Automatic Door Systems



AD-3E

(EN16005)
Single-winged / Bi-parting
For "Noiseless" aluminum profile use.

OPERATION INSTRUCTION



20 APPENDIX(3) UPS (Optional Device)

S S

- 1. Input Voltage: DC24V
 2. Output Voltage: DC24V
- 3. Pmax (Rated Power, Watts)/(Maximum power rating): 90W/1sec
- 4. Average Power Output: 70W
- 5. How to turn on:
 - (1) Auto power on when input voltage >23V
 - (2) Press 2 times on COLD START BUTTON
- 6. Power off:
 - (1) Power off when Input voltage <22V
 - (2) Hold the COLD START BUTTON for 3 seconds
 - (3) Shut down automatically when low battery or system failure

7. Automatic door opening signal output (dry contact) situations:

- (1) Power failure (controlled by K.O.C. switch)
- (2) The battery is running low
- (3) System failure (ex. Internal fuse failure, battery failure, system can't start normally)

8. COLD START BUTTON function sequence

- (1) Press twice → Power on (And Buzzer sound on)
- (2) Hold button for 3 seconds \rightarrow Power off
- (3) Press button twice → turn on the machine and "Beep" sound repeats in several seconds. To press twice again to cancel the "Beep" sound but the power remains on.

9. Signal and Buzzer

ignar and Bazz	-			
Signal	Buzzer	Explanation		
Green Light (flash)	NONE	Battery is Charging		
Green Light (steady)	NONE	Battery is fully charged		
Red Light (steady)	"Beep" sound (twice), stop for 10 sec, and repeat 10 times	Battery is working		
Red Light (flash)	"Beep" sound (3 times), stop 5 sec, and repeat 15 times	Battery is running low		
Orange Light (steady)	"Beep" sound (5 times), stop for 10 sec, and repeat 10 times every 8 hours	Advise to change battery (service life : 3 years)		
Orange Light (flash)	"Beep" sound (lasting 5 sec), stop for 10 sec, and repeat 10 times every 8 hours	System failure		
	"Beep" sound (once)	Press COLD START BUTTON		

K.O.C. SW

- Switch to KEEP OPEN position
- ▲ AC Power Connected : KEEP OPEN output is open circuit
- ▲ AC Power Disconnected : KEEP OPEN output is closed circuit, then door will be forced to open
- Switch to Normal position
- ▲ The KEEP OPEN output is open circuit at all the time

Illustration

The output contact

Green Open door signal

Red + Input / Output

Black - DC24V

(connect to micro-controller)

RIGHT SIDE OF UPS



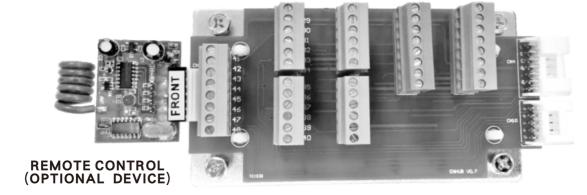
APPENDIX(2) REMOTE CONTROL 19 (Optional Device)



(C) Operation:

- 1 · ARROW UP(▲): Open door for 1 cycle and auto close back again. Good for controlling eople from coming in after office hours when put to LOCK mode.
- 2 · ARROW DOWN(♥): Door in fully open position. Press another time it will go back to normal function.
- 3 · SQUARE(■): Door permanently close or lock by electric lock. Press another time door is unlocked and go back to normal operation. Cannot be activated by sensor or press button. If using card access security system, has to put to LOCK mode. Coming in by card access system, going out by sensor or release press button.
- 4 · ROUND(●): Door opens partially. Press another time and door goes back to normal operation and door can open fully.

Connection of Illustrations



COMBINED TERMINAL BLOCK

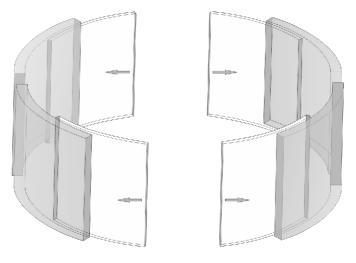


ROUND TYPE DOOR / CURVED TYPE DOOR $\stackrel{oldsymbol{2}}{st}$



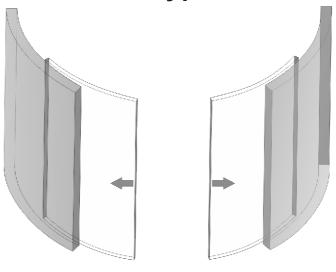
Our company has the following series of automatic door, please contact with our distributors/representations.

Round type door



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



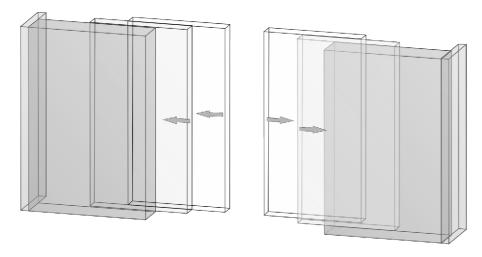


Installation: Please in accordance with the instruction of Curved Type Door.

