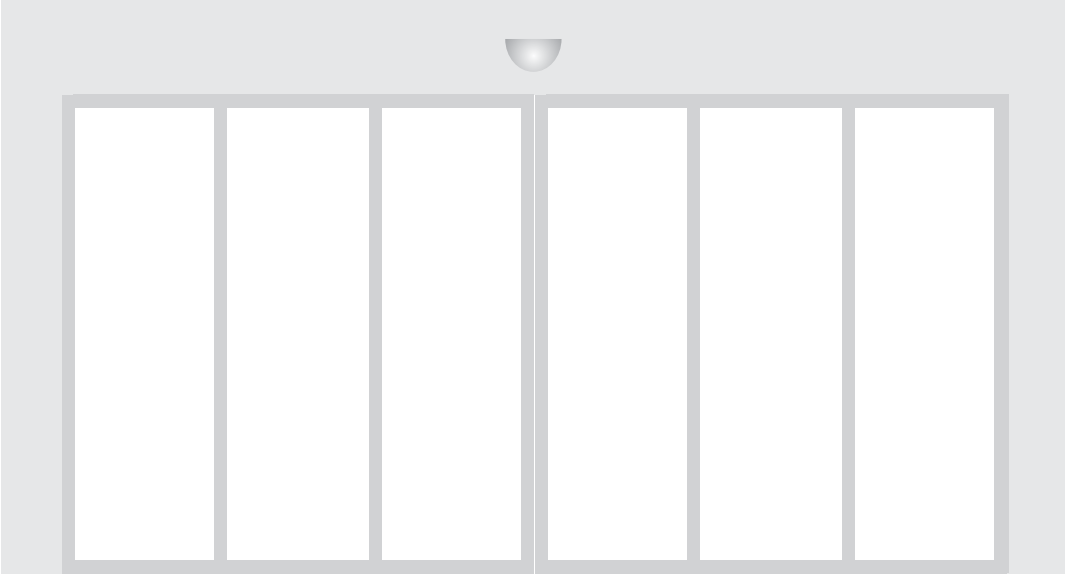
Installation Manual

ASLT-250- Telescopic

- Installation of automatic door should be entrusted to the appointed distributor or professional team as installation by non-professionals will face danger.
- Installation must be operated by professionals only in accordance with relevant decrees and codes for electric installation.
- This manual must be taken good care of in order to do maintenance work well.



Talbot Automatic Door and Gates
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Contents

Product features

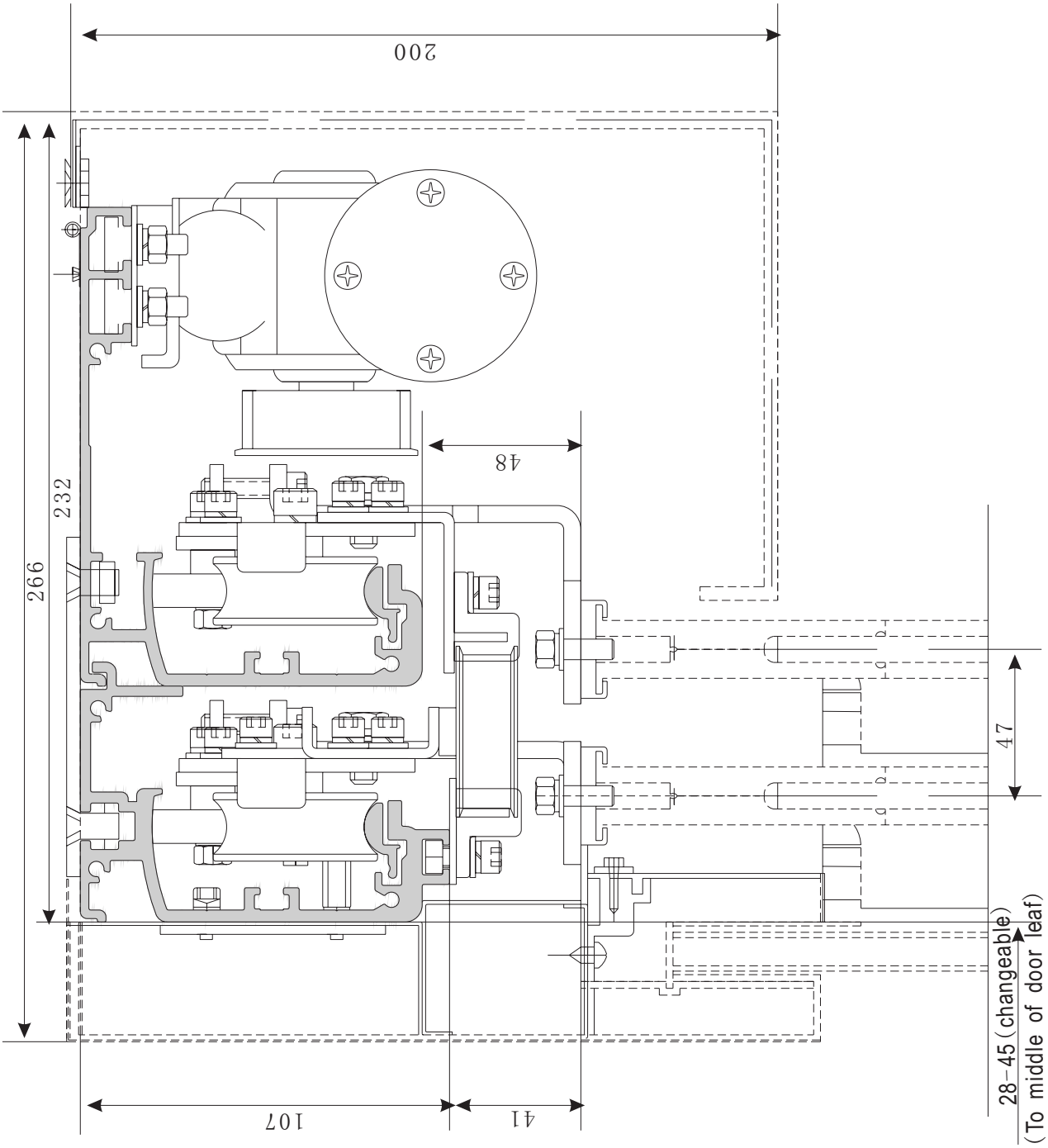
Microprocessor control technology and advanced mechanical manufacture

- Intelligent control system, all parameters can be adjusted flexibly according to manual or remote controller. Each function also can be set according to manual or remote controller.
- Remote controller has memory function of each function.
- Low noise driving device, an integration of motor, worm wheel, worm bar and gear box.
- Unique electricity locks function: no need to add extra accessories, safe and reliable.
- Advanced brushless motor has the features of high efficiency, high torque and long service life.
- Double-door interlock function, either always keeps closed.
- Optional backup power, when power fails, it can use to keep the door open or closed.
- Auxiliary sensor terminal: the connected sensor will automatically lose work after the door fully closed.
- The door closed force: after the door completely shut down, keep it closed tightly.
- Installation is simple and convenient.

