

# Automatic Door Systems

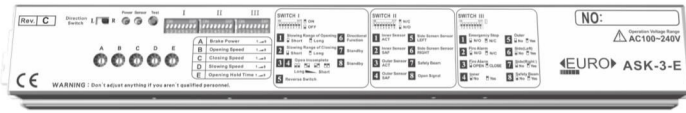


## ASK-2-E

**Single-winged / Bi-parting  
( For "Slim" Aluminum Profile )**

**OPERATION INSTRUCTION**

1. COMPONENTS SPECIFICATION .....	P3
2. LEGEND OF PART DRAWING .....	P4
3. TECHNICAL SPECIFICATION.....	P5
4. SECTIONAL DRAWING.....	P6
5. INSTALLATION DRAWING .....	P7
6. SAFETY DEVICE .....	P8
7. INSTALL PROCEDURE .....	P9
8. INSTALL THE BELT ROLLER & THE POSITION OF THE HANGING TWIN-WHEEL.....	P10
9. INSTALL THE RACK BELT & ADJUST THE DOOR-LEAF ..	P11
10. CONNECTION (Electric).....	P12
11. CONNECT (Combined Terminal Block) .....	P13
12. CONNECTION (Others).....	P14
CONNECTION (monitored sensor 1).....	P15
CONNECTION (monitored sensor 2).....	P16
14. TEST AND ADJUST – 1 .....	P17
TEST AND ADJUST – 2.....	P18
15. BROKEN CHECKING .....	P19
16. TROUBLESHOOTING .....	P20
17. TROUBLESHOOTING (ILLUSTRATED) .....	P21
18. APPENDIX(1) FUNCTION SWITCH (Optional Device) .....	P24
19. APPENDIX(2) REMOTE CONTROL (Optional Device) .....	P25
20. APPENDIX(3) UPS (Optional Device) .....	P27



