

# **KTH TH-3** **AUTOMATIC DOOR SYSTEM**

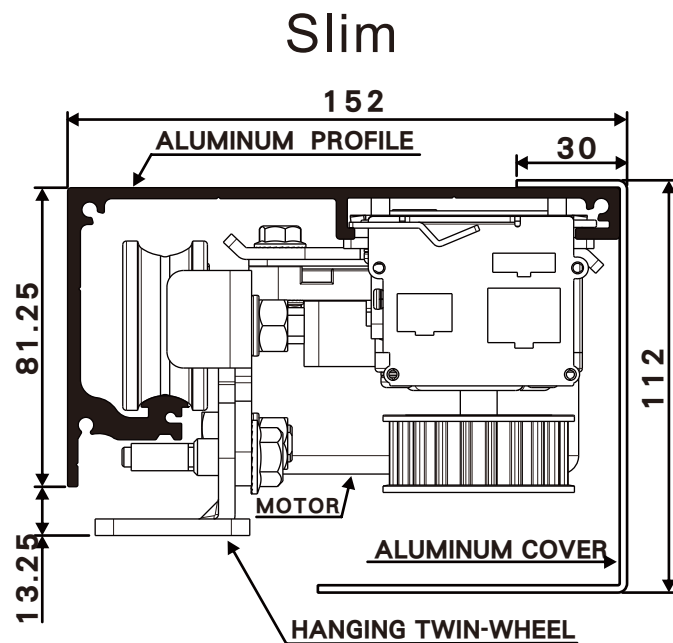
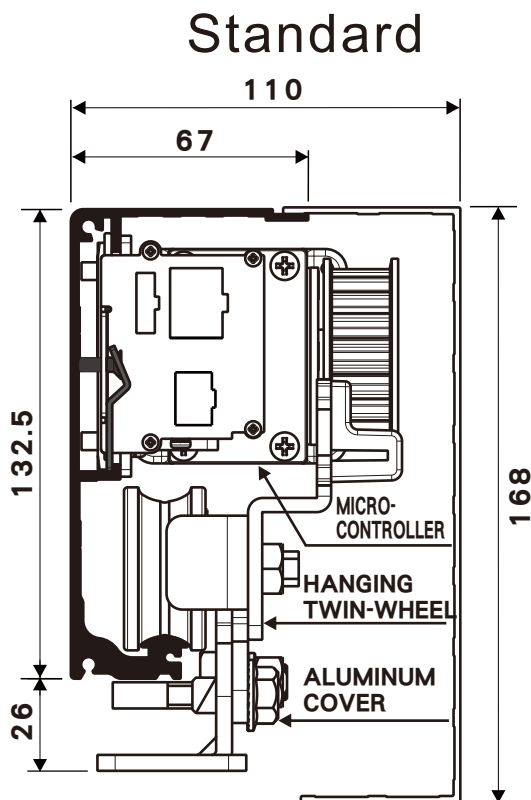


## ■ TABLE OF CONTENTS

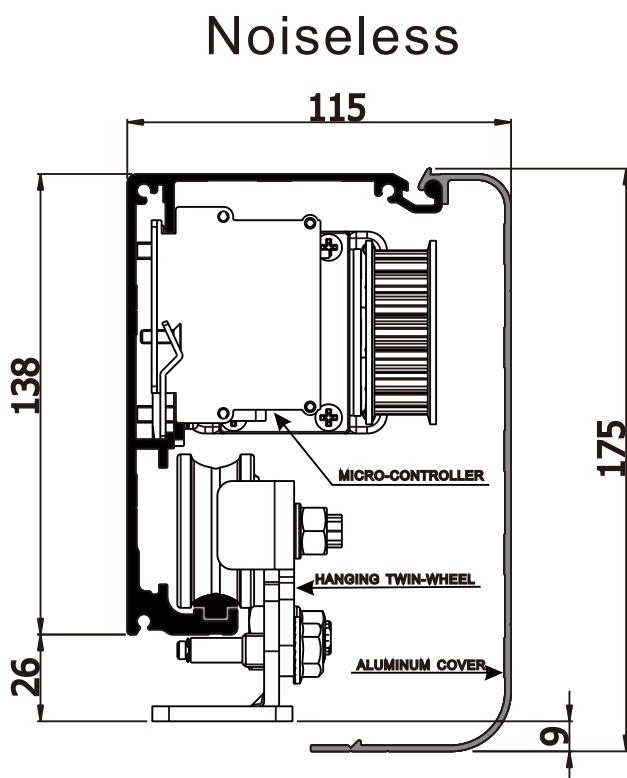
1. SPECIFICATION&PROFILE .....	1
2. COMPONENTS .....	2
3. THE POSITION OF THE HANGING TWIN-WHEEL & INSTALL THE RACK BELT .....	3
4. LEGEND OF PART DRAWING .....	4
5. TEST & ADJUST(STANDARD) .....	5
6. CONNECTION .....	6
7. ADJUST CONTROLLER .....	7
8. TEST & ADJUST(EN16005) .....	8
9. ADJUST CONTROLLER-1 .....	9
10. ADJUST CONTROLLER-2 .....	10
11. WIRING DIAGRAM OF TH-100(STANDARD) .....	11
WIRING DIAGRAM OF TH-100(EN16005)	
12. TH-125 REMOTE CONTROL & TH-136 DIGITAL SWITCH ..	12
13. A-11 SAFETY BEAM & 3H-CH01 SENSOR .....	13
14. HR100-CT(EN-16005) SENSOR .....	14
15. TH-201&TH-200LK LOCK .....	15
16. TH-135-FUNCTION KEY SWITCH .....	16



