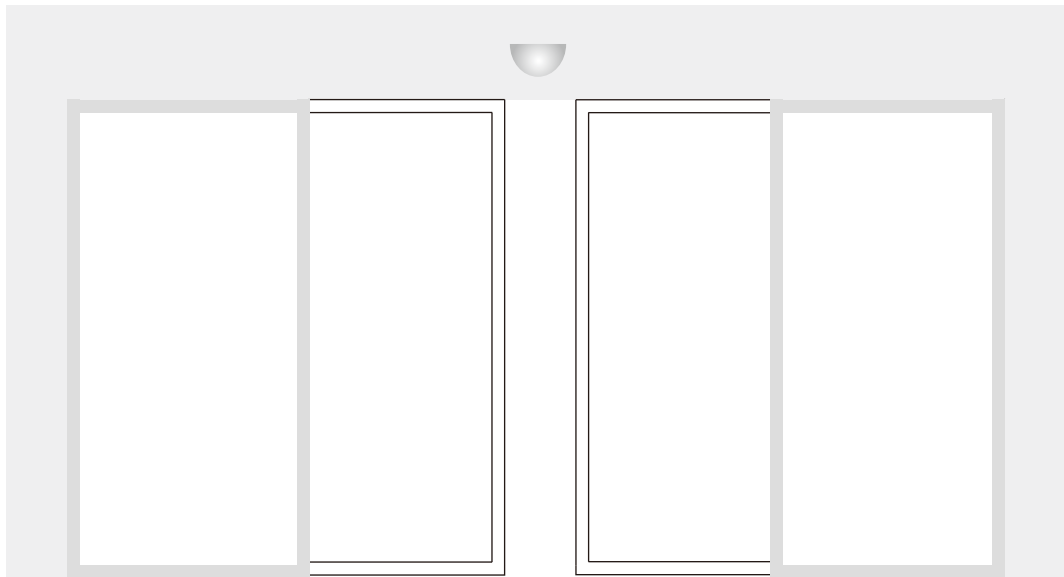


InstallationManual

RG-AT70D

- Installation of automatic door should be entrusted to the appointed distributor or professional team as installation by non-professionals may result in injury. Installation must be performed by professionals only in accordance with relevant decrees and codes for electrical installation.
- This manual must be kept well for product maintenance.



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Safety Precautions

- The user must abide by contents and categories are presented and described by the following graphic expressions.



Warning

Misoperation may result in injury even death to the operator.



Caution

Misoperation may result in injury or physical loss to the operator.



This stands for prohibited contents.

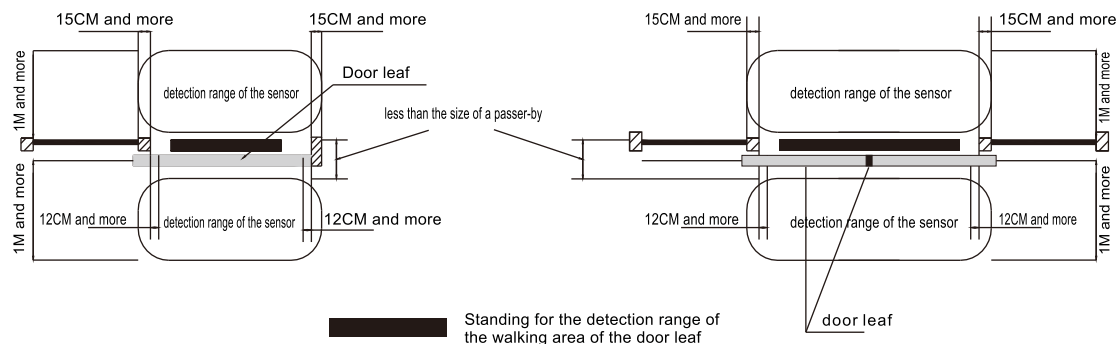


This stands for compulsory contents.



Warning

- Installation and adjustment must be carried out according to the Installation Manual. Carelessness in installation and adjustment may result in such accidents as fire, electric shocks or fall off.
- During the installation don't allow the pedestrians to pass through the automatic door or approach the work site. Because any tools or parts fall off during the installation may result in injury to the pedestrians.
- Don't remodel the parts, otherwise fire, electric shocks or fall may occur.
- Don't use the power beyond the stipulated voltage or frequency, otherwise fire or electric shocks may occur.
- The sensor should be set and adjusted to make sure that the opening area of the door is fully in the range of sensor detection without any blind area. If the detection range is too small or blind area is left, the passer-by may be collided or squeezed by the door, causing injury.
- Do fix up auxiliary safety beam sensor to ensure the detecting range for the walking area of the door leaf, otherwise the passers-by may be collided or squeezed by the door leaf, causing injury.



- If the above detection range is not guaranteed, to ensure the passer-by pass through the detection range, please restrict the passage by such as putting plants grown in a flowerpot with explanations given to the owners. Carelessness may make passers-by to be collided or squeezed by the door, result in injury.

Caution

- ⊘ Don't use the door in a place subject to dampness, vibration or corrosive gas, otherwise it may cause such accidents as fire, electric shocks or fall.
- ⊘ Make sure that a space of more than 30 mm be available after the door is opened, otherwise user's fingers may be squeezed by the door leaf and upright column, causing injury.
- ⊘ Don't cut off power when the door is in operation, otherwise it may cause the passers-by be injured.
- ❗ Please stick the adhesive sticker on the door leaf firmly. If not, it may cause injury to the passer-by who didn't pay attention to the door leaf.
- ⊘ Don't connect an electric device with a capacity of over DC24V 300mA to the plug of the controller, otherwise it may cause fire.

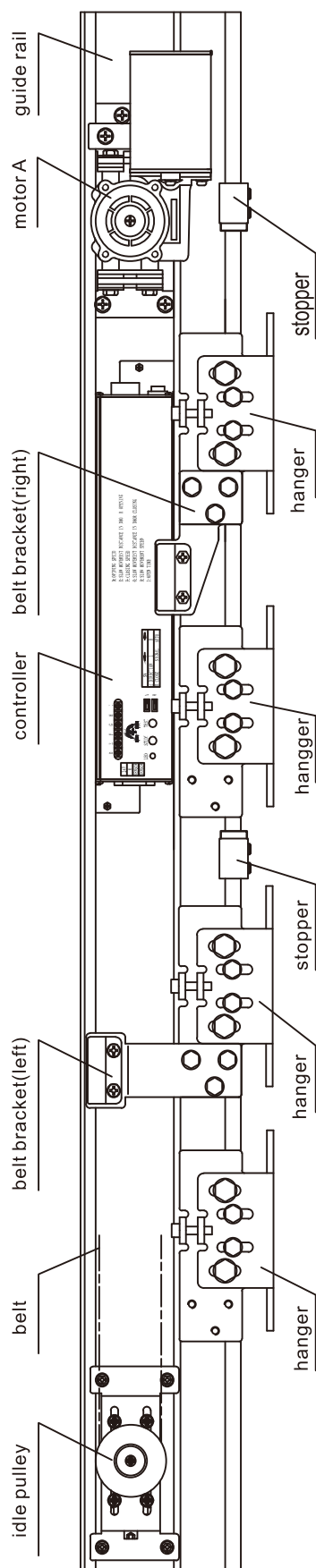
Other precautions

- Don't use a door leaf that exceeds the specified weight, otherwise it will cause failure.
- If you chose the backup battery,
 - * Please use the battery after charging for 24 hours.
 - * The service life of battery lasts for 2-3 years at an ambient temperature of 0-40 ℃. The temperature beyond of above range will shorten the service life of battery.
 - * If after charging 24 hours the battery still doesn't work when supply power is off, it means the service life of battery has expired. Replace it immediately.
 - * Check the battery each half a year.
- If you chose the electromagnetic lock
 - Don't use it in an environment beyond an ambient temperature of 0-40 ℃, otherwise it will cause malfunction.
- The graphic drawings and specifications in this manual are for reference only. You should rely upon real objects. Products are subject to change without notice.

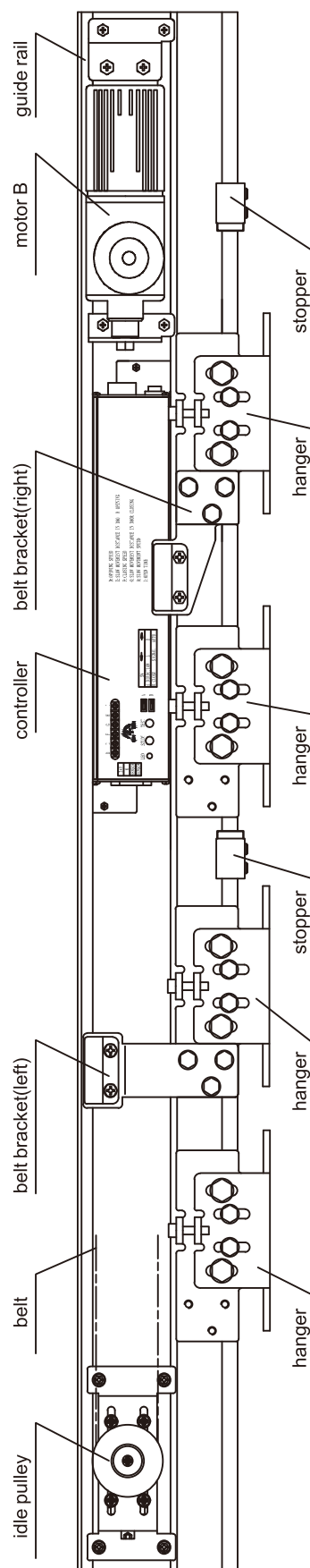
Positions of all components in the guide rail

