garage door and warns the user when door is out of balance. Courtesy lamp will triple flash every 15 sec once imbalance is excessive. At this time the garage door should be serviced by a suitably qualified technician.
To Enable – Select Dip 4 to the "ON" position

12A COURTESY LAMP

Function - Automatically activates each time the Opener is used and then will switch off after 3 min.

Bulb Replacement – Always replace bulb with identical 24V 21W Incandescent.

12A LED INDICATOR (Green)

Function – LED (9) provides Opener status information.
Glow Solid – Reached close limit position
Slow Blink – Reached open limit position
Medium Blink – Learning or deleting Hand Transmitters
Rapid Blink –Learning new drive force parameters
Intermittent Blink – Sleep Mode

12A SAFETY BEAMS

Function – Safety Beams constantly monitor for persons or objects which may cross the path of a moving garage door. The Opener will commence to Safety Reverse if the Safety Beams become momentarily or permanently interrupted during a closing movement. The Opener will support the connection of genuine 2 wire or aftermarket 4 wire SB.
Connection – For correct installation refer to the connection diagrams located at the end of this manual
To Enable – Select Dip 2 to the "ON" position.

12A SOFT STOP

Function – By intelligently reducing the speed of the garage door as it approaches a limit point the Soft Stop ensures quieter closing and enhanced Opener and garage door life.

To Enable – Select Dip 5 to the "ON" position.
Note: This function is not available when M Mode has been selected.

12A SPEED CONTROL

Function – Allows the user to adjust the running speed of the Opener to best suit the garage door type.
Adjustment – Run the Drive Unit and then stop it so that it is positioned mid way between the 2 Limit Prongs. Press and hold "Learn" button (10) until LED (9) begins to rapid blink. While opener is running, rotate the (red) "Speed" Adjust Pin (11) in a clockwise direction to increase running speed and anti clockwise to decrease running speed. Speed may only be adjusted while the Drive Unit is traveling between Limit Prongs. Speed adjustment will close out automatically once the Drive Unit reaches either one of the Limit Prongs.

12A TERMINAL CONNECTIONS – Accessory Installation

Connection of the following accessories is supported;
a. Genuine 2 wire Safety Beams (13A)
b. 3rd party N.O. 24V DC 4 wire Safety Beams (13B)
c. 24V DC universal receiver (13C)
d. Normally open momentary contact Wall Switch (13D)
e. Warning lamp (13) **Check E,F,G**
f. Additional courtesy lamp 24W max (13)
g. 240V relay driven courtesy lamp (12)

12A VACATION MODE

Function – disables most functionality in order to provide utmost security whilst user is away for an extended period.
To Enable – Momentarily press button 4 of a mass learned transmitter.

To Disable – Momentarily press button 1**,** 2 or 3 of a mass learned transmitter.

DUAL POWERED OPENER

12B LED INDICATOR - Red/Green (9)

Function – Provides visual indication of charger status
Glow Green – system normal

Glow Red – battery charger not charging
Extinguish – Opener has entered Shut-Down Mode

12B WARNING BUZZER (14)

Function – Provides audible indication of charger status.
Single "beep" every 30 sec – battery charger is not charging.
Double "beep" every 30 sec – battery charger is not charging – remaining battery voltage is low - Opener is preparing to enter Shutdown Mode
To Disable – Remove the jumper link located adjacent to the buzzer (15)

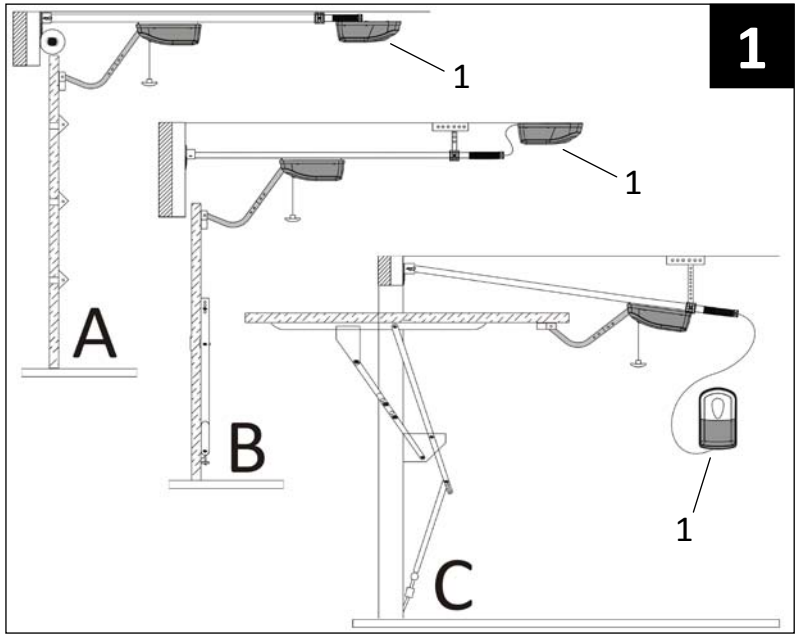
12B SHUTDOWN MODE

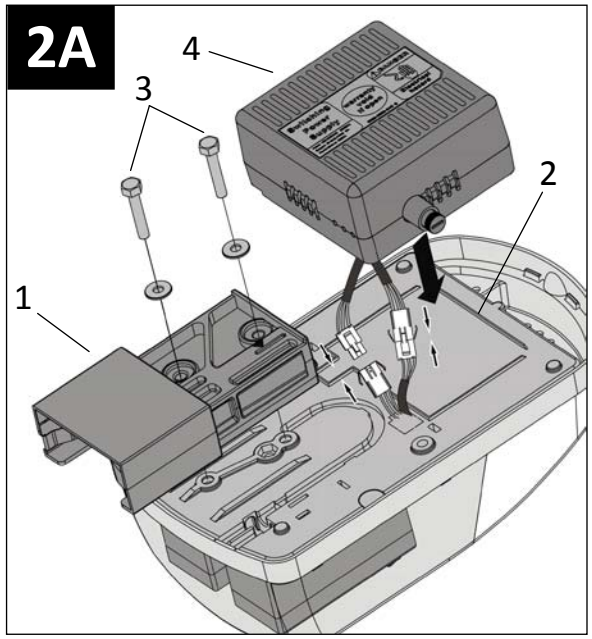
Function – In the event of prolonged power outage the Opener will automatically shutdown (when battery voltage drops below 22 volts) in order to conserve remaining battery charge – LED Indicator (9) will extinguish and the Opener will cease to function. Shutdown will only occur if the battery charger is not charging. Once the battery charger is reactivated the Opener will automatically exit Shutdown Mode upon the next press of button 1 on the Transmitter