## SPECIFICATION&PROFILE



MEASURE : mm



MEASURE : mm

TYPE	TH-3	
MODEL	SINGLE-WINGED	BI-PARTING
DOOR WEIGHT	150kgX1(door)	130kgX2(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	60 decibel(max.)	
STARTING SPEED	600mm(second)	550mm X 2 (second)
STARTING TIMES	0~20 sec. (regulable)	
TRANSMISSION IMPORTANT CONDITION	RACK BELT S8M	
OPEN DOOR RANGE	FULL/HALF-OPEN (regulable)	
PFC POWER EFFICIENCY	0.95(in AC100V Full load)	
TRACTION FORCE	3kg	

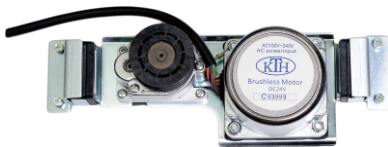
## COMPONENTS



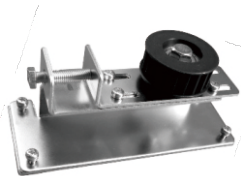
**MICRO-CONTROLLER**



**COMBINED TERMINAL BLOCK**



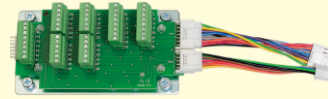
**BRUSHLESS DC MOTOR**



**BELT ROLLER**



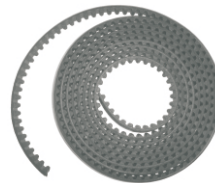