Technical specifications

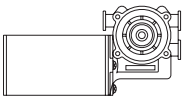
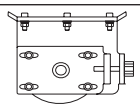
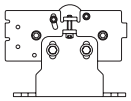
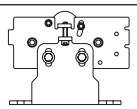
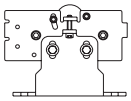
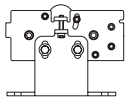
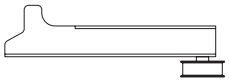
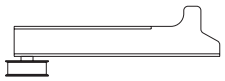
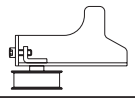
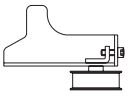
Door form	Two-leaves	Four-leaves
Weight of door leaf	2*150kg	4*100kg
Clean open width	1200mm-2700mm	2200-3900mm
Closed force F	>100N	
Power supply	AC220V 10%，50-60Hz	
Opening speed	300-550mm/s（adjustable）	
Closing speed	200-500mm/s（adjustable）	
Hold-open time	1-20s（adjustable）	
Manual push	＜100N	
Power consumption	＜150W	
Environment temperature	-20°C-+50°C	

Sectional view of dynamic beam



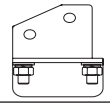
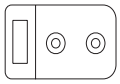
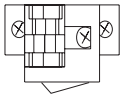
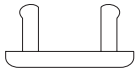
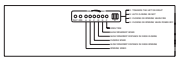
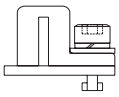
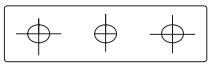
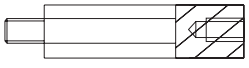
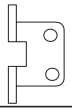
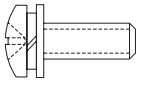
Components list

Below components are in the dynamic beam packing

Description	Model	Picture	Quantity		
			Single opening		Bi-parting opening
Dynamic beam model			0ZC01BZ01		0ZC01BZ02
motor	SF0901/0Z0906		1		1
Belt tension pulley	SZ0301		1		1
Trolley A	0Z0538		1		2
Trolley B	0Z0539		1		2
Trolley C	0Z0540		1		2
Trolley D	0Z0541		1		2
Holder of belt pulley A	0Z4105		left	1	1
			right	—	
Holder of belt pulley B	0Z4106		left	—	1
			right	1	
Adjusting bracket of belt pulley A	0Z4107		left	1	1
			right	—	
Adjusting bracket of belt pulley B	0Z4108		left	—	1
			right	1	
Belt bracket A	0Z4109		left	1	1
			right	—	

Components list

Below components are in the dynamic beam packing

Description	Model	Picture	Quantity	
			Single opening	Bi-parting opening
Dynamic beam model			0ZC01BZ01	0ZC01BZ02
Belt bracket B	0Z4110		left — right 1	1
Belt	0Z0401		1	1
Stopper	0Z0603		2	2
Power switch	0Z1903		1	1
Wire keeper	SZ4202		8	8
Controller	SF1102/0Z1102		1	1
Belt bracket C	0Z4111		1	2
Fixing strip	0Z2007-05		3	3
Special bolt	0Z2007-06		2	3
Fixing plate	0Z0106		3	3
Left & right fixing bracket	0Z2007-03		2	2
Fastener	0Z1402		1set(8pcs)	1set(16pcs)

Installation process

Preparation

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Dynamic beam cutting & installation

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Sensor installation

↓

Controller installation

↓

Motor installation

↓

Belt pulley installation

↓

Door leaf hanging & adjusting

↓

Belt installation

↓

Belt tension adjusting

↓

Wire connection

↓

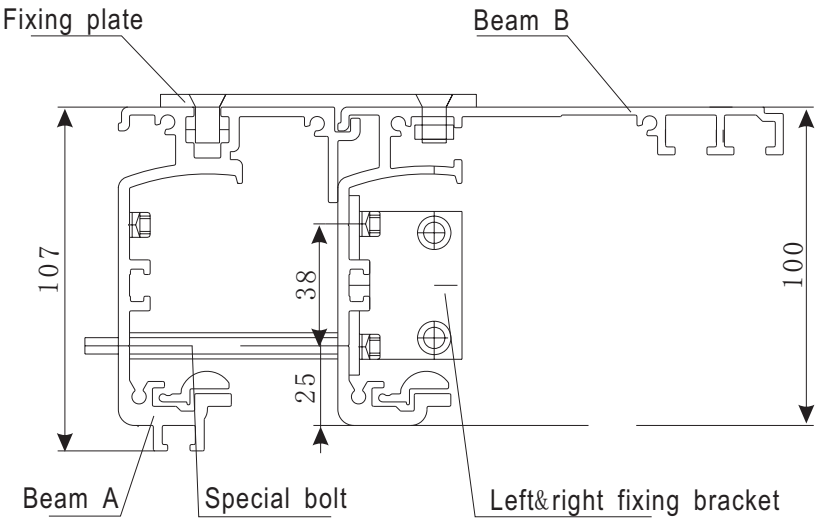
Opening & closing adjusting

Installation of dynamic beam

(1) Drill holes each 400mm on the dynamic beam and iron frame (or wall) for installing.

(2) Fix the dynamic beam on the iron frame or wall by using screws (or M8 steel expansion bolt).

(3) Confirm the dynamic beam is installed at level.



(4) After beam A installing, to drill holes according to above picture, use special bolt and fixing strip to fix.

(5) Install beam B, confirm the right position to fix the fixing plate and drill holes on beam B, then fix beam B by using screws.

(6) Fix left & right fixing bracket by using bolts (Beam B fixing holes).

Note: before installing beam B, please refer to page 7 first.

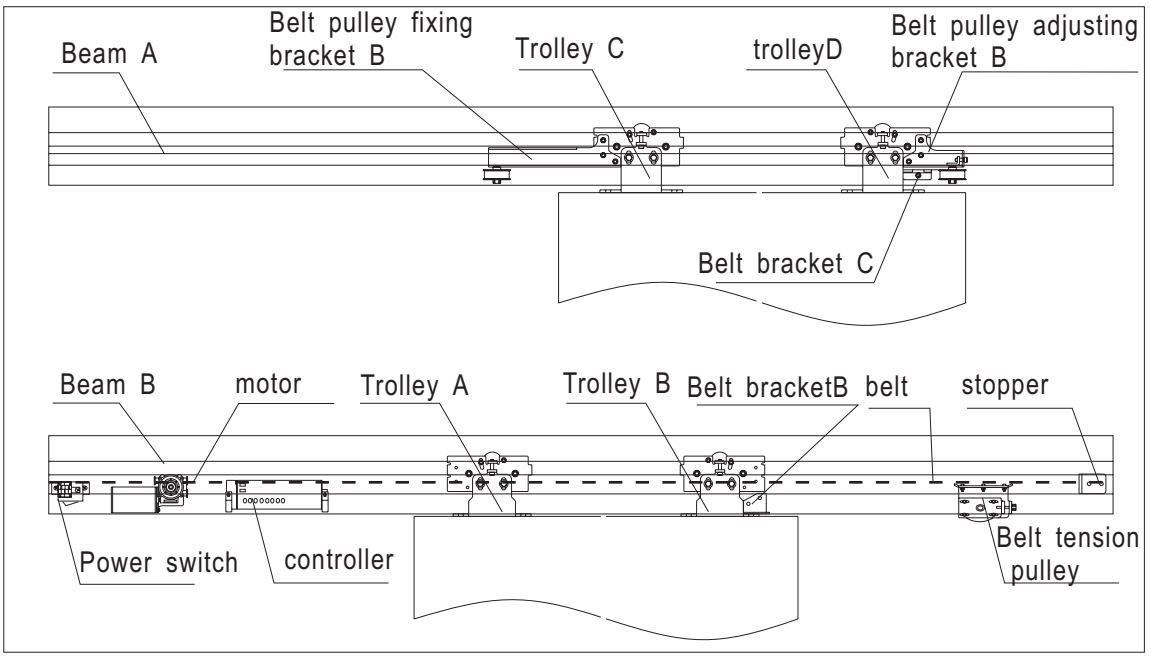
Component positions in dynamic beam

Components positions are as belows:

