Specification and Manual Installation

KM-1001

CONTENTS

PRECAUTION

- ➢ **Check product specification from your order list.**

- ➢ **Check all parts mentioned on part list.**

- ➢ **Do not connect with other devices without our pre approval.**

- ➢ **Contact us whenever you face any trouble during installation.**

- ➢ **Do not give terrible impact to the operator to prevent any damage from shock**

CHARACTERISTICS

- ➢ **Function to save energy through adjusting opening distance of the door.**

- ➢ **Function to prevent opening after door is closed.**

- ➢ **Stable operation without any performance deviation between AC185-265V due to compact SMPS power control system built-in controller.**

- ➢ **Front setting panel of controller equipped with initiative UI & key pad to help the user to adjust opening and closing speed easily.**

- ➢ **Digital display equipped with self diagnosis system helps to maintain system from error.**

- ➢ **Commuication port available with serial communication supporting remote control and monitoring through network.**

1. SPECIFICATIONS

	SINGLE DOOR	DOUBLE DOOR
MODEL	KM1001S	KM1001D
Door weight	150Kg (max)	120Kg x 2 (max)
Door width	650 ~ 1,500mm	650 ~ 1,200mm x 2
Opening/closing speed	MAX 600mm/Sec (adjustable)	
Waiting time at opening	0 ~ 60 Sec	
Electric power	AC 220V , 50~60Hz	
Electric consumption	Waiting: 3.5W ^{주1}, driving: max 90W^{주2}	
Motor./Engine	90W/100W DC MOTOR (worm gear)	
Control system	Micro processor PWM control	
communication(option)	RS-232C, RS-485	
Driving	TIMING-BELT DRIVE	
Ambient temperature.	-20°C ~ +50°C	

2. NAME OF PARTS

Front Cover

Idle Pulley

Door Hanger

Belt Clamp-D

Controller

Side Cover-L

Belt Clamp-S

Motor

Timming Belt

Head Rail

Side Cover-R

Stopper

Power Switch
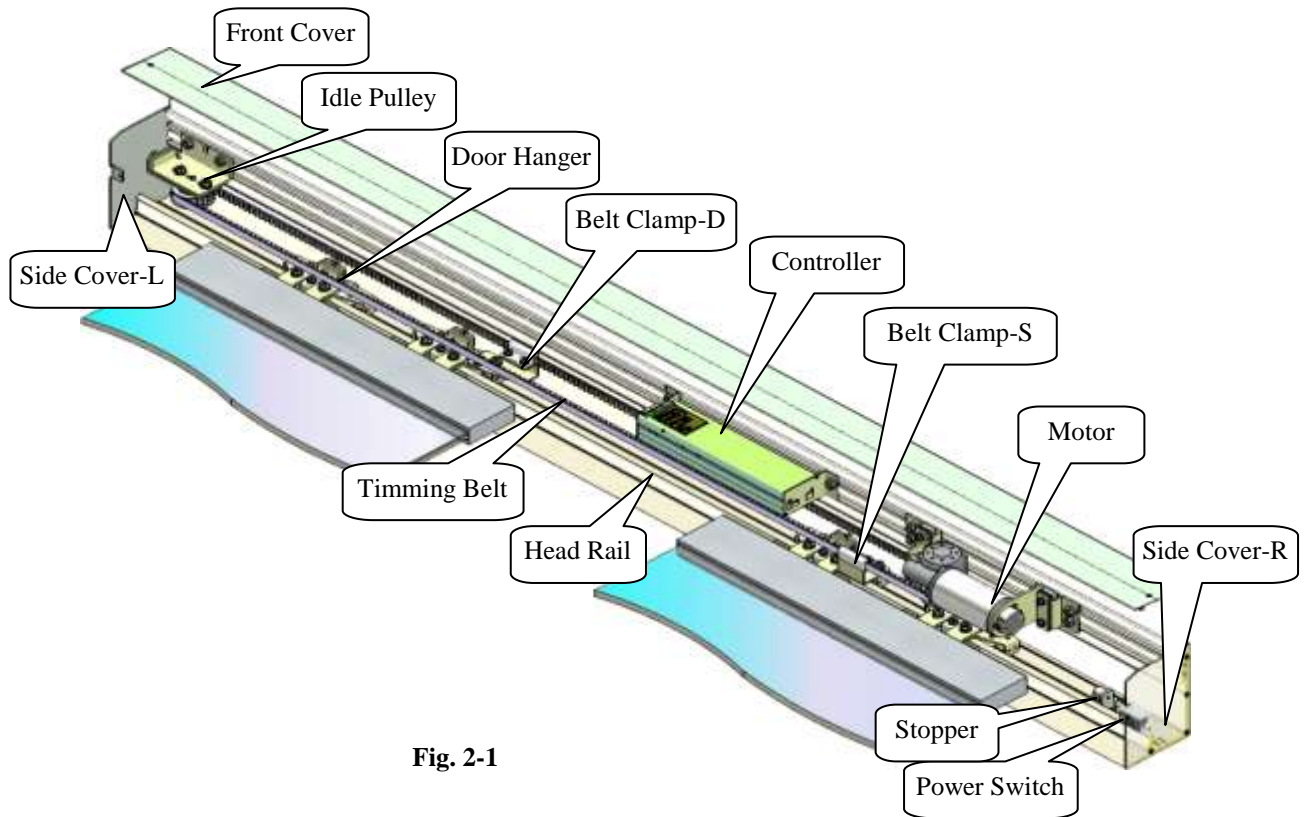
Fig. 2-1

3. INSTALLATION (ASSEMBLING)

.