**MICRO-CONTROLLER FOR EN16005**



**COMBINED TERMINAL BLOCK FOR EN16005**



**SENSORS (OPTIONAL DEVICE)**



**RACK BELT**

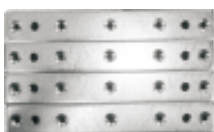
### (BI-PARTING) HANGERS & IRON PARTS



**ACTIVE BRACE with BELT FIXER**



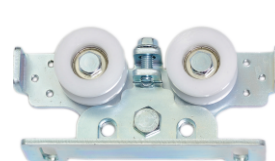
**PASSIVE BRACE with BELT FIXER**



**HANGING BRACE-4 PCS**

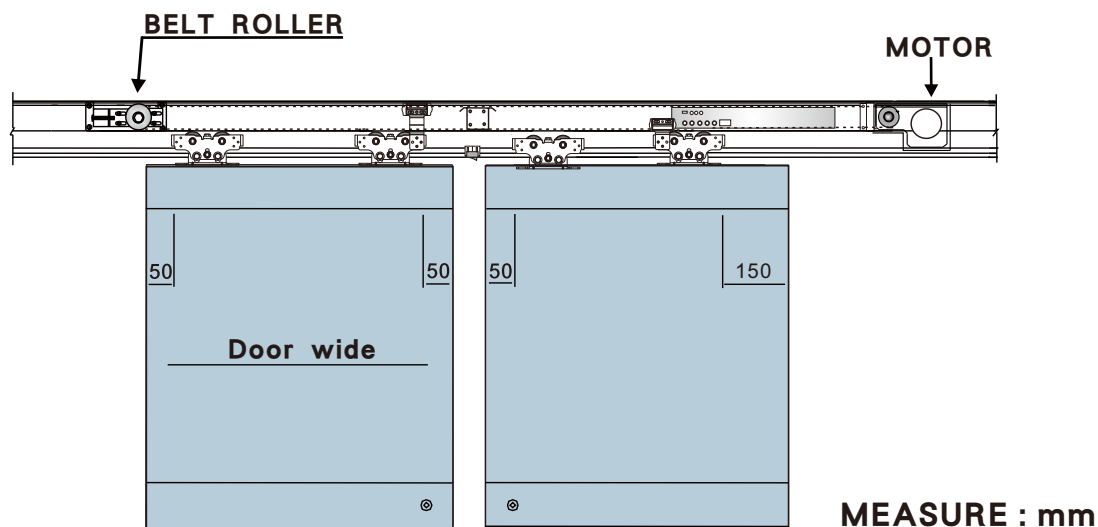


**BELT BRACE**



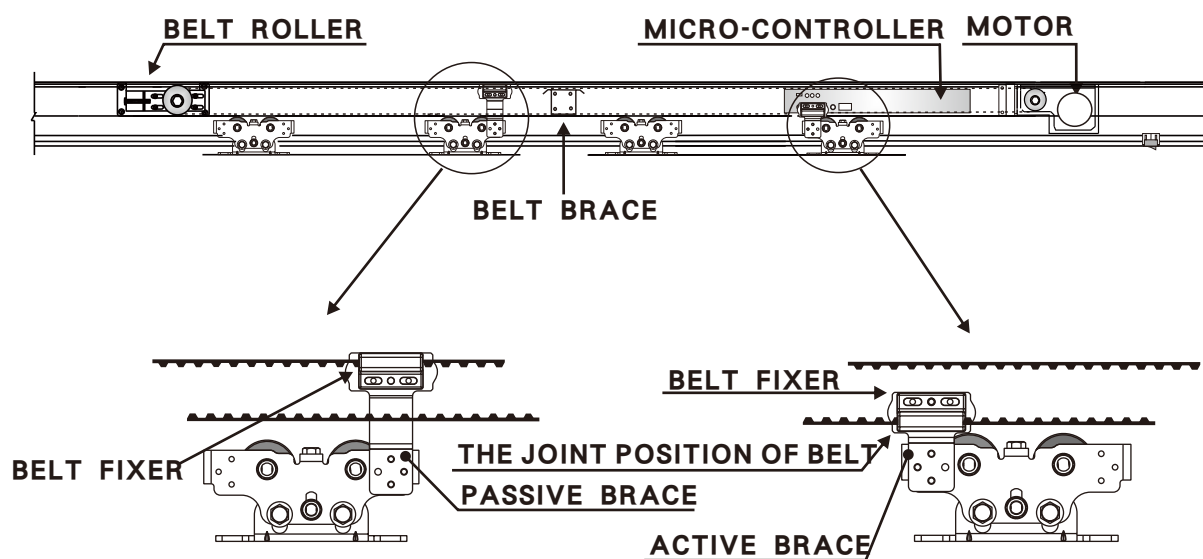
**HANGING TWIN-WHEEL 4 PCS**

## THE POSITION OF THE HANGING TWIN-WHEEL



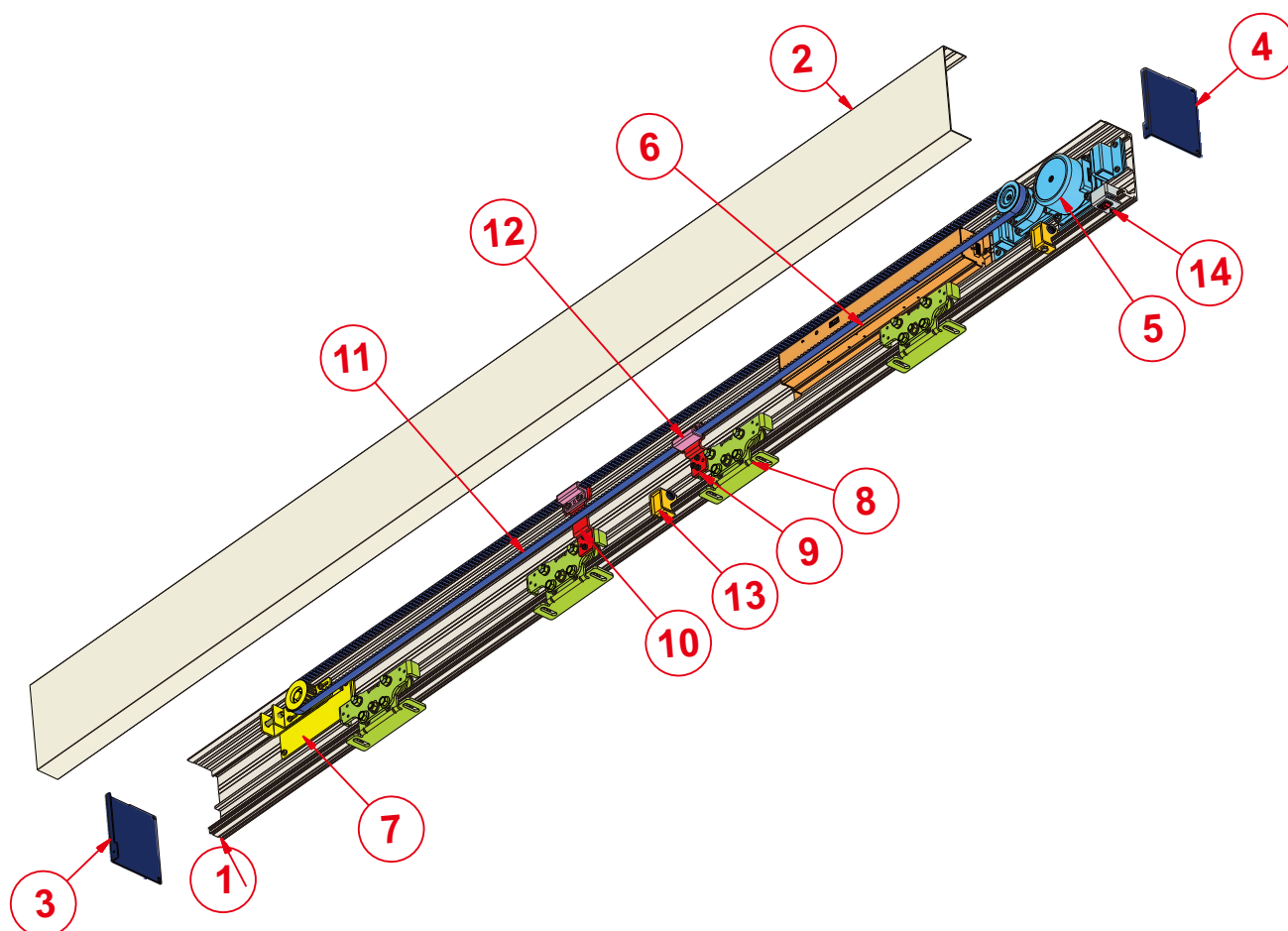
Inside the room, the distance between the “right side hanging-wheel” and “the edge of door” must be more than 150mm.