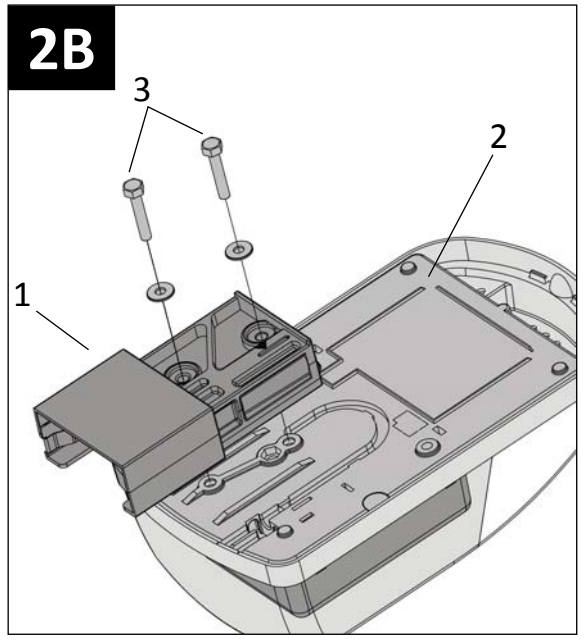
MAINTENANCE

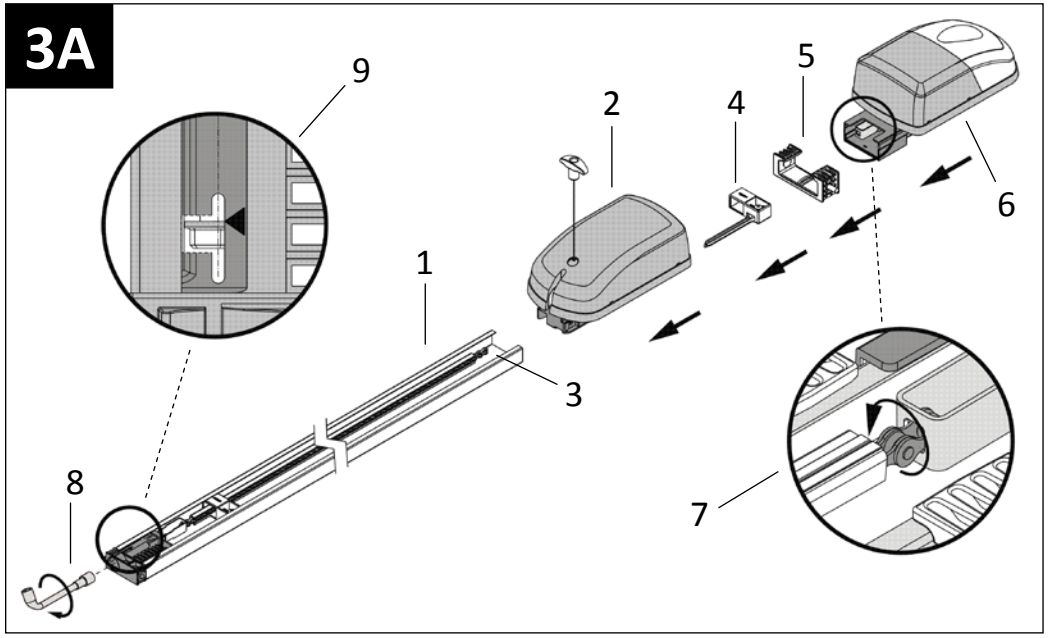
Once every 12 months lubricate the inside vertical faces of the Drive Rail with oil or an oil based spray lubricant.

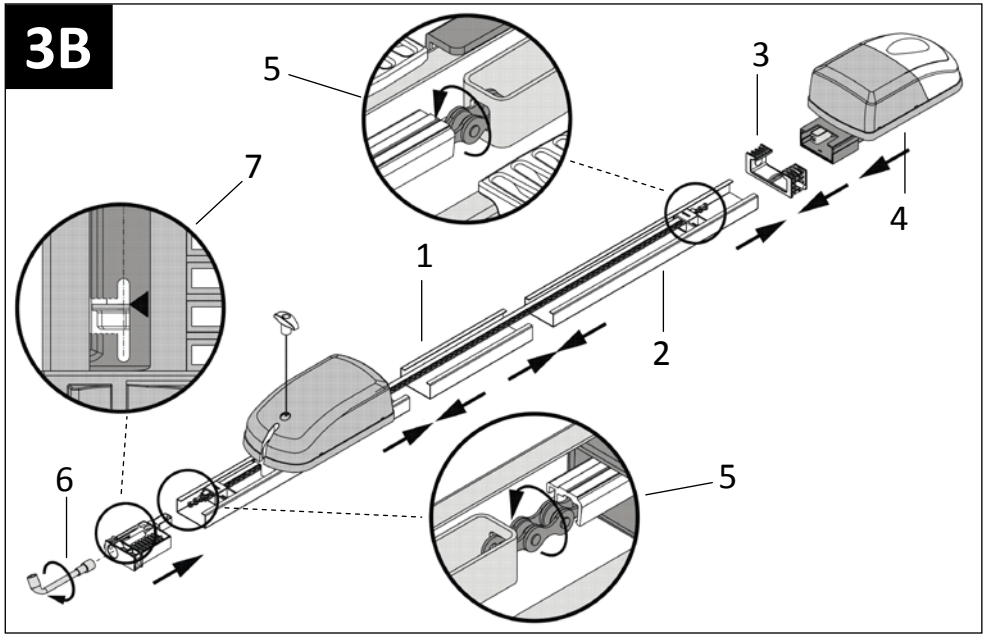
WARNING: Applying grease to the inside of the Drive Rail will cause the Opener to malfunction