● Name of components

Model A



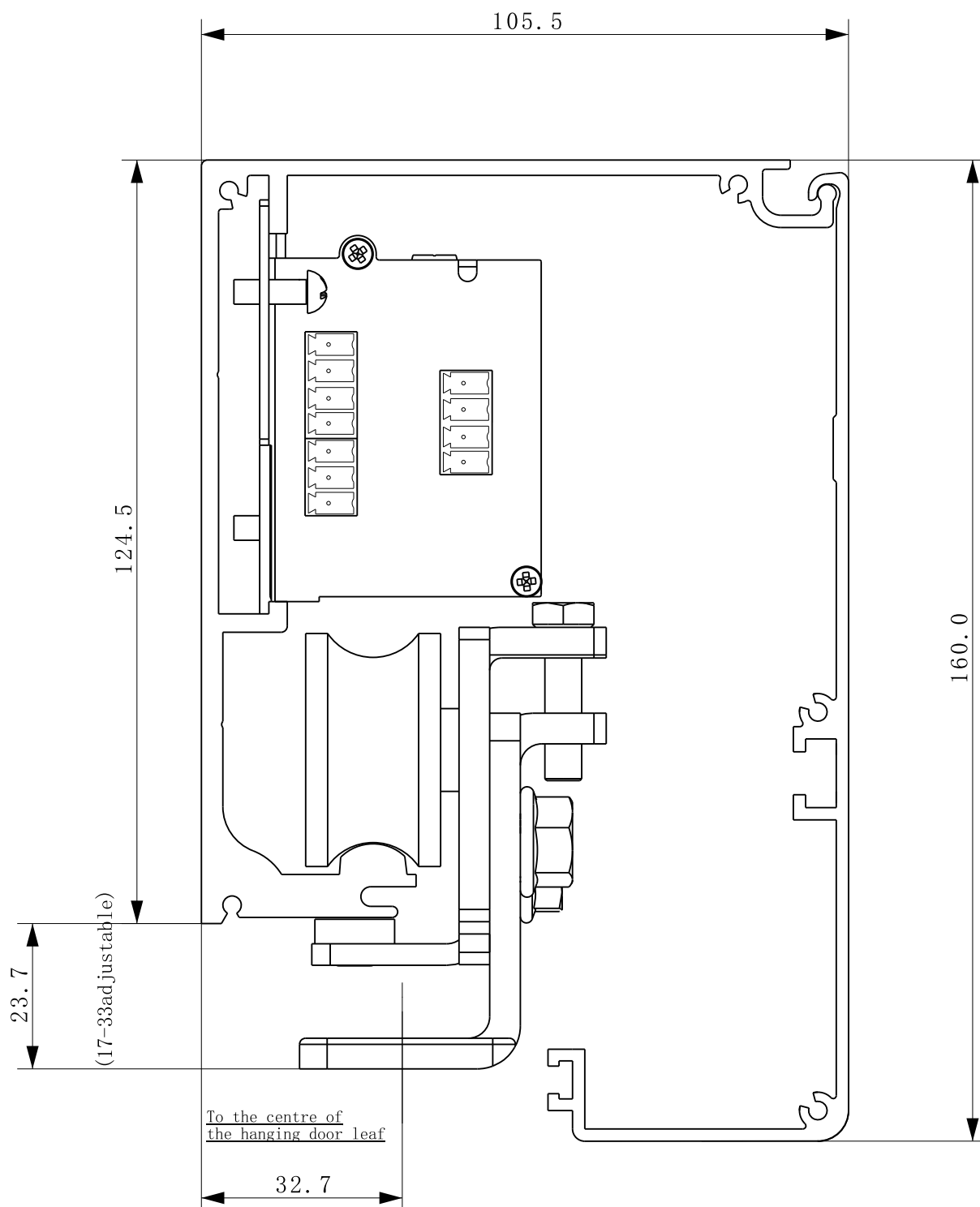
Model B



Side view of guide rail and hanger

- Side view

This view is not in a scale of 1:1.



Product features

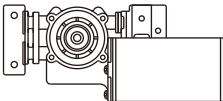
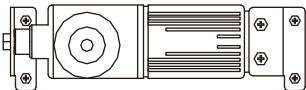
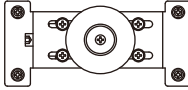
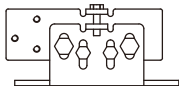
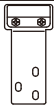
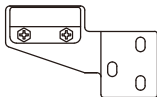
Features

- Microprocessor control technology and advanced mechanical manufacturing
- Automatic adjustment of door leaf operation and manual adjustment when necessary.
- Opening and closing smoothly and low noise
- Brushless motor with a long service life
- Two-door interlocking and electric lock function with support multiple access control systems.
- Installation is simple

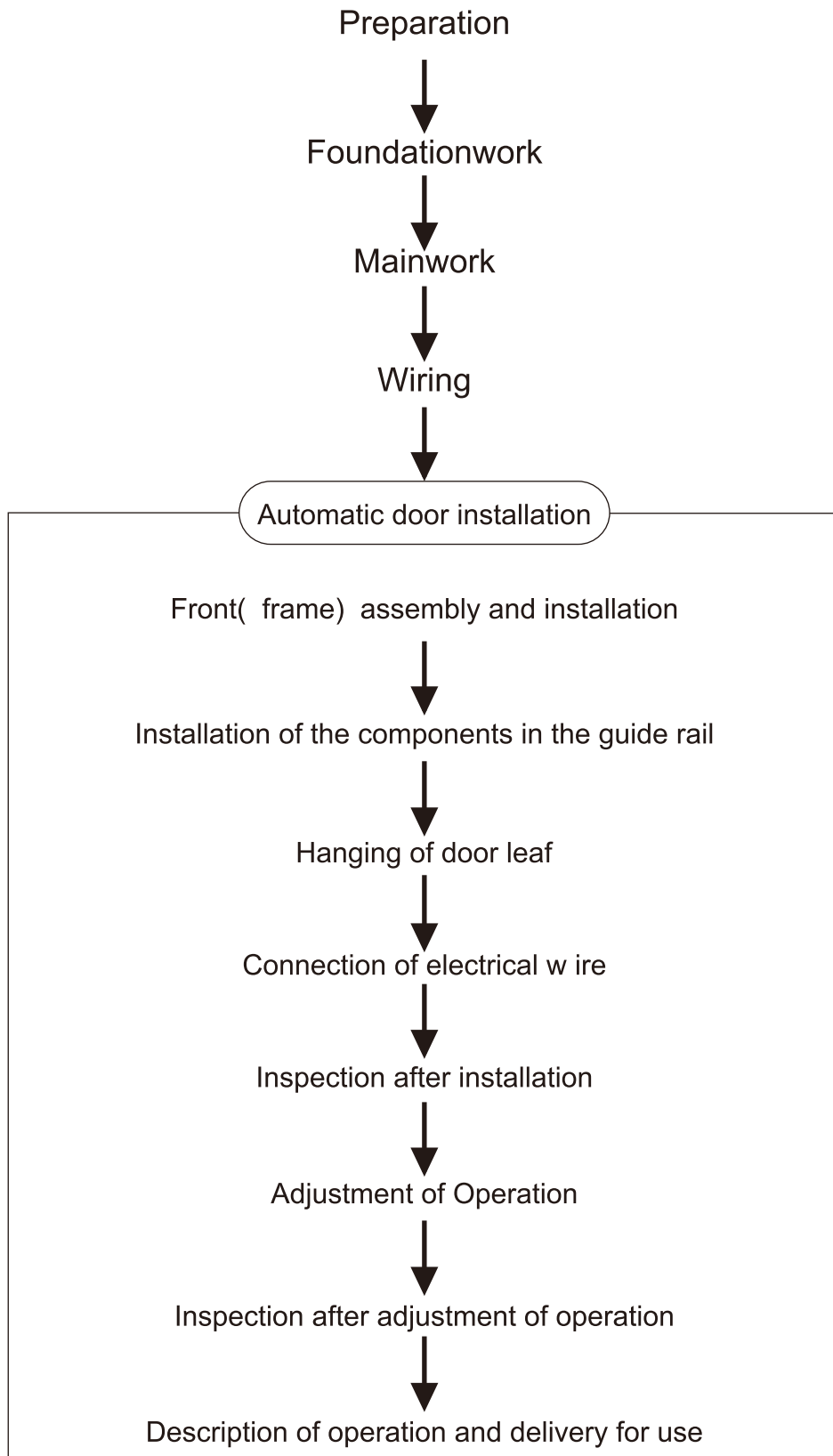
Technical specifications

Model	RG-AT70D	
Door leaf	Single-leaf	Double-leaf
Weight of door leaf	Max. 1 x 120kg	Max. 2 x 100kg
Width of door leaf	DW=700-1300mm	DW=600-1200mm
Width of door opening	W=1350-2400 mm	W=2300-4800 mm
Method of Installation	Surface Installation	
Supply power voltage	AC 110-220V +/- 10%, 50-60 Hz	
Opening Speed	150-460mm/s (adjustable)	
Closing Speed	130-460mm/s (adjustable)	
Door hold-open time	0-8s (adjustable)	
Manual open/close force	< 40N	< 50N
Motor	DC 24 V, 65W (DC, brushless)	
Working Environment temperature	-20 ℃ ~50 ℃	

Componenets List

Description	diagram	quantity	
		single-leaf	double-leaf
motor(A)		1	1
motor(B)		1	1
controller		1	1
idle pulley		1	1
hanger		2	4
belt bracket (left)			1
belt bracket (right)		1	1
stopper		2 (left,right)	2 (left,right)
belt		1	1
fastenings		1 set	1 set
sticker		1 pair	1 pair
installation manual product certificate varranty card		1 set	1 set

Installation

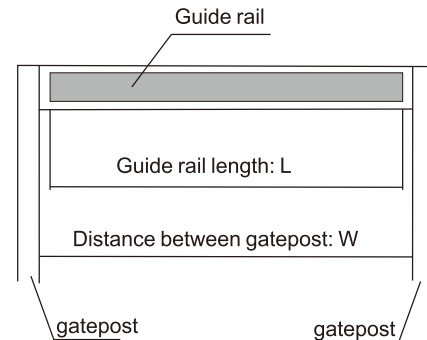


Cutting and installation of guide rail

● Cutting

Standard length of the guide rail is 2100 mm x2 or 4200mm .
other size should be customized.

Cut the guide rail as the following length $L=W-10\text{mm}$, “W” is the distance between gateposts.



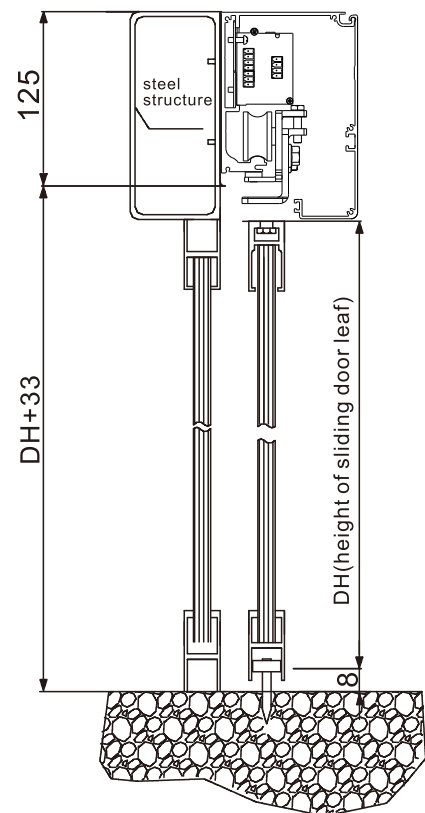
● Installation

Install the guide rail at a height of $DH+33\text{mm}$ from the ground (measure from the bottom of the guide rail).