**MICRO-CONTROLLER**



**WORM GEAR MOTOR**



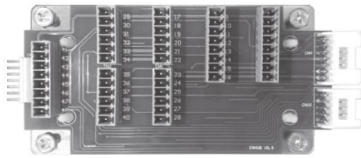
**POWER SWITCH**



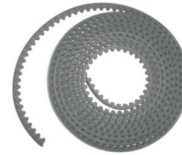
**SENSORS  
(OPTIONAL DEVICE)**



**BELT ROLLER**

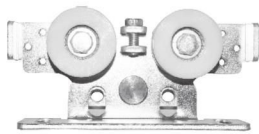


**COMBINED TERMINAL BLOCK**



**RACK BELT**

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



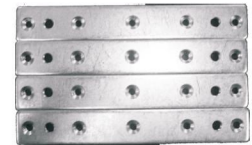
**HANGING  
TWIN-WHEEL 4 PCS**



**PASSIVE BRACE  
with BELT FIXER**



**ACTIVE BRACE  
with BELT FIXER**



**HANGING  
BRACE-4 PCS**



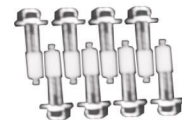
**IRON PARTS SACK**



**STOPER-2 PCS**



**WIRE CLAMP-5 PCS**



**BLOCK SCREW-8 PCS**



**GROUND WHEEL  
-2PCS**

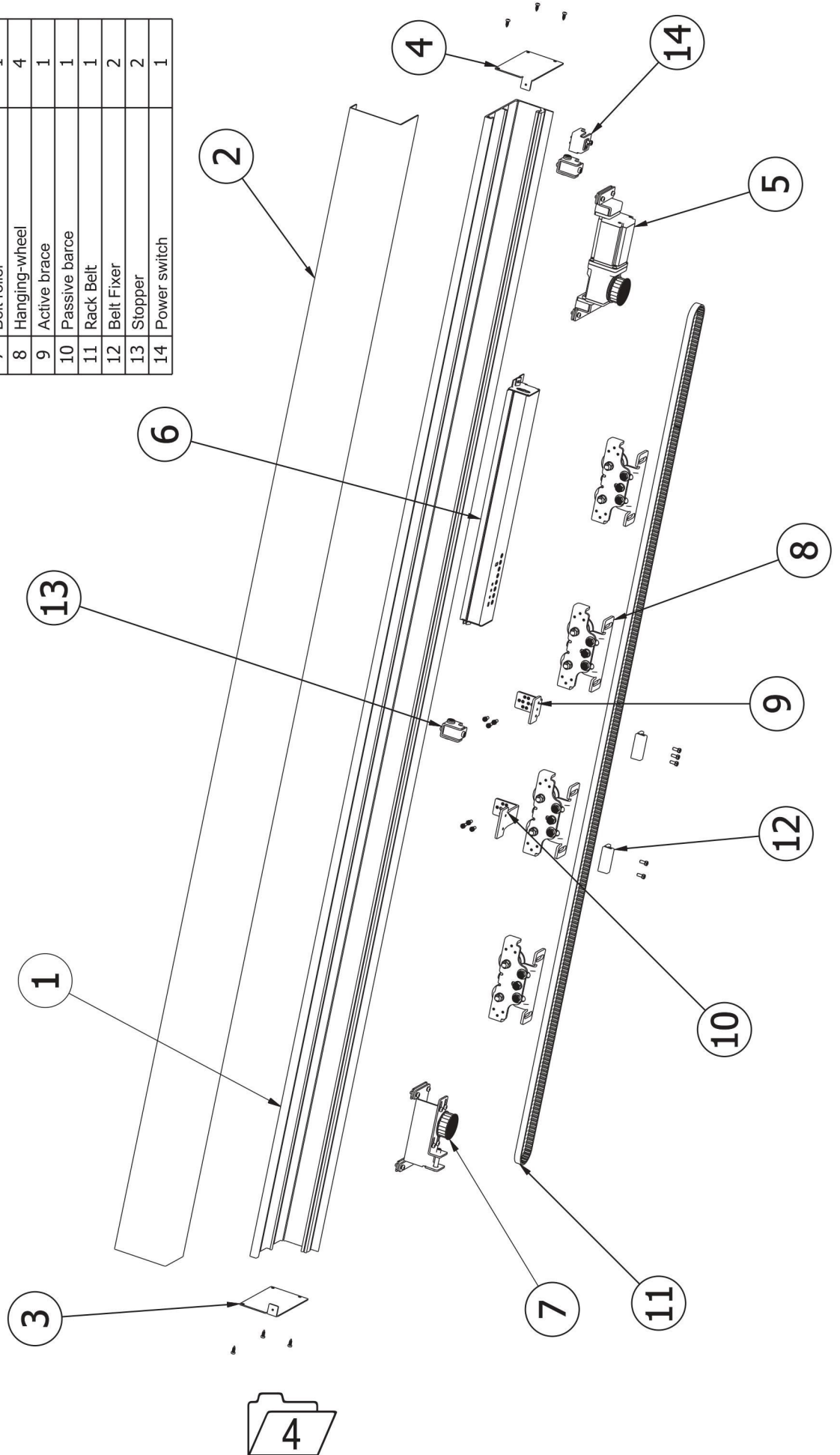


**SCREW-8 PCS**

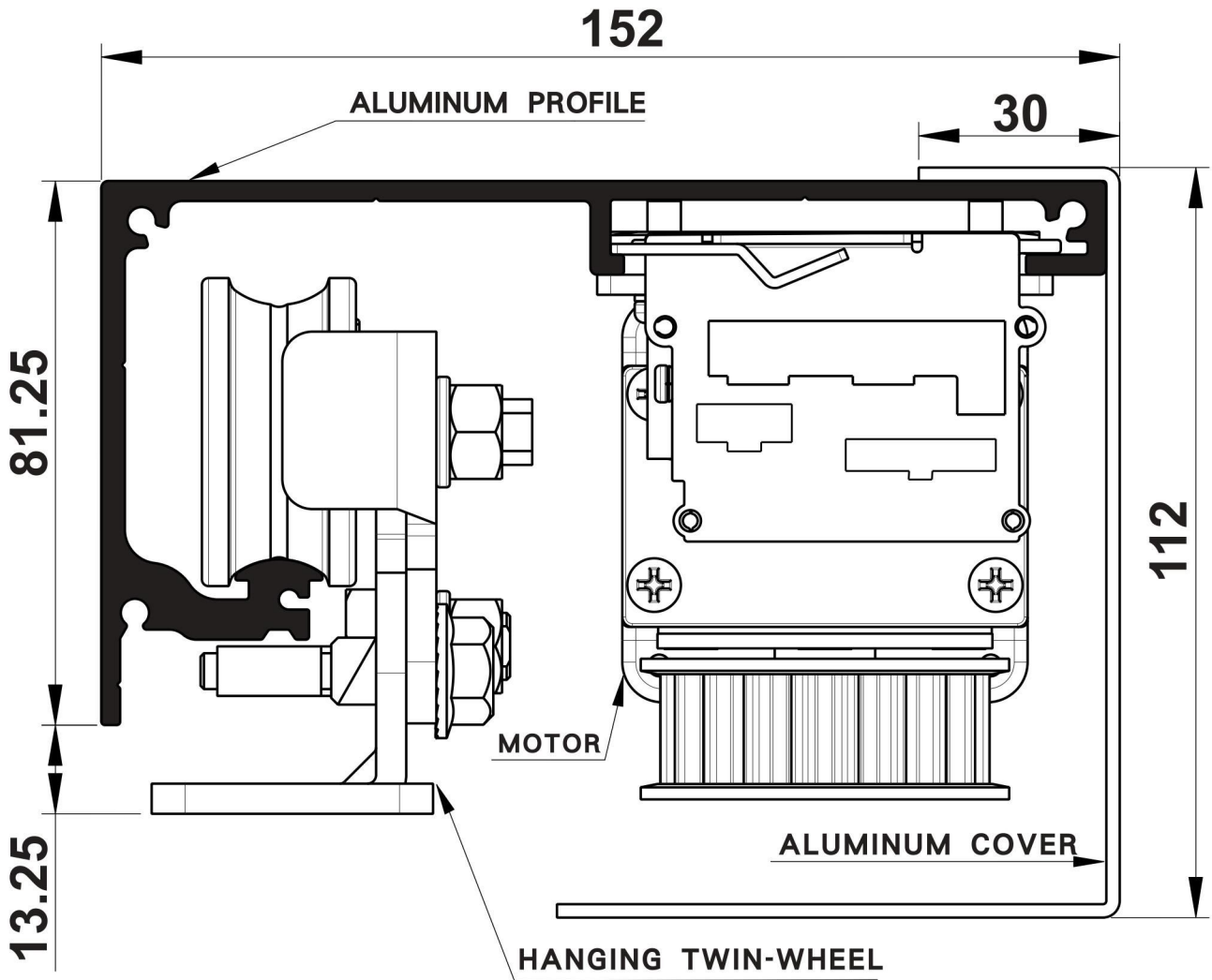


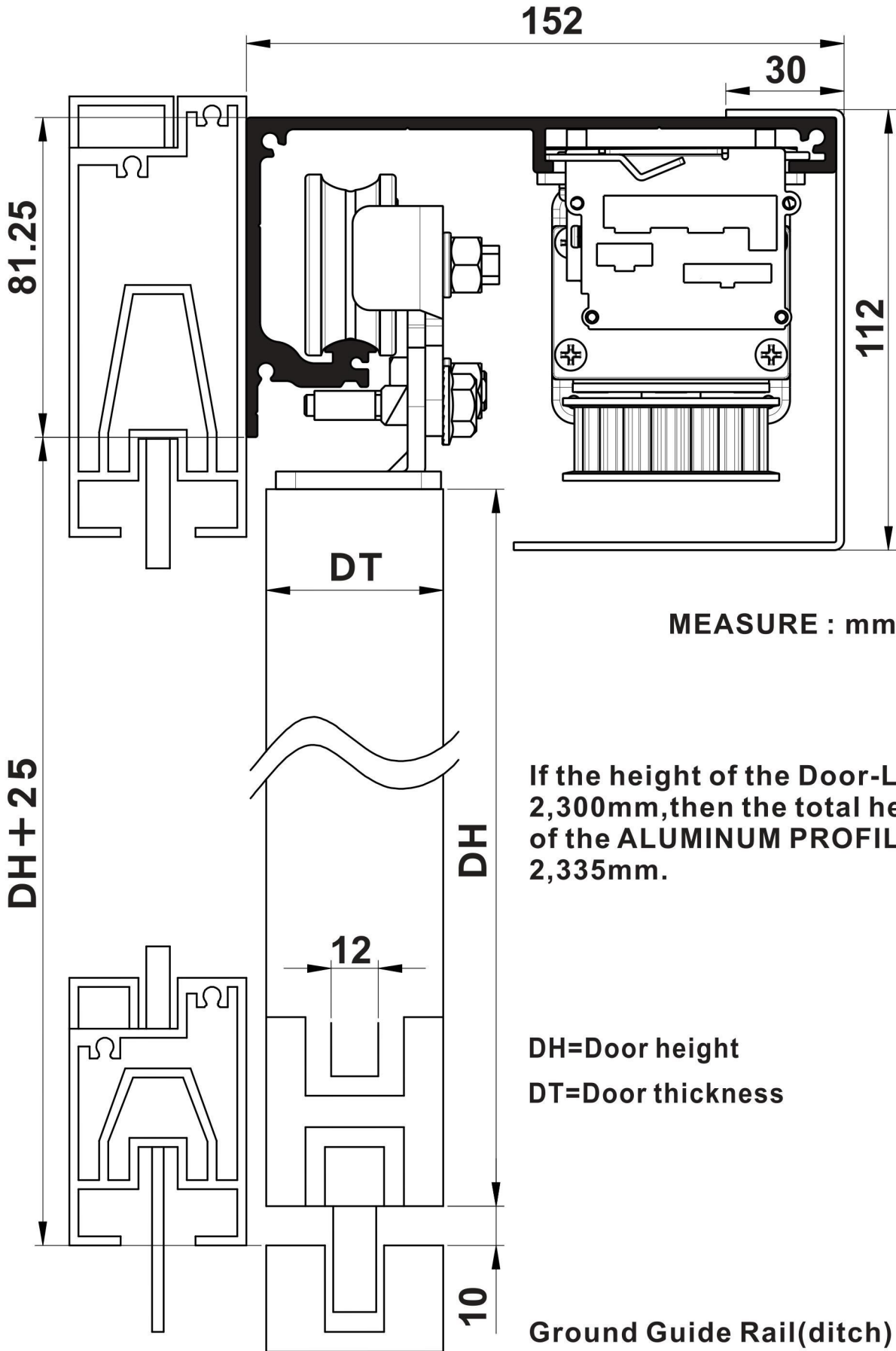
**DOOR SCREW-8 PCS**

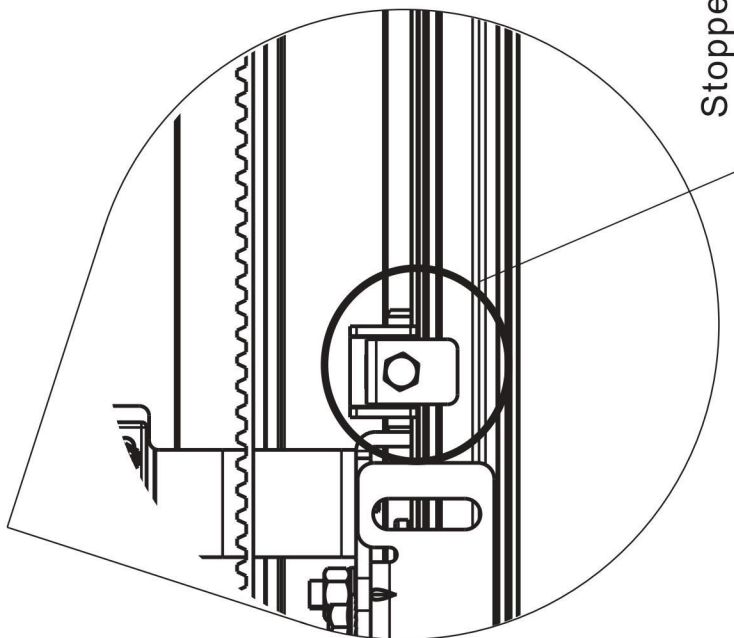
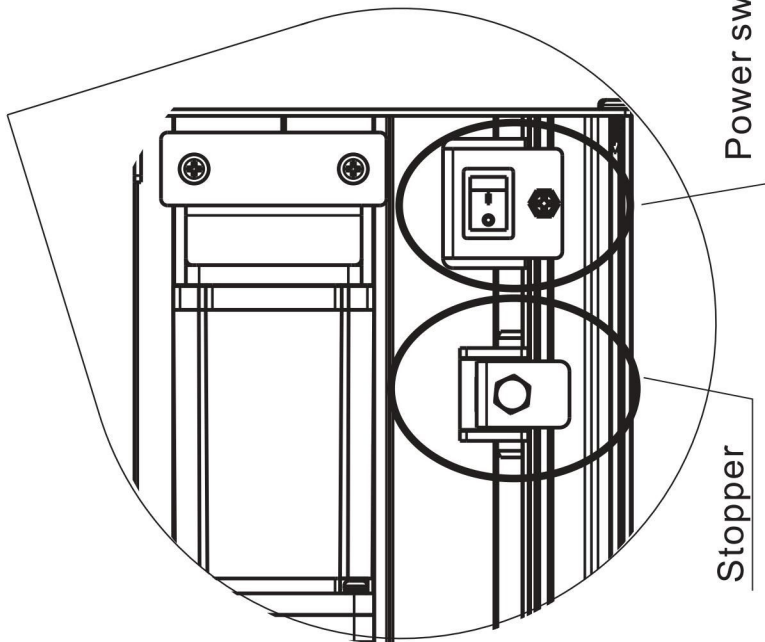
