

# Automatic Door Systems



## K-2

Single-winged / Bi-parting

( for Slim Aluminum Profile )



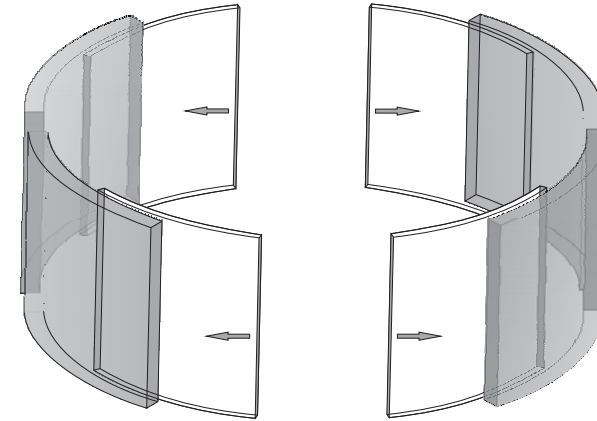
<http://www.kth-automaticdoor.com/>  
e-mail : [kth@kthtw.com](mailto:kth@kthtw.com)

## OPERATION INSTRUCTION



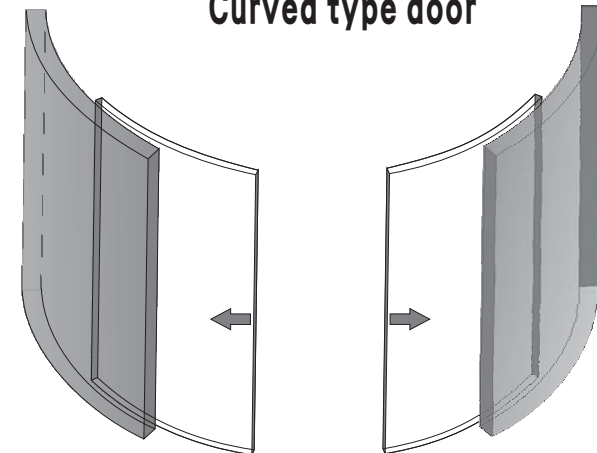
Our company has the following series of automatic door, please contact with our distributors/representations.

### Round type door



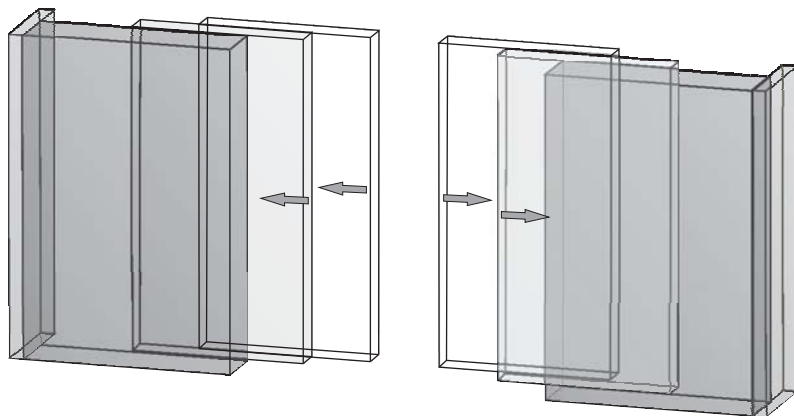
Installation: Please in accordance with the instruction of Round Type Door.

### Curved type door



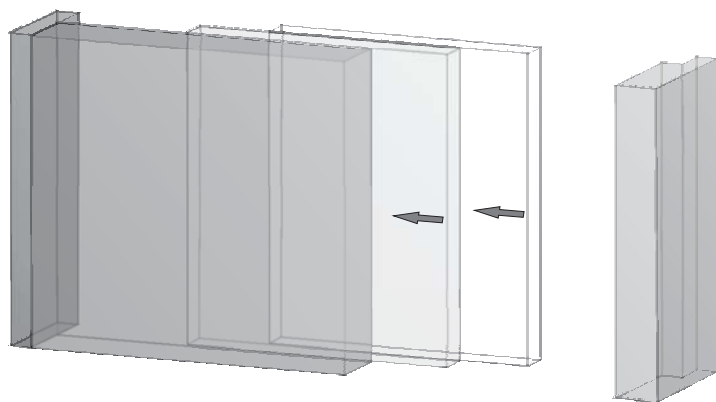
Installation: Please in accordance with the instruction of Curved Type Door.

Telescopic 4-winged Sliding Doors.



Installation: Please in accordance with the instruction of Telescopic 4-winged Sliding Doors.

Telescopic 2-winged Sliding Doors.

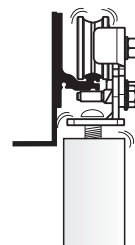


Installation: Please in accordance with the instruction of Telescopic 2-winged Sliding Doors.

The Door-Leaf sends out abnormal noise in operating.

## Cause 1

The SCREW of the HANGING TWIN-WHEEL is loose.

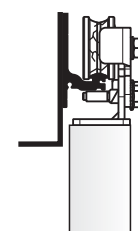


## How to solve:

Refasten the SCREW of HANGING TWIN-WHEEL.

## Cause 2

HANGING TWIN-WHEEL is broken.

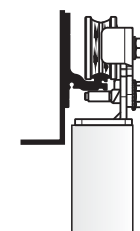


## How to solve:

Replace a new one HANGING TWIN-WHEEL.

## Cause 3

HANGING TWIN-WHEEL is dirty.