(＋) Bolt and driver tip (Tip) specification

Bolt	M2 ~ M2.6	M 3~ M5	M 6~ M8
Driver TIP	No.1	No.2	No.3

Power of fastening Bolt

Bolt	M3	M4	M5	M6	M8
Torque (Nm)	1.15	2.65	5.2	8.9	22

➢ **Necessary tools**

- (＋)driver　No.2&　No.3
- (Nipper)
- M8mm Tab& Tab Handle
- Safety glass, glove and safety items.

- (Spanner) 10mm & 13mm
- Hand Drill
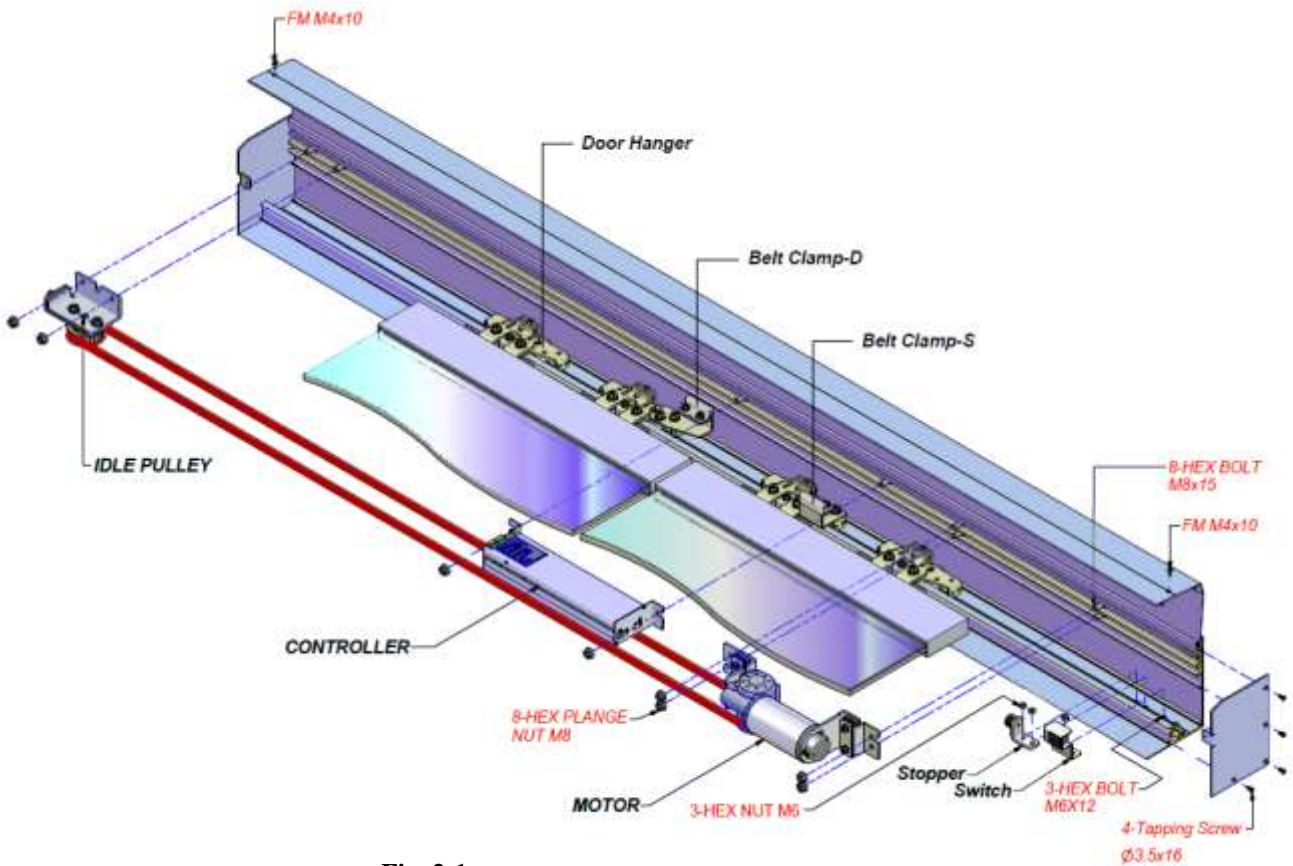- Ruler(tape)