## INSTALL THE RACK BELT

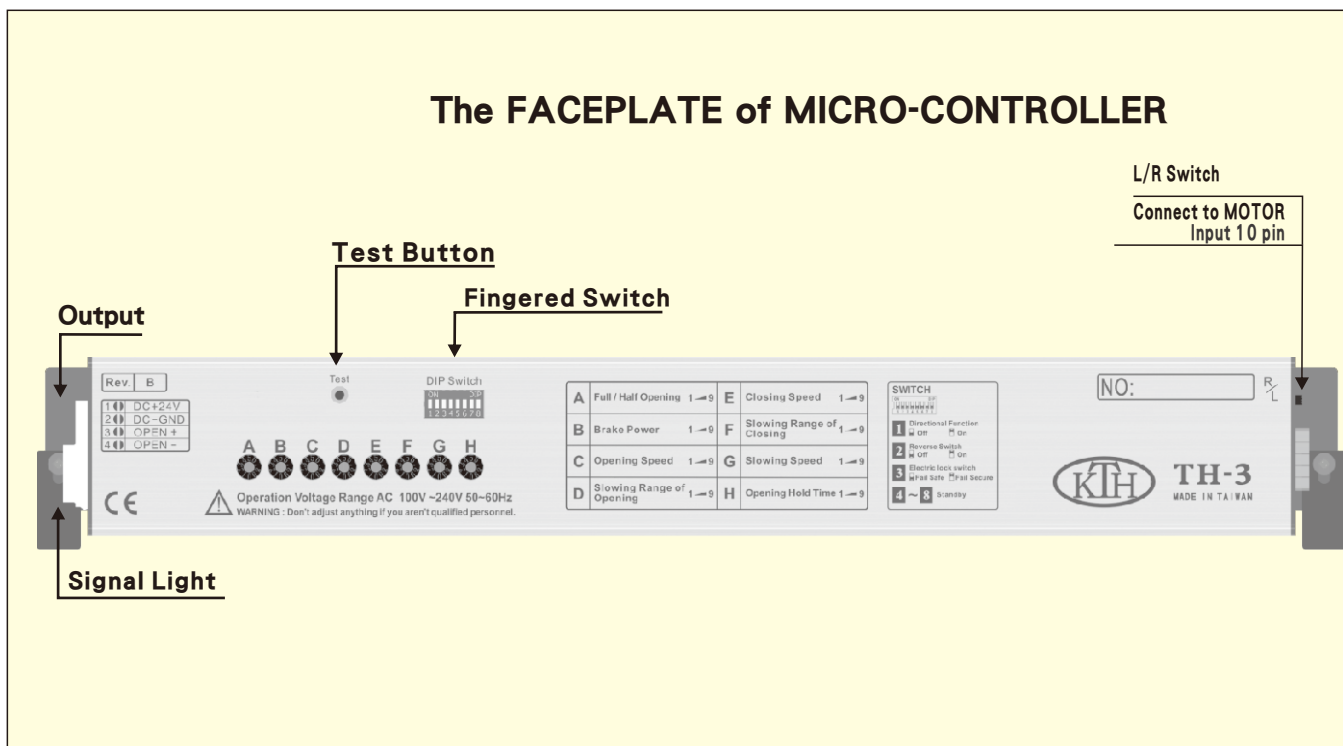


## LEGEND OF PART DRAWING

Parts List		
No.	Parts Name	Quantity
1	"Standard" Aluminum Profile	1
2	"Standard" Aluminum Cover	1
3	Left side end cap	1
4	Right side end cap	1
5	Motor	1
6	Controller	1
7	Belt roller	1
8	Hanging-wheel	4
9	Active brace	1
10	Passive brace	1
11	Rack Belt	1
12	Belt Fixer	2
13	Stopper	2
14	Power switch	1



## ■ TEST & ADJUST(STANDARD)



**Red LED-Power is connected.**

Green LED-Input the open door signal.

L/R switch-The direction of the door opening: right/left(R/L).

### **Fingered Switch- Pin 1 - Directional Function**

**Operation** { **OFF:** Normal mode.  
**ON:** push once , open the door. Push again,close the door.

### **Fingered Switch-Pin 2-Reverse Switch: in order to control opening and closing direction of the Door -Leaf after power resumes.**

**Operation** { **OFF:** Normal mode, after power resumes, the Door-Leaf opens the door first.  
**ON:** suitable for Security System, after power resumes,the Door-Leaf closes the door first.

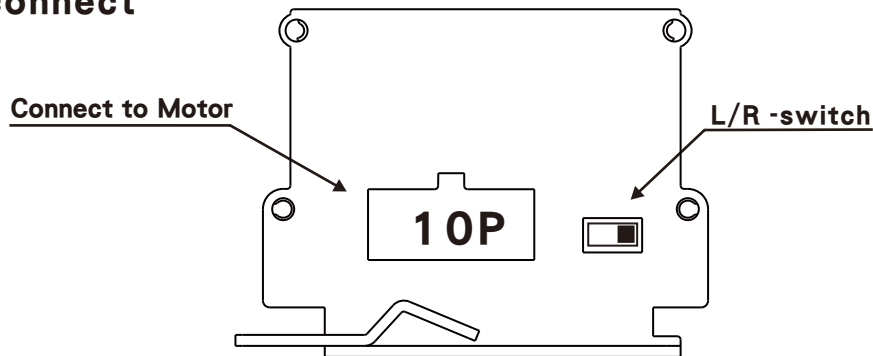
### **Fingered Switch- Pin 3- Electric Lock Switch**

☐ Fail Safe ☐ Fail Secure

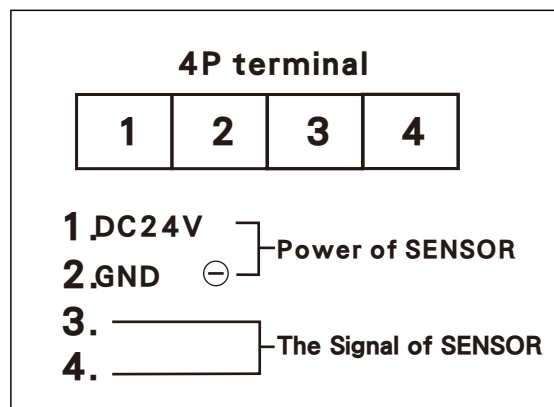
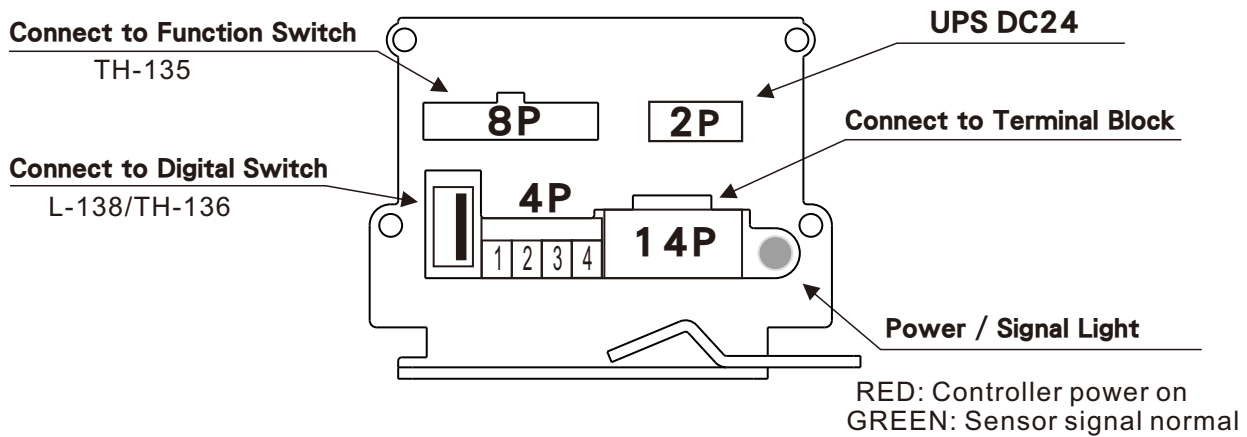


## MICRO-CONTROLLER

### Input connect



### Output connect



## ■ ADJUST CONTROLLER



### **A Full/Half opening**

Adjust the RANGE of the HALF OPEN DISTANCE.  
Higher number, wider range.