TELESCOPIC SLIDING DOORS

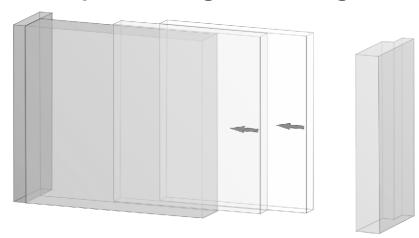






Installation: Please in accordance with the instruction of Telescopic 4-winged Sliding Doors.

Telescopic 2-winged Sliding Doors.



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

19 APPENDIX(2) REMOTE CONTROL (Optional Device)



(A) Action Instruction:

1 Add another Transmitters:

Make sure Receiver power on and take one Transmitter which can control Receiver. Press the ● and ■ of Transmitter simultaneously and Indicator flash quickly about 9 seconds. When press ▲ and ▼ of new Transmitter simultaneously during flash, the Indicator will stop flash and add new Transmitter. The memory capacity of Receiver is "30 pieces" of Transmitter.

Note: Follow the instruction again to add another Transmitter Transmitter

2 · Clearance other Transmitter:

Turn off the power for 10 seconds then turn on the power again. The Indicator will flash per second about 10 seconds. Then press four keys(\bigcirc , \blacksquare , \triangle , \blacktriangledown) of Sample Transmitter at the same time during flash and the Indicator will stop flash. After that, the Receiver will copy new code and remove the old code. All Transmitters couldn't control Receiver except the Sample Transmitter.

Note: Follow theinstruction again to add another Transmitter.

3 Stand by condition:

When the Receiver power on, the action Indicator will flash for 10 seconds. While press any key of Transmitter during flash, the Indicator will stop and enter stand by condition. If there are no input by pressing any key of Transmitter during flash, the Receiver will automatically enter stand by condition after 10 seconds.

4. Memory function of the lock: after power on, the receiver keeps the original condition of lock.

(1) If the lock is ON before the receiver powers off, it will be ON after the power on.

(2) If the lock is OFF before the receiver powers off, it will be OFF after the power on.

(B) Technical data:

1 · Transmitter:

Power supply: GP 23A (12V) Frequency: 433.92Mhz

Power consumption during operation: About 9mA (12V)

Stand by power consumption: 1uA Transmit power: About - 15dbm

2 Receiver:

Power supply: DC 7V - DC 14V(Standard: DC 12V)

Frequency: 433.92Mhz

Stand by power consumption: About 6mA(12V)

Max output: 30mA





18 APPENDIX(1) FUNCTION SWITCH (Optional Device)



FUNCTION SWITCH



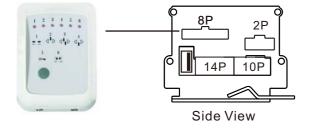
Six press functions:

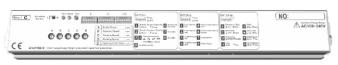
- 1.DOOR OPEN
- 2.IN ONE-WAY
- 3.AUTO
- 4.OUT ONE-WAY
- 5.DOOR CLOSE
- 6.HALF OPEN

Operation

Press for 3 seconds to unlock buttons. When light flash, choose the needed functions. After 5 seconds, the light keeps go to finish setting.

MICRO-CONTROLLER





Front View

Accessory Cable Notice:





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	LEGEND OF PART DRAWING



MICRO-CONTROLLER



WORM GEAR MOTOR



POWER SWITCH



SENSORS (OPTIONAL DEVICE)