a. Assembling illustration

Fig. 3-1

b. Head Rail

(1) After removing protection film (if any) , Inserting bolt to install Idle pulley, controller, motor as per below figure 3-2 , if anything extra part like UPS & electric lock etc , you need to insert more bolt.
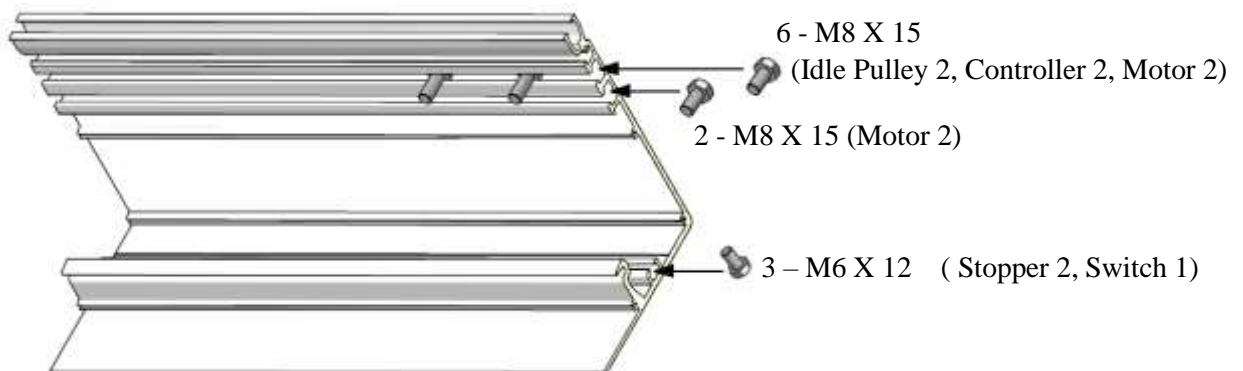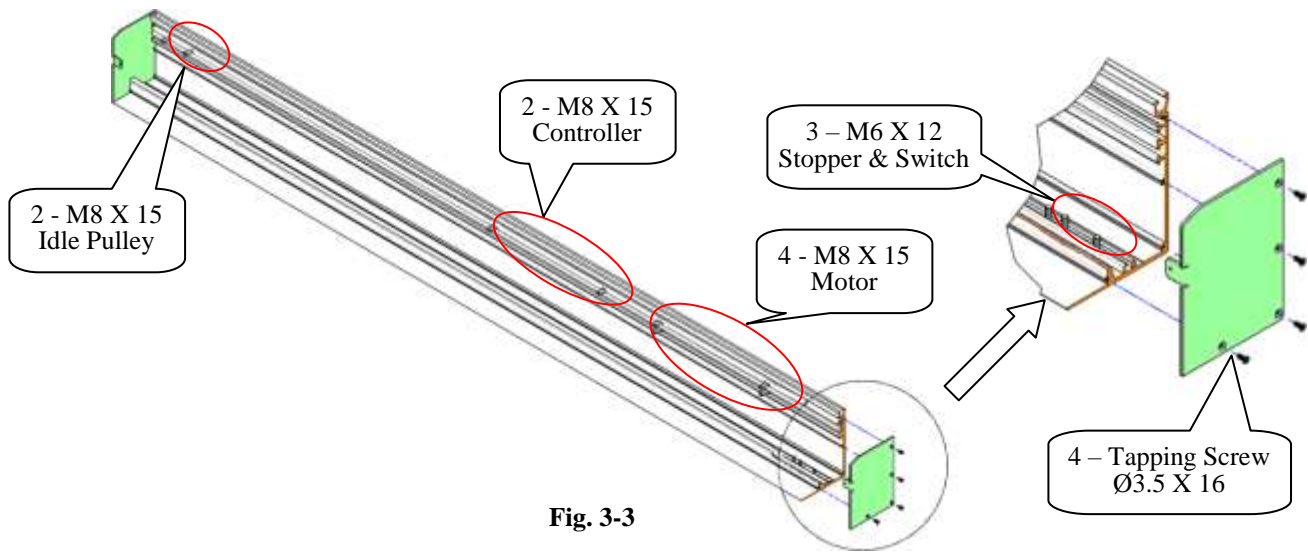
(2) Fixing side cover on the right and left end.