### **B Brake power**

The Door-Leaf is slight, the BRAKE POWER is less.  
Please choose 0~2 if the Door-Leaf is under 50kg.  
Please adjust number from number 5 if the Door-Leaf is over 80kg.



### **C 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.



### **D The slowing range of opening door**

Adjust the SLOW RANGE of OPENING DOOR  
Higher number, more range about the slow range at open door position.  
CAUTION: please adjust the number one by one from high to low.



### **E 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.



### **F The slowing range of closing door**

Adjust the SLOW RANGE of CLOSED DOOR  
Higher number, more range about the slow range at open door position.  
CAUTION: please adjust the number one by one from high to low.



### **G 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.



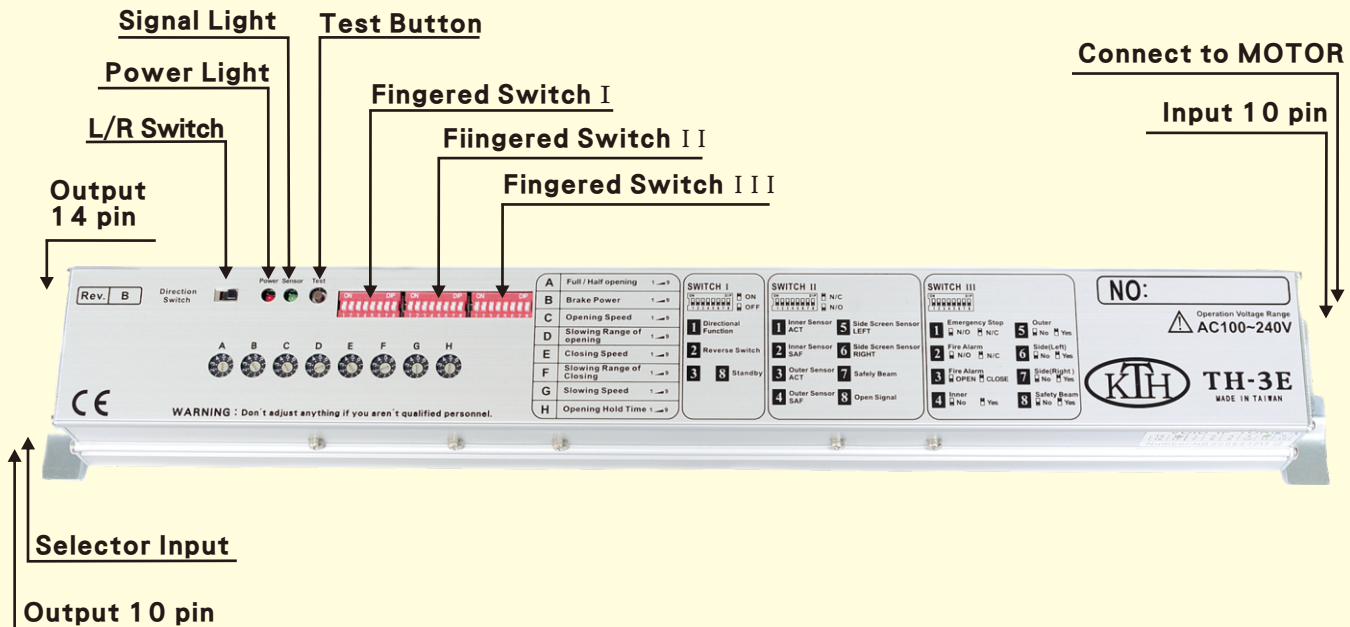
### **H Opening hold time**

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

## ■ TEST AND ADJUST(EN16005)

### The FACEPLATE of MICRO-CONTROLLER



**Red LED-Power is connected.**

**Green LED-Input the open door signal.**

**L/R switch-The direction of the door opening: right/lift(R/L).**

## ■ ADJUST CONTROLLER-1



### A Full/Half opening

Adjust the RANGE of the HALF OPEN DISTANCE.  
Higher number, wider range.



### B Brake power

The Door-Leaf is slight, the BRAKE POWER is less.  
Please choose 0~2 if the Door-Leaf is under 50kg.  
Please adjust number from number 5 if the Door-Leaf is over 80kg.



### C The opening speed of the door

Adjust the OPEN SPEED. Higher number, faster speed.  
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### D The slowing range of opening door

Adjust the SLOW RANGE of OPENING DOOR  
Higher number, more range about the slow range at open door position.  
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### E The closing speed of the door

Adjust the CLOSED SPEED. Higher number, faster speed.  
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### F The slowing range of closing door

Adjust the SLOW RANGE of CLOSED DOOR  
Higher number, more range about the slow range at open door position.  
CAUTION: please adjust the number one by one from high to low.



### G The slowing speed of the door

Adjust the SLOW SPEED. Higher number, faster speed.  
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### H 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

## ■ ADJUST CONTROLLER-2

The Slowing Range of Opening and Closing Door is controlled by "Fingered Switch". There are two kinds of choice: SHORT and LONG range. (The setting of production is SHORT range).