RACK BELT

BELT ROLLER

COMBINED TERMINAL BLOCK

(BI-PARTING)HANGERS & IRON PARTS



HANGING TWIN-WHEEL4 PCS



BELT BRACE



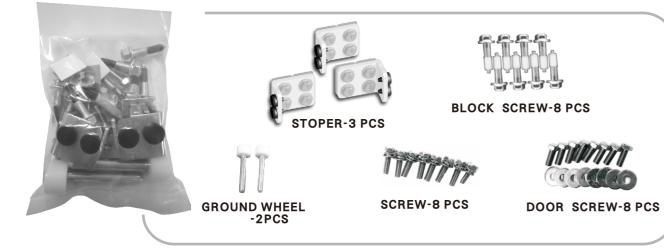
PASSIVE BRACE with BELT FIXER



ACTIVE BRACE with BELT FIXER



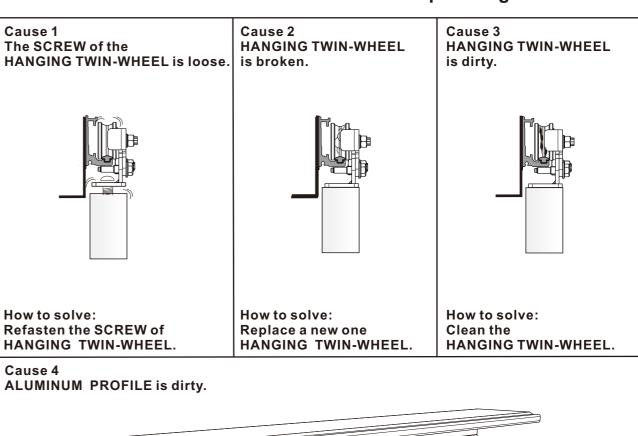
HANGING BRACE-4 PCS

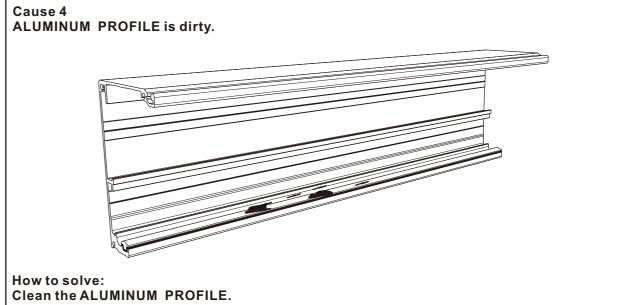


IRON PARTS SACK



The Door-Leaf sends out abnormal noise in operating.



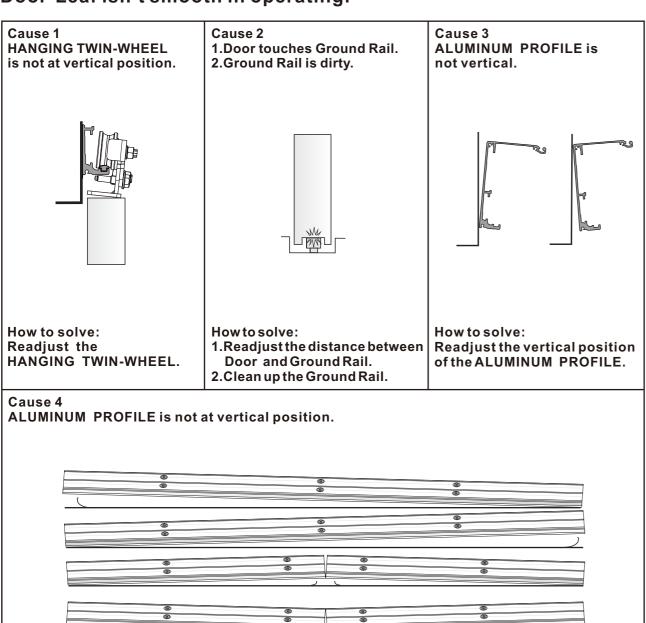


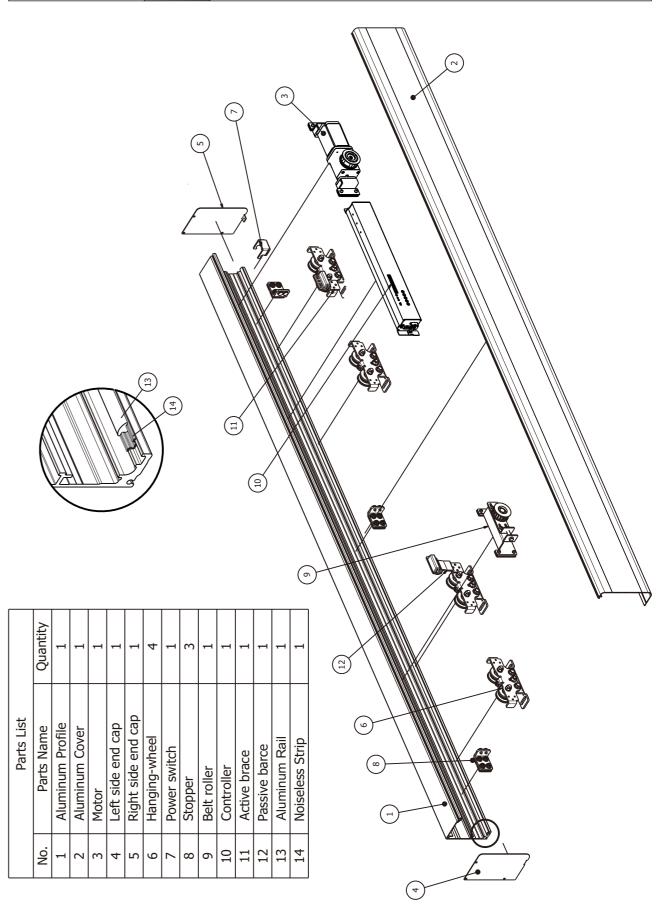
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Door-Leaf isn't smooth in operating.

How to solve:

Readjust the level position of the ALUMINUM PROFILE.