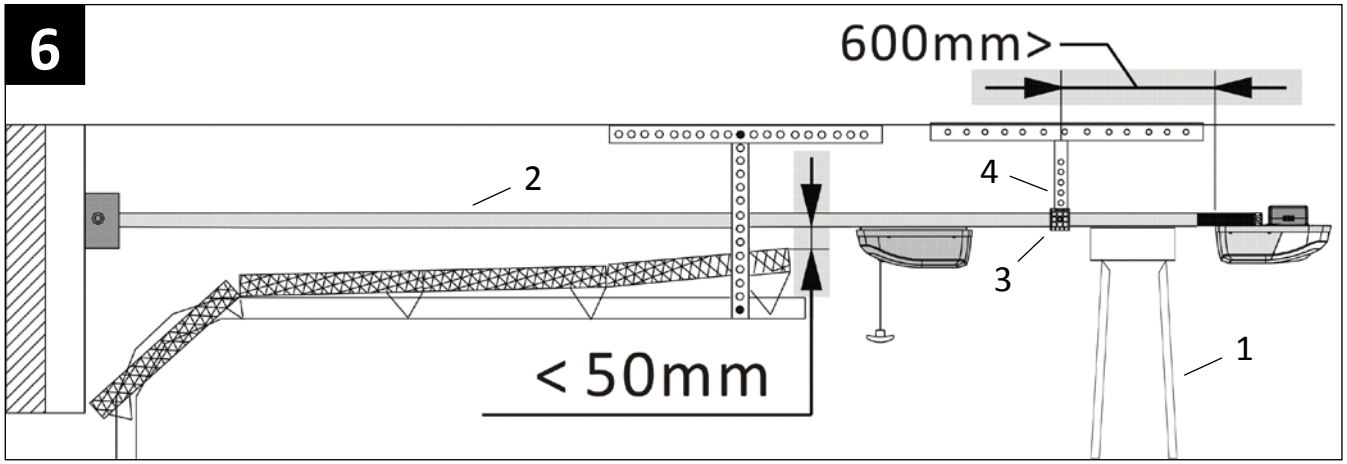

1
1
1
A
B
C

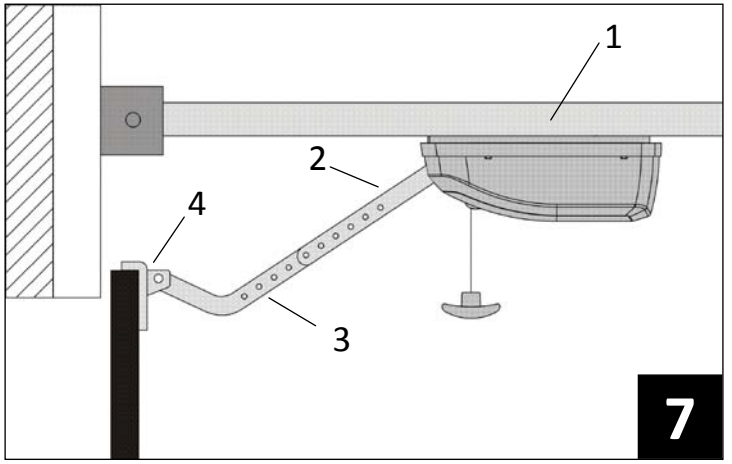

4
3
2
1

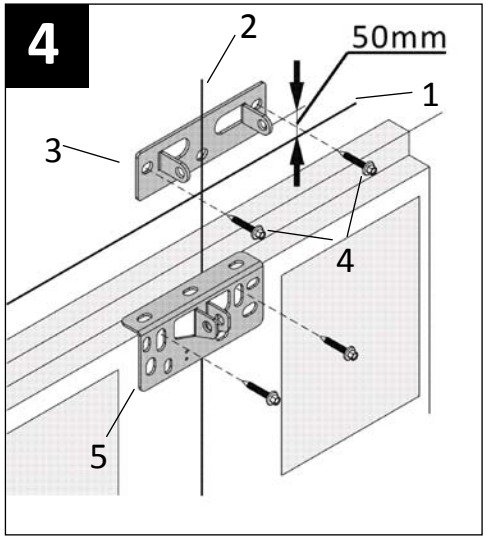

3
2
1

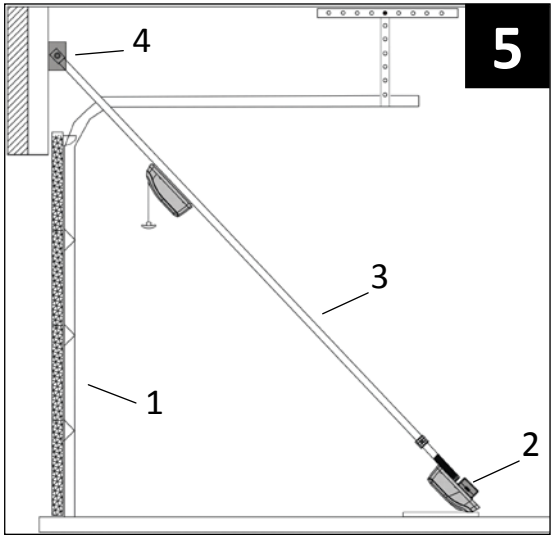

9
2
4
5
6
1
3
8
7

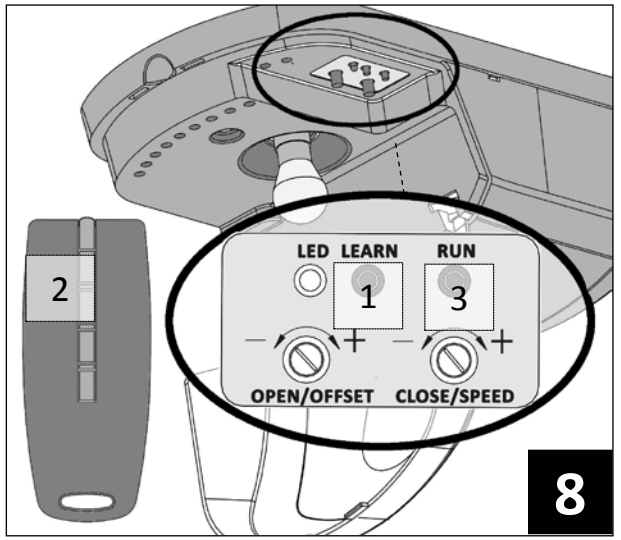

5
3
7
4
1
2
6
5

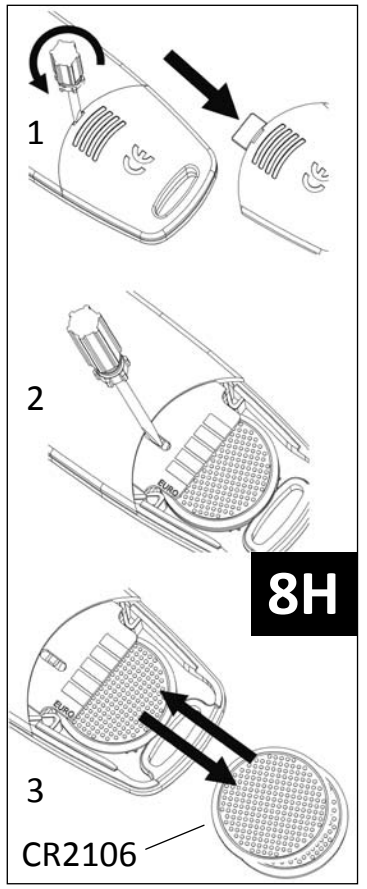

6
600mm>
2
4
3
1
< 50mm

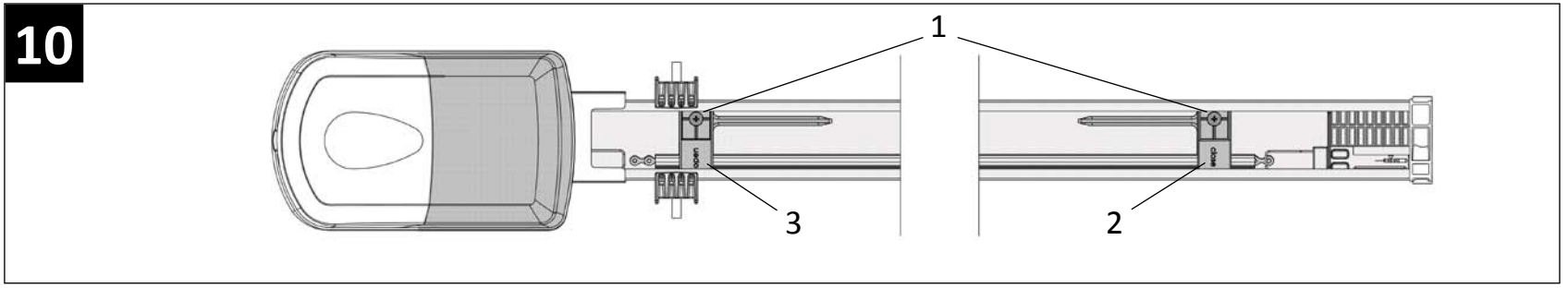

1
2
4
3
7