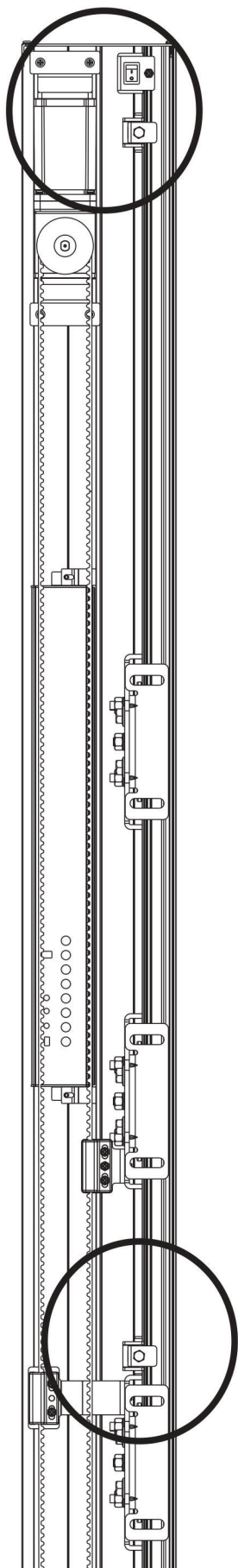
Parts List		
No.	Parts Name	Quantity
1	"Slim" Aluminum Profile	1
2	"Slim" Aluminum Cover	1
3	Left side end cap	1
4	Right side end cap	1
5	Motor	1
6	Controller	1
7	Belt roller	1
8	Hanging-wheel	4
9	Active brace	1
10	Passive brace	1
11	Rack Belt	1
12	Belt Fixer	2
13	Stopper	2
14	Power switch	1



TYPE	ASK-2-E	
MODEL	SINGLE-WINGED	BI-PARTING
DOOR WEIGHT	150kg X1(door)	130kg X2(door)
DOOR WIDTH	DW=500mm~2500mm	DW=500mm~2500mm
INSTALL WAY	Surface install	Surface install
MOTOR	DC24V 75W WORM GEAR MOTOR	
CONTROL	USER-FRIENDLY MICRO-CONTROLLER	
POWER CONSUMPTION	75W	
VOLTAGE	AC100V~240V	
ENVIRONMENTAL TEMPERATURE	<b>-20°C~+50°C</b>	
VOLUME	60decibel(max.)	
STARTING SPEED	600mm(second)	600mm(second) X 2
STARTING TIMES	0~20 sec. (regulable)	
TRANSMISSION IMPORTANT CONDITION	RACK BELT S8M	
OPENING DOOR RANGE	FULL/HALF-OPEN (regulable)	
<b>PFC</b> POWER EFFICIENCY	0.95(in AC100V Full load)	
TRACTION FORCE	3.5 kg	