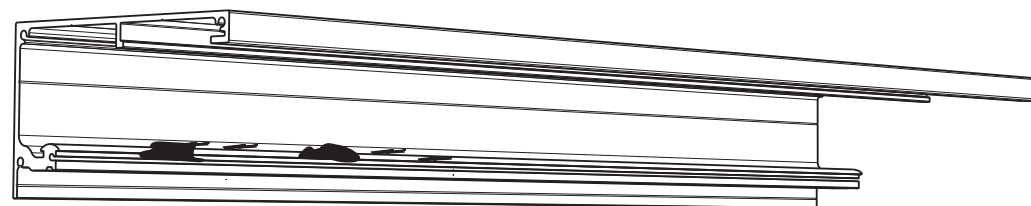


## How to solve:

Clean the HANGING TWIN-WHEEL.

## Cause 4

ALUMINUM PROFILE is dirty.

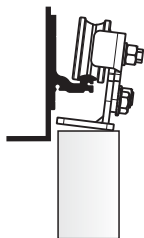


## How to solve:

Clean the ALUMINUM PROFILE.

Door-Leaf isn't smooth in operating.

Cause 1  
HANGING TWIN-WHEEL is not  
at vertical position.



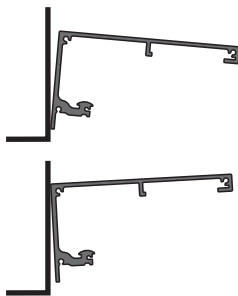
How to solve:  
Readjust the  
HANGING TWIN-WHEEL.

Cause 2  
1. Door touches Ground Rail.  
2. Ground Rail is dirty.



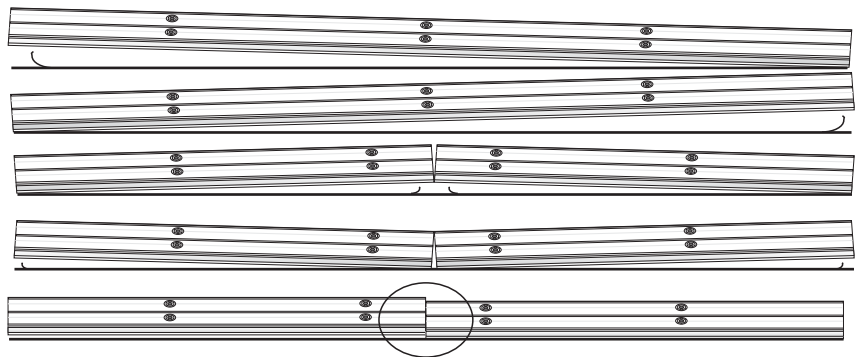
How to solve:  
1. Readjust the distance between Door  
and Ground Rail.  
2. Clean up the Ground Rail.

Cause 3  
ALUMINUM PROFILE is not vertical.



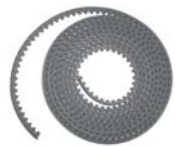
How to solve:  
Readjust the vertical position of the  
ALUMINUM PROFILE.

Cause 4  
ALUMINUM PROFILE is not at vertical position.



How to solve:  
Readjust the level position of the ALUMINUM PROFILE.

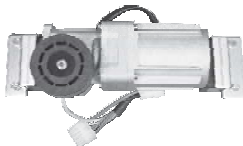
1. COMPONENTS SPECIFICATION .....	P1
2. TECHNICAL SPECIFICATION .....	P2
3. SECTIONAL DRAWING .....	P3
4. INSTALLATION DRAWING .....	P4
5. INSTALL PROCEDURE .....	P5
6. INSTALL THE BELT ROLLER .....	P6
7. THE POSITION OF THE HANGING TWIN-WHEEL .....	P7
8. INSTALL THE RACK BELT .....	P8
9. ADJUST THE DOOR-LEAF .....	P9
10. CONNECTION .....	P10
11. OUTPUT CONNECT .....	P11
12. TEST AND ADJUST .....	P13
13. ADJUSTMENT .....	P14
14. BROKEN CHECKING .....	P16
15. TROUBLESHOOTING .....	P17
16. TROUBLESHOOTING(ILLUSTRATED) .....	P18



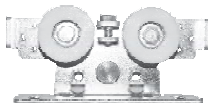
RACK BELT



MICRO-CONTROLLER

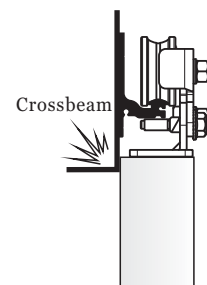


DC WORM GEAR MOTOR

PASSIVE BRACE  
with BELT FIXERACTIVE BRACE  
with BELT FIXERHANGING  
WHEEL 4 PCS2 PCS for  
single-wingedBELT ROLLER  
1 PCSNot including for  
single-wingedSCREW-  
8 PCS4 PCS for  
single-wingedSTOPPER-  
2 PCS2 PCS for  
single-wingedDOOR SCREW-  
8 PCS4 PCS for  
single-wingedHANGING BRACE-  
4 PCS2 PCS for  
single-wingedCOMBINED  
TERMINAL BLOCK  
(OPTIONAL DEVICE)WIRE CLAMP-  
5 PCS5 PCS for  
single-wingedSENSORS  
(OPTIONAL DEVICE)BLOCK SCREW-  
8 PCS4 PCS for  
single-winged

Door can't be opened or closed.

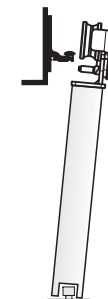
## Cause 1

Above the Door-Leaf touched  
with the crossbeam.How to solve:  
Adjustment the interval between the  
Door-Leaf height and Crossbeam.

## Cause 2

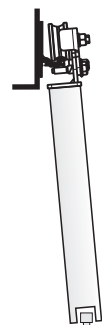
The Door-Leaf touched with the  
Ground Guide Rail.How to solve:  
Adjust the Door-Leaf height.