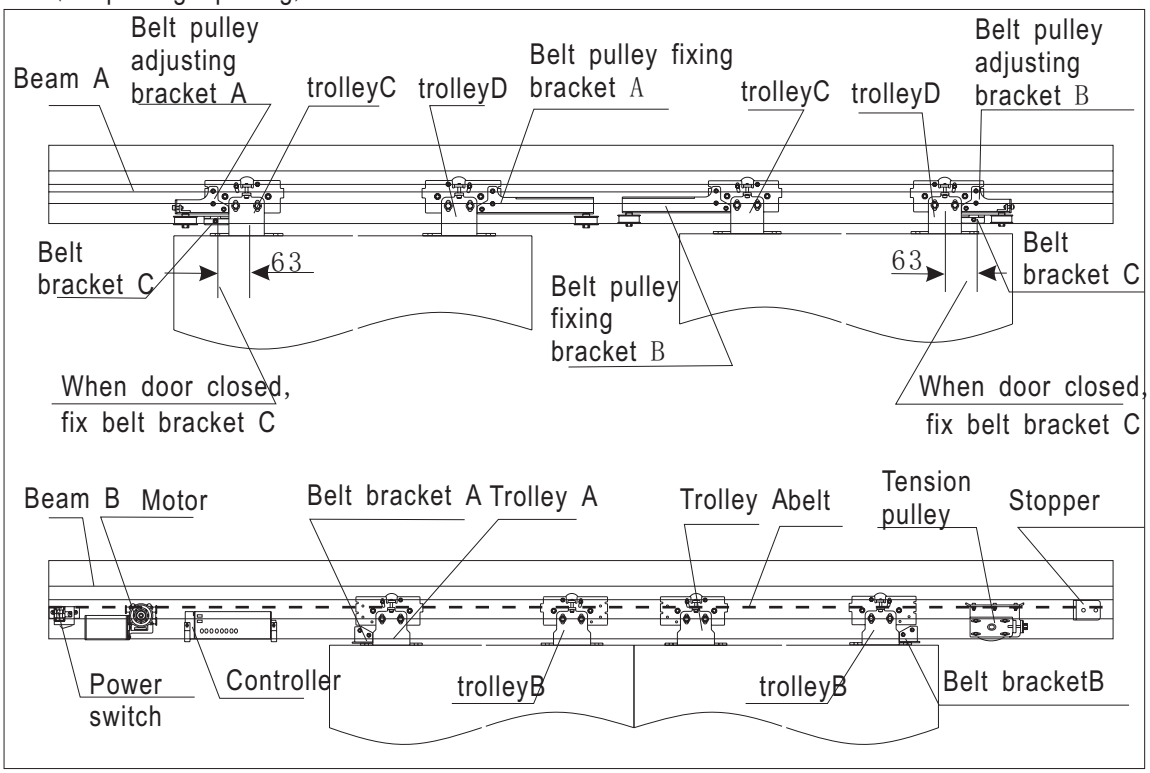
1. Install all components in Beam A packing and adjust positions.
2. Install all components in Beam A packing and adjust positions.

Note: after finished installation and adjustment of beam A, it allowed to start beam B.

（Single opening）



（Bi-parting opening）

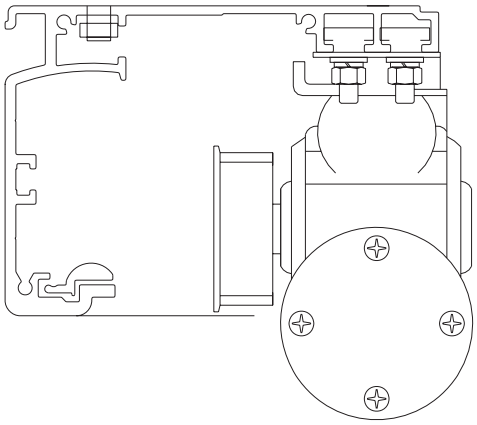


Components installation

To fix motor facility, controller device, tension pulley etc. parts, on the relative positions on the square groove of dynamic beam surface using fixing bracket.

（1）To loose the nut on mounting bracket , then stick the specially-made bolt head into the square groove;

（2）After find position, rotate the bolt to 90 ° localization, then respectively tighten screw nuts.

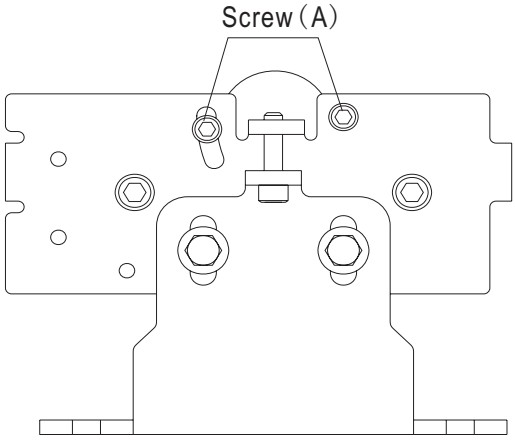


To install trolley components, you should confirm the trolleys are right in the arc rail of dynamic beam.

(1) To loosen screws (A), adjust the board press on the wheel to the lowest position;

(2) To install the trolleys respectively into the dynamic beam,

(3) To adjust pressure board position, make the pressure wheel and the upper square groove of the dynamic beam has a clear distance 0.5, tighten the screws (A)



Door leaf hanging

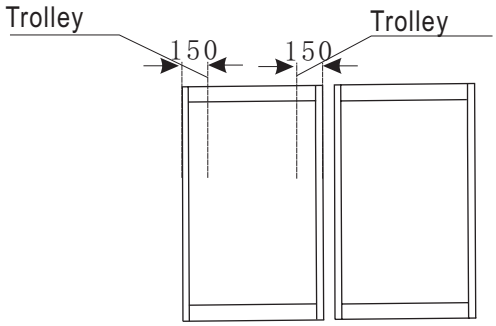
Trolleys hanging positions are as follows:

(1) Rotate the trolley bolts (M8X25) by set into right positions on door leaf top, and keep a gap of 5mm;

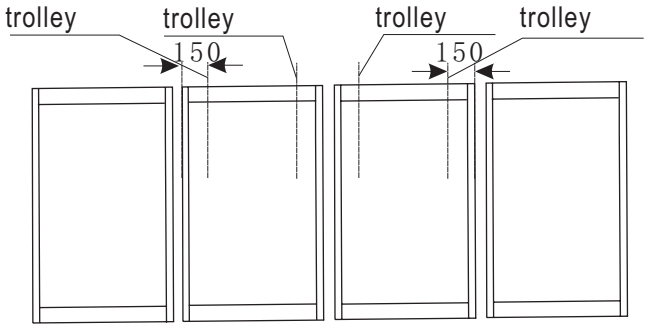
(2) Put above bolt set into the long groove of trolley bottom, please note to keep door leaves at level line;

(3) Tighten the bolt set and fix door leaves.

[Single opening]



[Bi-parting opening]



Door leaf adjustment

Adjust trolley to achieve door leaf adjustment.

(1) The moveable door leaves should be hung vertically. If the gap between left & right door leaf and fixing leaf is not the same, please relax the bolt set and adjust trolleys until the gap is agreeable.

(2) To rotate the trolley bolt to adjust the height and vertical position of door body until the installation height is agreeable.

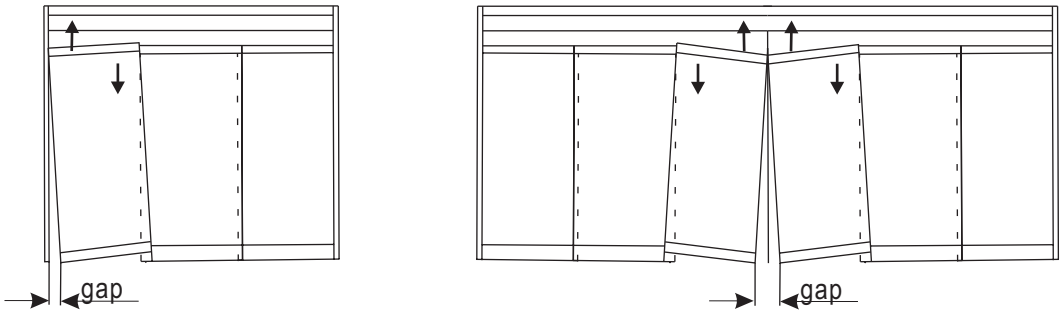
1) Firstly relax trolley bolt (B);

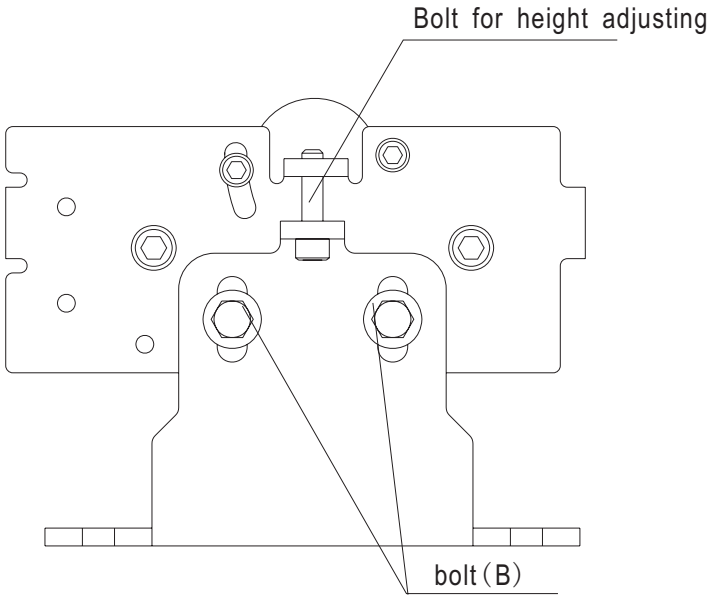
2) Rotate height adjusting bolt until the door leaf at requested height (limit 8mm up and down);

Turn the bolt clockwise and the door will ascend; Turn the bolt counterclockwise and the door will descend.