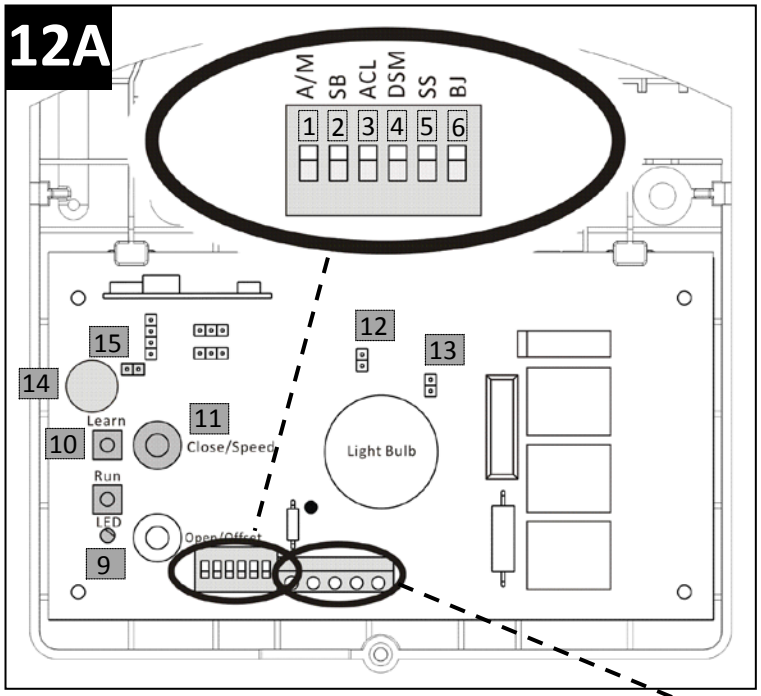

4
2
50mm
1
3
4
5

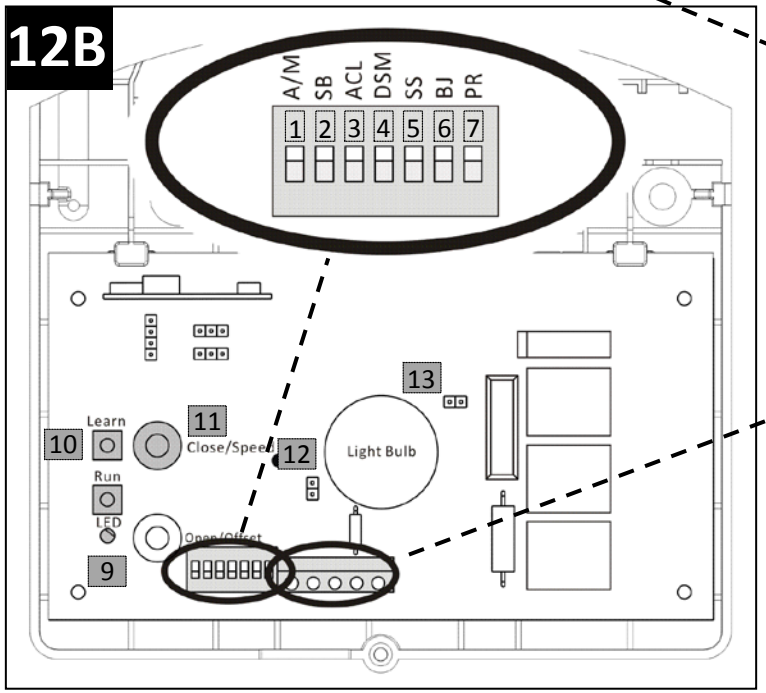

5
4
3
1
2

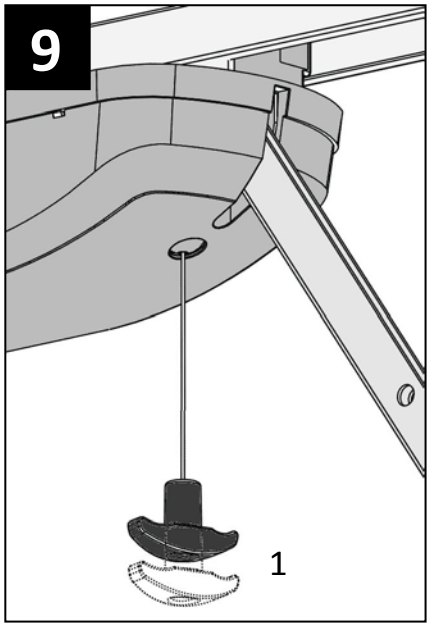

LED
LEARN
RUN
1
3
2
OPEN/OFFSET
CLOSE/SPEED
8

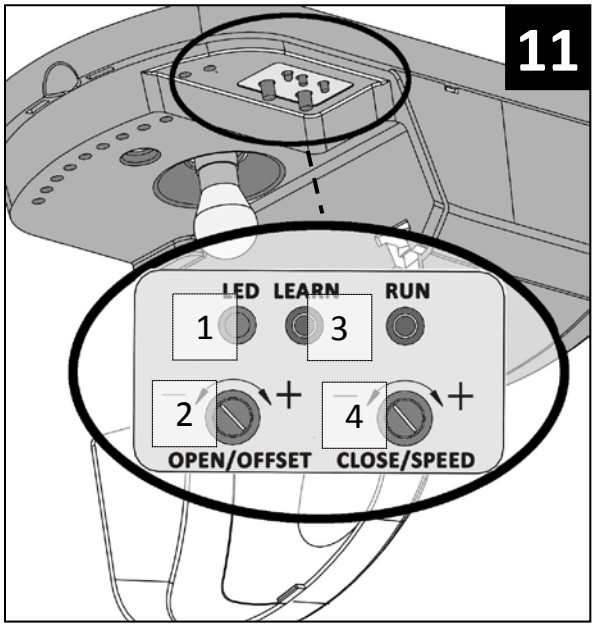

1
2
8H
3
CR2106

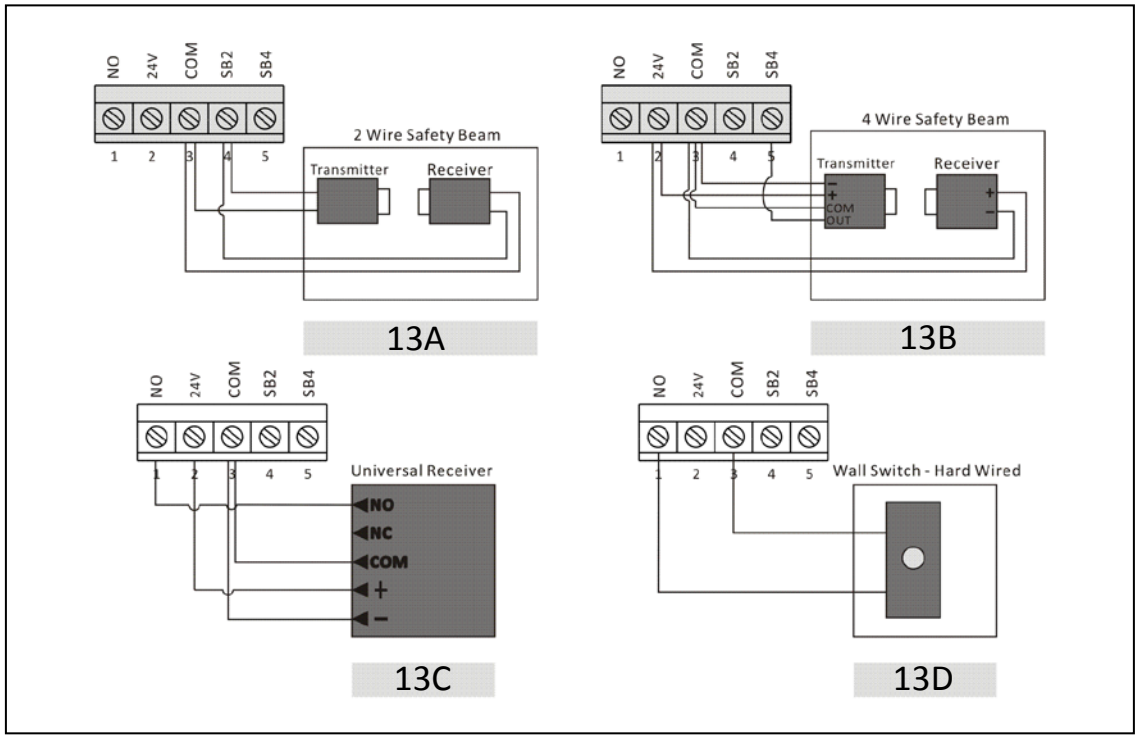

10
1
3
2


12A
A/M SB ACL DSM SS BJ
1 2 3 4 5 6
15
14
12
13
Learn
10
11
Close/Speed
Light Bulb
Run
LED
Open/Offset
9