## Cause 3

Door-Leaf derails the  
ALUMINUM PROFILE.How to solve:  
Put the Door-Leaf into the  
ALUMINUM PROFILE again.

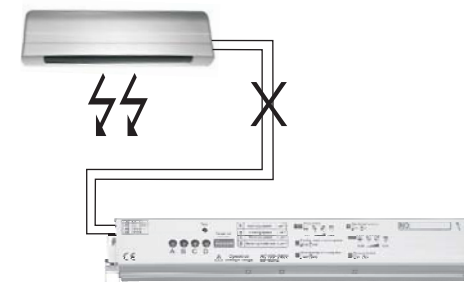
## Cause 4

Door-leaf is not vertical.

How to solve:  
Adjust the Ground Guide  
Rail/Wheel position.

## Cause 5

SENSOR is broken or disconnects to the MICRO-CONTROLLER.

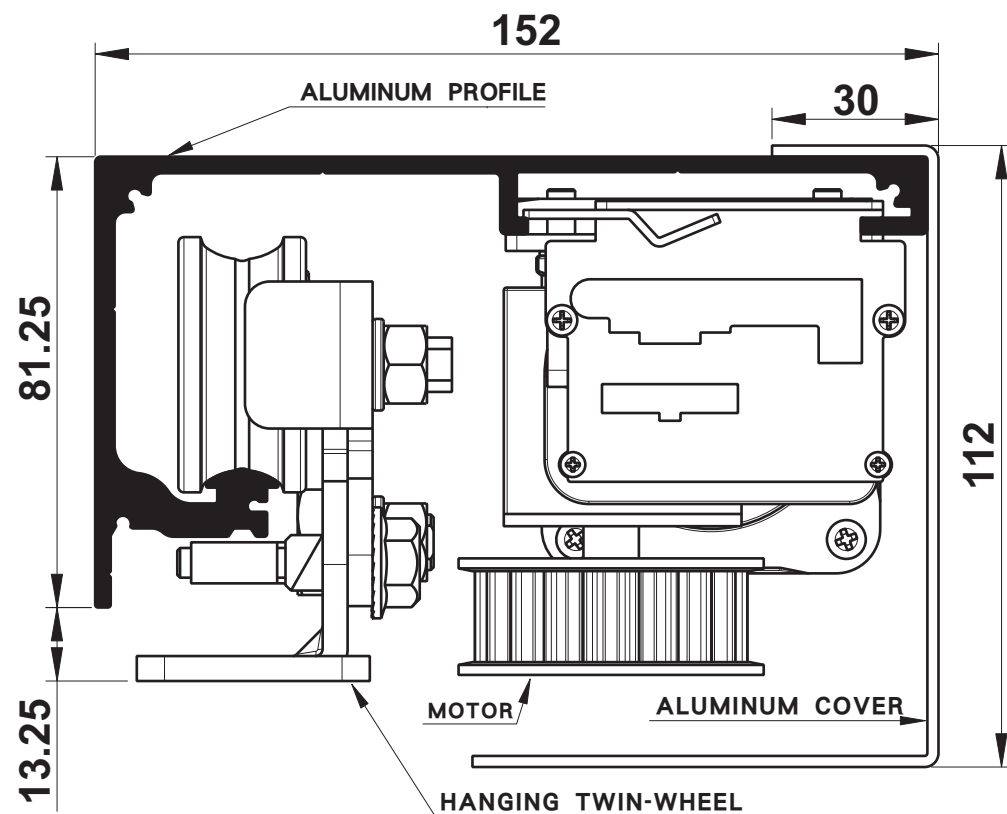


How to solve:

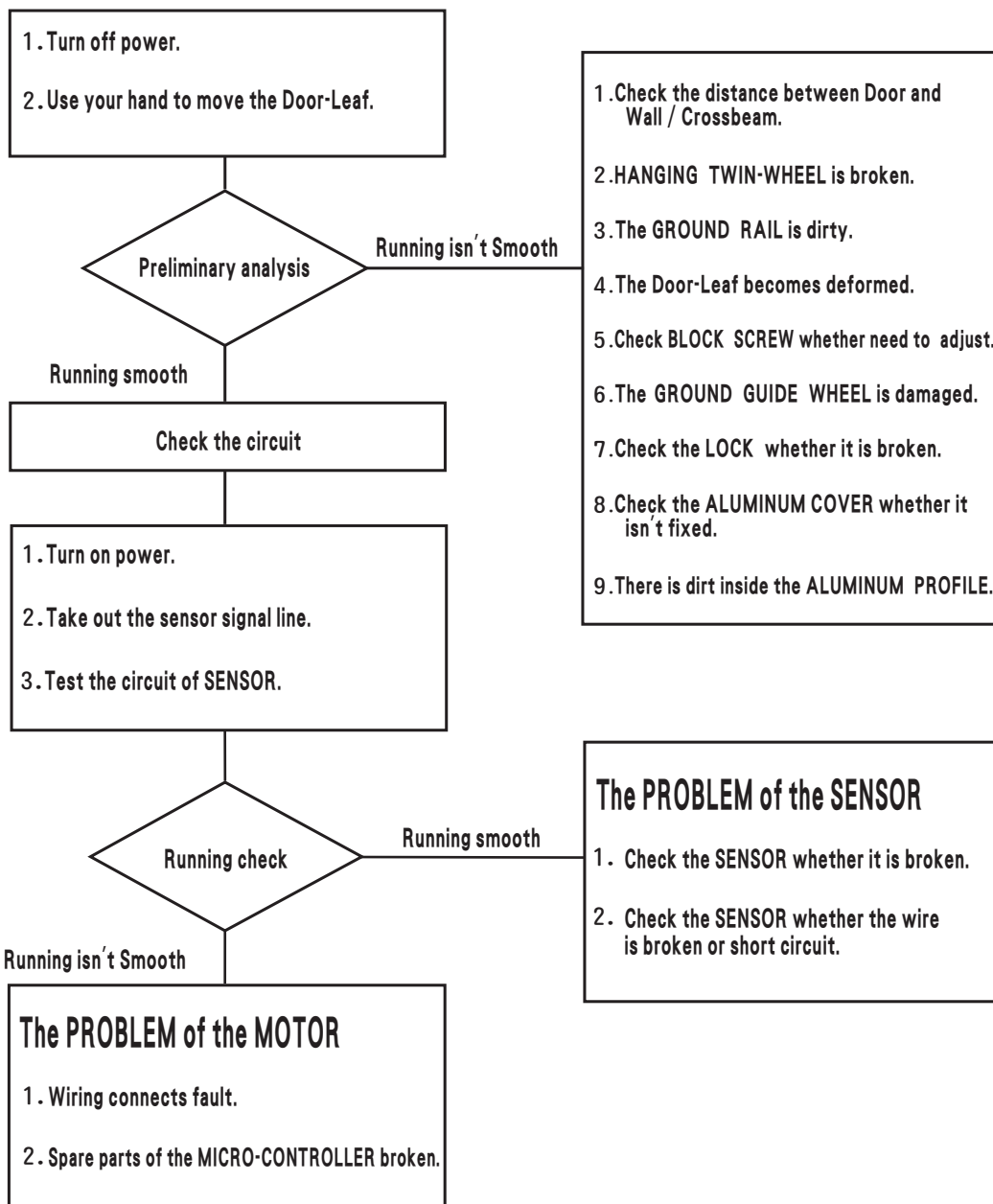
- 1.If SENSOR is broken please change a new one.
- 2.Check SENSOR whether it connects to the MICRO-CONTROLLER.