3) Tighten bolt (B) after adjusting.

Note: Moveable door leaves should be opened or closed softly, also have no friction with these static objects, such as dynamic beam, cover, fixing leaves and the floor.





Belt cutting

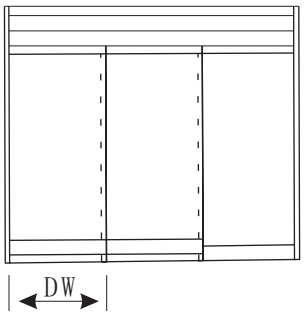
Please cut the belt according to below table:

Single opening:

(1) calculation formula of belt length in the beam:

Minimum Length L=DWX4+750

(2) calculation formula of belt length above door:
Length: L=DW*2+350



Belt length table

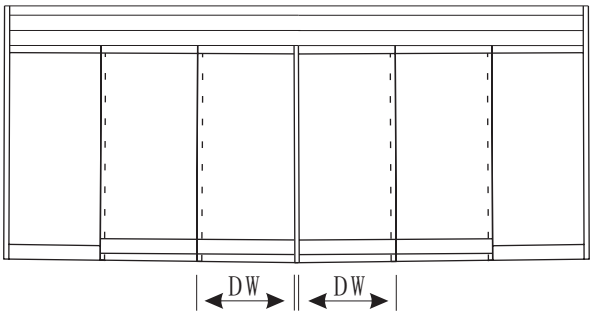
Door width(DW)	Total belt length
700	5300-5350
800	5900-5950
900	6500-6550
1000	7100-7150
1100	7700-7750
1200	8300-8350
1300	8900-8950
1400	9500-9550
1500	10100-10150
1600	10700-10750

Bi-parting opening:

(1) calculation formula of belt length

Minimum Length L=DWX8+1350

(2) calculation formula of belt length above door
Length: L=（DW*2+350）*2



Belt length table

Door width(DW)	Total belt length
650	9850-9900
700	10450-10500
750	11050-11100
800	11650-11700
850	12250-12300
900	12850-12900
950	13450-13500
1000	14050-14100
1050	14650-14700

Note: beam length 4.2m match with belt 10.6m.

Belt installation

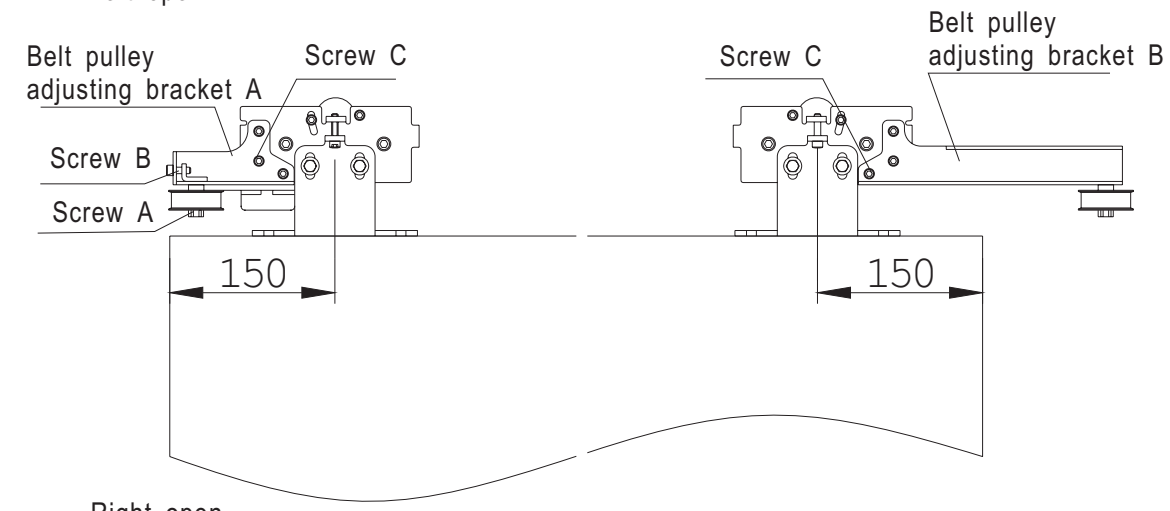
Adjustments of belt pulley fixing bracket, belt pulley adjusting bracket and belt tension in beam A.

1. Install belt pulley fixing bracket and belt pulley adjusting bracke, refer to below picture, tight screw C.
2. Belt installing（refer to page 13）

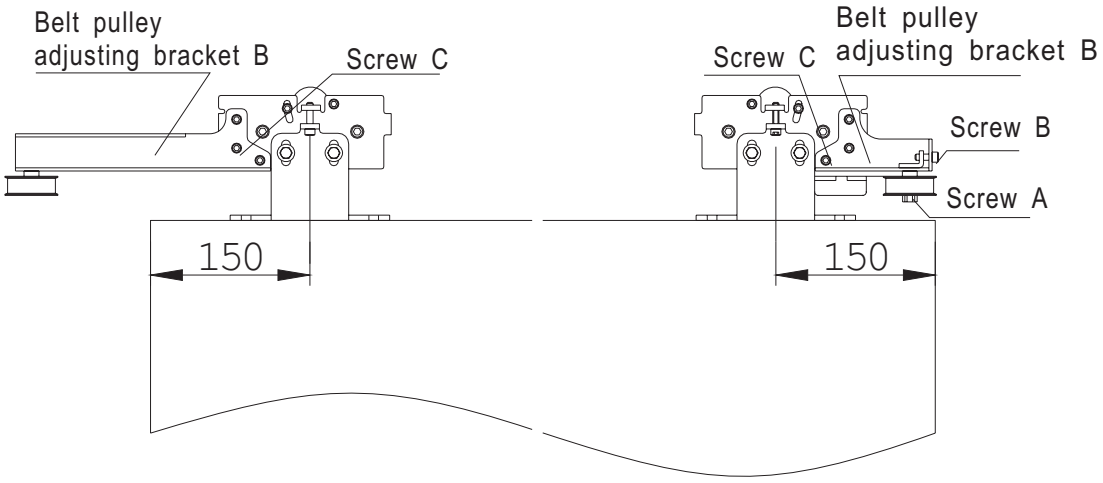
Belt tension adjustment

1. Relax fixing screw A;
2. Rotate tension adjusting bolt B clockwise, make the belt pulley move, the tension increasing, until the tension is suitable.
3. Tighten screw A。

Left open



Right open



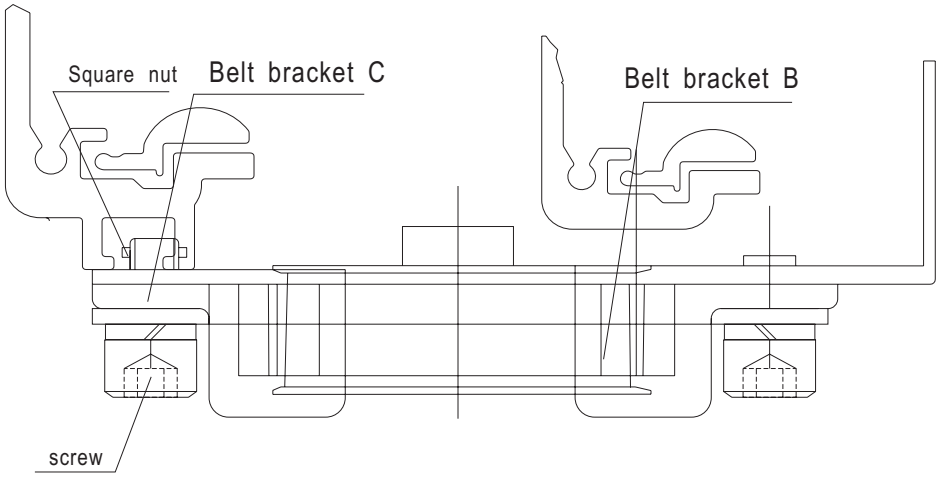
Note: Make sure that adjustments of trolley and door body installing has been finished, all bolts fixed, then installation of fixing bracket and adjusting bracket of the belt pulley is allowed.