### Switch I

#### 1 Directional function

☐ OFF ☐ ON

OFF: Normal mode.

ON: Push once, open the door.  
Push again, close the door.

#### 3 ~ 8 Standby

#### 2 Reverse Switch:

in order to control opening and closing direction of the Door-Leaf after power resumes.

☐ OFF ☐ ON

OFF: Normal mode, after power resumes, the Door-Leaf opens the door first.

ON: suitable for Security System, after power resumes the Door-Leaf closes the door first.



### Switch II

1 Inner Sensor ACT ☐ N/O ☐ N/C

2 Inner Sensor SAF ☐ N/O ☐ N/C

3 Outer Sensor ACT ☐ N/O ☐ N/C

4 Outer Sensor SAF ☐ N/O ☐ N/C

5 Side Screen Sensor LEFT ☐ N/O ☐ N/C

6 Side Screen Sensor Right ☐ N/O ☐ N/C

7 Safely Beam ☐ N/O ☐ N/C

8 Open Signal ☐ N/O ☐ N/C



### Switch III

1 Emergency Stop ☐ N.O. ☐ N.C.

2 Fire Alarm ☐ N.O. ☐ N.C.

3 Fire Alarm ☐ OPEN ☐ CLOSE

4 Inner ☐ No ☐ Yes

5 Outer ☐ OFF ☐ ON

6 Side(Left) ☐ OFF ☐ ON

7 Side(Right) ☐ OFF ☐ ON

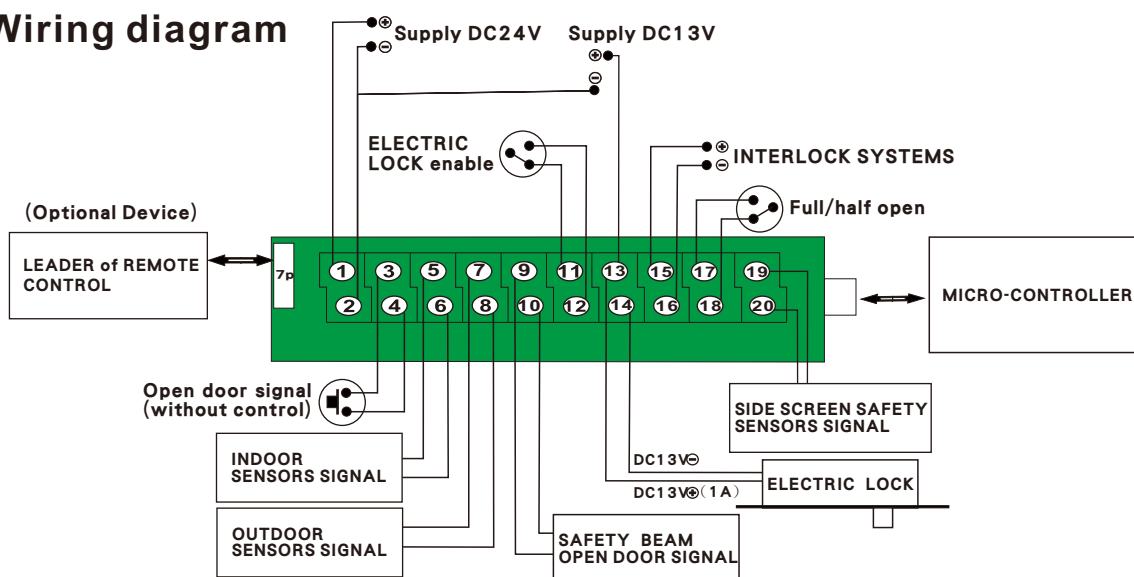
8 Safety Beam ☐ OFF ☐ ON

Fyi. (4)-(7) are for the function of Monitored Sensor.



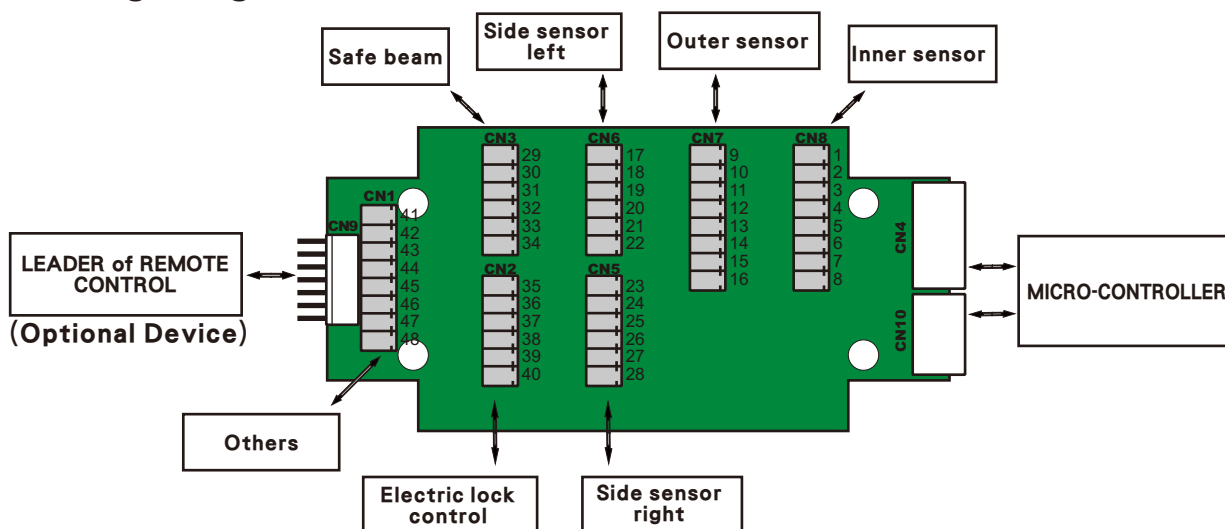
## ■ WIRING DIAGRAM OF TH-100(STANDARD)