3 / TECHNICAL SPECIFICATION

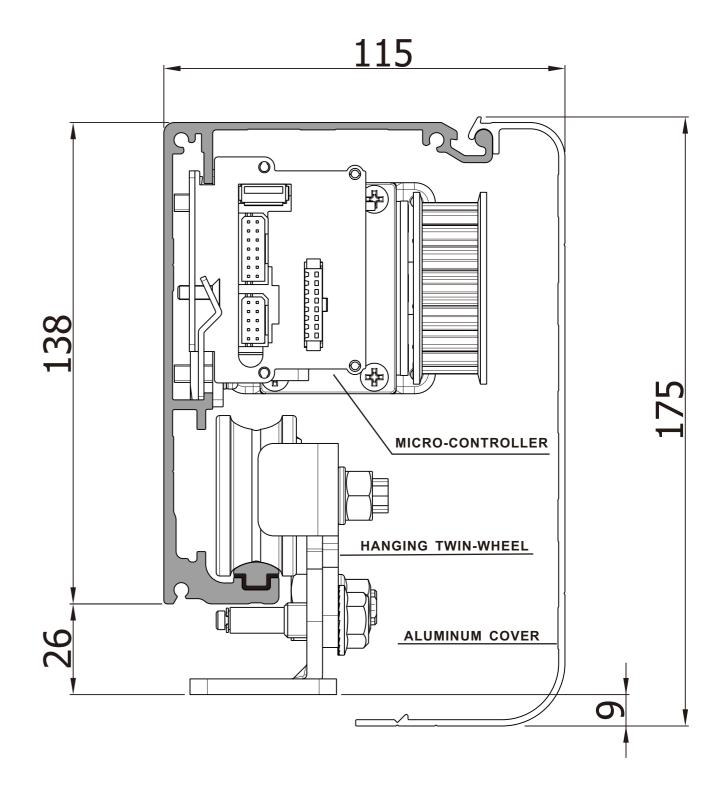
2	
E	

17 TROUBLESHOOTING (ILLUSTRATED) $^{2}_{3}$

Door can't be opened or closed.

MODEL	SINGLE-WINGED	BI-PARTING			
DOOR WEIGHT	150kg X1(door)	130kg X2(door)	Cause 1 Above the Door-Leaf touched with the crossbeam.	Cause 2 The Door-Leaf touched with the Ground Guide Rail.	Cause 3 Door-Leaf derails the ALUMINUM PROFILE.
DOOR WIDTH	DW=500mm~2500mm	DW=500mm~2500mm			
INSTALL WAY	Surface install	Surface install		3/8	
MOTOR	DC24V 75W WOR	M GEAR MOTOR	Crossbeam		
CONTROL	USER-FRINEDLY MI	CRO-CONTROLLER			
POWER CONSUMPTION	75	W		 	
VOLTAGE	AC100V~240V		How to solve: Adjustment the interval		How to solve:
ENVIRONMENTAL TEMPERATURE	-20℃~	+50°C	between the Door-Leaf height and Crossbeam.	How to solve: Adjus the Door-Leaf height.	Put the Door-Leaf into the ALUMINUM PROFILE again.
VOLUME	60decib	el(max.)	Cause 4 Door-leaf is not vertical.	Cause 5 SENSOR is broken or disconnects to the	e COMBINED TERMINAL BLOCK.
STARTING SPEED	600mm(second)	550mm(second) X 2			
STARTING TIME	0~64 sec. (regulable)			44	X
TRANSMISSION IMPORTANT CONDITION	RACK BELT S8M			K K	
OPENING DOOR RANGE	FULL/HALF-OPEN (regulable)				
PFC POWER EFFICIENCY	0.95(in AC100V Full load)		How to solve:	How to solve:	
TRACTION FORCE	3.5	kg	Adjust the Ground Guide Rail/Wheel position.	1.If SENSOR is broken please 2.Check SENSOR whether it concerns to the combined TERMINAL BLO	onnects to the

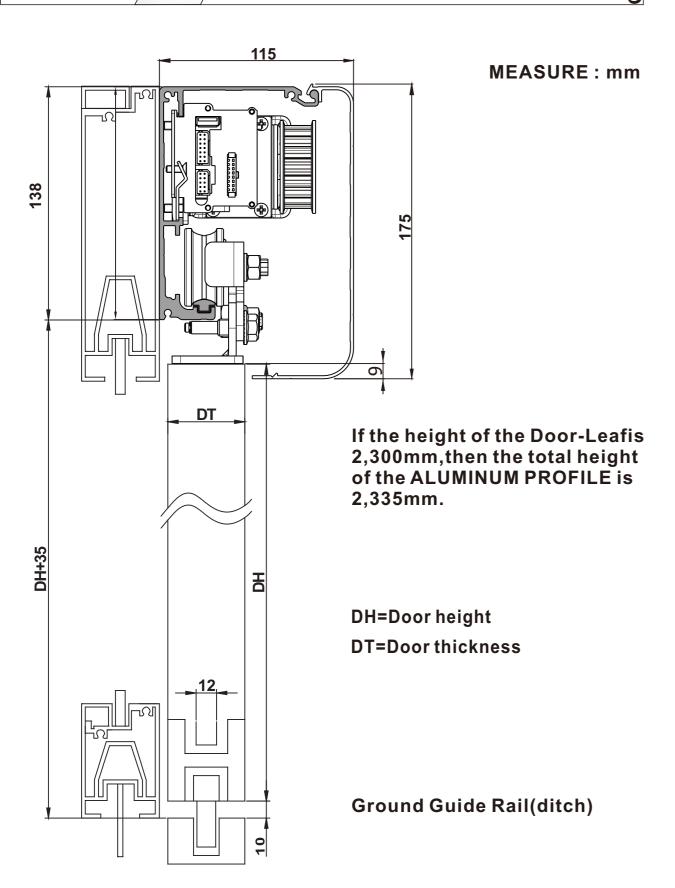
PROBLEMS	REASONABLE	CHECK	HOW TO SOLVE	
DOOR CAN'T BE MOVED.	1.No power.	Broken circuit.	Check the broken circuit position.	
		The Power Switch is not opened.	Open the POWER SWITCH.	
	2.The door is locked.	Door is locked and no movement action.	Open the DOOR LOCK.	
	3.The sensor is broken.	Signal light 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.	