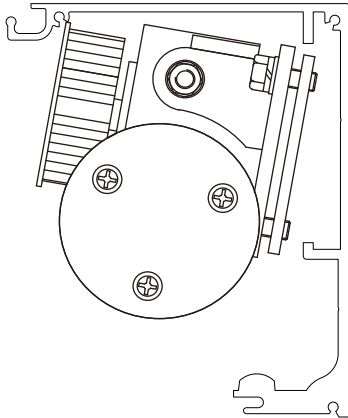
- (1) Drill holes on the steel structure (or wall surface) to install the guide rail.
- (2) Measure the levelness of both ends of the guide rail.
- (3) Each end of the rail is fixed onto the steel structure (or wall surface) with one self-tapping screw temporarily.
- (4) After recalibration of the levelness, fix the rail onto the steel structure (or wall surface) with self-tapping screws (or M8 expansion bolts).

Note:

- (1) The guide rail must be level.
- (2) The height of sliding door leaf is DH .
- (3) The clearance height above the guide rail should be more than 50mm.
- (4) The head of the screw/bolt must be fully sunk to avoid malfunction.



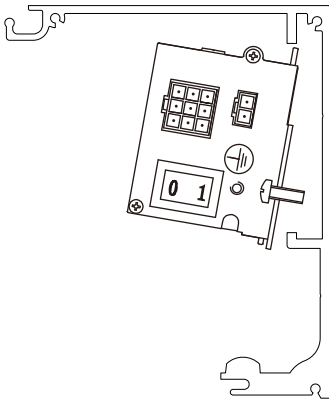
Installation of motor



1. Hold the motor cable in the front of the motor.
2. Insert the motor bracket top into the upper groove of the guide rail properly.
3. Then insert the motor bracket bottom into the below groove of the guide rail.
4. Move the motor to the right end of the guide rail.
5. Tighten the mounting bolts.
6. Make the motor cable pass through the top of the motor and come out from the left side.

Caution: Misoperation in step 2, 3, 5 may result in falling off.

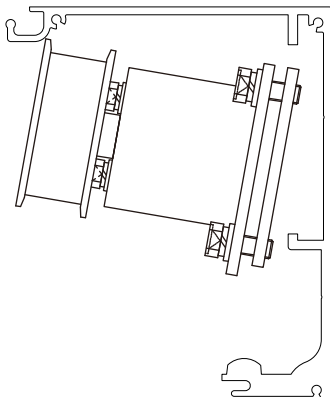
Installation of controller



1. Insert the controller top firmly into the upper groove of guide rail.
2. Insert the controller bottom into the below groove of guide rail firmly.
3. Move the controller to proper position for connecting with the motor cable and terminal switch cable.
4. Tighten the mounting screws .

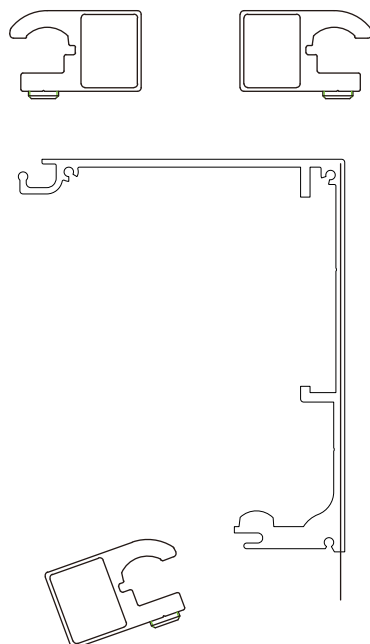
Note: Misoperation in step 1 and 2 may result in falling off.

Installation of the idle pulley



1. Insert the idle pulley top firmly into the upper groove of the guide rail.
2. Then firmly insert the idle pulley bottom into the below groove of the guide rail.
3. Fix the idle pulley temporarily with a fixing screw make sure it can be moved easily.

Installation of stopper



1. Loosen the fixing bolt of the stopper with hexagon wrench.
2. Insert the stopper onto the bottom flat rail of the guide rail.
3. Determine the position of the stopper by aligning with the open and closed positions of the sliding door leaf.

Note: When setting the position of the stopper, the hanger should be stopped when it touch the rubber of the stopper.

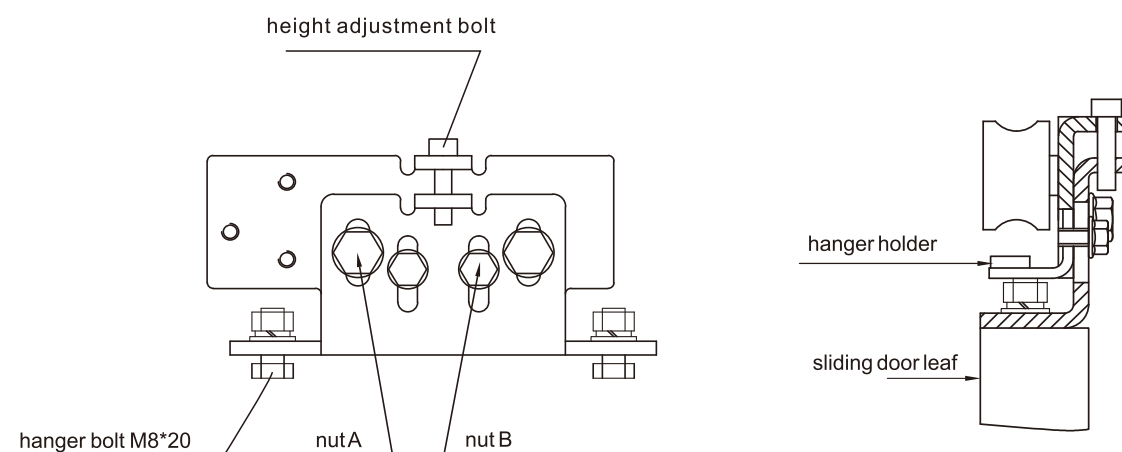
4. Tighten the fixing bolt firmly with the wrench.

Note: Carelessness may result in damage to the door.

Installation of hanger

1. Loosen nut A of the hanger and loosen nut B from the fixed holder.
2. Fix two hangers onto the top of each sliding door leaf at the correct position with bolts(M8*20).
3. Hang the sliding door leaf on the bottom flat rail of the guide rail.

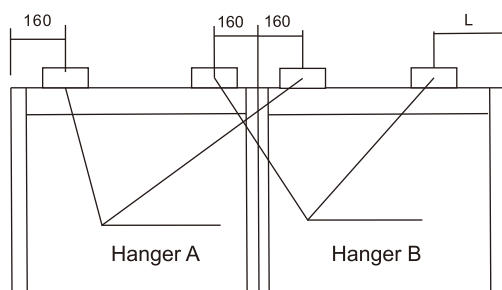
Note: When fix above two hangers, make sure that both are flat with each other, and the sliding door leaf top and the white wheels of hanger are in parallel.



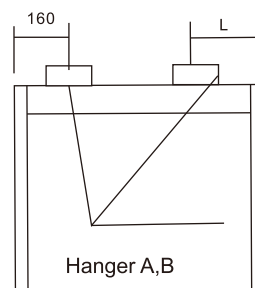
Installation of hanger(continue)

- Fixing position of hanger (see below drawing)

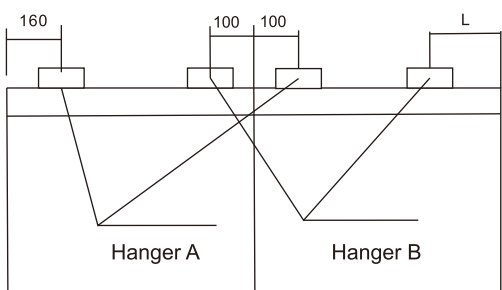
(Double-leaf) Framed door



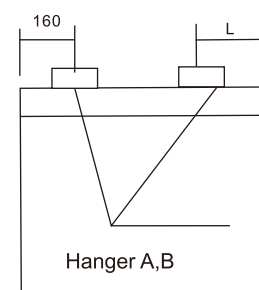
(Single-leaf) Framed door



(Double-leaf) Frameless door



(Single-leaf) Frameless door

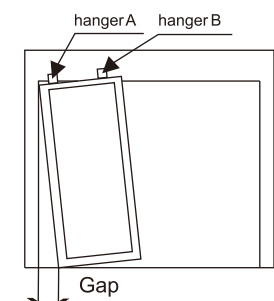


Note: Model 120A* If sliding door leaf size is approximate to the fixed door leaf, L=250mm.
 If there is no enough space for the requirement of L=250mm, please choose 125B.
 If the sliding door leaf is narrower than the fixed leaf, L=190mm or more.
 Model 120B* L=190mm

- Note: 1. During installation the center of the hanger wheel should be in full parallel with the door leaf.
 If not, the service life of the wheel will be shortened.
2. Don't collide the guide rail and components in it, otherwise, the components may be damaged, service life of the wheel will be shortened and there will be noise during door operation.

Installation and adjustment of door leaf

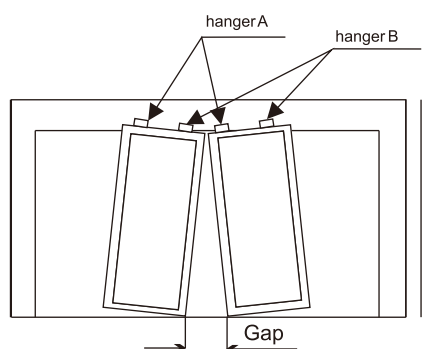
Single-leaf



Installation step:

1. Left hanger and right hanger should be installed to the door leaf in a line.
2. Hang the door leaf onto the rail, if the door leaf slides to left or right, it means that the rail is not in horizontal line.
3. When the door leaf is properly hung on the rail, it can be opened and closed easily by hand.

double-leaf



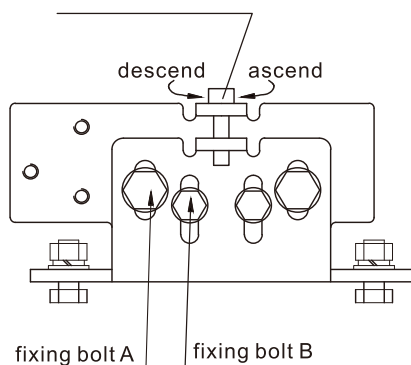
As is shown in the left diagram, if the door leaf can't be installed horizontally, it can be adjusted while hanging.