PROBLEMS	REASONABLE	CHECK	HOW TO SOLVE
DOOR CAN'T BE MOVED.	1.No power.	Broken circuit.	Check the broken circuit position.
		The Power Switch is not opened.	Open the POWER SWITCH.
	2.The door is locked.	Door is locked and no movement action.	Open the DOOR LOCK.
	3.The sensor is broken.	Signal light is WORKING.	Check the MICRO-CONTROLLER.
		Signal light is OUT OF WORKING.	Check the CIRCUIT OF SENSOR or change a new one SENSOR.
SPEED	1.Speed is too slow.	Check the Speed at KNOB of MICRO-CONTROLLER.	Adjust the Speed of Open/Closed Door.
	2.Door runs into the obstructor, then cause the Door moving slow.	Installation problem or dirty.	Reinstall or clean the ALUMINUM PROFILE.
	3.Door is difficult to move.	Turn off the power.Use hand to move the Door, besides, check the Ground Guide Rail whether it is dirty.	Clean the Ground Guide Rail.
		Check the HANGING TWIN-WHEEL whether it is broken.	Change a new one.
		Check the Door Bolt in the door bottom whether it is loosen.	Fix the Door Bolt.
		Check whether the Ground Wheel is broken.	Change a new Ground wheel.
DOOR CAN'T FULL OPEN.	In the Half-Open way.	Check the Knob/Switch.	Turn on to Full Open.
DOOR CAN'T CLOSE.	1.In the Full-Open way.	The SENSOR keeps working.	Check wiring or change a new SENSOR.
	2.The Door opens suddenly while it is moving to close .	The SENSOR probably is installed with something wrong.	Adjust the SENSOR or change a new one.

TYPE	K-2	
MODEL	SINGLE-WINGED	BI-PARTING
DOOR WEIGHT	1 20kg X1 (door)	1 00kg X2 (door)
DOOR WIDTH	DW=500mm~2500mm	DW=500mm~2500mm
INSTALL WAY	Surface install	Surface install
MOTOR	DC24V 75W BRUSHLESS DC MOTOR	
CONTROL	STANDARD MICRO-CONTROLLER	
POWER CONSUMPTION	75W	
VOLTAGE	AC100V~240V	
ENVIRONMENTAL TEMPERATURE	-20℃~+50℃	
VOLUME	60decibel(max.)	
STARTING SPEED	200~550mm(second)	
STARTING TIMES	0~20 sec. (regulable)	
TRANSMISSION IMPORTANT CONDITION	RACK BELT S8M	
OPENING DOOR RANGE	FULL/HALF-OPEN (regulable)	
PFC POWER EFFICIENCY	0.95(in AC100V Full load)	
TRACTION FORCE	3 kg	