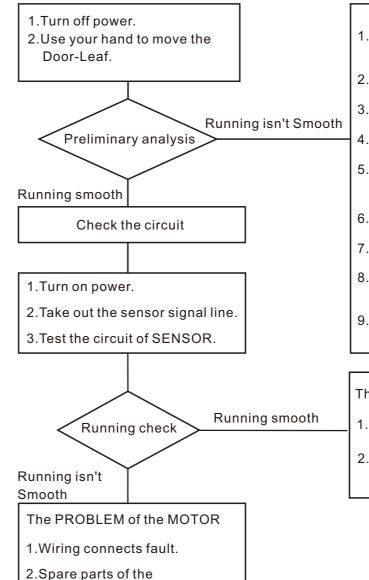


MEASURE: mm









MICRO-CONTROLLER broken.

- Check the distance between Door and Wall / Crossbeam.
- 2. HANGING TWIN-WHEEL is broken.
- 3. The GROUND RAIL is dirty.
- 4. The Door-Leaf becomes deformed.
- Check BLOCK SCREW whether need to adjust.
- 6. The GROUND GUIDE WHEEL is damaged.
- 7. Check the LOCK whether it is broken.
- 8. Check the ALUMINUM COVER whether it isn't fixed.
- 9. There is dirt inside the ALUMINUM PROFILE.

The PROBLEM of the SENSOR

- 1. Check the SENSOR whether it is broken.
- 2. Check the SENSOR whether the wire is broken or short circuit.

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

ON DIP 1 2 3 4 5 6 7 8

DIP Switch I

Short Long

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



1 Inner Sensor ☐ N/O ☐ N/C ACT

2 Inner Sensor N/O N/C SAF

3 Outer Sensor ☐ N/O ☐ N/C ACT

4 Outer Sensor ☐ N/O ☐ N/C SAF

5 Side Screen Sensor ☐ N/O ☐ N/C LEFT

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

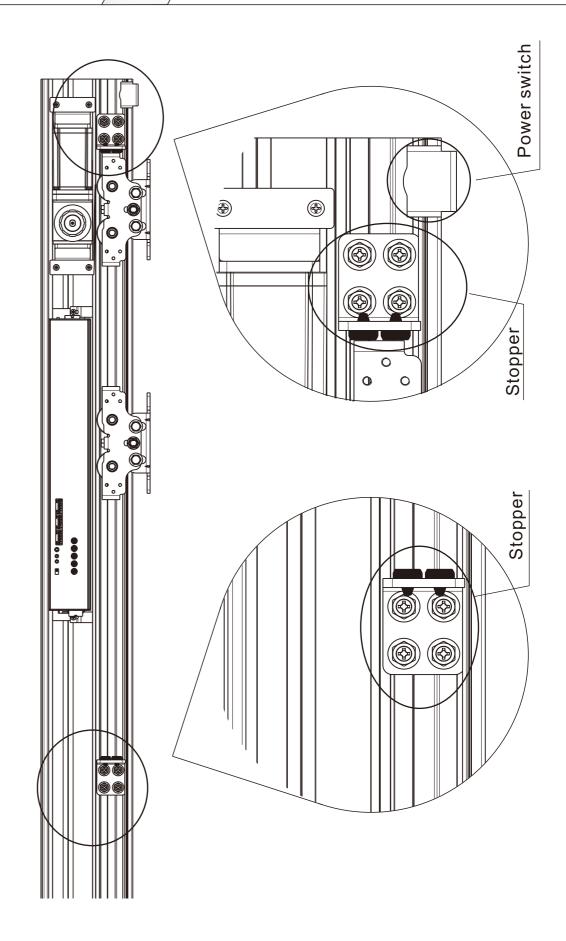
8 Open Signal N/O N/C

DIP Switch III

1 Emergency Stop N.O. N.C. 5 Outer No Yes
2 Fire Alarm N.O. N.C. 6 Side(Left) No Yes
3 Fire Alarm OPEN CLOSE 7 Side(Right) No Yes
4 Inner No Yes 8 Safety Beam No Yes