1. Loosen the fixing nut A for fixing the hanger.
2. Adjust the height adjustment bolt.

Turn clockwise the door will ascend.

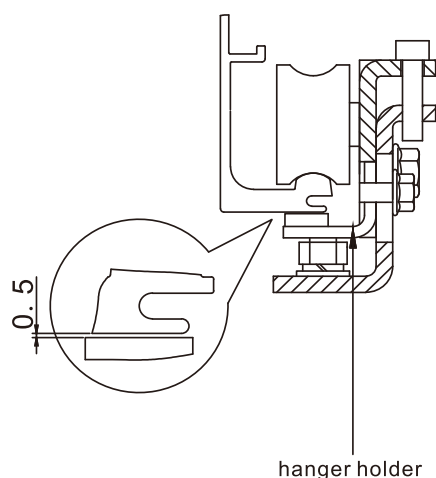
Turn counterclockwise the door will descend.

height adjustment bolt



3. Tighten fixing nut A.

4. Move the hanger holder to the top, and then tighten bolt B of hanger holder. Now the hanger holder and the bottom of the rail is about 0.5mm (see the diagram).

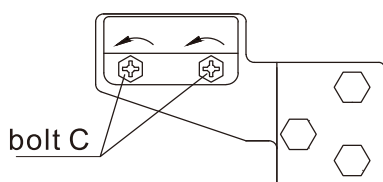


5. Check the friction during the operation.

If it's hard to move the door leaf by hand, please check below items:

1. The hanger is fixed vertically on the leaf.
2. Any friction between the floor guide and the leaf bottom.
3. Any friction between the door leaf frame and gatepost.
4. Any friction between the hanger holder and the guide rail.

Belt installation of single-leaf



1. Remove the bolt C and take off the belt socket from the belt bracket.
2. Cut the belt with reference to the belt cutting table.

Note: Cut the belt at the middle between two belt teeth.

3. Insert both ends of the cut belt into the belt socket and make this two ends meet in the middle of the socket.

Note: The belt can not be twisted in above installation.

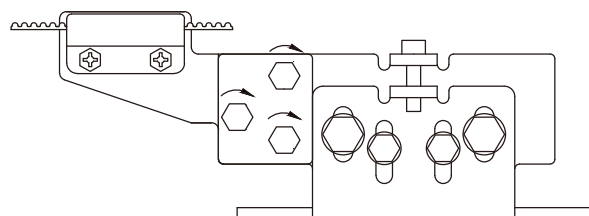
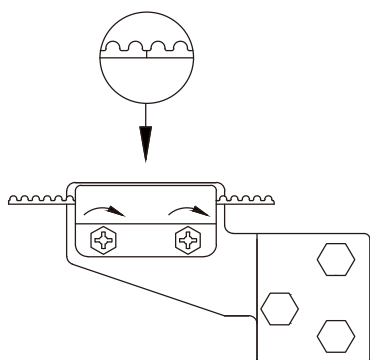
4. Fix the belt socket back to the belt bracket firmly.

Note: the direction of the belt bracket.

5. Hang above belt onto the wheel of the motor and the wheel of idle pulley.

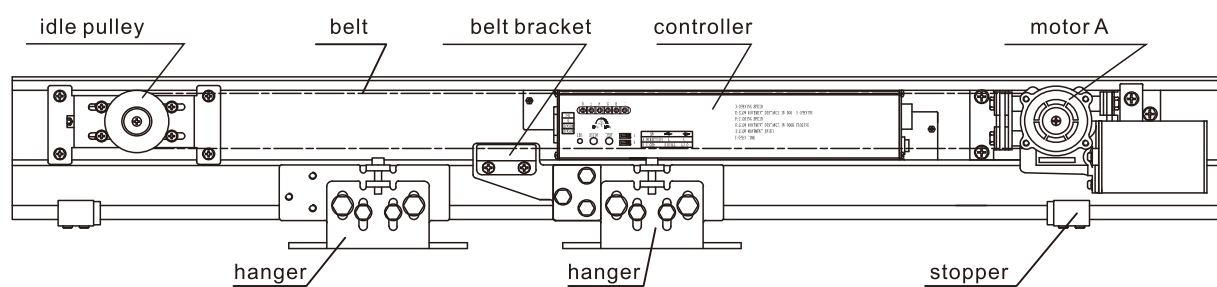
6. Fix the belt bracket onto hanger A firmly with bolt (M6*12) and spring washer after adjusting the door leaf position.

Note: Do tighten the bolts firmly.

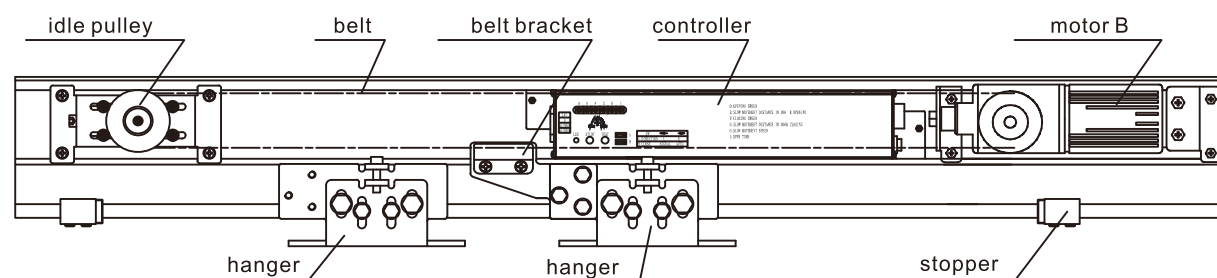


Position of belt bracket(single-leaf)

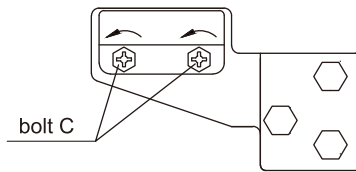
Model A



Model B

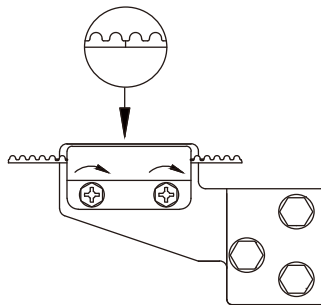


Belt installation of double-leaf



1. Remove the bolt C and take off the belt socket from the belt bracket .
2. Cut the belt with reference to the belt cutting table.

Note: Cut the belt at the middle between two belt teeth.



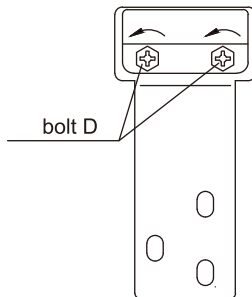
3. Insert both ends of the cut belt into the belt socket and make this two ends meet in the middle of the socket.

Note: The belt can not be twisted in above installation.

4. Fix the belt socket back to the belt bracket firmly.

Note: the direction of the belt bracket .

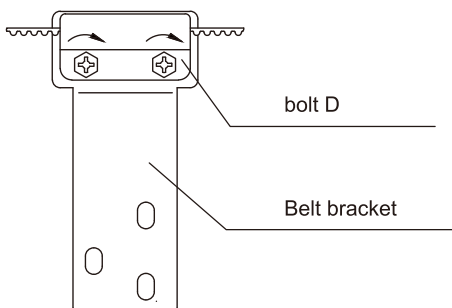
5. Hang above belt onto the wheel of the motor and the wheel of idle pulley.
6. Fix the belt bracket onto hanger with bolt (M6*12) and spring washer.



Note: Do tighten the bolts firmly.

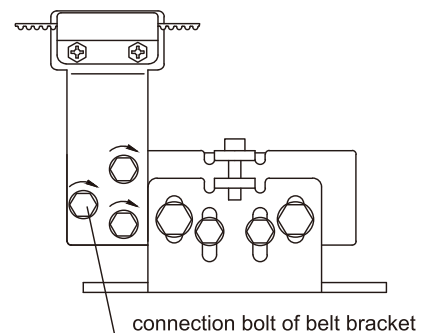
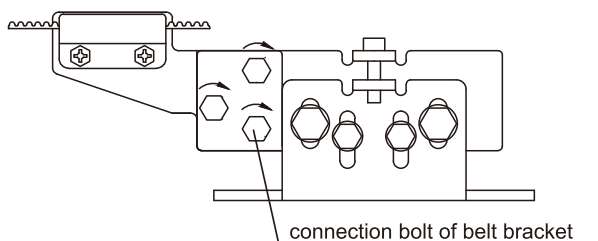
7. Adjust the tension of belt refer to instruction.
8. Keep the two leaves closed.
9. Remove bolt D and take off the belt socket from the belt bracket D.
10. Insert the belt into the belt socket at the correct position.
11. Fix the belt socket back to the belt bracket firmly.

Note: the direction of the belt bracket .



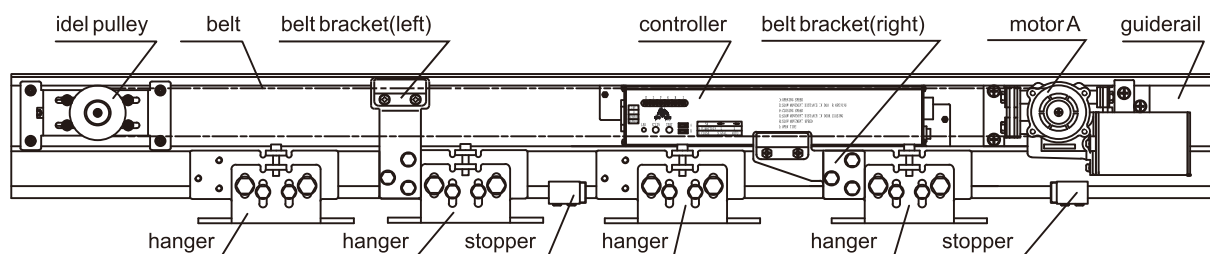
12. Link the belt bracket onto hanger with bolt (M6*12) and spring washer, adjust the door leaf position, then tighten Bolt D.

Notice: Do tighten the bolt D after adjustment.