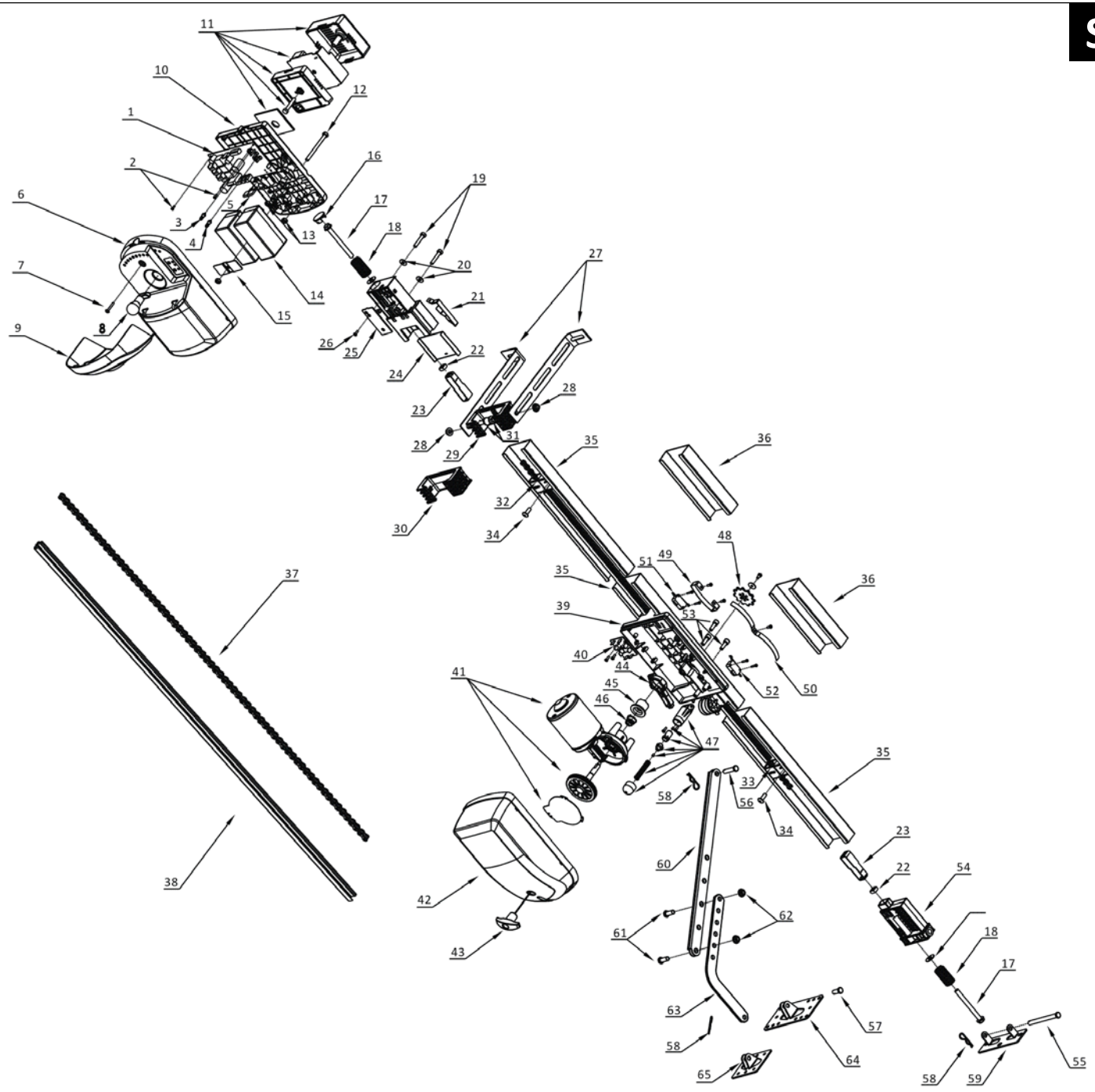

12B
A/M SB ACL DSM SS BJ PR
1 2 3 4 5 6 7
13
Learn
10
11
Close/Speed
12
Light Bulb
Run
LED
Open/Offset
9


9
1


11
LED LEARN RUN
1
3
2
4
OPEN/OFFSET
CLOSE/SPEED

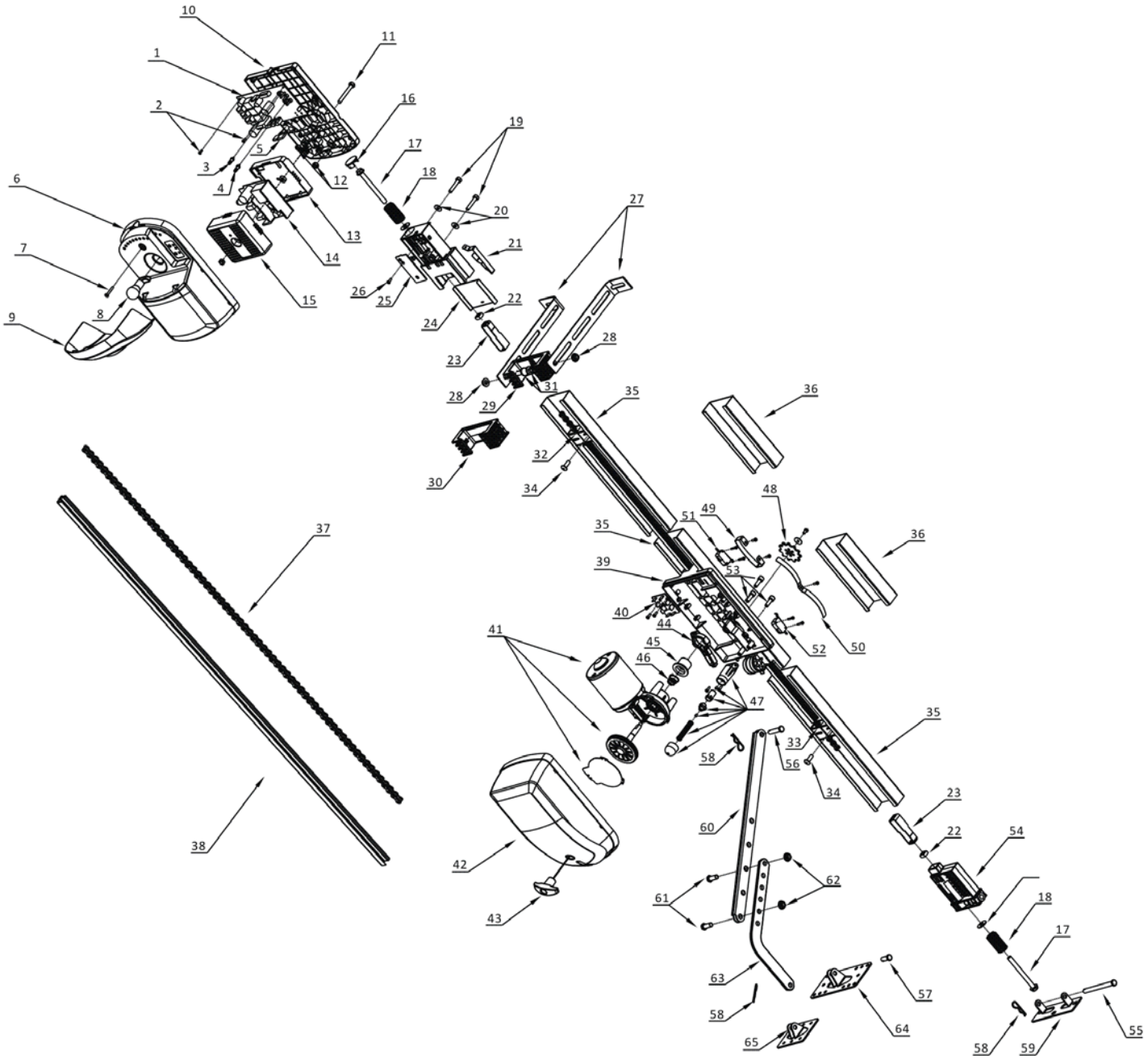

NO 24V COM SB2 SB4
1 2 3 4 5
2 Wire Safety Beam
Transmitter
Receiver
13A
4 Wire Safety Beam
COM
OUT
13B
Universal Receiver
NO
NC
COM
+
–
13C
Wall Switch - Hard Wired
13D

SMPS/Battery Powered



Item	Qty.	Description
1	1	Logic Board
2	2	Screw 2.9x8C
3	1	Sensitivity Screw Pa6 - Green
4	1	Sensitivity Screw Pa6 - Red
5	1	Receiver 433.92MHz
6	1	Control Box Cover
7	1	Screw ST3.5x25C
8	1	Light Bulb 24V 21W
9	1	Light Cover
10	1	Control Box Base
11	1	Power Supply Assembly
12	1	Screw M6x75
13	2	Nut M6 Nylock
14	2	Battery 12V 1.5Ah
15	1	Strapping Plate
16	1	Terminal Sleeve / Bracket Cup
17	2	Screw M8x80
18	2	Spring
19	2	Screw M6x32
20	2	Washer Flat Ø6x15
21	1	Spring Contact
22	2	Nut M8 Rectangular
23	2	Square Bracket Chain Tensioner
24	1	Terminal Sleeve Insert
25	1	Terminal Tensioning Bracket Cover
26	1	Screw 3.5x10
27	2	Punched Angle Strapping - "L" Type
28	2	Nut M8
29	1	Hanging Bracket - For 1.2mm Rail
30	1	Hanging Bracket - For 2.0mm Rail
31	2	Gutter Bolt M6 x 18
32	1	Travel Limit (135mm) - Open
33	1	Travel Limit (135mm) - Close
34	2	Screw ST1/4" x 3/4"
35(A)	3	Rail 1.2mmx1056mm
35(B)	3	Rail 2.0mmx1056mm
36(A)	2	Connecting Rail 1.2mm x 500mm
36(B)	2	Connecting Rail 2.0mm x 500mm
37	1	Chain Bicycle
38	3	Chain Insulation PVC Strip
39	1	Carriage Base
40	1	Power Board
41	1	DC Motor
42	1	Carriage Cover
43	1	Knob - Release Cord
44	1	Clutch Lever
45	1	Clutch
46	1	Spring - Motor Shaft
47	1	Automatic Clutch Assembly
48	1	Sprocket Chain 11 tooth
49	1	Spring Contact - "C" Type
50	1	Spring Contact - "M" Type
51	1	Limit Micro Switch & DC Wire Assy - Close
52	1	Limit Micro Switch & DC Wire Assy - Open
53	3	Screw M6x18
54	1	Terminal Tensioning Bracket - Wall Side
55	1	Pin Clevice Ø8 x 90
56	1	Pin Clevice Ø8 x 35
57	1	Pin Clevice Ø8 x 20
58	3	Hinch Pin Ø2
59	1	Wall Bracket
60	1	Arm Straight
61	2	Screw M8 x20
62	2	Nut M8 Wizzlock
63	1	Arm Connecting Bent
64	1	Door Bracket 80mm(L) X 65mm(W)
65	1	Door Bracket 140mm(L) X 70mm(W)