6 - M8 X 15
(Idle Pulley 2, Controller 2, Motor 2)

2 - M8 X 15 (Motor 2)

3 – M6 X 12   (Stopper 2, Switch 1)

Fig. 3-2

2 - M8 X 15
Idle Pulley

2 - M8 X 15
Controller

3 – M6 X 12
Stopper & Switch

4 - M8 X 15
Motor

4 – Tapping Screw
Ø3.5 X 16

Fig. 3-3

✧ **Side cover to be fixed after assemblying of all of the parts.(Side Cover)**

c. Assembling of motor and idle pulley

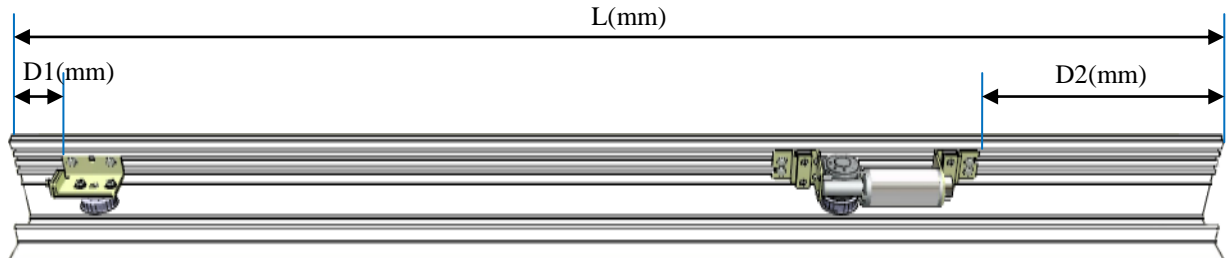assemblying idle pulley on the left and motor on the right side respectively

L(mm)

D1(mm)

D2(mm)

Fig. 3-4

● **Single shutter** : D1 = 40mm, D2 = length of rail (L)÷2 - 600mm
● **Double shutter** : D1 = L ÷4 - 250mm, D2 = length of rail (L)÷4 - 600mm

d. Assembling motor

Controller to be fixed in 50mm distance from motor as per below drawing.
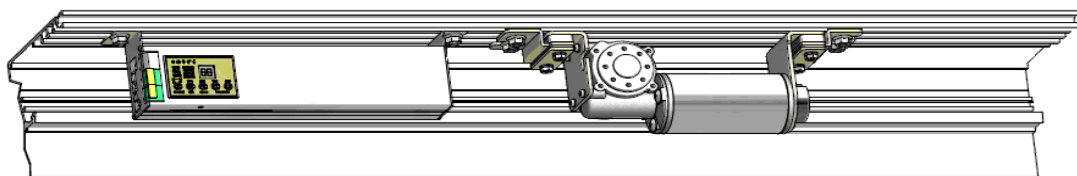

Fig. 3-5

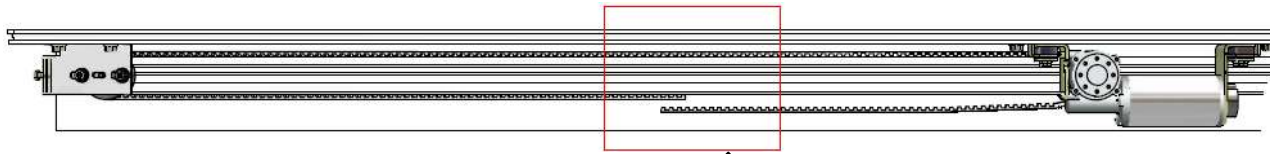**Connecting timing belt**

Adjusting of belt length

Fig. 3-6 a

● Cutting belt after putting it on motor and idle pulley like figure here.
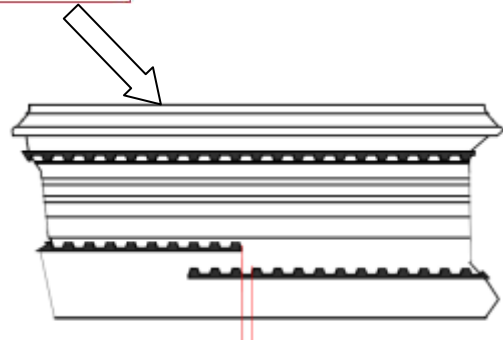

Fig. 3-6 b

i.   Assembling belt connector
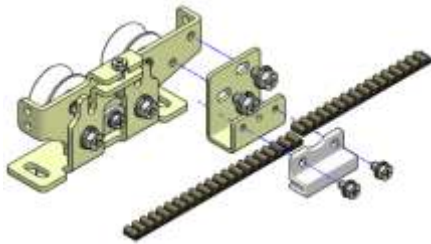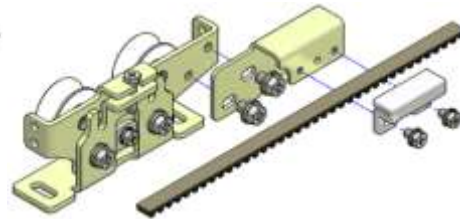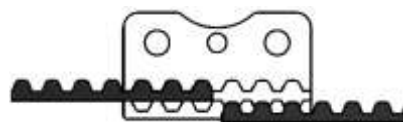