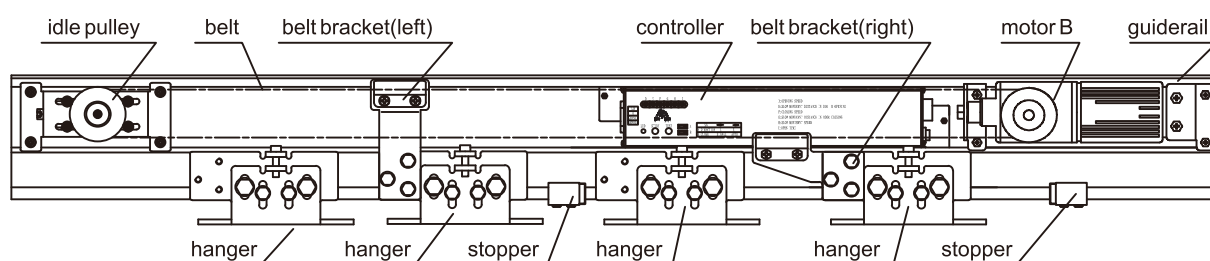


Position of belt bracket(double-leaf)

Model A



Model B



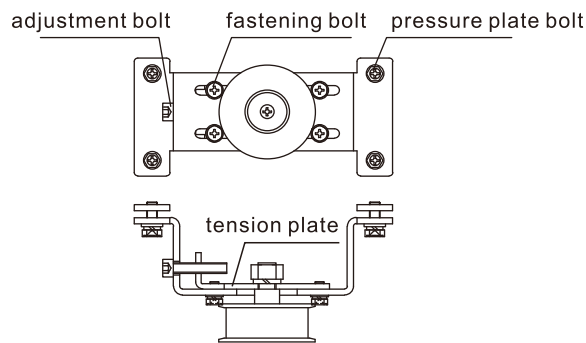
Belt length table

Minimum length(for inference only)

Door Width	Belt Length
650	4100-4200
700	4400-4500
750	4700-4800
800	5000-5100
850	5300-5400
900	5600-5700
950	5900-6000
1000	6200-6300
1050	6640

Adjustment of belt tension

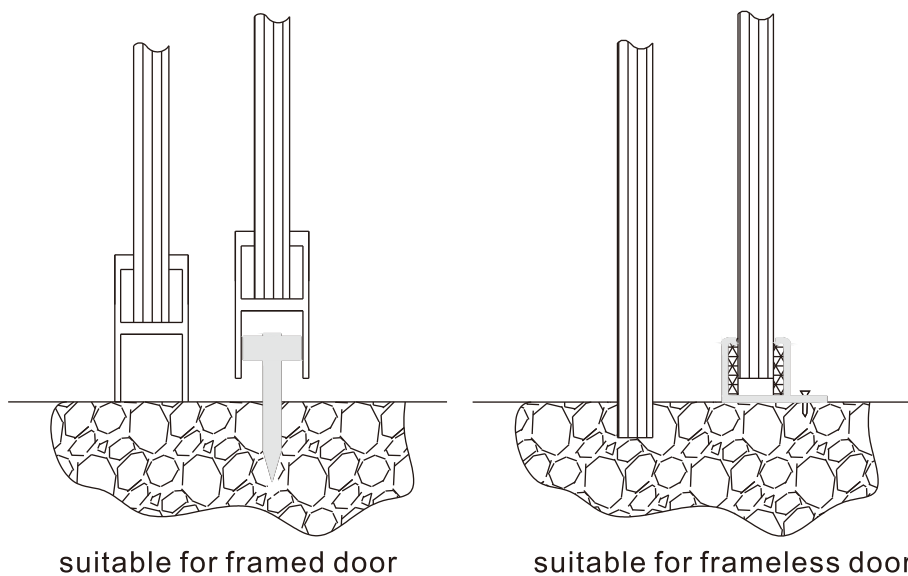
1. Move the idle pulley to the left end of the guide rail to keep the belt tightened and tighten the four pressure plate bolts.
2. Loosen the four fastening bolts.
3. Turn the tension adjustment bolt clockwise so that the tension plate will be moved to the left and the belt tension increased gradually. Adjust the belt tension until it's suitable, then tighten the four fastening bolts.



4. After use for some time the belt may stretch slightly and then the belt tension should be readjusted by repeating steps 1-3.

Installation of floor guide

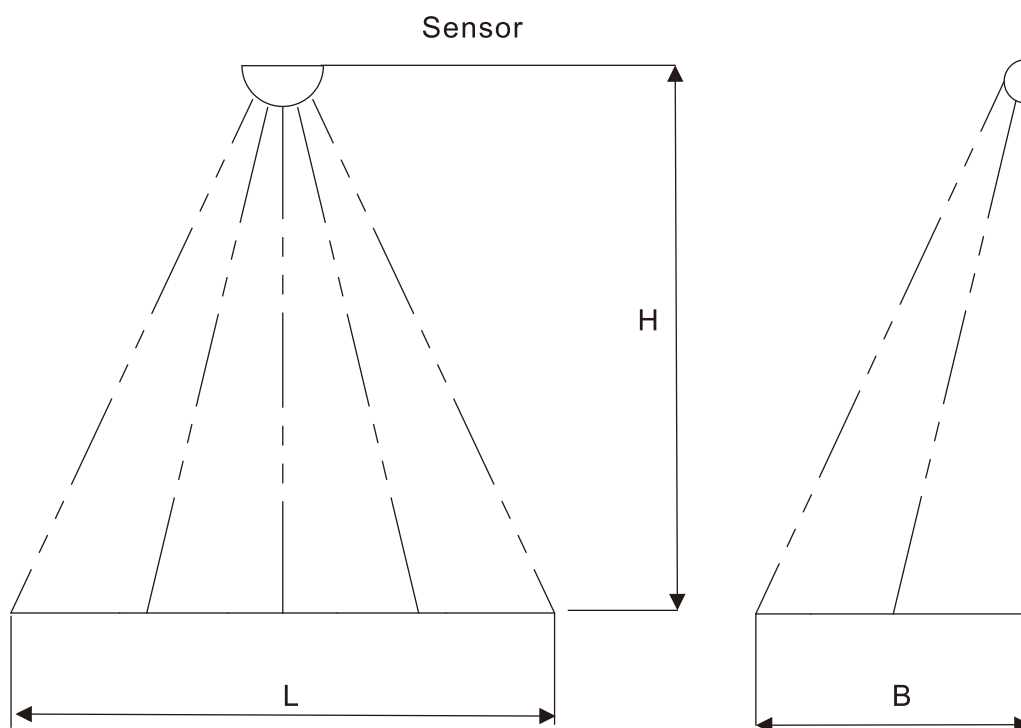
There are two kinds of floor guide as below:



1. The floor guide should be installed in the center of the sliding door leaf with its axle center coinciding with the central line of the door leaf depth.
2. The central distance between the two floor guides must be smaller than the total depth of this two sliding door leaves (2DW).

Installation of sensor

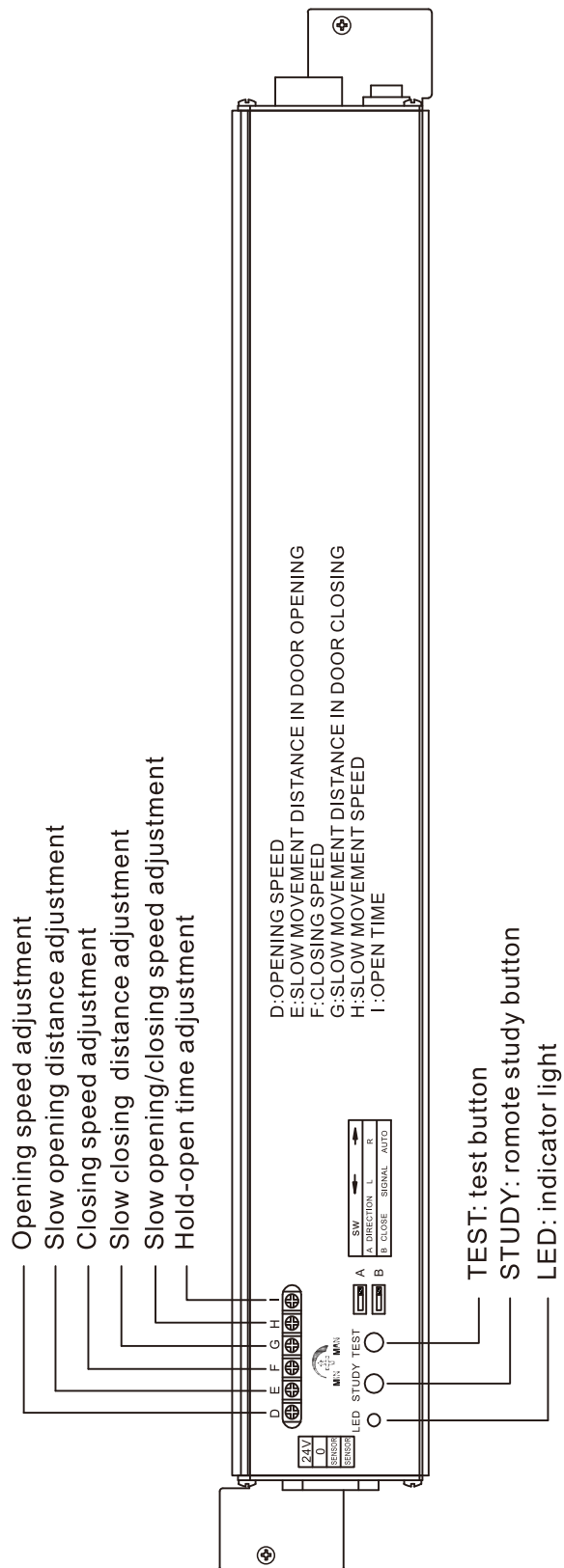
The sensor should be installed on the top center above the sliding door leaf properly at a correct height according to the chosen sensor. Normally the height(H) is not over 2.5m. Generally, two sensors are installed, one inside and the other outside of the room. For wiring please refer to the wiring diagram and more rules in details for installation refer to the installation instructions from the sensor manufacturer.



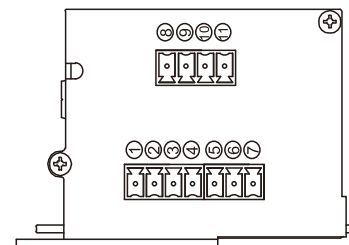
Caution: because wiring voltage of the sensor is different among different manufacturers and models, please don't replace with each other at will.