Wiring diagram



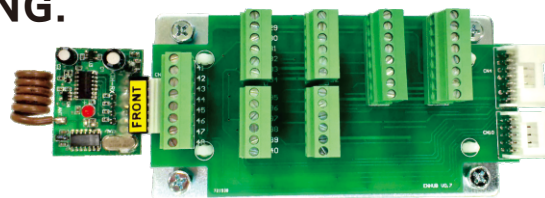
## ■ WIRING DIAGRAM OF TH-100(EN16005)

Wiring diagram

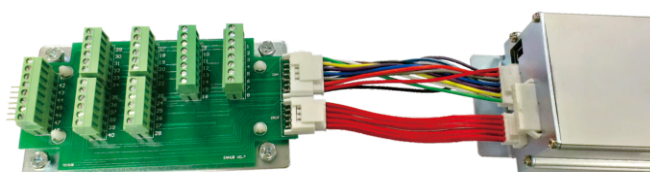


The ILLUSTRATED of WIRING.

REMOTE CONTROL (OPTIONAL DEVICE)



COMBINED TERMINAL BLOCK

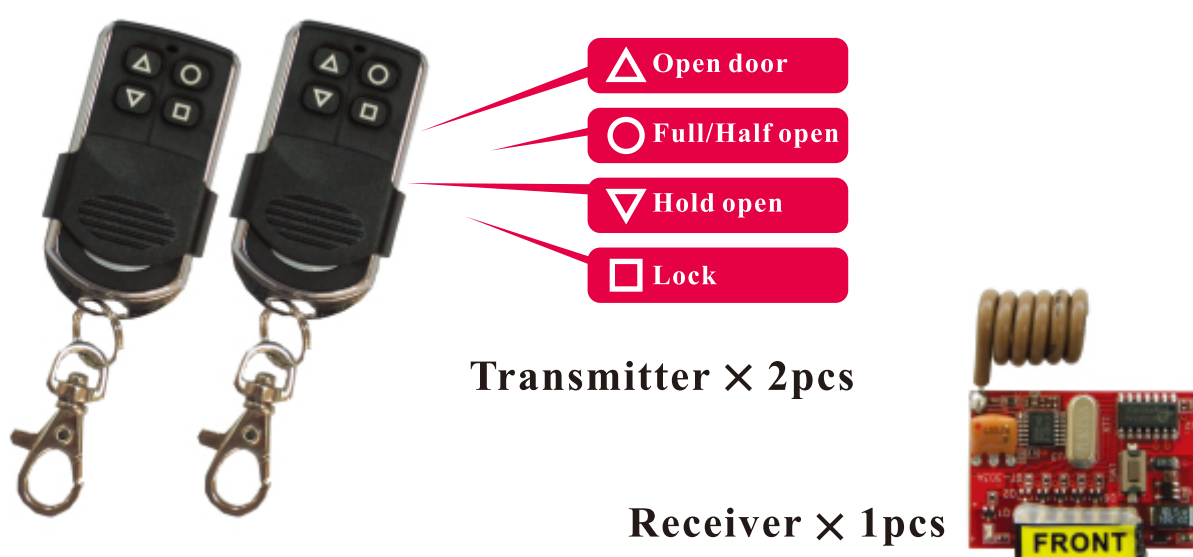


COMBINED TERMINAL BLOCK

MICRO-CONTROLLER

## ■ TH-125 (NEW)-REMOTE CONTROL

1. Transmitter is 20 bit digital code that is much safety and use fix-frequency component to transmit signal. The frequency of transmitter won't be affected by battery consumption and outside environment.
2. Wireless receiver use super-heterodyne from U.S.A..  
The receiver is stably, anti-interference, no extra-wave.
3. Control unit is 8 bit single chip. The order is accurate and action is correct.



## ■ TH-136-MULTIFUNCTION DIGITAL SWITCH

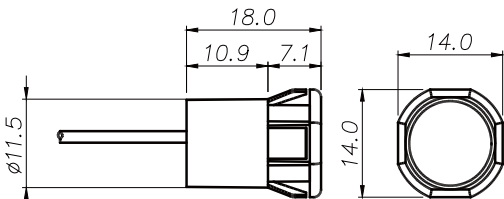
1. Particular Memory Mode according different sessions to work.
2. Safety Alarm by itself to avoid danger happening.
3. Optional Language for easier operate in your location
4. Date and Time setting
5. Easy to install and program.
6. Beautiful and clear LCD panel
7. With buttons lock-on function

VOLUME	124.5X80X38.5(mm)
NET WEIGHT	0.46kg
ACCESSORIES	One piece of 5M cable



## ■ A-11-SAFETY BEAM



Product	Amplifier	Sensor head
Model	A-11	SC-6M
Power supply	DC24V	 <p>* Fixed hole : 12.5Φ±0.2</p>
Current consumption	3VA Max.	
Response time	5 ms max.	
Min. sensible object	10.0Φ Opaque object	
Control output	1a / Relay ( 3A/250VAC )	
Output status	NO/NC changeable	
Off delay	0.5s	
Operating circumstance	- 20℃ ~ +80℃ ; 35% ~ 85% RH	

## ■ 3H-CH01-INFRARED RAY SENSOR

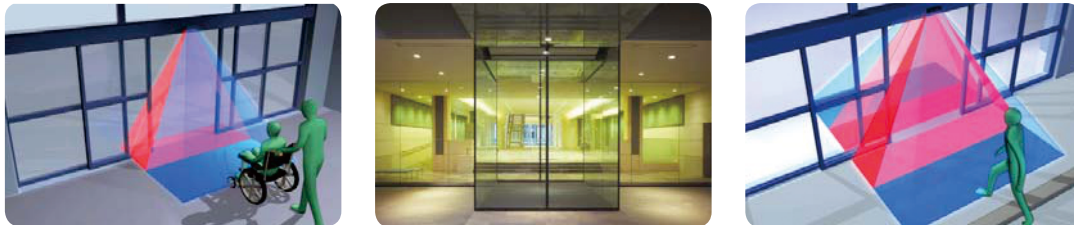


- 1.Small sensor on the market that combines door activation with pedestrian safety in one product.
- 2.Double curtain of infrared safety beams protects pedestrians from dangerous automatic door movements.
3. Accurately adjustable detection area reduces false door activations in busy urban environments.
- 4.Intelligent software along with internal sensor self monitoring ensures safe and reliable operation in all installation environments.