Fig. 3-7 Belt Clamp-S   **Fig. 3-8**Belt Clamp-D

● connect belt like the figure here

ii.   Adjusting belt tension
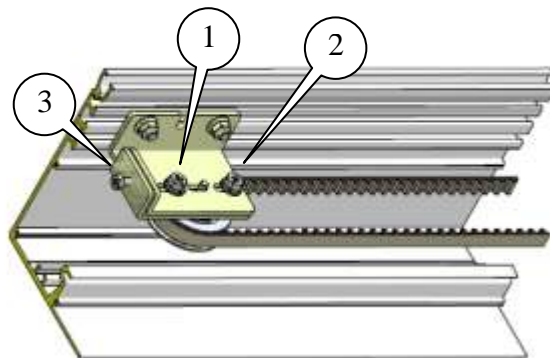
FIG 3-9

e. **Door installation**

i. **Tempered glass door**

| good | bad | bad | bad |
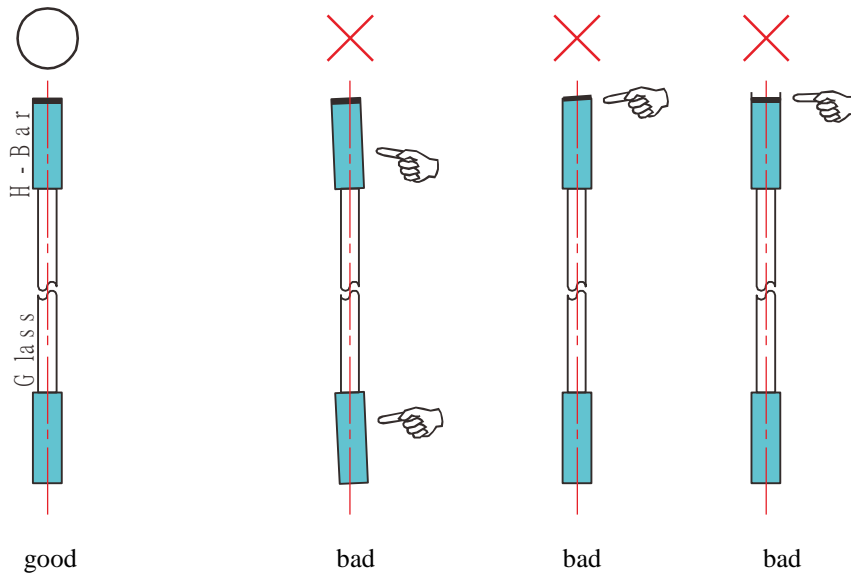
FIG3-10

ii. **Assembling hanger to the door: figure-3-11**

DW   150~220

150~220

Hex M8 Bolt ×4
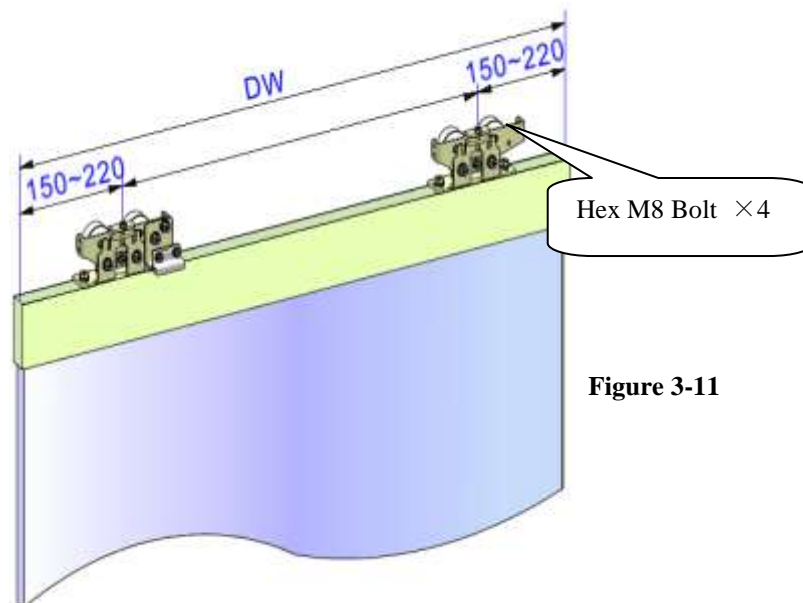
Figure 3-11

iii. Alignment of roller: Figure 3-12,13

Door Hanger   Roller   Door   Track

Fig. 3-12 Correct
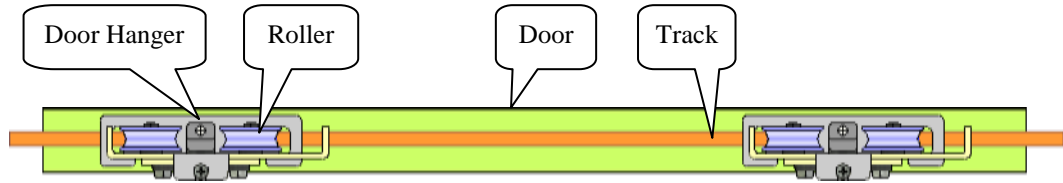
Turning to Alignment
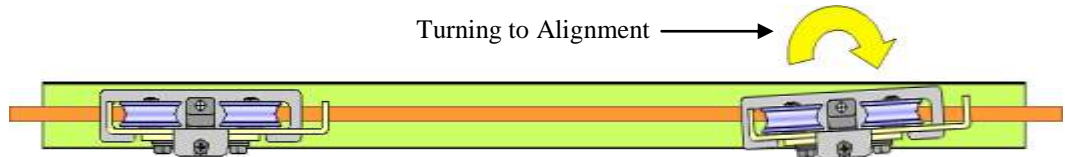
Fig. 3-13 Wrong

iv. Assembling door: Figure 3-14

Bolt "B"