Wiring connection

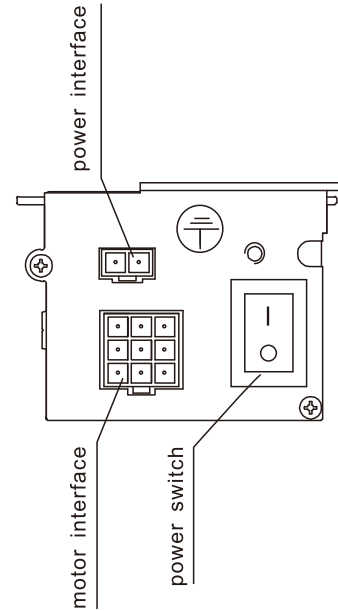
Introductions of controller port function



left of controller

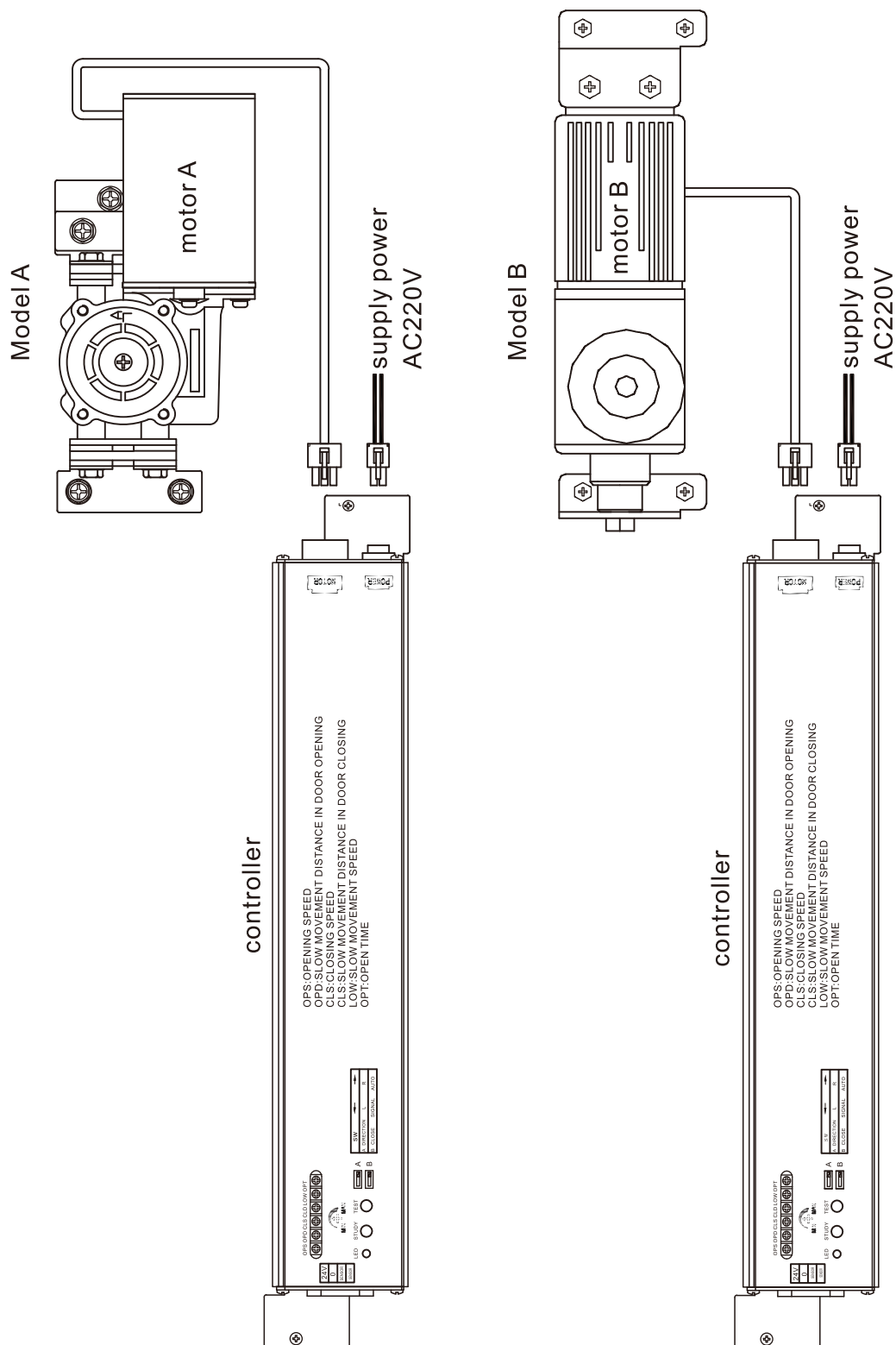


right of controller



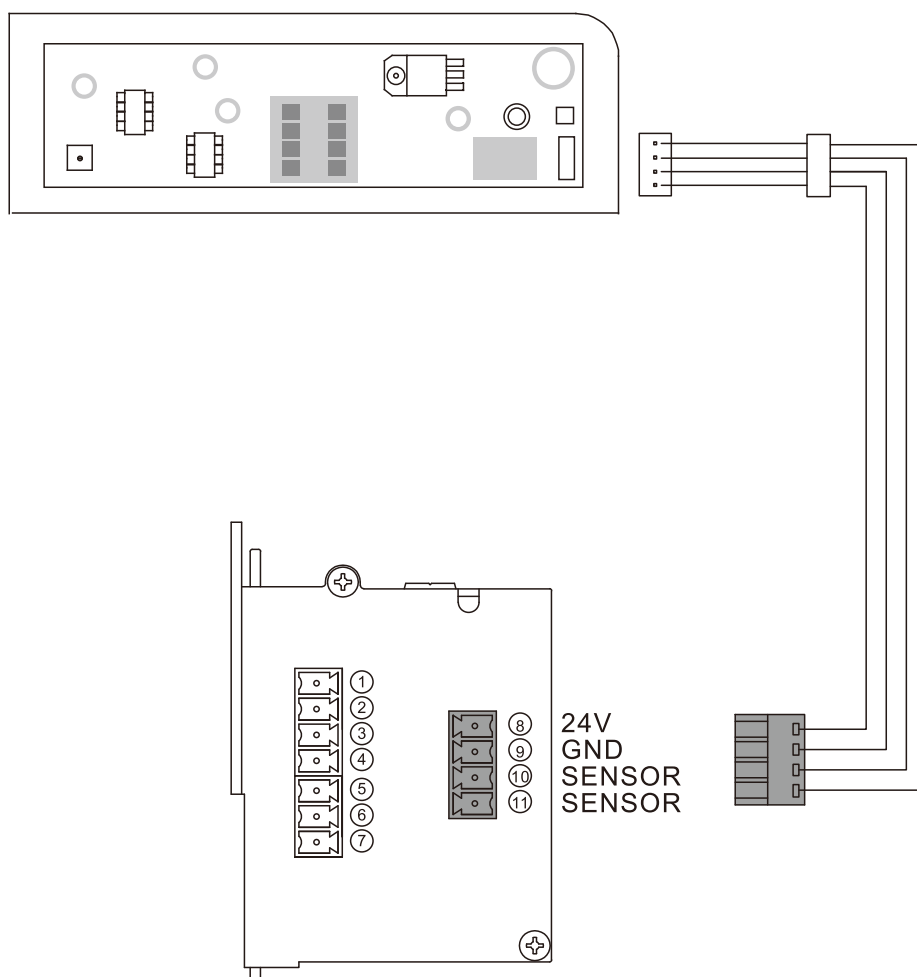
Power connection diagram

Caution:all the connections should be done with the power disconnected



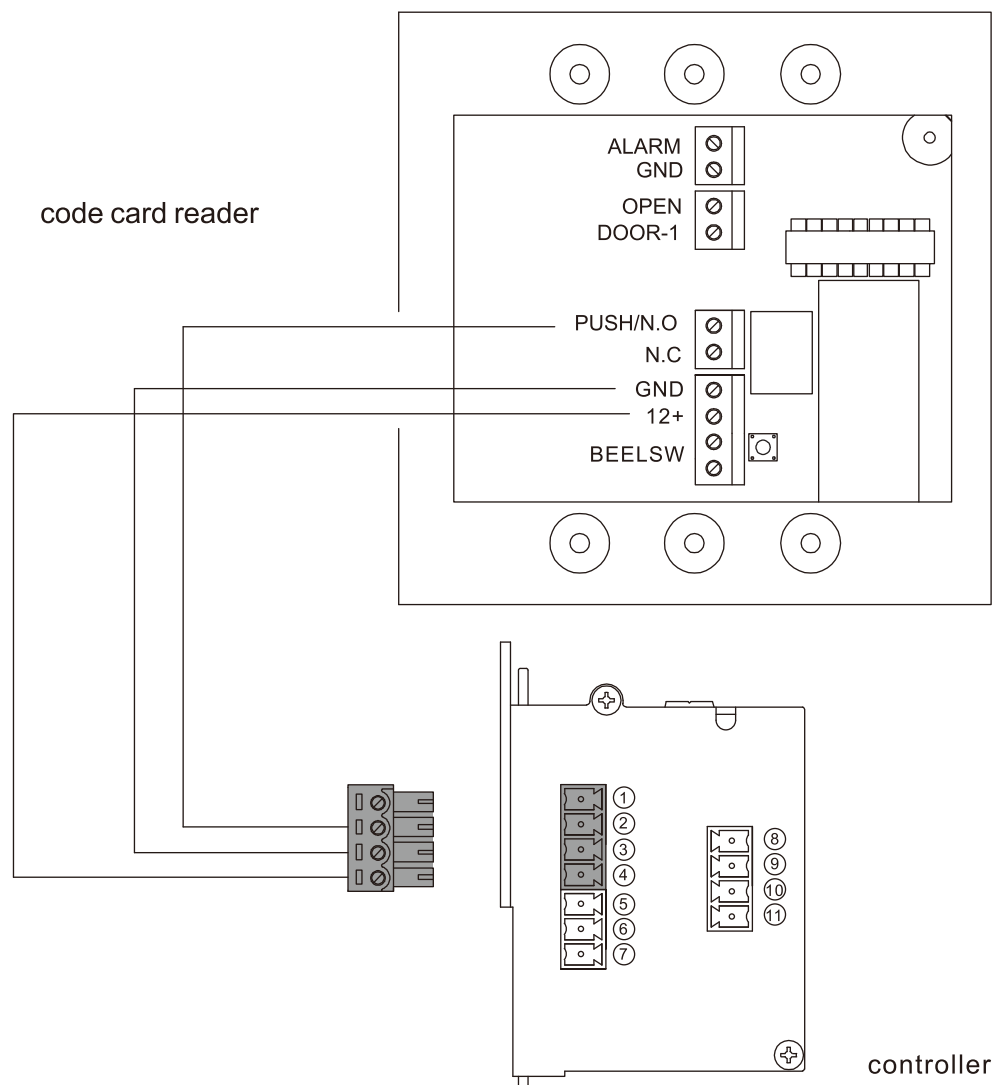
Connection of sensor

sensor



Connection of code card reader(optional)