SMPS Powered



Item	Qty.	Description
1	1	Logic Board
2	2	Screw 2.9x8C
3	1	Sensitivity Screw Pa6 - Green
4	1	Sensitivity Screw Pa6 - Red
5	1	Receiver 433.92MHz
6	1	Control Box Cover
7	1	Screw ST3.5x25C
8	1	Light Bulb 24V 21W
9	1	Light Cover
10	1	Control Box Base
11	1	Screw M6x55
12	2	Nut M6 Nylock
13	1	Power Supply Down Cover
14	1	Power Supply PCB
15	1	Power Supply Top Cover
16	1	Terminal Sleeve / Bracket Cup
17	2	Screw M8x80
18	2	Spring
19	2	Screw M6x32
20	2	Washer Flat Ø6x15
21	1	Spring Contact
22	2	Nut M8 Rectangular
23	2	Square Bracket Chain Tensioner
24	1	Terminal Sleeve Insert
25	1	Terminal Tensioning Bracket Cover
26	1	Screw 3.5x10
27	2	Punched Angle Strapping - "L" Type
28	2	Nut M8
29	1	Hanging Bracket - For 1.2mm Rail
30	1	Hanging Bracket - For 2.0mm Rail
31	2	Gutter Bolt M6 x 18
32	1	Travel Limit (135mm) - Open
33	1	Travel Limit (135mm) - Close
34	2	Screw ST1/4" x 3/4"
35(A)	3	Rail 1.2mmx1056mm
35(B)	3	Rail 2.0mmx1056mm
36(A)	2	Connecting Rail 1.2mm x 500mm
36(B)	2	Connecting Rail 2.0mm x 500mm
37	1	Chain Bicycle
38	3	Chain Insulation PVC Strip
39	1	Carriage Base
40	1	Power Board
41	1	DC Motor
42	1	Carriage Cover
43	1	Knob - Release Cord
44	1	Clutch Lever
45	1	Clutch
46	1	Spring - Motor Shaft
47	1	Automatic Clutch Assembly
48	1	Sprocket Chain 11 tooth
49	1	Spring Contact - "C" Type
50	1	Spring Contact - "M" Type
51	1	Limit Micro Switch & DC Wire Assy - Close
52	1	Limit Micro Switch & DC Wire Assy - Open
53	3	Screw M6x18
54	1	Terminal Tensioning Bracket - Wall Side
55	1	Pin Clevice Ø8 x 90
56	1	Pin Clevice Ø8 x 35
57	1	Pin Clevice Ø8 x 20
58	3	Hinch Pin Ø2
59	1	Wall Bracket
60	1	Arm Straight
61	2	Screw M8 x20
62	2	Nut M8 Wizzlock
63	1	Arm Connecting Bent
64	1	Door Bracket 80mm(L) X 65mm(W)
65	1	Door Bracket 140mm(L) X 70mm(W)

重要安全建议

不遵循以下安全建议可能会导致严重的人身伤害、死亡或财产损失。

- 开门机必须严格按照此手册说明进行安装和调试。
- 车库门必须平衡良好，运转正常。在其运行的全部过程中不可有卡住或束缚的现象发生。平衡不当和运转故障的车库门可能引起严重的人身伤害，死亡或财产损失。

  符合以下情况时，车库门被视为平衡良好：

  a. 手动开门和关门时使用的力量相同，

  b. 手动开门和关门时使用的力量不超过 150N (15kg),

  c. 在完全开门和完全关门位置之间的任何一点松开离合，门都不会下落超过 100mm，

  d. 不会错误地摩擦或者接触到任何支撑或固定结构。

  如有需要，应请资质合格的人员进行检测和维修。
- 移除或解开当前所有锁具和绳索。
- 尽可能将开门机安装在离地面至少 2 米或以上的位置。调整离合拉绳，使其悬挂于离地面大约 1.8 米的高度。
- 墙上支架承载开门机在开门和关门时所有的支撑力，因此必须将其安全地固定在车库墙壁或天花板坚固的结构性部分上。安装方法和安装点结构的合理性完全由安装者判断决定。
- 离合说明标签必须始终悬挂在离合拉绳上。
- 墙壁开关应安装在能完全看见车库门的位置，并且离地面至少 1.5 米高，以避开儿童所能触及的范围，且远离车库门的任何移动部件。
- 警示标签必须牢固地贴在紧靠墙壁开关的显著位置。
- 安装和调试之后，当车库门与放置在其下方地面上的 35mm 高的实物发生接触时，必须会停止并反向运行。
- 每月应该定期检查安全逆转系统是否运转正常。
- 在车库门没有完全处于视线范围内，有人或车可能妨碍其运行的情况下禁止使用开门机。
- 禁止儿童操作开门机。
- 当有人在车库门下方或在其运行路线附近时禁止操作开门机。儿童在车库门附近以及在开门机使用的过程中必须始终受到监护。
- 松开开门机离合时必须始终保持车库门完全处于视线范围内。
- 只要开门机不处于完全关闭状态，在松开开门机离合之前都必须确保没有儿童、成人或实物（包括机动车辆）处于车库门下方或在其运行路线附近，因为车库门在离合松开时可能会急剧下落。
- 禁止试图用拉扯离合拉绳的方式打开或关闭车库门。
- 在事先没有将电线从电源拔出的情况下，禁止在电源开启状态下进行维修或移除开门机上的盖子。
- 移除防护外壳只能由技术资质合格的人员进行操作。
- 出于安全原因，在驾车出入车库时一定要始终确保车库门完全打开并稳定静止。
- 出于安全原因，在车库门离开视线范围之前一定要始终确保其完全关闭且稳定静止。
- 始终保持宽松衣物远离开门机和移动的车库门，切勿用手触碰。
- 安全逆转系统必需在先遇到人、物品等形式的阻碍并对其施加力量时才起作用。因此可能会导致物品、人或车库门遭受损伤或伤害。
- 安全逆转系统设计只对**静止物体**起作用。如果车库门在开或关的运行过程中接触到移动的物体，可能会发生严重的人身伤害、死亡或财产损失。
- 安全逆转系统的调试必须由技术资质合格的人员进行操作。
- 为了更加安全，我们强烈建议同时使用光电开关。 尽管开门机包含了压敏性的安全逆转系统，安装光电开关将极大地提高自动车库门的安全性，让您更加安心。在某些国家，安装光电开关是法定的。在有此项规定的国家，光电开关的安装由业主/安装者全权负责。

目录

	页数	图表
安全建议	14	
组装说明	15	1 - 3
安装说明	15	4 - 7
设置说明	16	8 - 11
学习遥控器	16	8A - H
更换电池	16	8H
离合	16	9
门行程调试	17	10
安全逆转	17	11
功能的选择	18	12
自动关闭	18	12
回跳	18	12A & B
门况监控	18	12A & B
照明灯	18	12A & B
LED 指示	18	12A & B
光电开关	18	12A & B
软停止	18	12A & B
速度控制	18	12A & B
终端连接	19	12A & B
度假模式	19	12A & B
蓄电池开门机	19	12 B
维护	19	

以下各项的编号与说明书后部分示意图编号相对应

组装说明

1. 鉴别门的类型和组装方法

从图表中选择最适合门及车库类型的安装方法。请注意**控制盒**(1) 可用以下方式安装：(A) 安装在导轨端部，或，(B) 独立安装在紧靠导轨的天花板上，或，(C) 安装在车库的墙壁上，(需要附加延长线)。
注意: B 和 C 选项不适用于蓄电池开门机。