Anti derailing

Bolt "A"

M6 Bolt
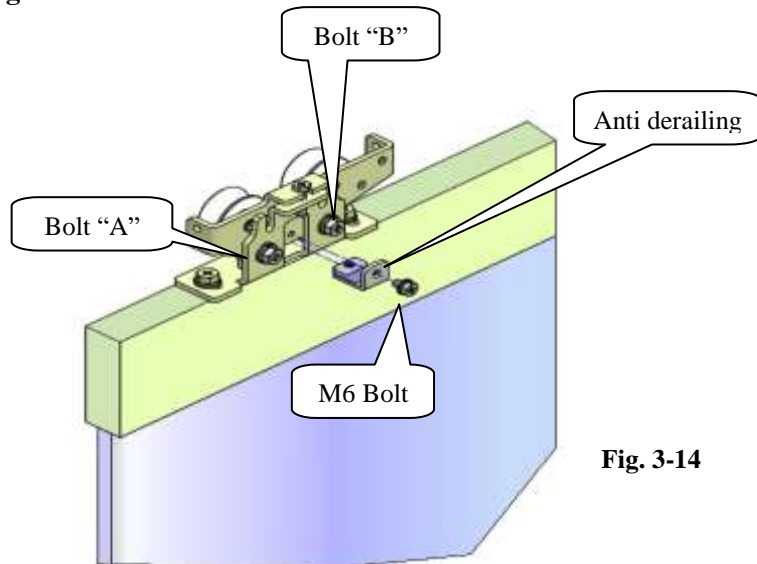
Fig. 3-14

v. Balancing of doors Figure 3-15

Single Door   Double Door

Gap   Gap
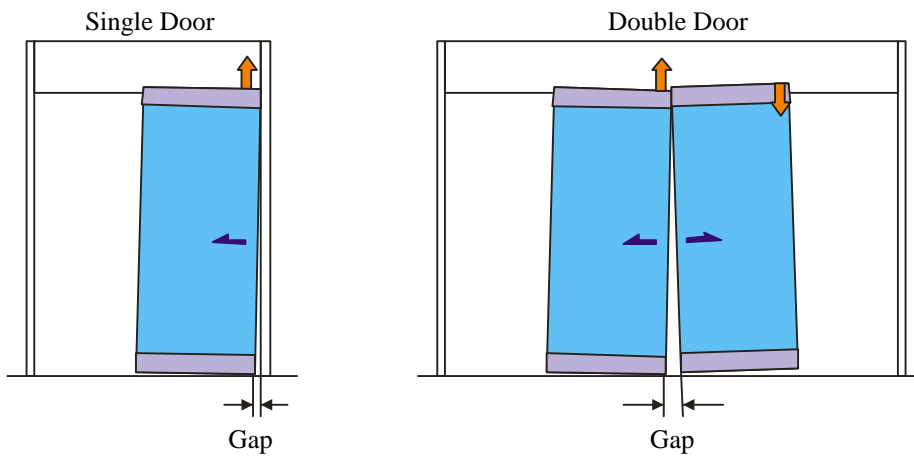
Fig. 3-12

vi. Install anti derailing: Figure 3-16

Anti-derailing
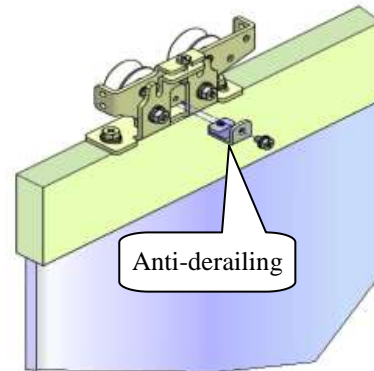
Fig. 3-13

vii. Connection of belt: Figure 3-17

Belt Clamp-D   Belt Clamp-S

Fig. 3-14

Left Door   Right Door

3.1 Basic wiring (power, sensor, motor)

wiring as per below figure 4-1(sensor &safety sensor are optional)