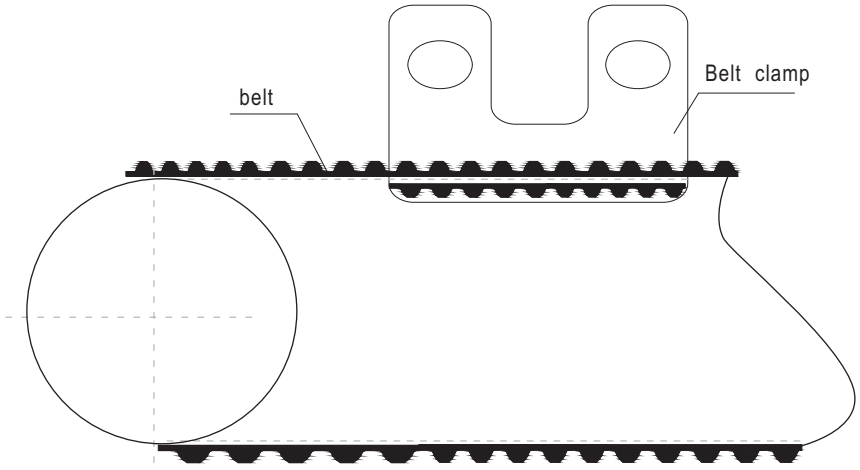
Belt installation

Belt installation above door

Please do as following steps;

1. Choose or cut belt according to door width;
2. Hang the belt with suitable length on left and right belt pulleys, put belt into belt clamp and make two ends meet at center;
3. Confirm that the moveable door leaf connected with beam A is closed, to install belt bracket C and tighten screw(see details on page 7);
4. Confirm that the moveable door leaf connected with beam B is closed, to install belt bracket B and tighten screw(see details on page 7).

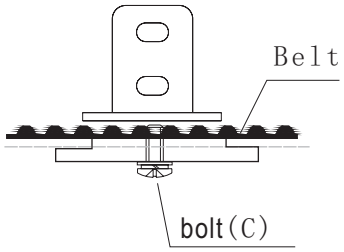




Belt installation

1. Move bolt（C）away;

2. Put the cut belt into the square groove in belt press plate, make two ends meet at center. Then put the press plate into belt clamp, tighten bolt（C）, fix it.

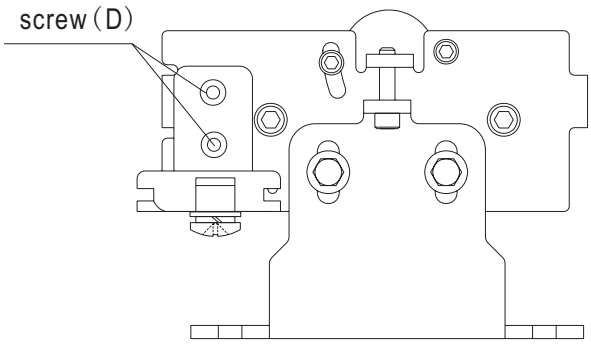


Connect belt and trolleys（single opening）

（1）Hang the belt on left and right belt pulley;

（2）Fix the bracket onto the trolley by using two screws（D）;

（3）Adjust belt tension.



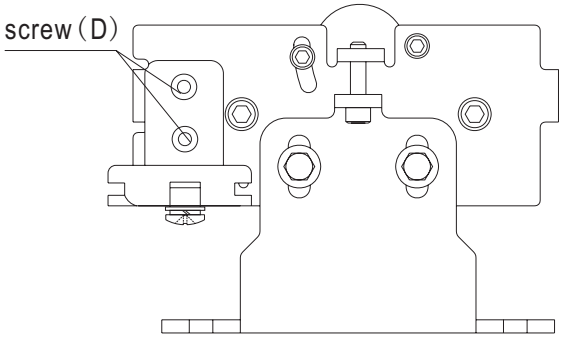
Belt installation

Connect belt and trolleys（bi-parting opening）

（1）Hang the belt on left and right belt pulleys;

（2）Fix the bracket onto the trolley by using two screws （D）;

（3）Adjust belt tension.



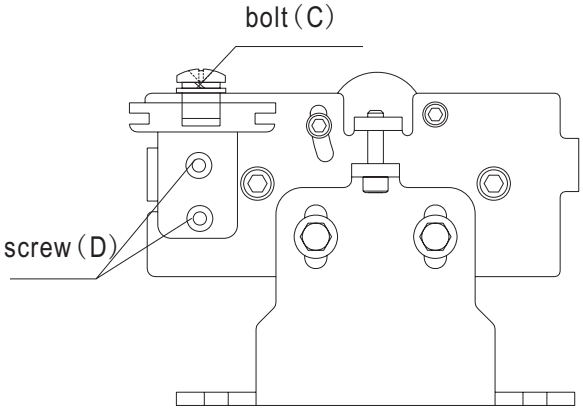
（4）Continue to connect.

1）Make the left and right door leaves close tightly at central position;

2）Tighten bolt（C）, remove belt press plate;

3）Aim the holes for screw （D） in belt clamp and trolley, then press the belt rightly into the groove of press plate, put the press plate into belt head, tighten bolt （C） to fix it.

4）Fix belt clamp onto the trolley by two screws （D）.



Belt tension adjustment

Adjust the belt tension pulley to achieve belt tension adjustment.

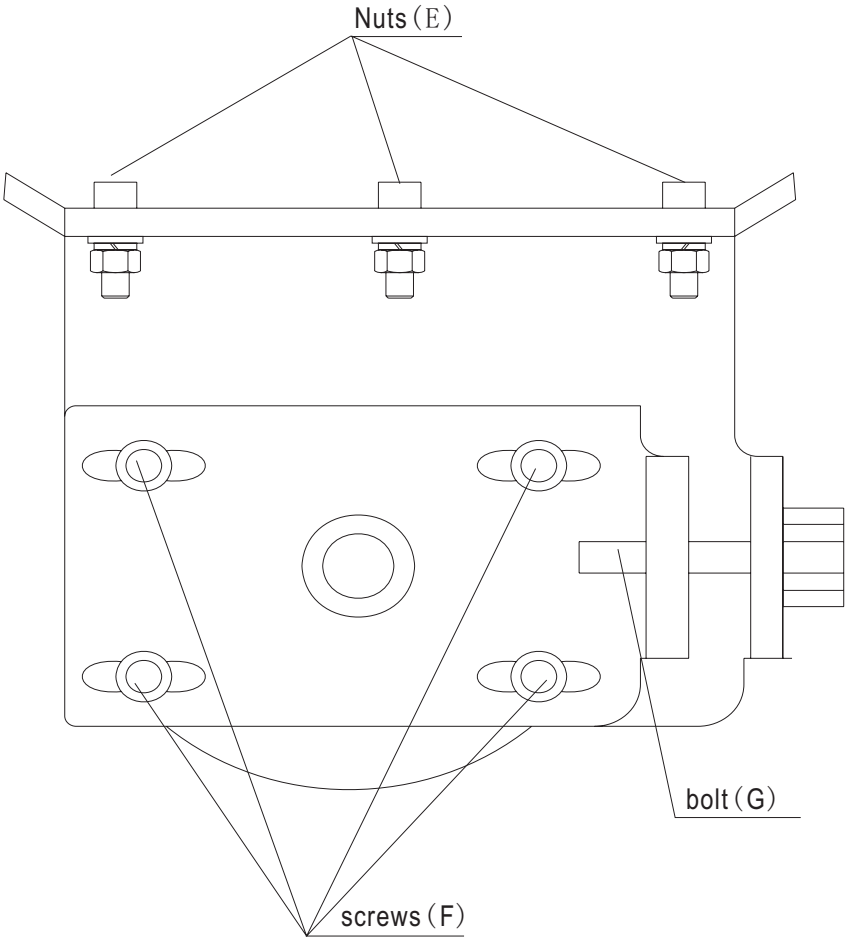
(1) Pull the tension pulley to side right hard, keep the belt tenseness, tighten the three nuts (E) on special bolt heads;