MEASURE : mm







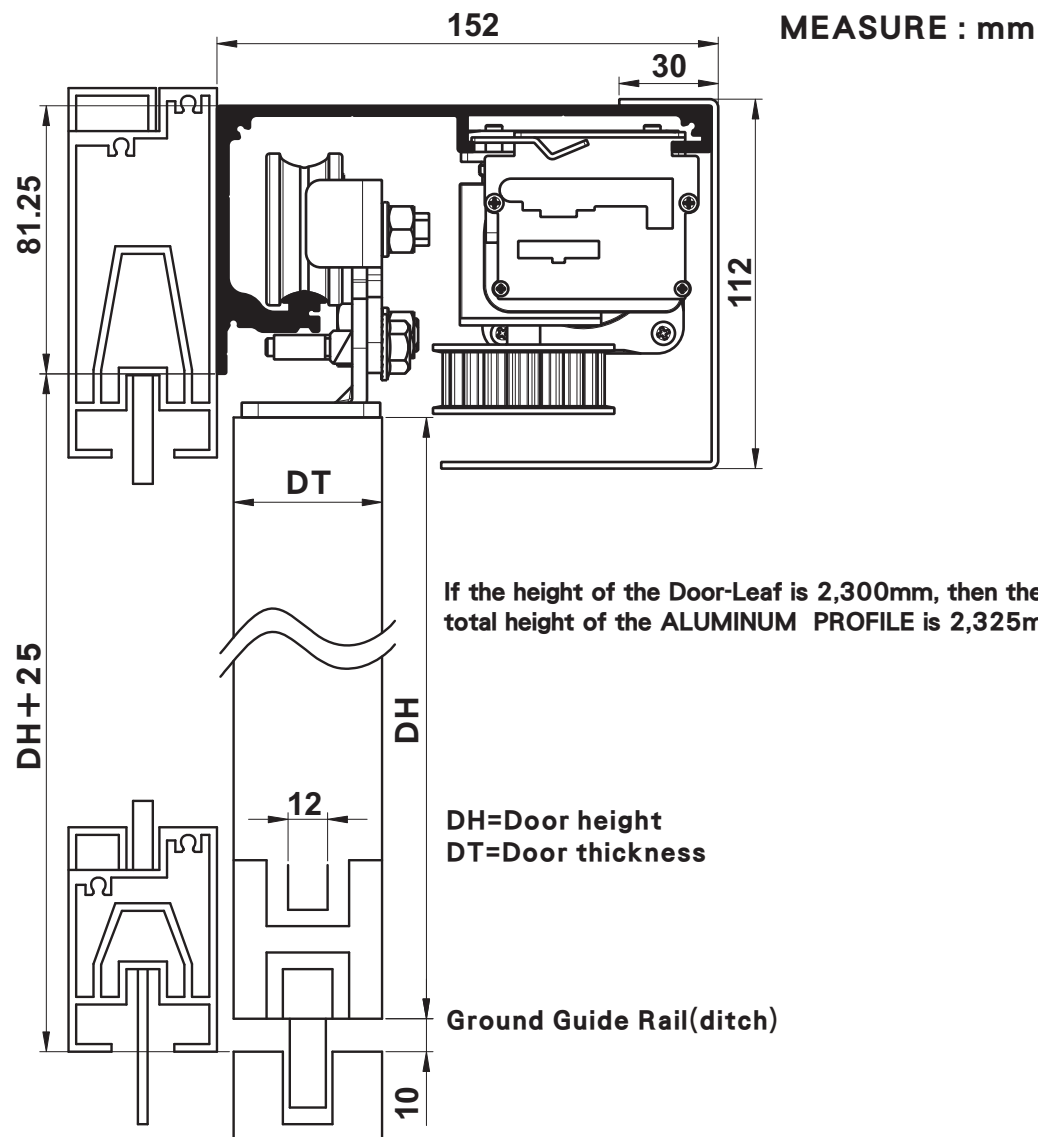
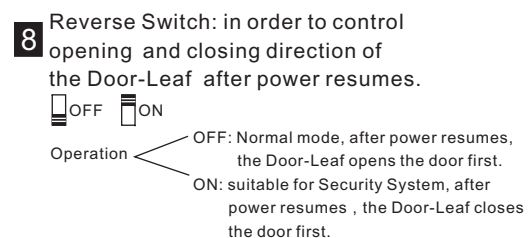
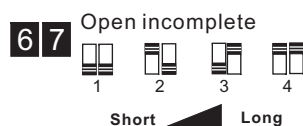
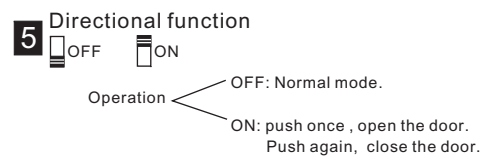
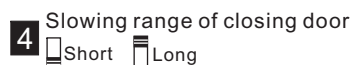
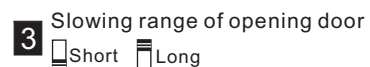
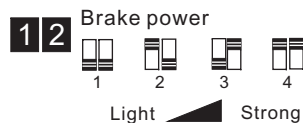
## D Opening hold time

Adjust the HOLD OPEN TIME. Higher number, the hold time is longer.

NUMBER	0	1	2	3	4	5	6	7	8	9
SECOND	0	1	2	3	4	5	6	10	15	20



Fingered Switch



**1** Prepare Should correct the height and the leveling of the ALUMINUM PROFILE



**2** Cut and install the ALUMINUM PROFILE



**3** Install the SENSORS



**4** MOTOR



**5** MICRO-CONTROLLER

**6** Install the BELT ROLLER



**7** Hang and adjust the Door-Leaf



**8** Install and adjust the BELT



**9** Power connect



**10** Test and adjust

When USER regulates the Speed the Range and the Brake; it will start to accord what USER sets after twice running.

When door works over 10 times, the controller will record the distance. If turn on the power again, the door will start detecting in slow speed and reach the correct distance.



### A The opening speed of the door

Adjust the OPEN SPEED. Higher number, faster speed.

CAUTION: please adjust the number one by one from low to high.



### B The closing speed of the door

Adjust the CLOSED SPEED. Higher number, faster speed.

CAUTION: please adjust the number one by one from low to high.



### C The slowing speed of the door

Adjust the SLOW SPEED. Higher number, faster speed.

CAUTION: please adjust the number one by one from low to high.