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





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

<u></u>

3

Hang and adjust the Door-Leaf

Install and adjust the BELT

9 Power connect

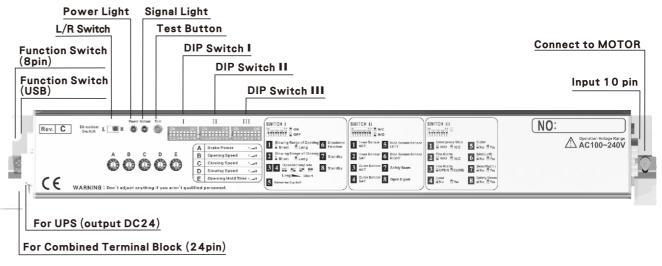
1 Test and adjust

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



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).

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.

The closing speed of the door
Adjust the CLOSED SPEED. Higher number, faster speed.

Adjust the CLOSED SPEED. Higher number, faster speed. CAUTION: please adjust the number one by one from low to high.

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	32	64



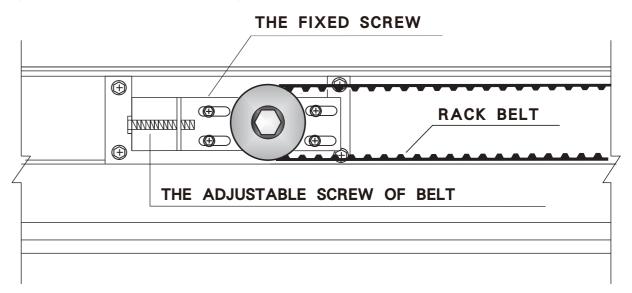


13 CONNECTION (Monitored sensor - 2) $^{2}_{8}$

	1	TEST-	BROWN	TEST-				
_	2	TEST+	GRAY	TEST+	1	= =	= = · w	ŗ.
CN8 Inner Sensor	3	COM	GREEN	COM	,	R1 00-CT	☐	ISO
	4	ACT	WHITE	ACT	8 E. Y.	🔼 8 🔭)en
5 2	5	COM	BLUE	COM	EN_HR100-CT (INNER)	=	Controller II-No.2 → N.C." III-No.4 → 'N.Yes"	5
lne	6	SAF	YELLOW —	SAF		EN -Y-No.2 Y-No.4	0.0 10.4	SS
	7	0V	BLACK	0V	1	EN_H Y-No.2 Y-No.4	급급	che
	8	24V	RED	24V	1			ĬŽ.
					•	•		ibs
	1 _ 1		I			Ī		اً ب
	9	TEST-	BROWN	TEST-	4	_	_ =	Pu)
ō	10	TEST+	GRAY —	TEST+		. . ≥	S. S.	ם כ
CN7 Outer Sensor	11	COM	GREEN	COM	EN_HR100-CT (OUTER)	EN_HR100-CT Y-No.2 → " N.C. " Y-No.4 → " LOW "	oller N.C." Yes"	<u>=</u>
CN7	12	ACT	WHITE	ACT	:N_HR100-C; (OUTER)		Controller II-No.4 → "¶N.C." II-No.5 → "¶ Yes."	rt.
O P	13	COM	BLUE	COM	H 4 4	0.4 T	Ö
Out	14	SAF	YELLOW ———	SAF		Z O O	Contro II-No.4 → III-No.5 →	_
	15	0V	BLACK	- OV	1	≯ ₹	= =	
	16	24V	RED —	24V				Į į
								rect "N.C./N.O. position" for " DIP Switch II " of Controller and "E
	17	TEST-	BROWN	TEST-]	= =	Š
or	18	TEST+	GRAY	TEST+		HR94D1-C1 No.6 → " N.C." No.8 → " ON "	Controller II-No.5 → N.C." III-No.6 → " Yes"	ه <u>۵</u>
9 Sus	19	COM	BLUE	COM	- 2 H M	V Z O		۽ ۾
NS H	20	SIDE	YELLOW —	SIDE	HR94D1-C1 (SIDE SCREEN) LEFT HAND	HR94D1-C1		for
CN6 Side Sensor LEFT	21	0V	BLACK —	- 0V		17. 9.0		"L
S	22	24V	RED	24V	(S) _	- 2 2		itic
		2.1	,		1	I	I	SOC
								0 7
	23	TEST-	BROWN	TEST-	<u> </u>	= =	.; s	Ž.
los	24	TEST+	GRAY —	TEST+		2 3 8	a ≥ ≥ ×); ;
CN5 e Sen	25	COM	BLUE	COM	HR94D1-C1 DE SCREE GHT HAN	HR94D1-C1	Controller ○.6 → ¶N. Io.7 → "¶ Y	Ţ,
5000	26	SIDE	YELLOW —	SIDE	894	46.7 %	ont 6 7 –	t t
CN5 Side Sensor RIGHT	27	0V	BLACK	- 0V	HR94D1-C1 (SIDE SCREEN) RIGHT HAND	HR94D1-C1 No.6 → " N.C." No.8 → " ON."	Controller II-No.6 → ¶N.C." III-No.7 → "¶ Yes."	rre.
"	28	24V	RED -	24V	9	22	i i	00
								the
	20	TEST-	1			1		ğ
_	29				4 %			g
3 susc	30	TEST+		COM	N N			O)
CN3	31	COM		COM	SEI			as
CN3 SAFE Sensor	32	SAFE		SAFE				*Please select the correct "N.C./N.O. position" for " DIP Switch II " of Controller and "Dipswitches of Sensor".
/\$	33	0V		0V	SAFE SENSOR			*
	34	24V		24V	0,			