figure 4-1

a. semi auto mode
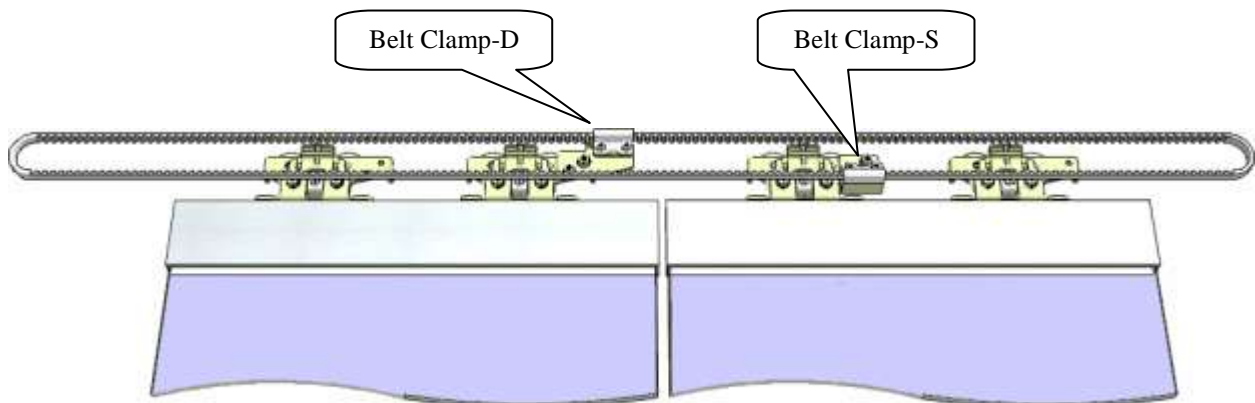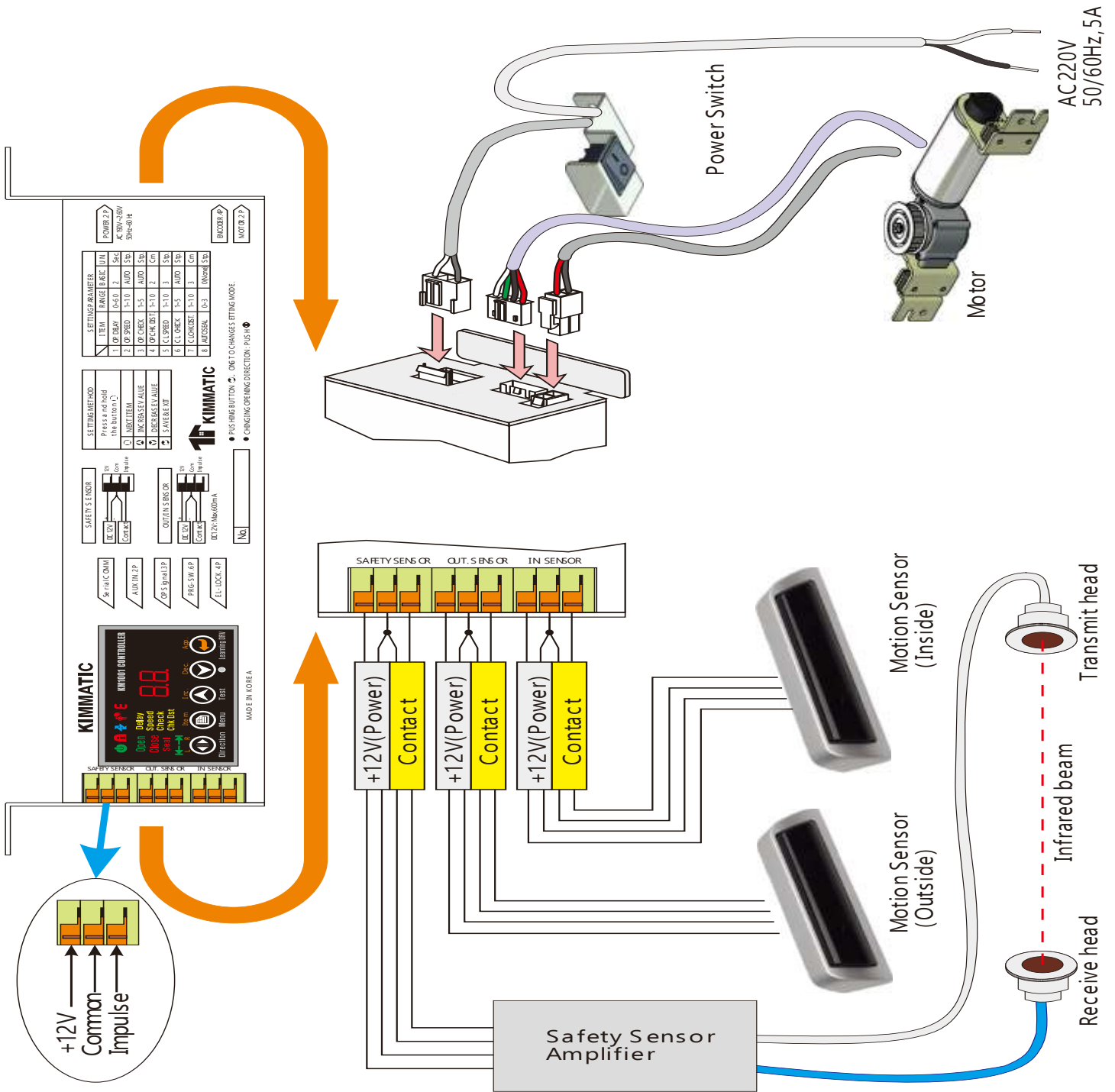
- Connect as per figure 4-2 and setting coefficient to "So" as 2
- it could be used for stopping switch when pushing button switch to connect to auxiliary input and set coefficient (fig 4.d)
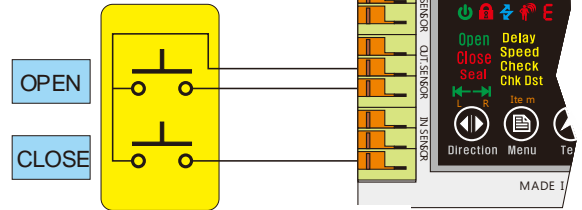
Fig. 4-2