**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

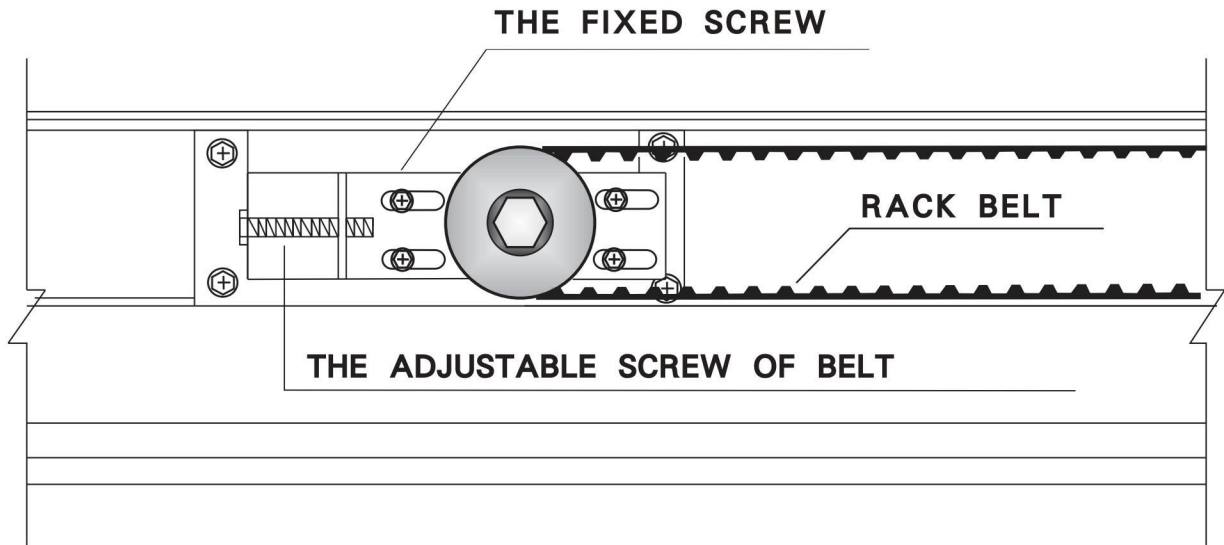


**9** Power connect



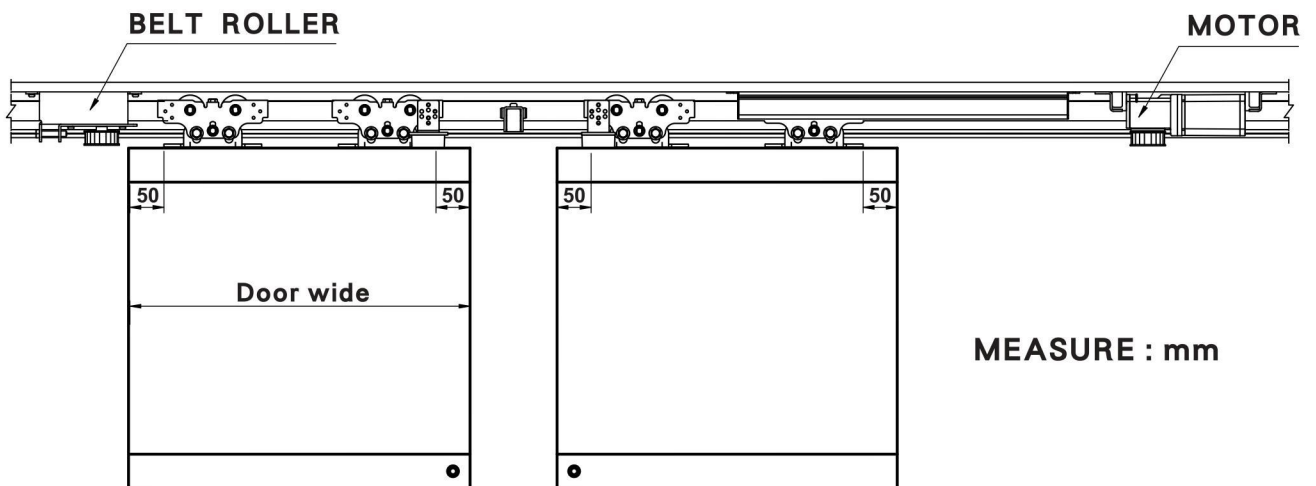
**10** Test and adjust

## INSTALL THE BELT ROLLER



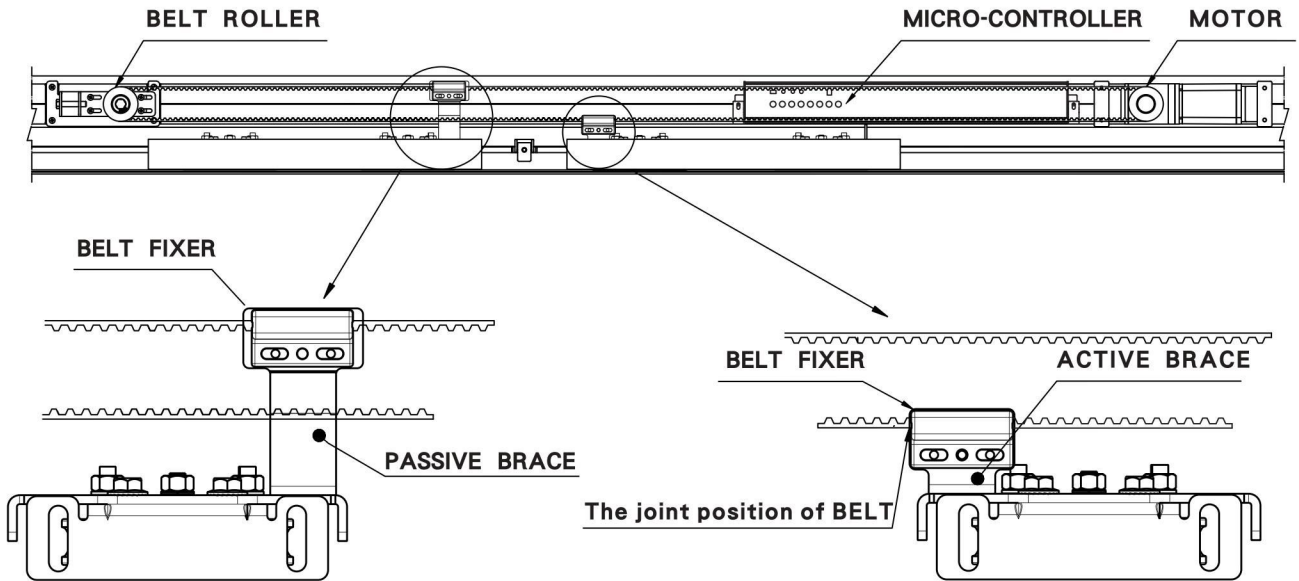
TENSION of BELT can be adjusted by the ADJUSTABLE SCREW of BELT, after that, must tighten the FIXED SCREW of BELT.