(2) Tighten four fixing screws (F);

(3) Rotate the tension adjusting bolt (G) clockwise to make the adjusting plate move to side right, the belt tension increasing, stop adjusting until tension is agreeable;

(4) Tighten four fixing screws (F);

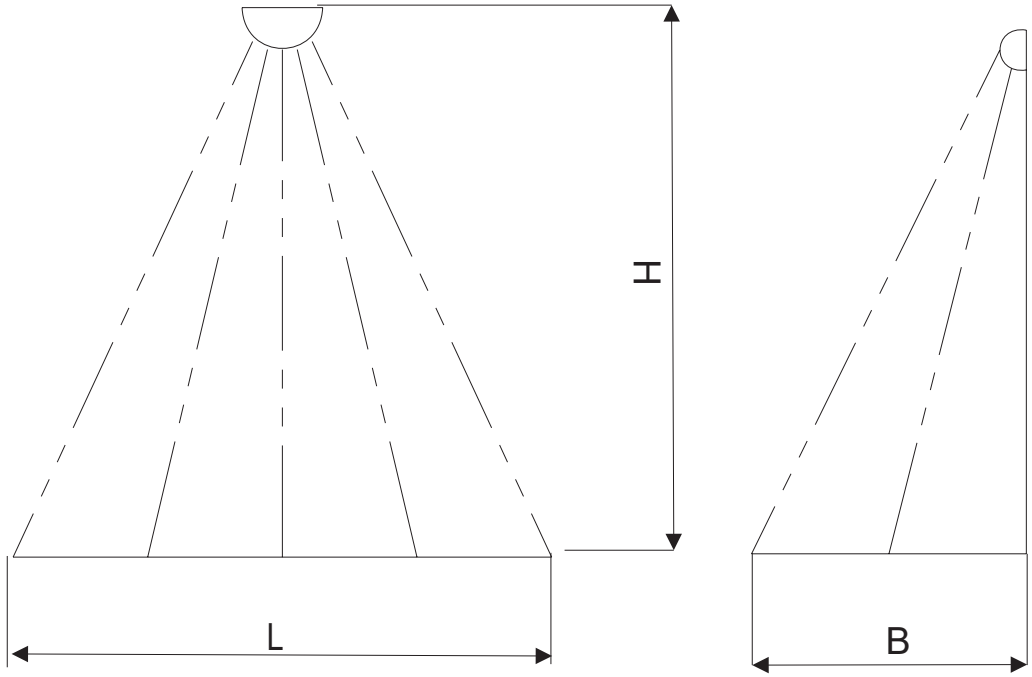
(5) After use for some time the belt will be stretched slightly and then the belt tension should be readjusted by repeating Steps 1-4.



Sensor installation

The sensor should be installed above the center of the door leaf properly with a height of not over 2.5 m high as most properly. Generally, the sensors are installed each inside and outside of the room. For wiring please refer to the wiring diagram and for more detailed rules for installation refer to the installation specifications of the sensor manufacturer.

Sensor

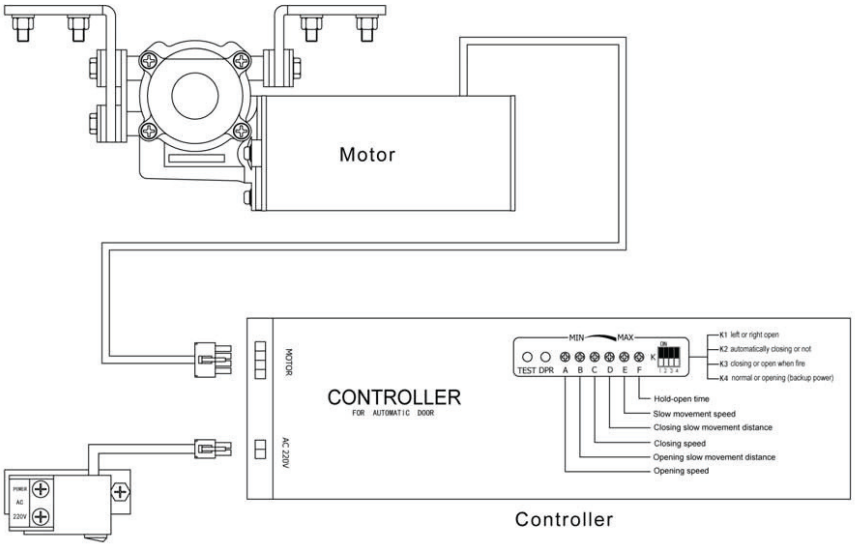


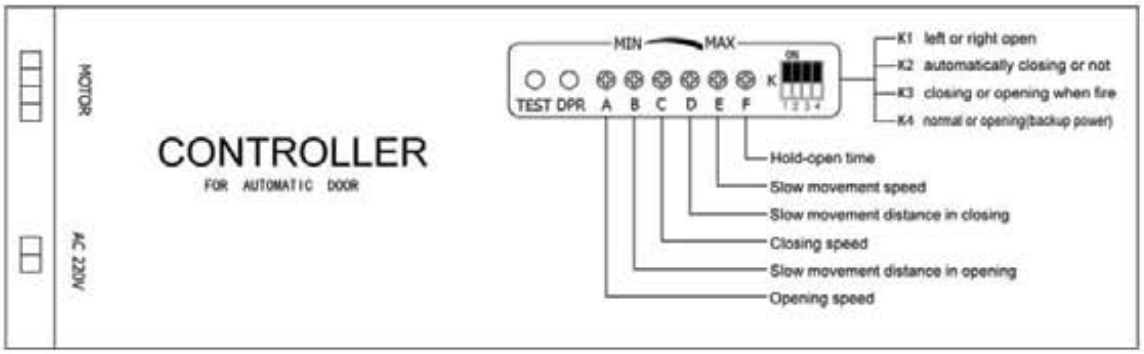
Note: As wiring voltage varies for sensors of different manufacturers and models, they should never be replaced at will!

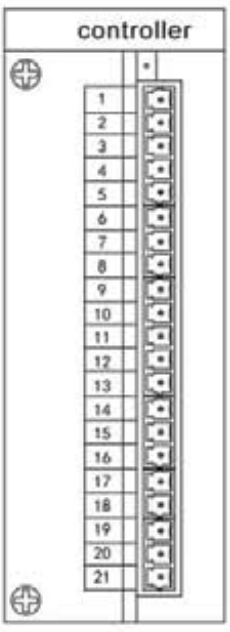
Description of controller and terminal blocks

Connection of controller, motor and switch terminal.

Note: All the connections should be performed with the power disconnected from the unit.