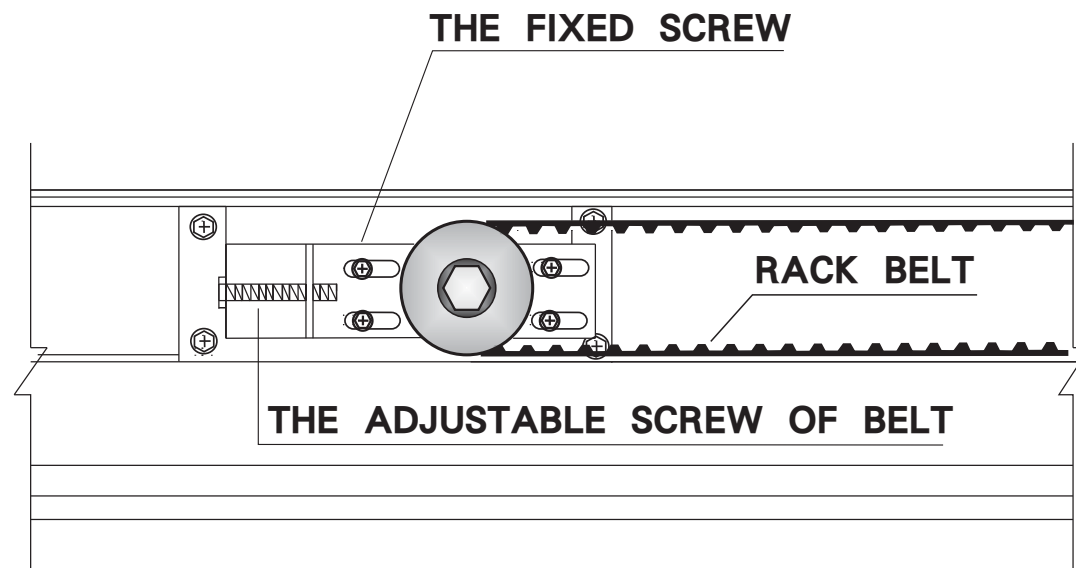
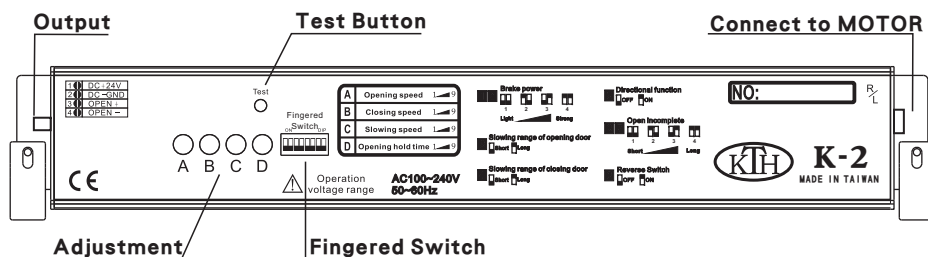
Before turn on the power, make sure the Door-Leaf can be smoothly moved, and the electric link is correct at first.

## 1.SYSTEM PROGRAM REMEMBER

After turn on the power, the MICRO-CONTROLLER will remember the distance and the range.

## 2.ADJUST

The FACEPLATE of MICRO-CONTROLLER



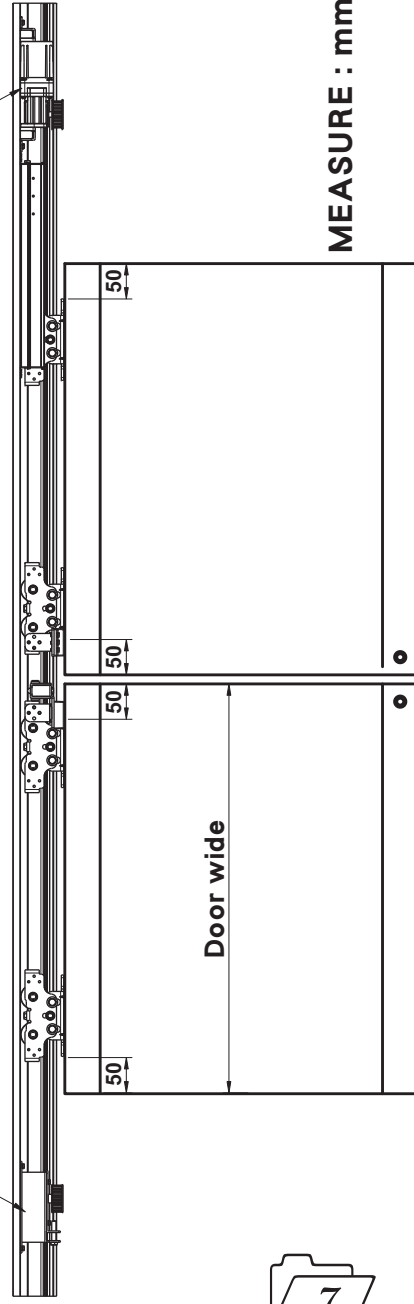
TENSION of BELT can be adjusted by the ADJUSTABLE SCREW of BELT, after that, must tighten the FIXED SCREW of BELT.

★Please don't adjust the BELT too tight.

Please contact us / your supplier if you have any questions.