## THE POSITION OF THE HANGING TWIN-WHEEL

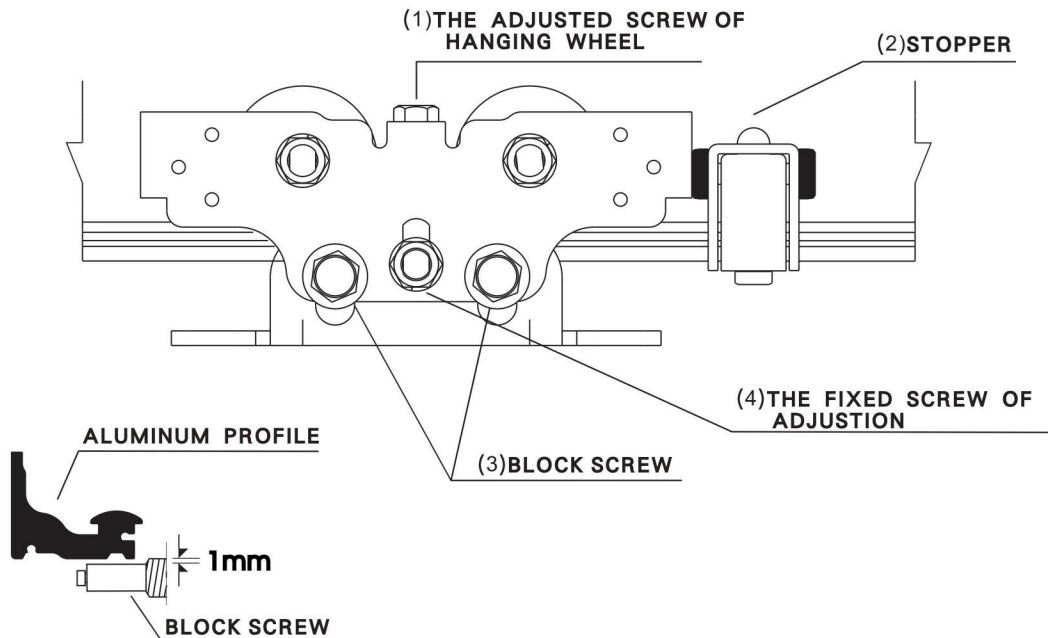


Inside the room, the distance between the HANGING TWIN-WHEEL and the RIM of DOOR must be more than 50mm.

## INSTALL THE RACK BELT



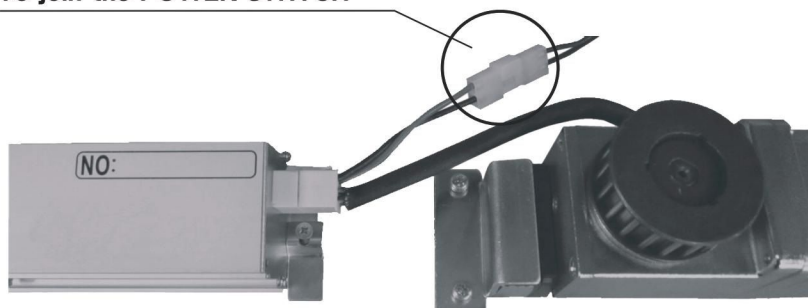
## ADJUST THE DOOR-LEAF



- 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.

## ELECTRIC CONNECTION

To join the POWER SWITCH



The ILLUSTRATED of CONTROLLER and MOTOR.

Power supply (input)  
Either DC 24V

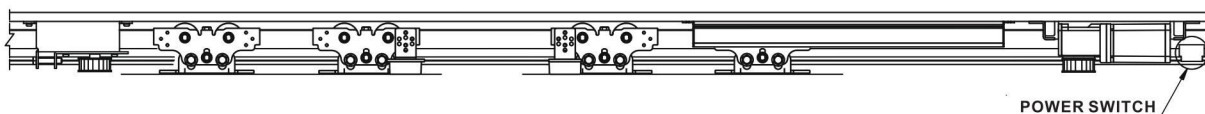
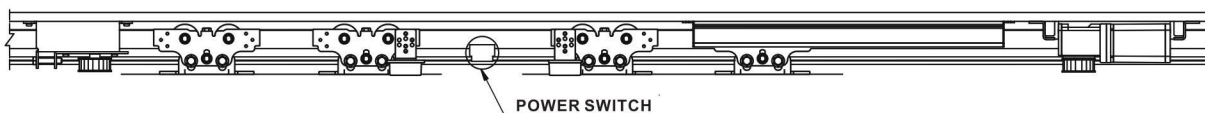


 **Warning**

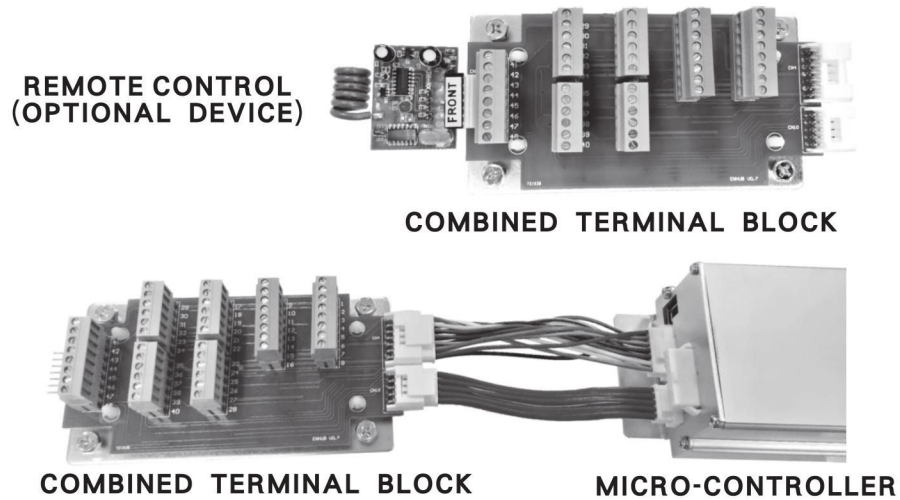
Please confirm WHETHER the SENSOR VOLTAGE is the same as the power supply. If different between them, need to add the TRANSFORMER, otherwise the SENSOR would be burned.

## POWER SWITCH

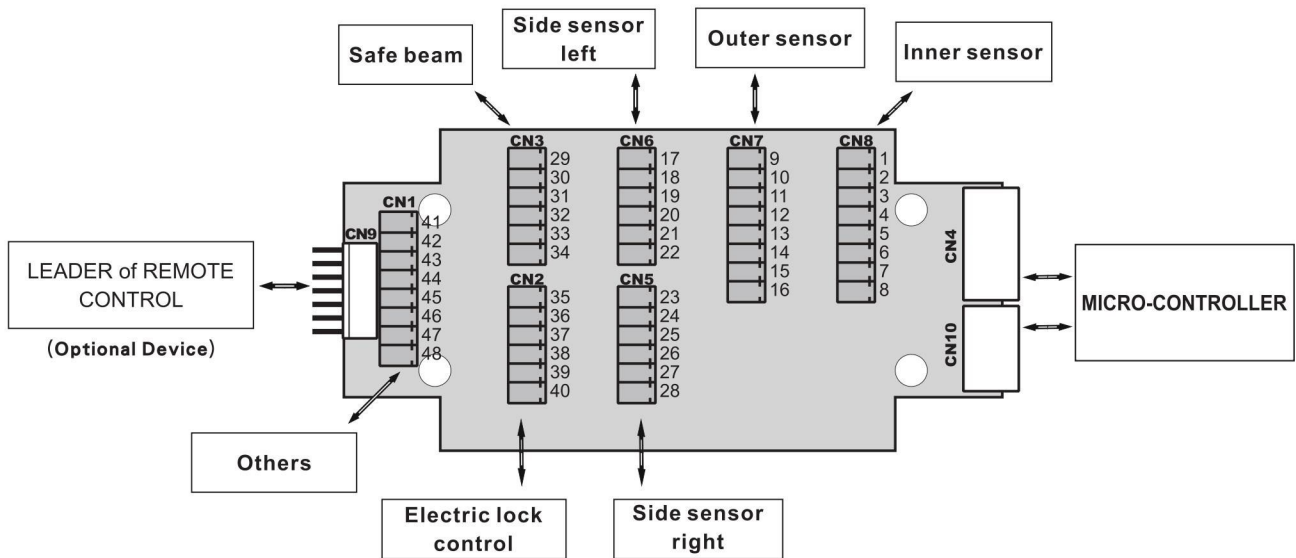
It can be installed at the MIDDLE of the ALUMINUM PROFILE or the SIDE.