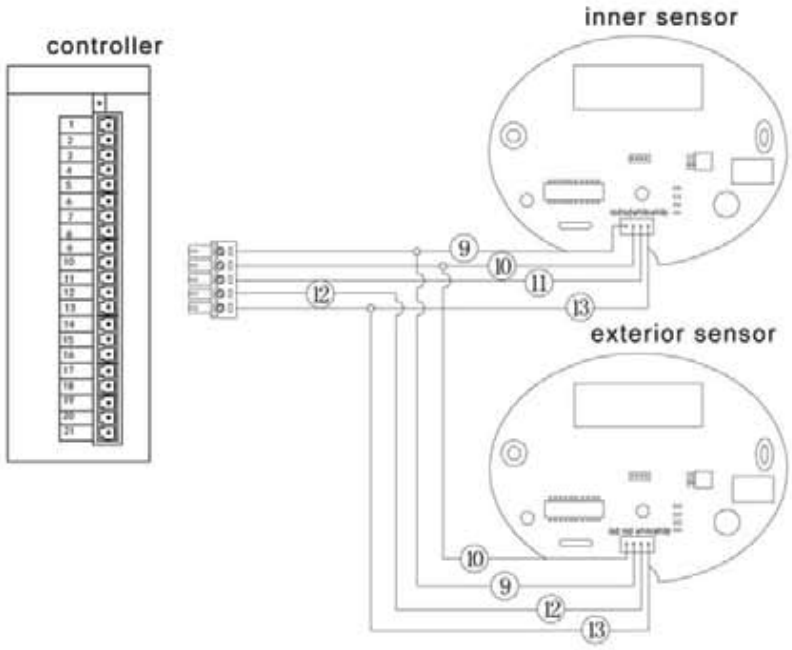






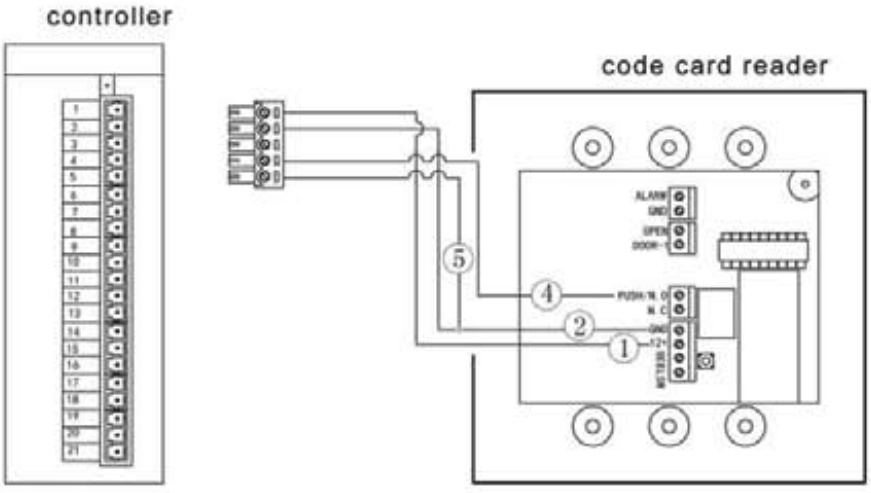
1. +12V
2. GND
3. safety beam input
4. access control input
5. COM
6. inter-lock input
7. inter-lock output
8. COM
9. +24V
10. GND
11. inner sensor input
12. exterior sensor input
13. COM
14. lock inner sensor
15. lock exterior sensor
16. COM
17. fire signal input
18. COM
19. +12V lock power output
20. +24V backup power input
21. COM

Connection of sensors



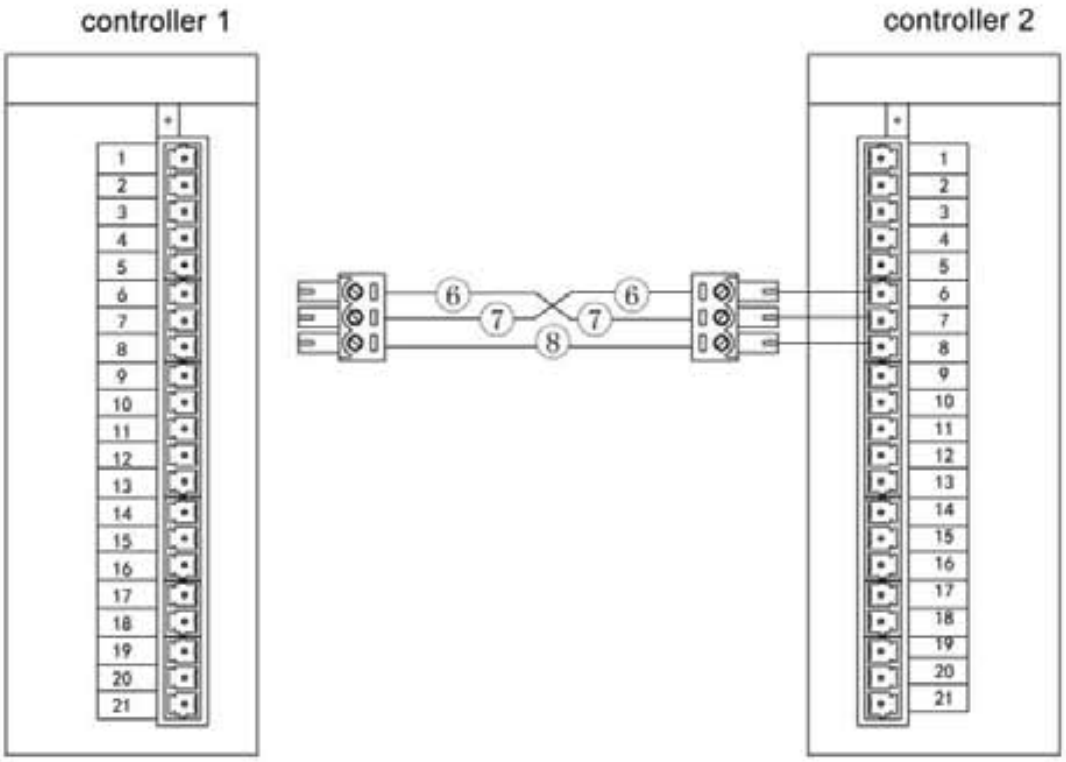
Connection of card reader

1.All the wiring operations should be conducted with the power disconnected.
2.Positive or negative polarity should be identified when the card reader is connected.
3.At this time the card reader with passive output should be connected. If a card reader with active output is available, it should be changed to passive output.



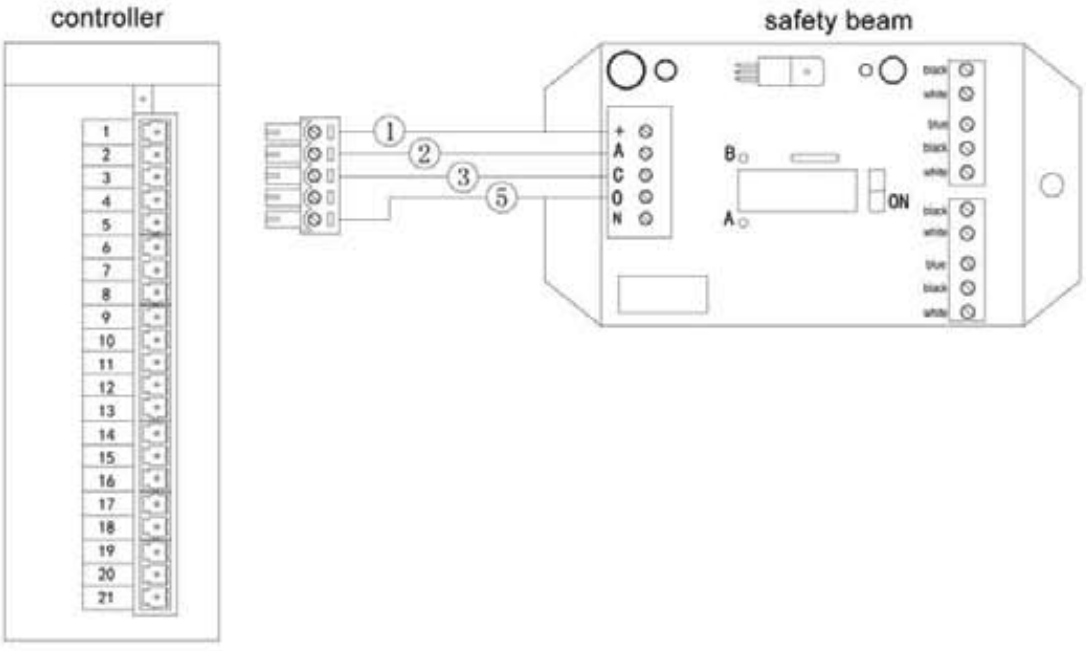
Caution: If the access control power is greater than 2.4W, it is necessary to supply 12V DC externally. Never feed 12 V power from the automatic door control system because overload will lead to failed controller.