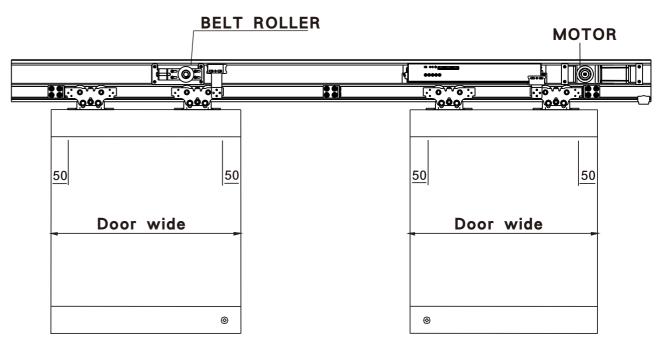
INSTALL THE BELT ROLLER & 2 THE POSITION OF THE HANGING TWIN-WHEEL &

INSTALL THE BELT ROLLER



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

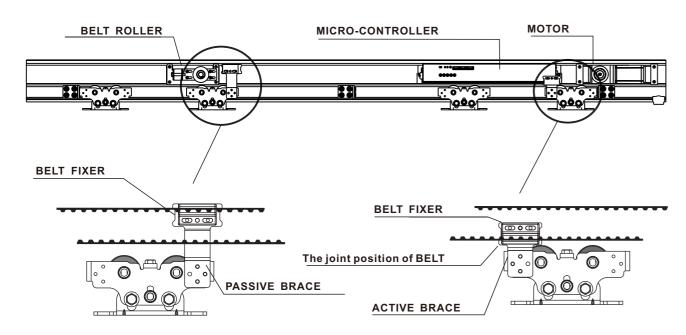
THE POSITION OF THE HANGING TWIN-WHEEL



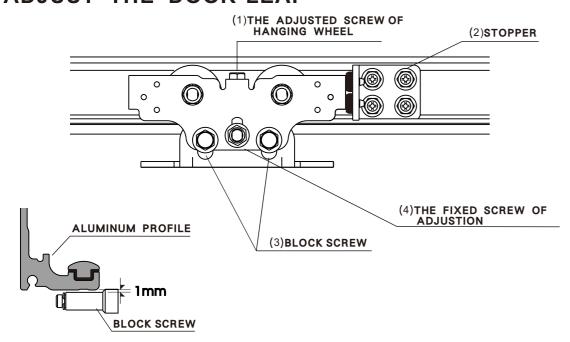
Inside the room, the distance between the HANGING TWIN-WHEEL and the RIM of DOOR must be more than 50mm.

MEASURE: mm

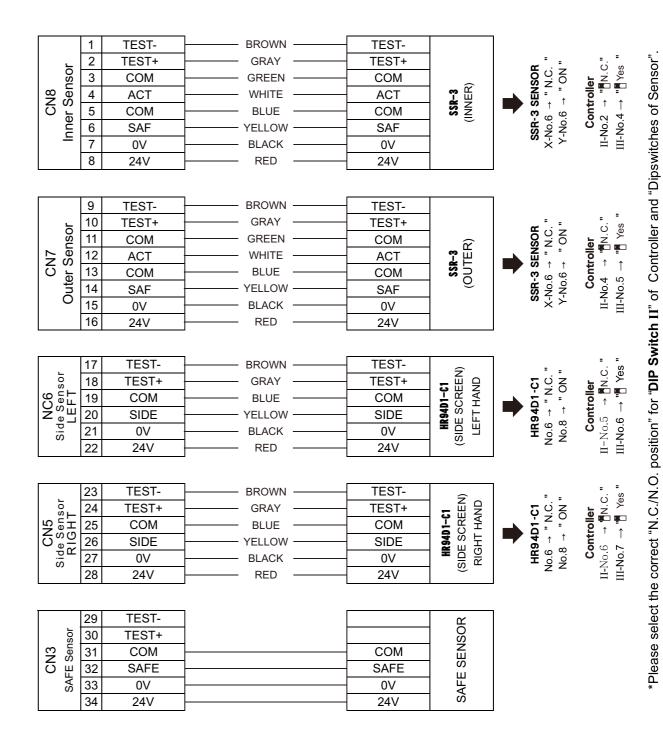
INSTALL THE RACK BELT



ADJUST THE DOOR-LEAF

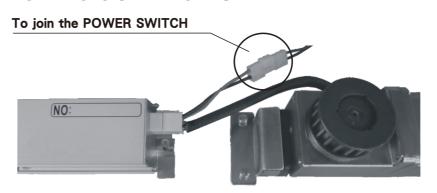


- When Door-Leaf height and interval need to adjust, loose (3) & (4) at first, then adjust (1).
- B Need to fasten (3) & (4) after adjust (1).
- (2) Install above-mentioned (2) after make sure the DOOR OPEN POSITION.