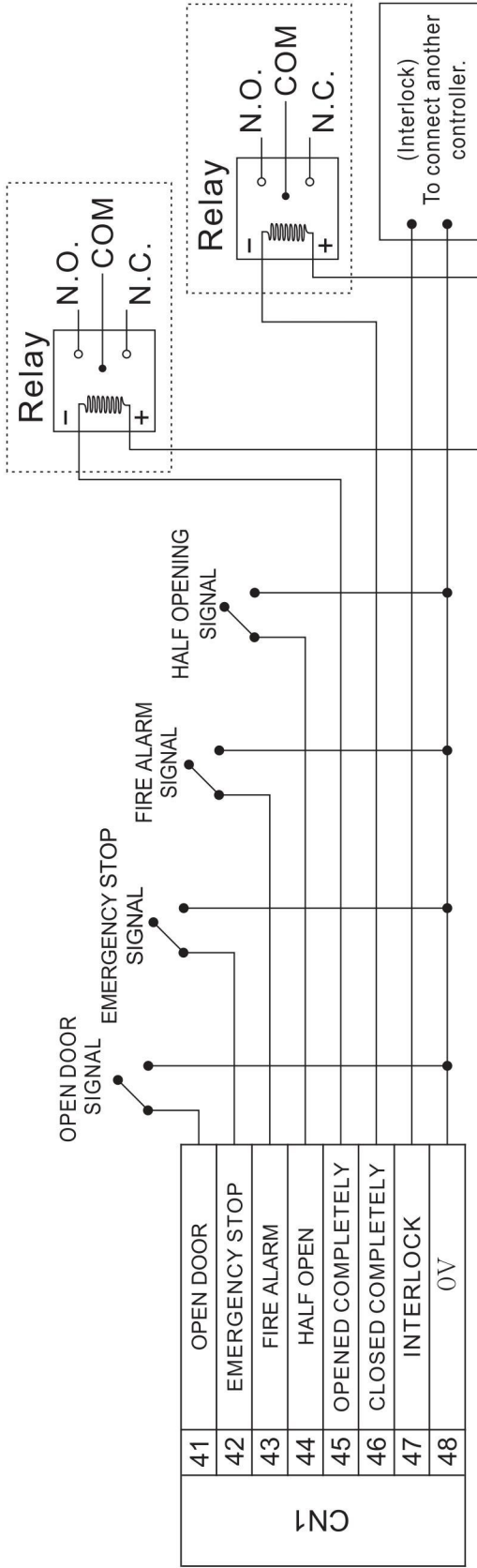
**The ILLUSTRATED of WIRING.**



**Wiring diagram**



- (A)** No.39 and No.40 of Terminal block CN2 are for ELECTRONIC LOCK enable ; No.35 provides power +12V ; No. 36 provides N.O. (Normal Open) contact ; No. 37 provides N.C. (Normal Close) contact. Only when No.38 and No.39 short circuit No.36 and No.37 will have functions.
- (B)** The SIGNAL of the SAFETY BEAM is controlled by CN3 terminal block. When door is opening and running, CN3 terminal block keeps receiving the signal, then the SAFETY BEAM will be working. CN3 terminal block 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 CN5 and CN6. 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 with normally speed.



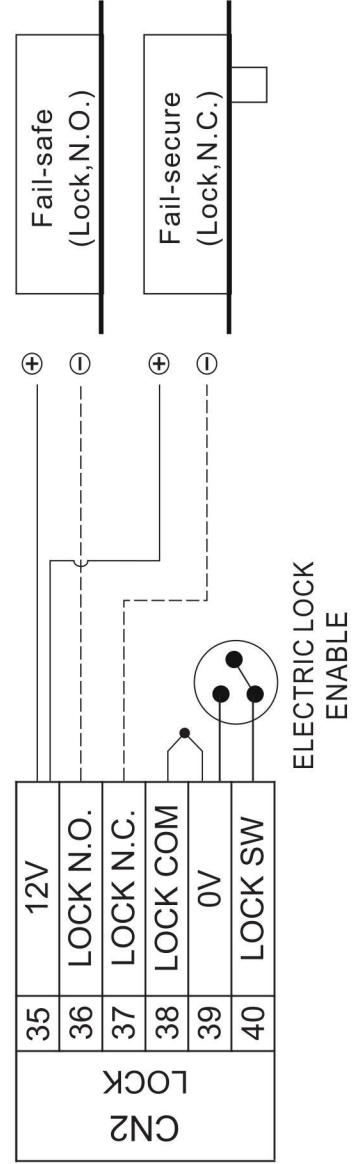
\* For Relay(DC24V): connect to No.34 of CN3.

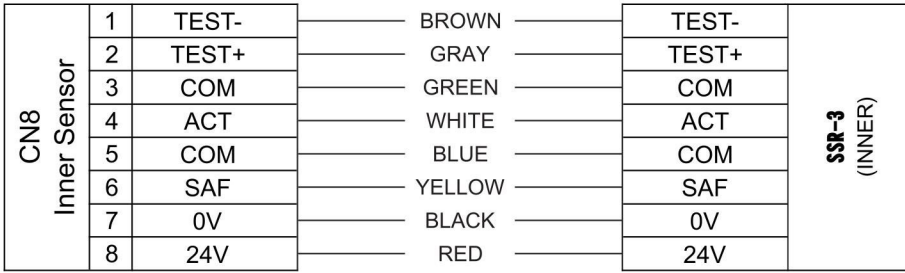
\* For Relay(DC12V): connect to No.35 of CN2.

**Warning**

\*Relay it should be with built in diode.