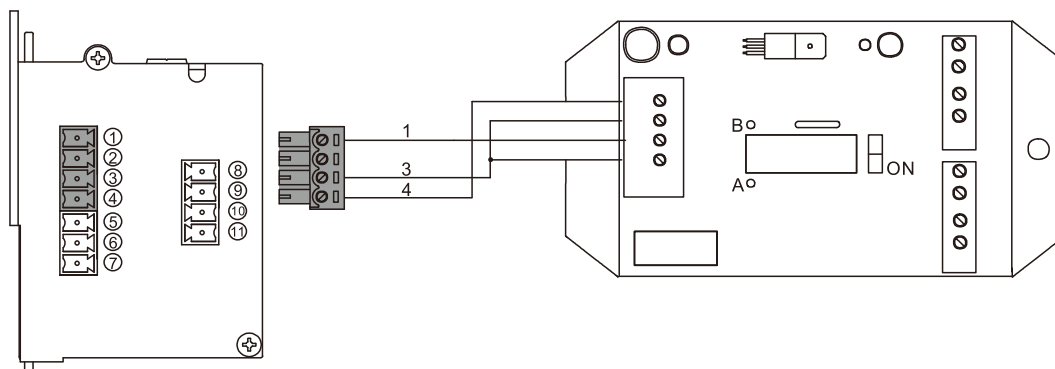
- 1.All the wiring connection should be done with the power disconnected.
- 2.Positive or negative polarity should be identified when the code card reader is connected.
3. The code card reader should be with passive output . If the code card reader is with active output, it should be changed to passive output.



power of code card reader : 12+---4
 GND---3
 signal of code card reader : NO---2
 GND----3

Connection of safety beam(optional)

Caution:all the connections should be done with the power disconnected.

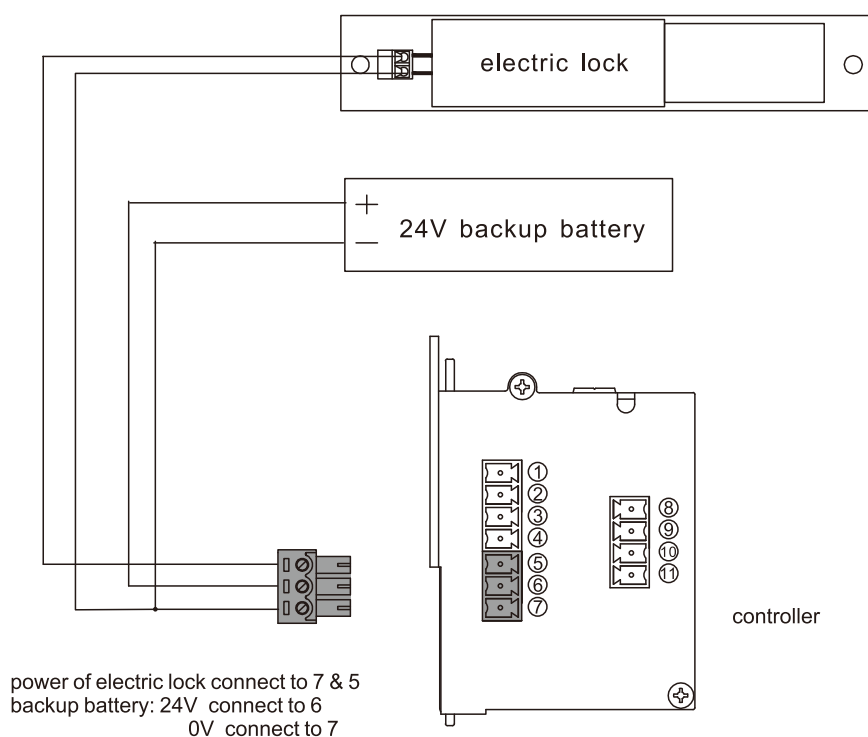


Connection of backup battery and electric lock(optional)

Caution:1.all the connections should be done with the power disconnected.

2.working current of electric lock is less than 200mA and starting current less than 800mA.

3.note:the positive and negative polarity in connection of backup battery and specific operation is shown as following diagram.

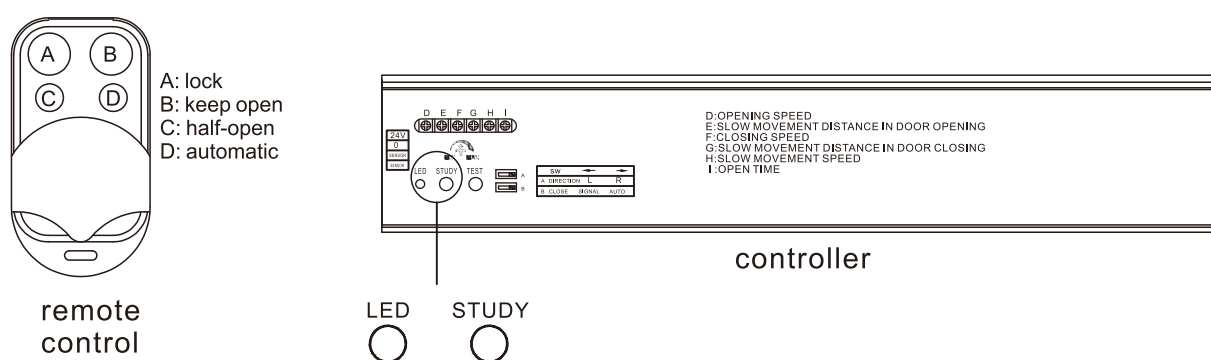


Connection of remote control(optional)

Remote and controller code matching

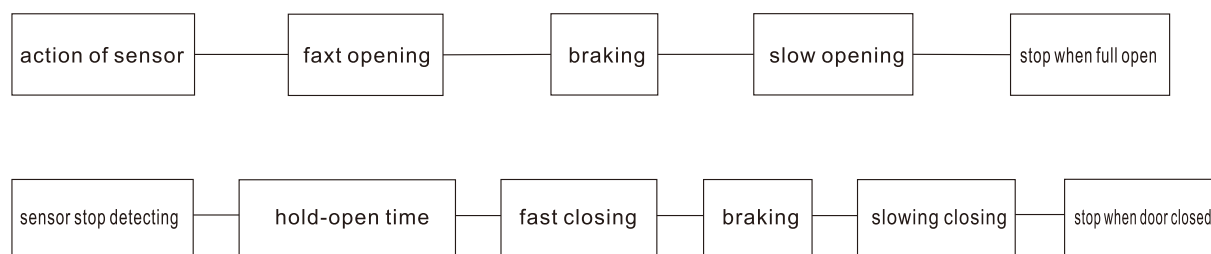
- 1.Reset: Keep pressing “STUDY” button until no buzzing sound, loosen the button.
- 2.Matching: Press “STUDY” button, loosen the button when the buzzer sounds. Then press any key of the remote control, the buzzer stops sounding, it means matching is successful. When using the remote control, the buzzer will sound for 2 seconds.
- 3.Note: when remote control is used, buzzer “beep” twice, it means the code matching is unsuccessful. Please repeat above step 2.

One controller can be connected with at most ten transmitters of remote control.



Description of operation

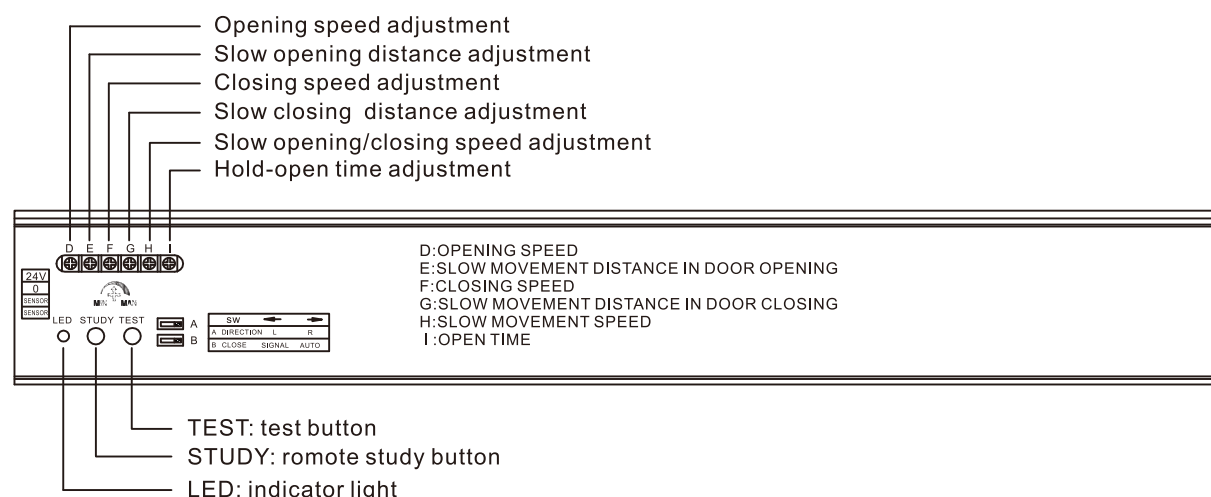
1. After installation, push the door fully open by hand, power on, the system begins its initial program. The door will close at a low speed until the hanger is stopped by the stopper in the guide rail, this closing operation confirms the sliding route. The built-in micro-processor in the main controller will memorize this route.
2. The door works as the following sequence when normal operation:



Note: When an electric lock is chosen, we advise the user to buy above multi-function remote control (optional) together.

Adjustment of opening and closing parameters

Name and function of each button of the controller



TEST: One press finishes one open action and can be used for adjusting all parameters during installation.

LED: The light is always shining after energization.

A: Single-leaf door: Switch left is for open to the left direction and Switch right for open to the right direction (effect after cut electricity and restart).

Double-leaf door: Switch right (effect after cut electricity and restart)

B: At Left: The door will hold open after opening until given a closing signal.

At Right: The door will close automatically after opening and hold-open time.

D: Turning anticlockwise will reduce opening speed while clockwise will increase speed.

E: Turning anticlockwise will reduce slow opening distance while clockwise will increase distance.

F: Turning anticlockwise will reduce closing speed while clockwise will increase speed.

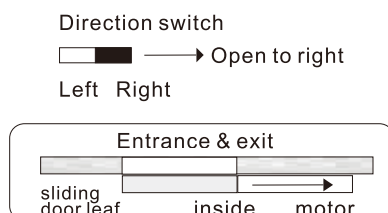
G: Turning anticlockwise will reduce slow closing distance while clockwise will increase distance.