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

ELECTRIC CONNECTION



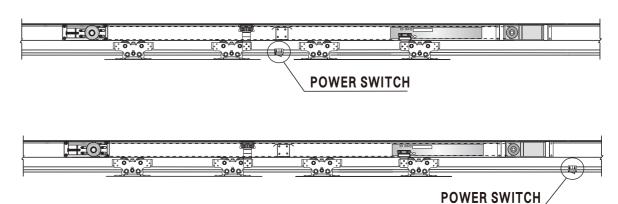
The ILLUSTRATED of CONTROLLER and MOTOR.

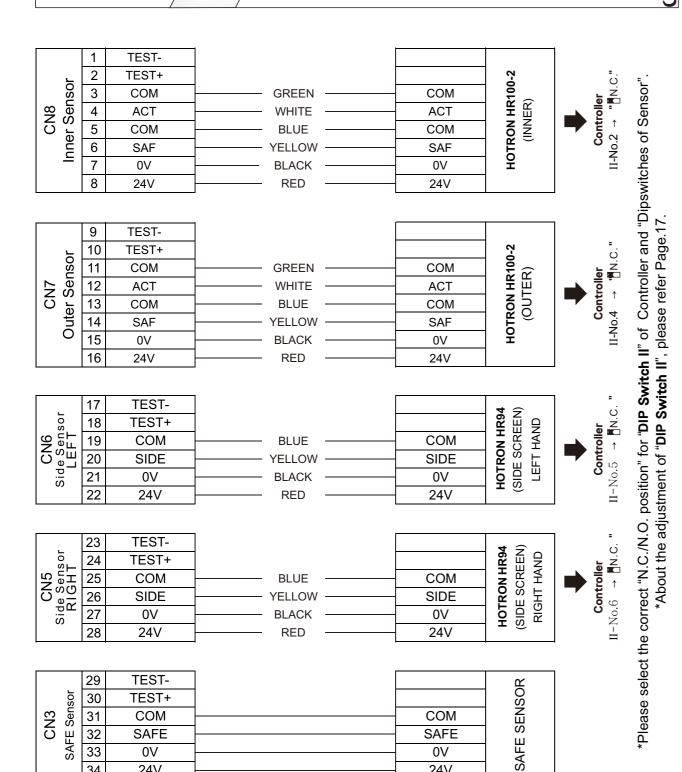


Please confirm WHETHER the SENSOR VOLTAGE is the same as the power supply. If different between them, need to add the TRANSFORMER, otherwise the SENSOR would be burned.

POWER SWITCH

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





24V

34

24V

The ILLUSTRATED of WIRING.



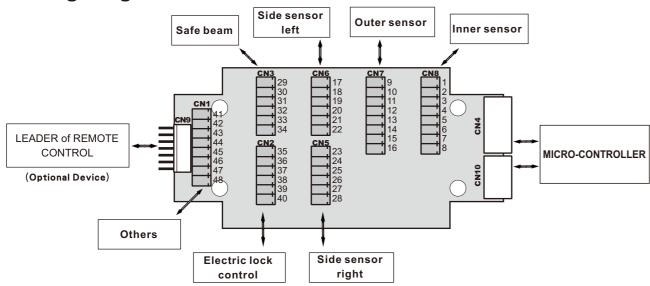
COMBINED TERMINAL BLOCK



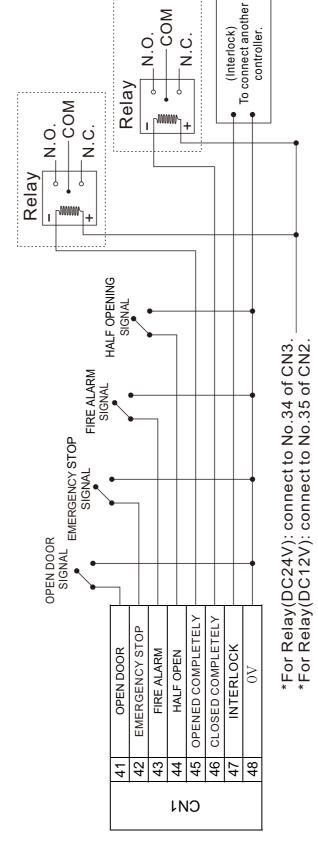
COMBINED TERMINAL BLOCK

MICRO-CONTROLLER

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.



Warning 'Relay it should be with built in diode. 'Relay Suggested model: OMRON MY2N-J-D2-J (It's arranged by customers)