BELT ROLLER

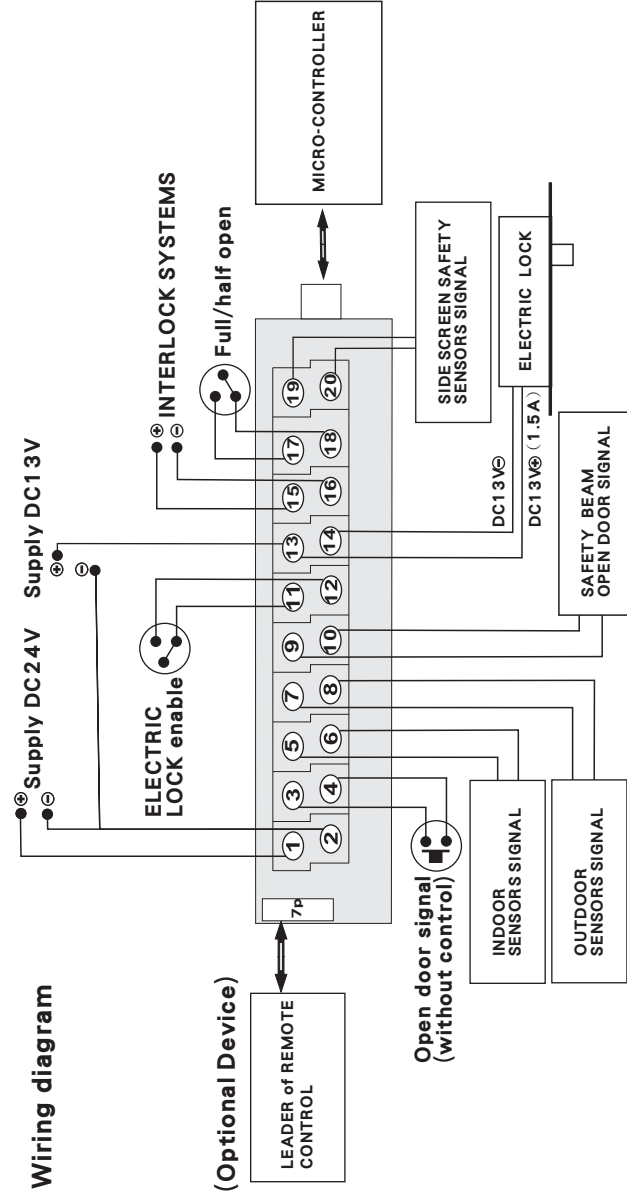
MOTOR



## POSITION OF HANGING TWIN-WHEEL:

Two sides of Door-deaf keeps the distance of 50mm to make sure the safety of installation

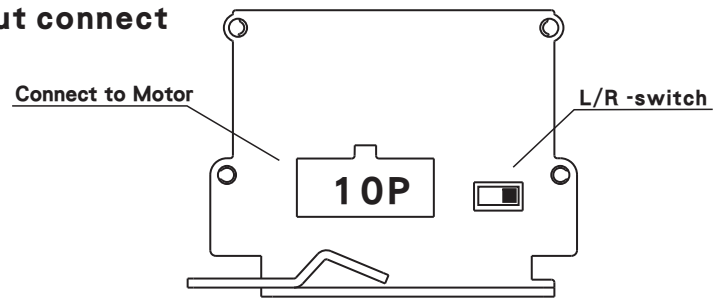
Wiring diagram



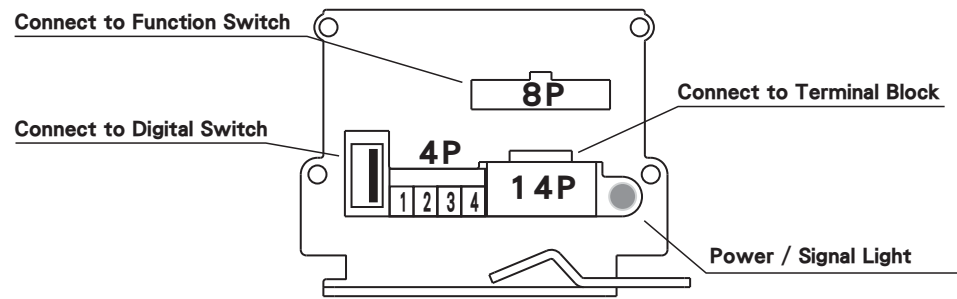
- (A) The FUNCTION of the ELECTRIC LOCK will work when ① and ② are short circuit, then ③ and ④ will output DC13V for ELECTRIC LOCK after the door closes. ③ and ④ will not output DC13V if ① and ② are not short circuit.
- (B) The SIGNAL of the SAFETY BEAM is controlled by ⑤ and ⑥. When door is opening and running, ⑤ and ⑥ keep to accept the signal, then the SAFETY BEAM will be working. ⑤ and ⑥ will not work when the door is closed, then the SAFETY BEAM will lose efficacy when the door is closed.
- (C) The signal of Side Screen Safety Sensor is controlled by ⑦ and ⑧. Side Screen Safety Sensors are placed at the rear end of the door to prevent collisions during the opening movement of the moving leaves. When the signal activates, the moving leaves will become slowly, till the door opens fully, then close normally.