H: Turning anticlockwise will reduce slow opening/closing speed while clockwise will increase speed.

I: Turning anticlockwise will reduce hold-open time while clockwise will increase the time.

Adjustment steps

(Open and close the door manually for several times to confirm the door can be opened and closed freely.) (1)A: Set left/right switch:



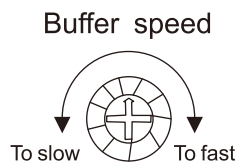
Seeing from the inside(see above diagram), left or right is set according to the opening direction. Double-leaf door, the switch is at right.

(2) B: set signal closing/ automatically closing. At left: the door will not close by itself after opening, it need to give a closing signal; at right, the door will close automatically after opening. Caution: If electric lock is connected, to press "test button" should be when electric lock is unlocked.

(3) Push the door to the closed position and set initially:

It is recommended to adjust buffer (slow opening/closing) speed, opening speed and closing speed in the mid-positions, slow opening distance and slow closing distance are longer, if not, it may cause collision.

(4) After power switch on, the door is closing slowly and stops when touch the stopper. Press the test button of the controller and adjust the buffer speed when door is static.



Caution: When electric lock is connected, to press test button should be after unlocking the lock.

Caution: After adjustment, the door should be opened and closed easily.

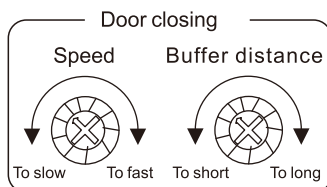
Caution: The first adjustment of the slow opening/closing distance is 8-10cm.

Caution: The power off time should be longer than 10s every time.

(5) Closing speed and slow closing distance can be adjusted as required.

Caution: When electric lock is connected, to press test button should be after unlocking the lock.

Caution: Adjustment should be performed after confirming there is no pedestrian around the door, otherwise injury may be caused.



1. Adjust the slow closing distance at about 10cm.

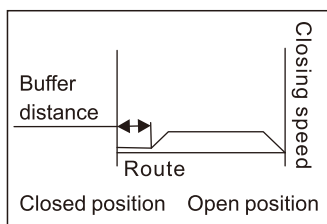
Caution: Do adjustment slowly because turning the button too fast may cause injury to person or damage to the door.

2. Adjust the closing speed.

3. Adjust slow closing distance again if necessary.

Caution: Do adjustment slowly because turning the button too fast may cause injury to person or damage to the door.

Caution: Slow closing distance must be set more than 5cm, otherwise, it may cause injury to person or damage to the door.



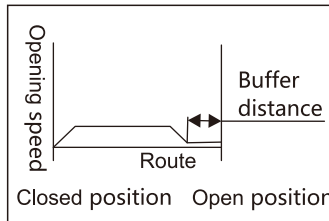
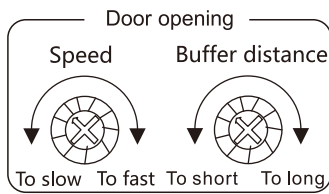
(6) Adjust opening speed and slow opening distance.

Adjust opening speed and slow opening distance as required.

Caution: When electric lock is connected, to press test button should be after unlocking the lock.

Caution: Adjustment should be performed after confirming there is no pedestrian around the door, otherwise injury may be caused.

Caution: Slow opening distance must be set more than 5cm, otherwise, it may cause injury to person or damage to the door.



1. Adjust slow opening distance at about 10cm.

Caution: Do adjustment slowly because turning the button too fast may cause injury to person or damage to the door.

2. Adjust opening speed.

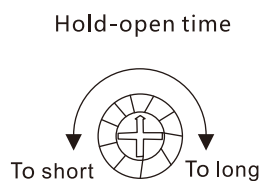
3. Adjust slow opening distance again if necessary.

Caution: Don't do this adjustment during door opening or closing.

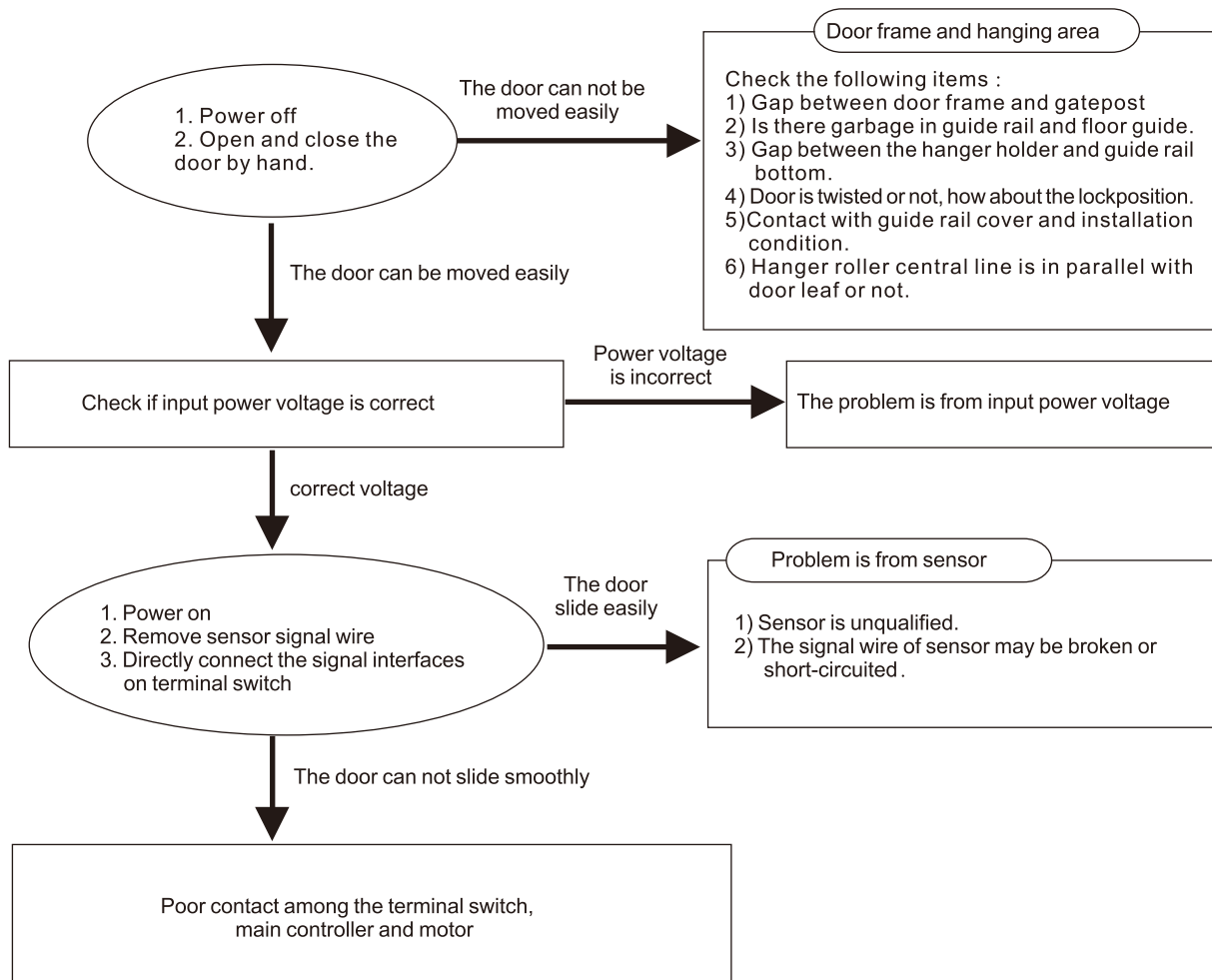
Caution: Do adjustment slowly because turning the button too fast may cause injury to person or damage to the door.

(7) Adjust hold-open time Adjust the door hold-open time after opening.

Caution: When electric lock is connected, to press test button should be after unlocking the lock.



30. Troubleshooting



Trouble shooting (continued)

Symptoms	Causes	Check	Solutions
Open and close is not smooth	• Opening/Closing speed is slow. • Buffer distance is too long, visual slow. • Someone is in touch with door leaf when closing, resulting in an abnormal mode. • Too much resistance.	• Check opening and closing speed. • Length of buffer distance. • Power off and open the door manually. • If any garbage in the guide rail. • If floor guide is damaged or loose. • If there is any obstacle.	• Reset the opening/closing speed • Reset the buffer distance • The one who touch the door left, it will be normal. • Remove garbage. • Install the floor guide properly. • Clear obstacle away.
Door leaf over-tight	• Slow opening/closing speed is too fast • Slow opening/closing distance is too short		• Decrease buffer speed • Increase buffer distance
Door doesn't work.	• Power not switched on • Door locked • Garbage in the guide rail • Poor electrical connection • Two-door interlocking • Auto-door is under protection because of great resistance. • Slow opening/closing speed is too small.	• Check the power switch • Check if the door is locked. • Turn off power to check if the door can be moved by hand easily. • Something is wrong with the connectors between motor, controller and terminal switch	• Turn on power. • Open the door lock. • Remove garbage. • Check the connector. • Wait till the other door is closed. • Check door resistance after power off. • Screw the button "H" clockwise slowly.
Door doesn't open fully	• under half-open mode	• Check fully/ half-open mode(remote control).	• Change to fully-open mode use remote control.

Troubleshooting (continued)

Symptoms	Causes	Check	Solutions
Door doesn't close.	• Sensor keeps working. • Safety beam keeps working. • Sensor signal wire is short-circuited.	• There is object cause misoperation in the detection range • There is no object cause misoperation in the detection range • Check if the safety beam eye has any contaminant. • Optical axis is deviated. • Check if the door is closed after the signal wire removed.	• Clear away the moving object • Replace sensor. • Clear away the garbage. • Adjust optical axis. • Change signal wire.
Door keeps opening /closing with no stop	• Any movable object in the detection area • Intense electrical wave is emitted near the door. • Share the detection area with other sensor • Fluorescent lamp in the detection area • Unqualified sensor	Check Check Check Check Unqualified sensor	• Remove moving object from the detection area. • Remove the machine that emits intense wave. • Change the anti-interference switch • Remove fluorescent lamp from the detection area • Replace sensor
Door comes into great collision	• Significant speed reduction, but with great collision. • belt is loose. • No speed reduction when opening door. • No speed reduction when closing door.		• Turn button (H) slowly Anti-clockwise • Adjust belt tension • Turn button (E) slowly clockwise • Turn button (G) slowly clockwise



The Product Has Passed ISO 9001:2008 Quality Management System Certification