\*Relay Suggested model: OMRON MY2N-J-D2-J (It's arranged by customers)

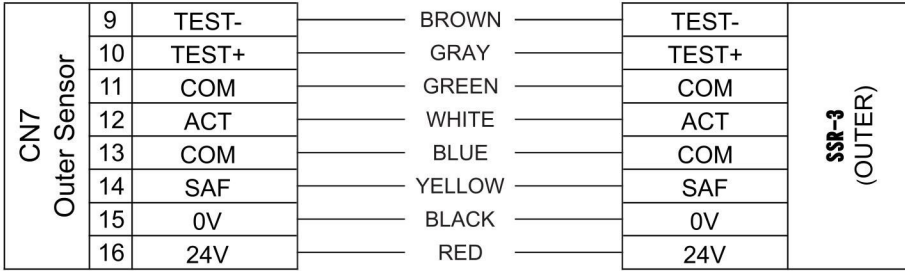




**SSR-3 SENSOR**  
X-No.6 → "N.C."  
Y-No.6 → "ON"

**Controller**

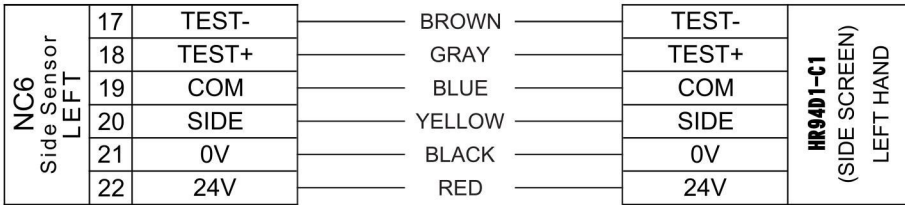
II-No.2 → "N.C."  
III-No.4 → "Yes"



**SSR-3 SENSOR**  
X-No.6 → "N.C."  
Y-No.6 → "ON"

**Controller**

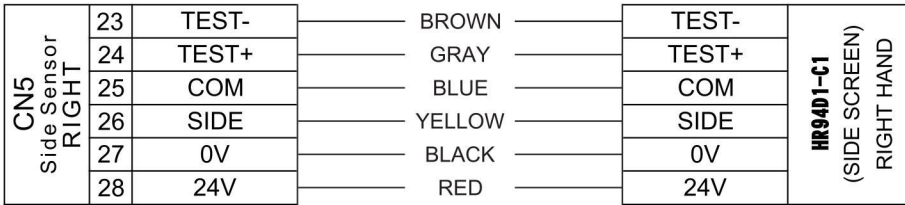
II-No.4 → "N.C."  
III-No.5 → "Yes"



**HR94D1-C1**  
No.6 → "N.C."  
No.8 → "ON"

**Controller**

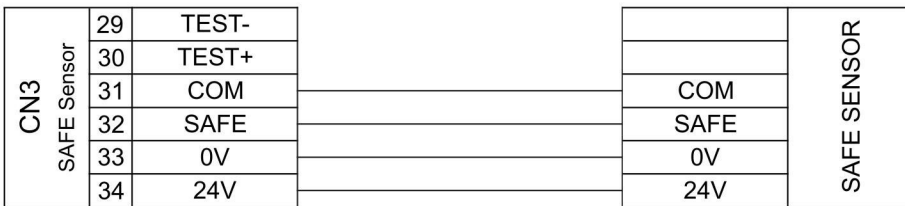
II-No.5 → "N.C."  
III-No.6 → "Yes"



**HR94D1-C1**  
No.6 → "N.C."  
No.8 → "ON"

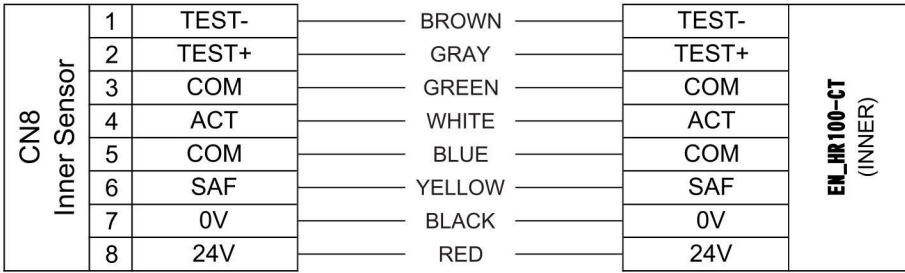
**Controller**

II-No.6 → "N.C."  
III-No.7 → "Yes"



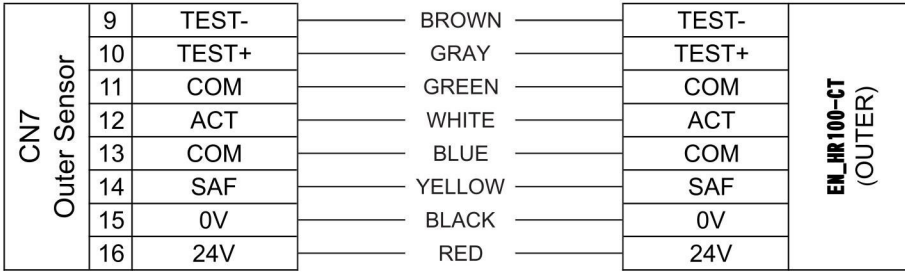
\*Please select the correct "N.C./N.O. position" for "Fingered Switch II" of Controller and "Dipswitches of Sensor".

\*About the adjustment of "Fingered Switch II", please refer Page.17.



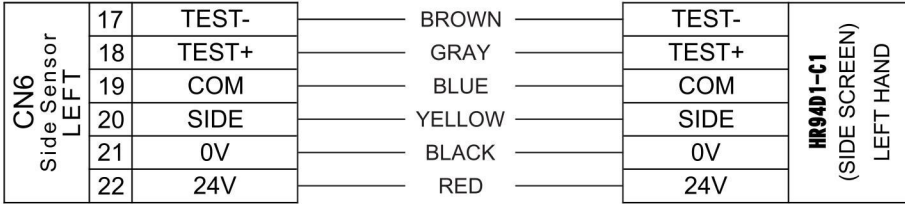
**EN\_HR100-CT**  
Y-No.2 → "N.C."  
Y-No.4 → "LOW"

**Controller**  
II-No.2 →  "N.C."  
III-No.4 →  Yes "



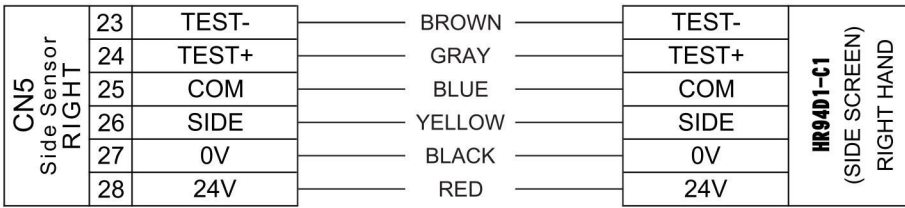
**EN\_HR100-CT**  
Y-No.2 → "N.C."  
Y-No.4 → "LOW"

**Controller**  
II-No.4 →  "N.C."  
III-No.5 →  Yes "



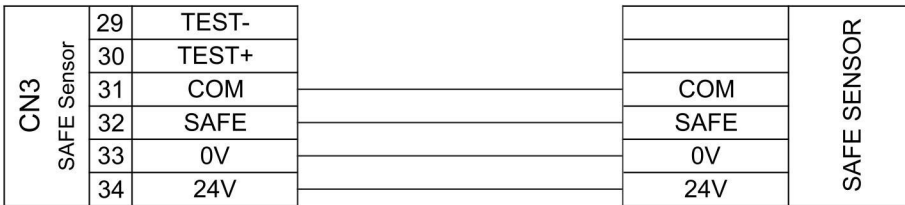
**HR94D1-C1**  
No.6 → "N.C."  
No.8 → "ON"

**Controller**  
II-No.5 →  "N.C."  
III-No.6 →  Yes "



**HR94D1-C1**  
No.6 → "N.C."  
No.8 → "ON"

**Controller**  
II-No.6 →  "N.C."  
III-No.7 →  Yes "



\*Please select the correct "N.C./N.O. position" for "Fingered Switch II" of Controller and "Dipswitches of Sensor".