### Advanced Unidirectional Detection Sensor with Monitored Safety and Unique "Door Learn" Ability



Pioneering super sensor offers pedestrian door activation and unprecedented safety at mounting heights of up to 3m



- **Energy Efficient**

Intelligent unidirectional detection ability reduces door hold open time by 20% and building energy loss by 6% in a standard installation.

- **Unparalleled Pedestrian Safety**

Unique ability to memorize door motion allows the infrared safety curtain to be focused inside the moving door leaf resulting in unparalleled pedestrian safety.

- **Versatile**

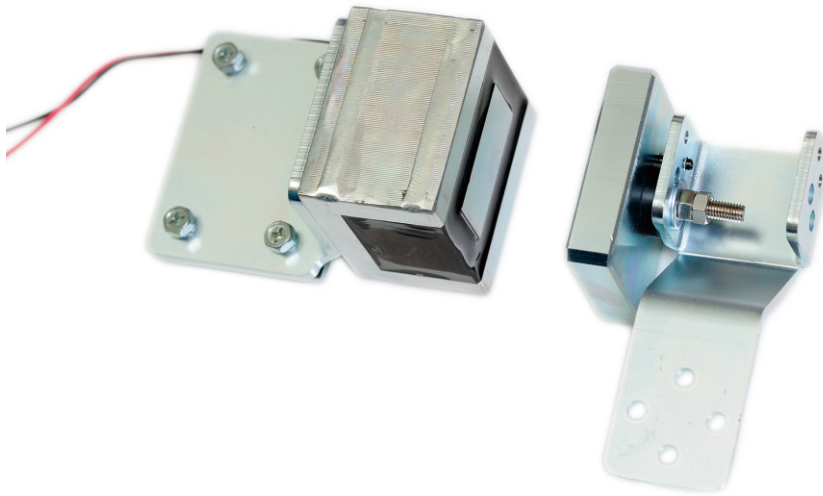
Flexibility to adjust the door activation and pedestrian safety detection zones independently makes the HR100-CT the ideal sensor for every sliding door installation

- **Ease of Installation**

All the information necessary to install the HR100-CT sensor is printed on the sensor body

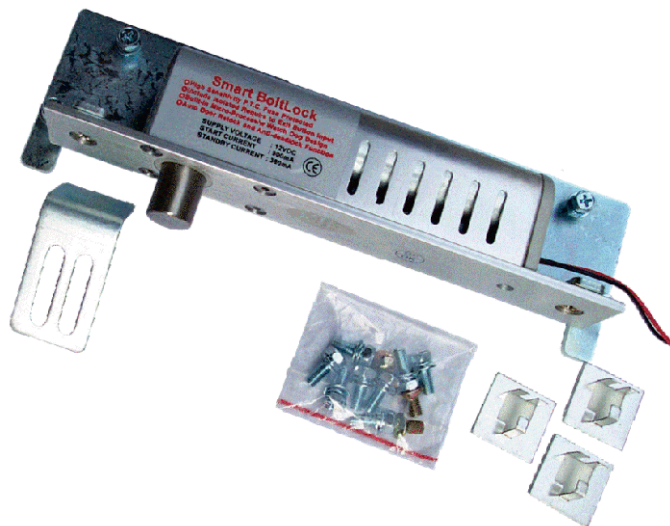
EN16005 is the regulations of power operated pedestrian door sets in all CEN member countries

## TH-201-MEGNETIC LOCKS



1. Main subject molded integrally and it can simplify installation procedures
2. Use aluminum alloy frame, strong crashworthy
3. Compact size, it can follow the installation (door type, sliding type)

## TH-200LK-ELECTRIC BOLT



1. Don't increase the temperature while it running and working.
2. Tough and durable. There is no problems about the lock be lodged.



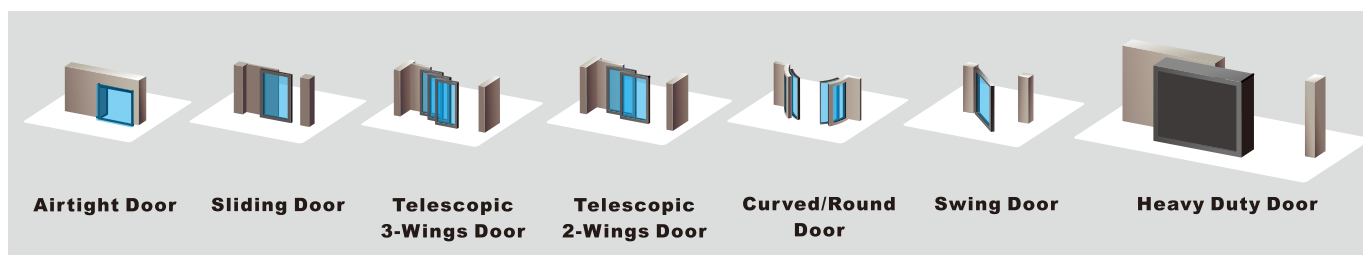
## ■ TH-135-FUNCTION KEY SWITCH



- 1.It's is suitable any Door Operator of KTH.
- 2.Easy to install and adjust.

### • SIX PRESS FUNCTION

- |               |                |
|---------------|----------------|
| 1. DOOR OPEN  | 2. IN ONE-WAY  |
| 3. AUTO       | 4. OUT ONE-WAY |
| 5. DOOR CLOSE | 6. FULL/HALF   |



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