2A. 连接端部预紧块

安装方法 1A
使用配备的螺丝(3)将端部预紧块(1)牢固地连接到控制盒座(2)上。

安装方法 1B 和 1C
将端部预紧块与控制盒分开。

2B. 连接端部预紧块与电源(仅适用于蓄电池开门机)

安装方法 1A
使用配备的螺丝(3)将端部预紧块(1)牢固地连接到控制盒座(2)，用连接线将电源(4)与控制盒(2)连接，并将其附着到控制盒顶部。

安装方法 1B 和 1C
蓄电池开门机不适合用方法 1B 或 1C 安装。

3A. 组装单条导轨开门机

将驱动组件(2)滑入导轨(1),同时将链条(3)卡入驱动组件。将限位开关(4)滑入导轨，并将导轨吊挂件(5)安装到导轨上。将控制盒(6)放置到导轨的末端，并将链条“旋转锁紧”(7)。使用 12mm 的套筒扳手(8)拧紧链条张紧螺栓(9), 使托栓头的底部与指示箭头对齐。至此开门机已组装完毕并可以进行安装。

3B. 组装 3 条导轨开门机

将每个导轨连接件(1)对齐并插入导轨(2)，将两者推紧直到完全连接形成一条连续的导轨组件。将导轨吊挂件(3)滑动到导轨组件上。将控制盒(4)滑动到导轨上然后“旋转锁紧”(5)导轨两端的链条。使用 12mm 的套筒扳手(6)拧紧链条张紧螺栓(7), 使螺栓头的底部与指示箭头对齐。至此开门机已组装完毕并可以进行安装。

安装说明

在开始安装之前请确保您已经仔细阅读并理解本手册第一页所述的安全建议。特别要确保车库门按照具体要求正常运转。在安装开门机之前应对车库门进行必要的调试。

墙上支架承载开门机在开门和关门时所有的支撑力，因此必须将其安全地固定在车库坚固的结构性部分上。安装方法和安装点结构的合理性完全由安装者判断决定。如果将导轨安装在高于车库门弧度最高点 50mm 的位置，可能会导致导轨过度弯曲。请始终确保导轨底部处于车库门顶部门板顶端的最高弧度点之上的 50mm 以内。

4. 安装墙上支架和牵引支架

墙上支架 - 测定车库门弧度的最高点，在车库门之上的墙面上以水平线标记(1)。测定车库门的中心线，并在车库门之上的墙面上以垂直线标记(2)。将墙上支架(3) 如图所示放置，确保其底端不高于水平线标记(1)以上 50mm。现在标记最外侧两个螺丝孔的位置(4)。用至少 8mm x 50mm 的螺丝将墙上支架牢固地安装在墙上。
牵引支架 - 在门的中心线处用 4 个自钻螺丝或 2 个 6mm 螺丝加螺母将牵引支架(5)固定在车库门的结构性部分上，且尽可能地靠近顶端。

5. 连接导轨与墙上支架

重要提示：为了避免划痕和对塑胶外壳的潜在损伤，请将开门机放置于纸板上。
使车库门(1)处于完全关闭的状态 - 将组装好的开门机放置于地面且与车库门中心线一致，以使控制盒(2)处于离车库门最远的位置。然后将导轨(3)抬起到墙上支架(4)处，将导轨安置在墙上支架的两耳之间。并使导轨和墙上支架的安装孔对齐，将长的 U 型夹完全插入并用弹簧卡固定。

6. 将开门机安装到天花板上

重要提示：不要企图用控制盒提起开门机，否则可能造成损坏。必须通过导轨提起开门机。

将开门机从地面抬起并放置于一个支撑物(1)上。支撑物应具有足够的高度以使导轨(2)与地面平行。将导轨吊挂件(3) 沿导轨滑入（最多离控制盒 600mm），并将其与车库的某一结构性部分对齐。将两个金属吊架(4)牢固地安装到此结构性部分上，然后将金属吊架与导轨吊挂件(3)连接。

7 连接连杆

关闭车库门并卸下移动部件(1)的上盖。将直连杆(2) 从盖子的槽中插入。用 U 型夹销和弹簧卡将直连杆连接到移动部件(1)上。用 U 型夹销和弹簧卡将弯连杆(3)连接到牵引支架(4).上。将两个连杆相距彼此最远的两组孔对齐，用 2 组 8mm 螺丝与螺母将两个连杆牢固连接。将开门机插入到正确接地的电源上，并确保没有多余的电源线垂落在控制盒以下。

设置说明

8. 遥控器 – 学习与删除

A. 群学习
功能 – 遥控器的全部 4 个按键学习如下功能：
1. 运行。2. 自动关门忽略。3.照明灯 4.休眠
学习 – 按红色学习按钮 (1) - LED 闪一次。
按遥控器 (2) 任意键两次 – 学习完成。

B. 运行功能 A 学习
功能 – 只学习运行键。
学习 – 按红色学习按钮 (1) 两下-LED 闪两次。
按下您希望使用的遥控器 (2) 按键两次 – 学习完成。

C. 运行功能 B 学习
功能 – 用此键开门后，门将不会自动关闭。
学习 –按红色学习按钮 (1) 三下- LED 闪三次。
按下您希望使用的遥控器 (2) 按键两次 – 学习完成。

D. 照明灯开、关功能学习
功能 – 开、关照明灯。
学习 –按红色**学习按钮** (1) 四下- LED 闪四次。
按下您希望使用的**遥控器** (2) 按键两次 – 学习完成。

E. 度假模式功能学习
功能 – 禁用开门机的大部分功能。
学习 –按红色**学习按钮** (1) 五下- LED 闪五次。
按下您希望使用的**遥控器** (2) 按键两次 – 学习完成。

F. 无线墙壁开关
无线墙壁开关的写入程序与遥控器相同。
从以上 A-E 所列方法中选择对码方式并做相应的学习。

G. 删除遥控器
短按红色**学习按钮** (1) - LED 闪一次。
长按黑色**运行按钮**(3) – LED 快速闪烁。
待 LED 停止闪烁时，遥控器被全部删除。

H. 更换遥控器电池
按照图 8H 所示程序进行.
使用规格相同的电池进行替换。

9. 离合

重要提示:始终在车库门完全关闭时松开开门机的离合。如果在门处于非完全关闭的状态下松开离合，请确保门的运行路线正下方或附近没有人或物品。

离
拉下**离合手柄**(1)，“感觉”到咔哒声后松开手柄。

合
再次拉下**离合手柄**(1)，“感觉”到咔哒声后松开手柄。

10. 门行程调试

关门方向
首先将限位开关锁定螺丝(1)松开半圈，然后将限位开关(2)向靠近车库前门方向移动以增加门的行程；再向远离车库前门方向移动以减少门的行程。调试正确后重新上紧限位开关锁定螺丝。

开门方向
首先将限位开关锁定螺丝(1)松开半圈，然后将限位开关(3)向靠近控制盒的方向移动以增加门的行程；再向远离控制盒的方向移动以减少门的行程。调试正确后重新上紧限位开关锁定螺丝。

11. 安全逆转

在关门的过程中安全逆转确保车库门在遇到障碍物时会停止并逆转（安全逆转），以此保障人和财产的安全。在开门的过程中车库门遇到障碍物时将停止（安全停止）。安全逆转的敏感度是可以调节的。高敏感度能提供最大的安全保障，但要求扭簧和门本身的安装和平衡良好，以避免车库门无故停止或逆转。低敏感度能确保即使安装和平衡不好的门也能运转，不会因为过于敏感而无故停止和逆转，如何调节安全逆转的敏感度请参见以下章节。

A 模式

敏感度最高的安全逆转系统，最适合用于平衡良好的新门。

功能 –在车库门的使用期限内对其磨损和老化进行自动补偿。在关门的运行过程中，开门机遇到障碍物就会即刻停止并开始安全逆转。

启用 – 从插座处关闭电源，打开控制盒上盖。将拨码开关 1 选择到“开”的位置。（参见 12）

学习 –为了按照要求学习运行时间和力量值，开门机需要完成 6 个不受中断的开关周期（由遥控器或运行按钮启动）。在学习过程中 LED(1)将快速闪烁。学习完成后 LED(1)将慢速闪烁。