Connection of double door interlocking



Connection of safety sensors

Caution: All the connecting operations should be conducted with power disconnected.

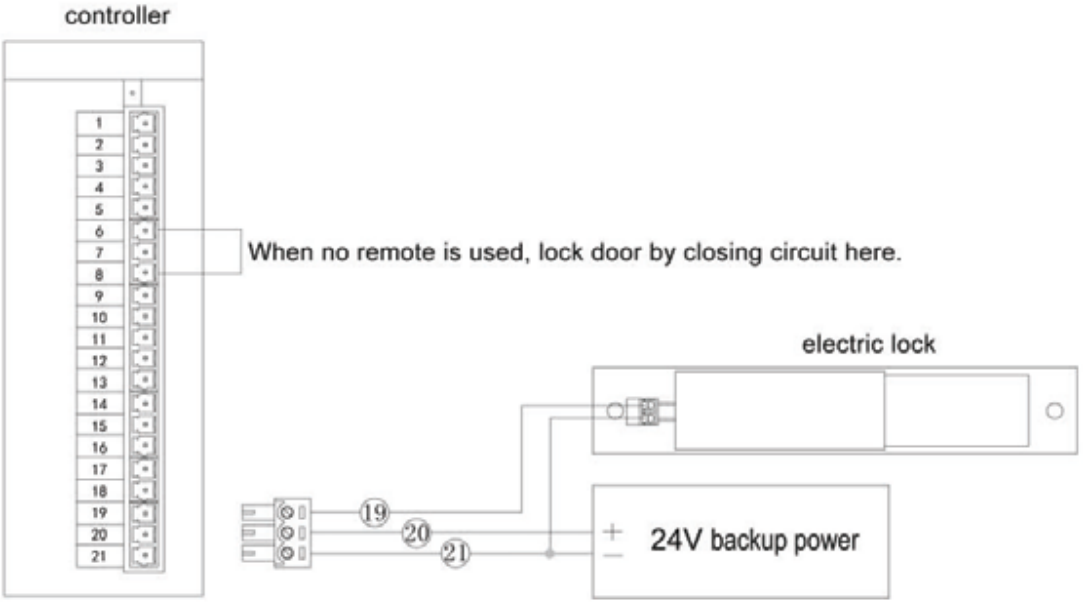


Connection of backup power and electric lock

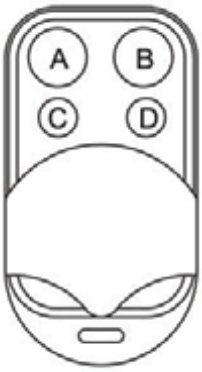
Caution: All the connecting operations should be conducted with the power disconnected.

Working current of electric lock is less than 200mA, starting current is less than 800mA.

When connecting backup power please note the polarity and connect as shown in the following drawing:



Remote control instructions



A	Lock	• After door closed, press A to lock the door,the signals from sensors will be ignored.
B	Opening	• Press B, the door will open and stay open.
C	Half-open	• When the door is fully closed, pressing C will open the door to 50% of full open.
D	Automatic	• Press D to cancel the A, B, C settings.

Operation description

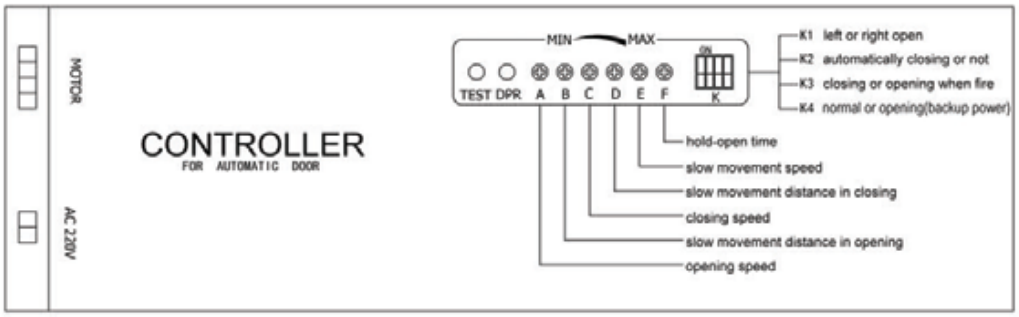
1. After switching on power, the system begins its initial program from the close status. The door leaf will open at a low speed and close again after meeting with the door stopper and confirming the stroke.The built-in micro-processor will memorize the stroke through this open-close cycle.

Sensor action → Fast open → Brake → Slow open → Stop after full open

Sensor stop → Hold open time → Fast close → Brake → Slow close → stop

Note: The multi-function controller allows the selection of different modes. These modes can be chosen as required.

◎ Name and function of each part in the central controller



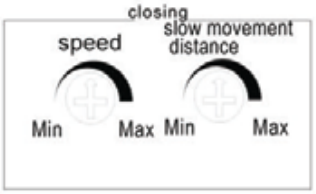
TEST：One press initialises a full open and close stroke and can be used for conveniently adjusting every parameter during installation.
DRP：Power indicator. Always on when mains or UPS is available.
K1：Opening direction: Before switching on， push the moveable leaf fully open; switch on, if the door learning is to closing direction, do not change K1; Alternatively, switch K1 to other position for direction change .
K2：Closing automatically or not：K2 is down, the door will close automatically after hold-open time；K2 is "ON"：Only another closing signal can make the door to close after full open.
K3：Closing or opening when fire：K3 is down, the door will open when it receives a fire signal; At "ON" means the door will stay closed when it receives a fire signal.
K4：Status when backup power is available from battery pack：When K4 is down the door will open and close normally；When K4 is "ON",the door will stay open.
A：Turning counterclockwise will reduce open speed while clockwise will increase speed.
B：Turning counterclockwise will reduce open speed while clockwise will increase speed.
C：Turning counterclockwise will reduce close speed while clockwise will increase speed
D：Turning counterclockwise will reduce close buffer distance while clockwise will increase distance.
E：Turning counterclockwise will reduce buffer speed while clockwise will increase speed.

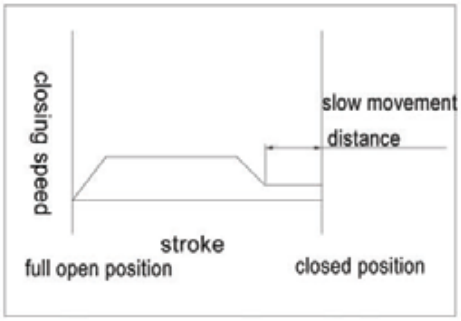
◎ Before power on:

1. Push the door leaf by hand,check the resistance. If the door operation is not smooth, or is noisy, please check the mechanism.
2. Push the door fully open.
3. Switch K2, K3, K4 to positions according desired function.

◎ After power on:

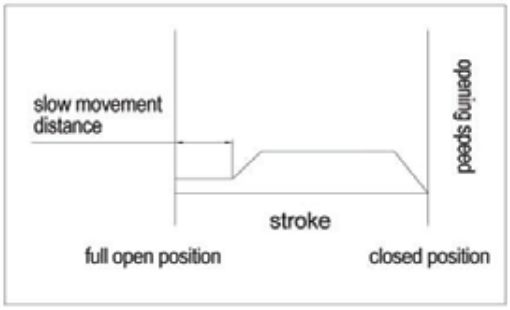
1. Check the door operating direction: if the door leaf is sliding to closing direction,keep K1 at the position where it is; Or, switch off,then turn K1 to opposite position,about 10 seconds later, switch on.
2. Adjust closing operation parameters.





Note: To avoid impact on pedestrian,the closing speed cannot be too fas together or banging on framework,the slow movement distance can not b can be closed tightly, the slow movement speed can not be too slow.

3. Adjust opening operation parameters.



Note: The opening speed should be faster to allow full opening prior to pedestrian passing through; to avoid the doors banging together or banging on framework, the slow movement distance can not be too short; to ensure the door can be opened fully, the slow movement speed can not be too slow.

4. Adjust hold open time.