\*About the adjustment of "Fingered Switch II", please refer Page.17.



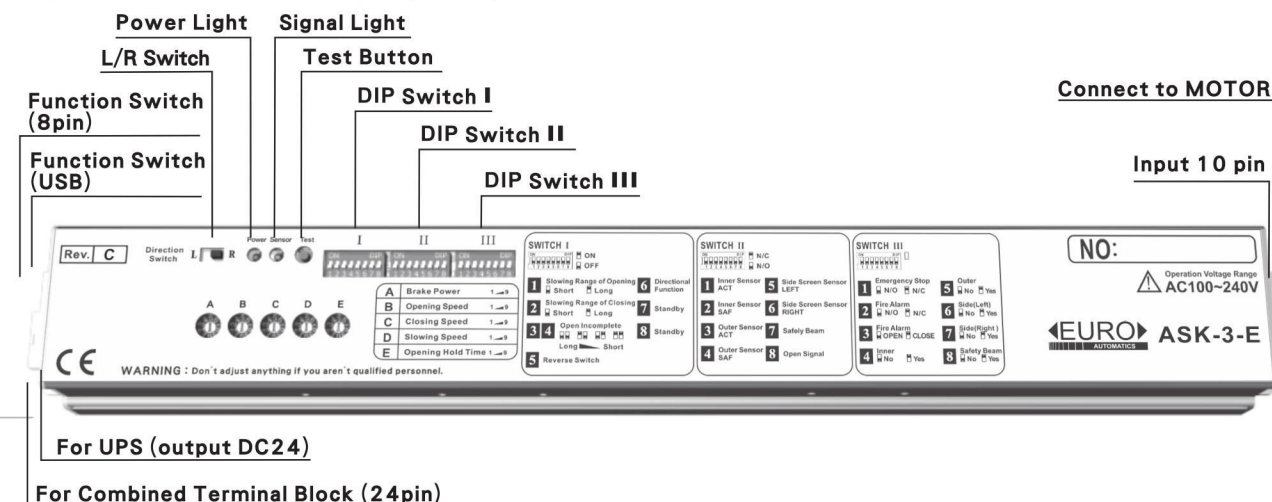
Before turn on the power, make sure the Door-Leaf can be smoothly moved, and the electric link is correct at first.

## 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



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).

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



### A 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.



### B 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.



### C 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.



### D 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.

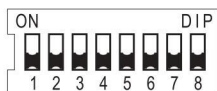


### E Opening hold time

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

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 ange).



## Switch I

### 1 Slowing Range of Opening

Short  Long

### 2 Slowing range of closing

Short  Long

### 3 4 Open incomplete

Long Short

### 5 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.

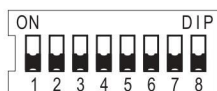
### 6 Directional function

OFF  ON

OFF: Normal mode.

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

### 7 8 Standby



## 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

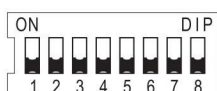
4 Outer Sensor SAF  N/O  N/C

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

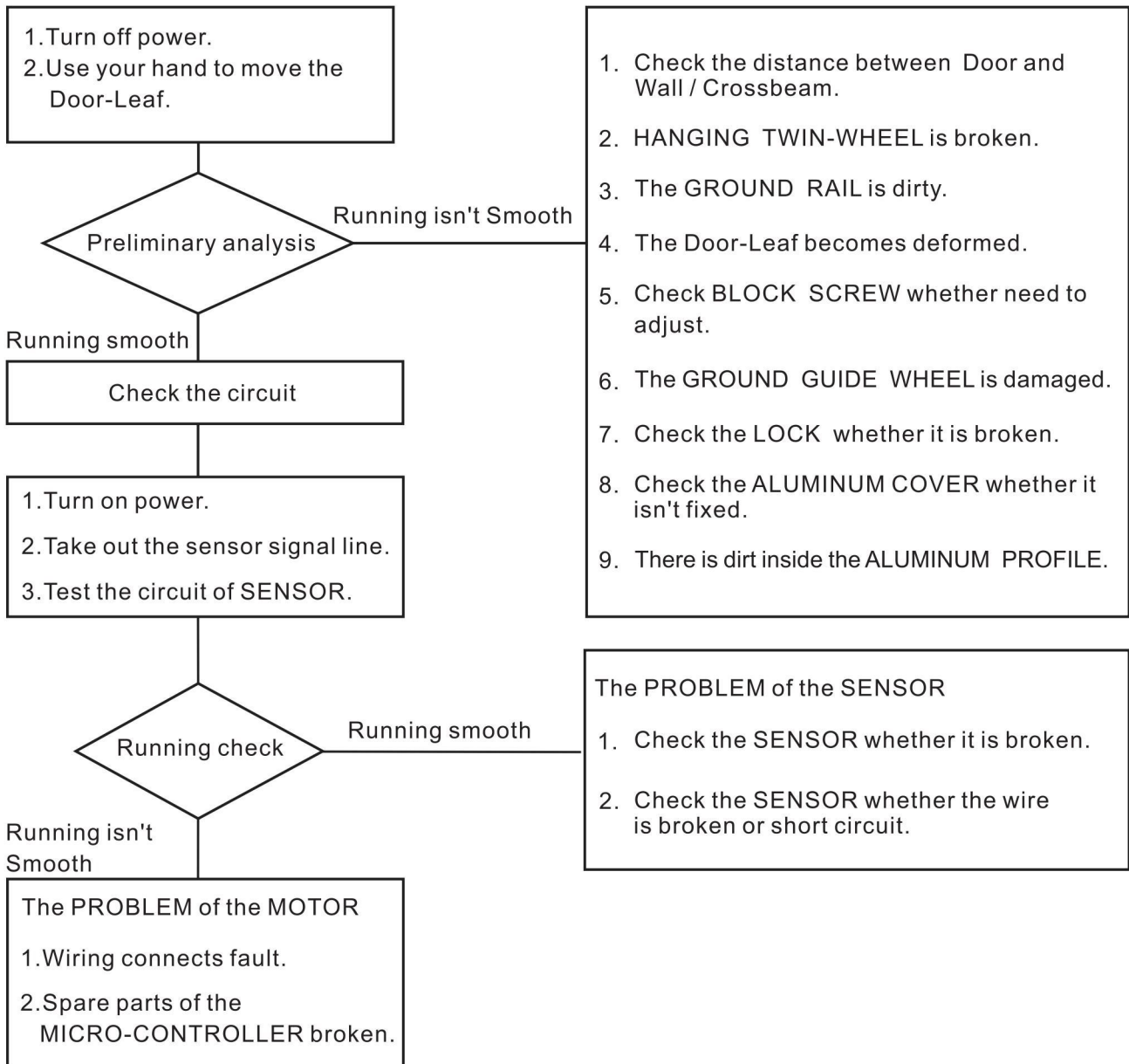
5 Outer  No  Yes

6 Side(Left)  No  Yes

7 Side(Right)  No  Yes

8 Safety Beam  No  Yes

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



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.