## MICRO-CONTROLLER

## Input connect



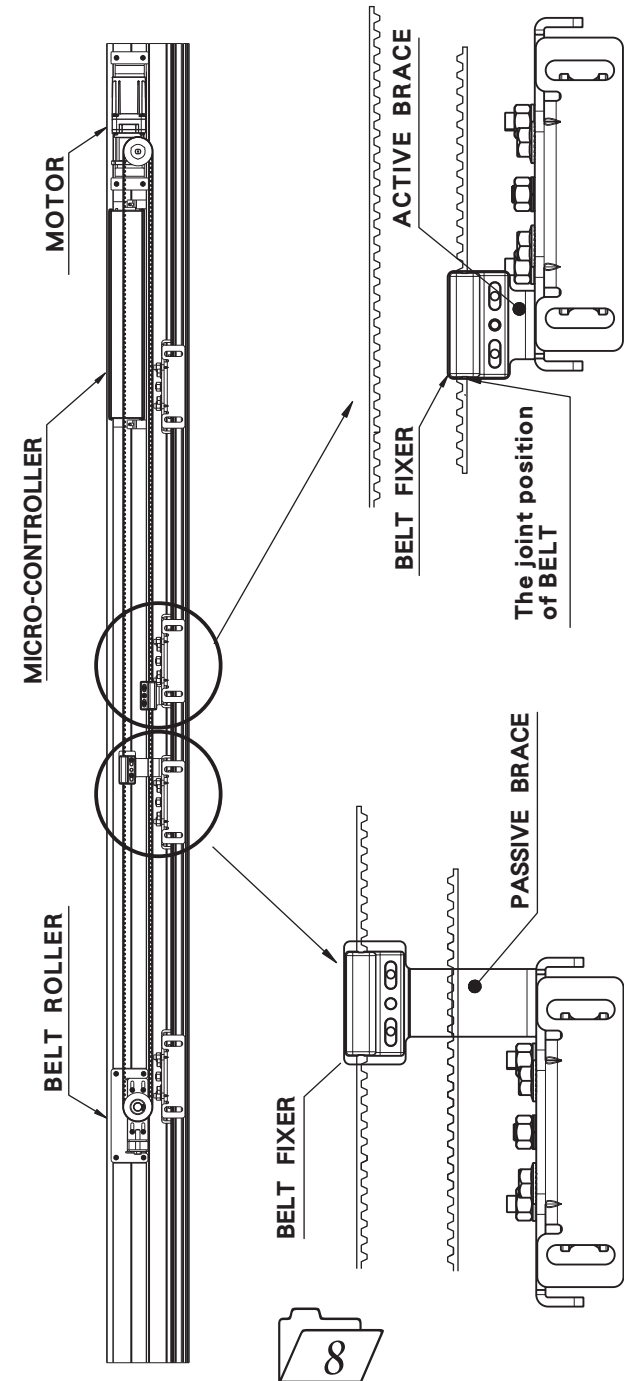
## Output connect

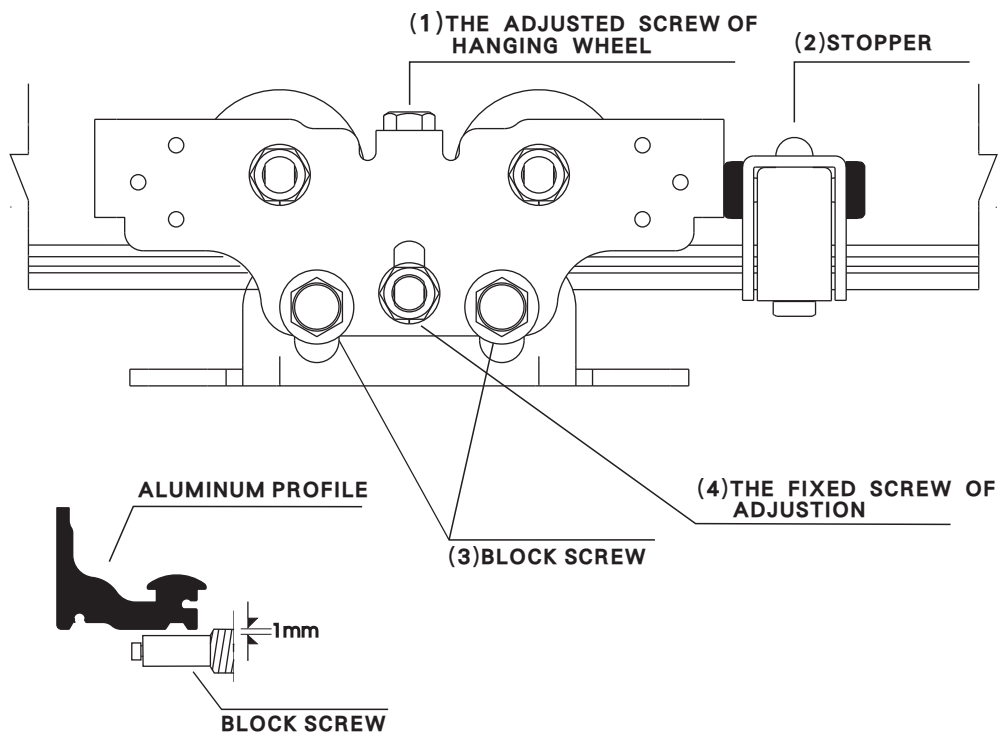


## 4P terminal

1	2	3	4
---	---	---	---

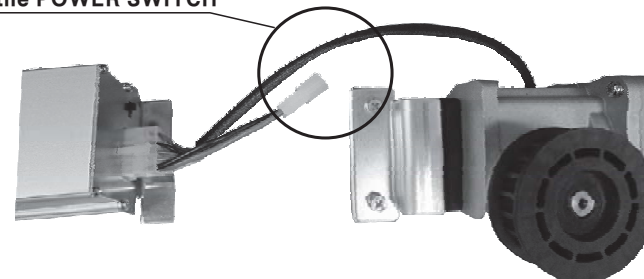
- 1.DC24V<sup>+</sup> — Power of SENSOR
- 2.GND —
3. — The signal of SENSOR
4. —





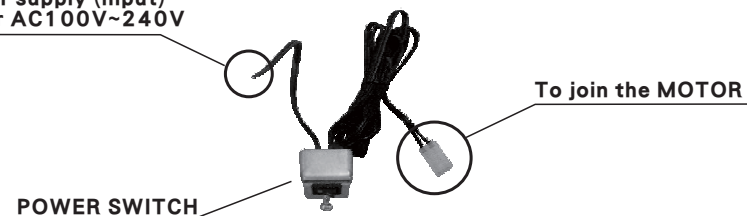
- A** When Door-Leaf height and interval need to adjust, loose (3) & (4) at first, then adjust (1).
- B** Need to fasten (3) & (4) after adjust **A**.
- C** Install above-mentioned (2) after make sure the DOOR OPEN POSITION.

To join the POWER SWITCH



The ILLUSTRATED of CONTROLLER and MOTOR.

Power supply (input)  
Either AC100V~240V



### Warning

Please confirm WHETHER the SENSOR VOLTAGE is the same as the power supply. If different between them, need to add the TRANSFORMER, otherwise the SENSOR would be burned.