调试 —旋转绿色的“调节”旋钮(2)，顺时针方向(MAX)可增加安全逆转或安全停止所需的力量值，逆时针反方向(MIN)可减少安全逆转或安全停止所需的力量值。

测试开门方向 – 在开门过程中，对车库门施加一定稳固向下的力量。如果安全停止力量值正确，开门机感应到阻力就会立即停止。如果开门机停止所需的力量值过小或过大，将绿色的“调节”旋钮(2)向适当的方向旋转 5 度——顺时针方向(MAX)增加力量值，逆时针方向(MIN)减小力量值——然后重新测试。

测试关门方向 —确保车库门稳定静止地停在地面上。打开门，并在门下方的地面上放置一块 35mm 厚的木块。现在关门——如果力量值正确，一旦触碰到木块，开门机将立即停止并反向运行。如果使开门机停止所需的力量值过小或过大，将绿色的“调节”旋钮(2)向适当的方向旋转 5 度——顺时针方向(MAX)增加力量值，逆时针方向(MIN)减小力量值——然后重新测试。

力量学习—可按住红色学习按钮(3)两秒—LED 指示灯将开始快速闪烁。开门机需经过 6 次完全不受中断的开关门循环以完成学习过程。学习完成后 LED 指示灯将慢速闪烁

自动重新学习 —以下 3 种情况的任意一种发生时，重新学习力量值参数将被立即自动启用：
(a)运行时间偏差过大，(b)连续 3 次发生自动逆转，(c)连续 3 次发生自动停止。

M 模式

敏感度较低的安全逆转系统最合适用于大型、重型及旧的门。

功能 –适用于传统的一次性力量调节，更适用于严重磨损的门。

启用 –从插座处关闭电源，打开控制盒上盖。将拨码开关 1 选择到“关”的位置。（参见 12）

调试 – 按住红色学习按钮(3)两秒钟 – LED 指示灯将开始间断性的双闪烁。

安全障碍力量调节可在 LED 指示灯处于“间断性双闪烁”的状态下进行。转动绿色“开”旋钮(2)以调节开门方向行程的力量，转到红色“关”旋钮(4)以调节关门方向行程的力量——顺时针方向增加力量，逆时针方向减小力量。

若要关闭退出力量调节模式，短按“学习”按钮或者此模式将会在 10 分钟后自动关闭退出。

测试 –依照 **A** 模式所述测试方法进行。

功能的选择

以下章节为用户提供了多种功能的选择。要使用控制这些功能的元器件，必须将控制盒的上盖打开，从插座处关闭电源，打开灯盖并卸下单独的固定螺丝，将上盖从底座上拆下。

12A 自动关闭

重要提示–自动关闭功能只有在安装和启用光电开关的情况下才能工作。

功能 –.自动关闭功能将会在以下情况发生时自动将车库门关闭：(A)车或人已经通过车库门 5 秒以后，30 秒后车或人还没有从门下经过，以此确保不会发生忘记关门的情况。

启用 – 将拨码开关 2 & 3 选择到“开”的位置。

12A 回跳

功能 – 关门时，回跳功能轻微反转车库门，以确保能毫不费力地松开离合。

启用 – 将拨码开关 6 选择到“开”的位置。

12A 门况监控

功能 – 持续监测车库门扭簧的平衡情况，在车库门失衡的情况下警告用户。失衡过度时，照明灯会每 15 秒连续闪烁三次。

此时车库门应当由资质合格的技术人员进行维护。

启用 – 将拨码开关 4 选择到“开”的位置。

12A 照明灯

功能 - 每次使用开门机时自动开启，3 分钟后自动关掉。

更换灯泡 –始终用相同规格的 24V 21W 的白炽灯更换。

12A LED 指示灯 (绿)

功能 – LED (9) 提供开门机的状态信息。
稳定发光 – 达到关门限制位置。
慢闪烁 – 达到开门限制位置。

中速闪烁 – 正在学习或删除遥控器。
快速闪烁 – 正在学习新的力量值参数。
间断性闪烁 – 休眠模式。

12A 光电开关

功能 – 光电开关持续监控可能会经过车库门运行路线的人或物体。在车库门关闭过程中，如果光电开关被暂时或持续地阻断，开门机将开始安全逆转。开门机支持原装的 2 线连接或后续市场上的 4 线连接的光电开关。

连接 – 参照本手册后面的连接图纸进行正确安装。

启用 – 将拨码开关 2 选择到“开”的位置。

12A 软停止

功能 -在车库门接近某一限制点时智能减速，以此确保关门更安静，并延长开门机和车库门的使用寿命。

启用 – 将拨码开关 5 选择到“开”的位置。
重要提示：此功能在 M 模式下不适用。

12A 速度控制

功能 - 允许用户将开门机调节到最适合门型的运行速度。

调节 – 移动驱动部件，使其处于两个限位开关的中间。长按学习按钮(10)直到 LED(9)开始快速闪烁。在开门机运行的同时旋转(红)“速度”调节旋钮(11)，顺时针方向以增加速度，逆时针方向减小速度。只有驱动部件在限位开关之间运行时才能进行速度调节。当驱动部件触及任何一边的限位开关时，速度调节将自动停止并退出。

12A 终端连接– 配件安装

支持以下配件的连接：
a. 原装 2 线光电开关 (13A)
b. 第三方常开 24V 直流 4 线光电开关(13B)
c. 24V 直流通用接收器 (13C)
d. 常开触摸式墙壁开关(13D)
e. 报警灯 (13).
f. 附加照明灯，最大 24W(13)
g. 240V 继电器驱动 照明灯(12)

12A 度假模式

功能 – 在用户长期离开的情况下停用开门机的大部分功能，以提供最大的安全保障。

启用 – 短按群学习过的遥控器的按键 4。
禁用 – 短按群学习过的遥控器的按键 1,2 或 3。

蓄电池开门机

12B LED 指示灯 - 红/绿 (9)

功能 – 提供充电器状况的视觉指示。
绿灯亮 – 系统正常。
红灯亮 – 充电器未充电。
灯灭 – 关闭模式。

12B 报警蜂鸣器 (14)

功能 – 提供充电器状况的声音指示。
每 30 秒响一声“吡” – 电池充电器未充电。
每 30 秒响两声“吡” – 电池充电器未充电 – 剩余电量低 – 开门机准备进入关闭模式。

禁用 – 移除蜂鸣器旁边的跳线连接(15)。

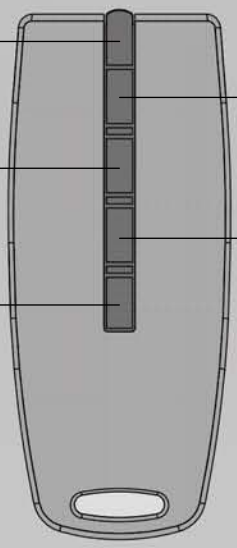
12B 关闭模式

功能 -.在长时间停电的情况下，开门机将会自动关闭（当电池电压降至 22V 时）以保持剩余电量- LED 指示灯 (9) 将熄灭，开门机停止工作。关闭模式只会在电池未充电状态下发生。当电池充电器被重新激活后，按下遥控器按键 1，开门机将自动退出关闭模式。

保养

导轨内侧的垂直面应该每 12 个月用润滑油或润滑油喷剂喷洒一次。

警告：在导轨内侧涂抹油脂会引起开门机运行故障。



Run A	Refer Sec.8B	Vacation Mode	Refer Sec.8E
运行 A	参考第 8B 项	度假模式	参考第 8E 项
Run B	Refer Sec.8C	Battery Replacement	Refer Sec.8H
运行 B	参考第 8C 项	遥控器电池更换	参考第 8H 项
Courtesy Light	Refer Sec.8D	Transmitter Learning and Deleting	Refer Sec.8 A-G
照明灯开，关	参考第 8D 项	遥控器功能学习与删除	参考第 8 A-G 项