b. one touch toggle mode(1 button)

- If you press push button switch 1,door will be opened and closed after press again. Set coefficient "So" to "3" as fig 4-3.

- In this case, sensor or touch switch could be connected to external sensor terminal.
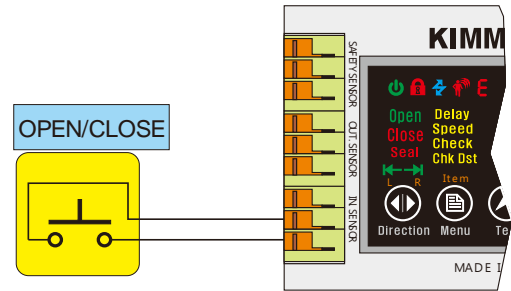
Fig. 4-3

c. Long press mode(stop in opening)

If you press touch switch or push button longer than 3 seconds, door will be stopped after opened.

If you need to release, press again very shortly.

After you connect touch switch or push button to the internal sensor terminal as fig 4-3, set coefficient "So" to"4" 4

d. Connection to other function parts

Fig. 4-4

i. **Auxiliary input :**

it must be connected to zero voltage contacting signal, following function will be accessible
according to setting variable "Au"

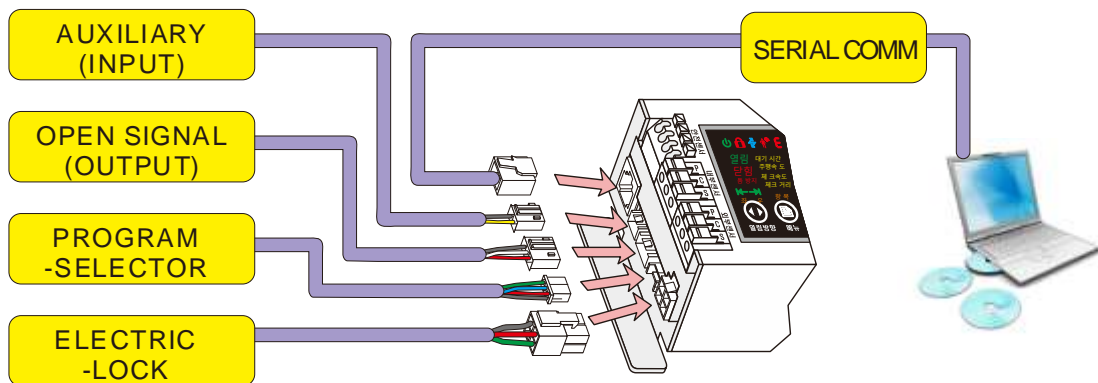| variable(Au)	Function	variable(Au)	function
0	No use	3	stop (semi auto)
1	Detecting swing out(stop unconditionally)	4	Exit mode
2	Driving sensor	5	Exit mode 2

Fig. 4-1

✧ **Exit mode: buzzer rings 5 times, release mode: buzzer ring one time**

✧ **In case of exit mode 2, after releasing, door will be opened after sensor detects.**

ii. **Setting for opening:**

setting as per the variable "Su"

variable(Su)	Function	variable(Su)	function
0	No output	4	Reverse output of 2
1	Output when opening	5~8	Output when opening by force value5 → 3sec , value 6 → 8sec value7→ 13sec , value8→ 18sec
2	Output after complete opening		
3	Reverse output of 1		

Fig. 4-2

it could be used by signal of Transistor Output.
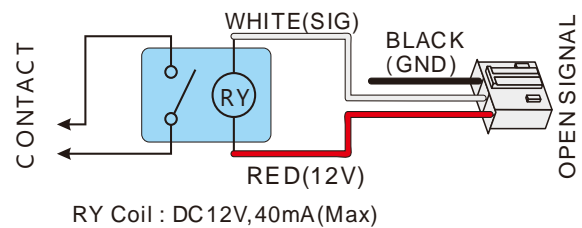It recommends to use DC12V relay if you use
other devices. Fig4-5

RY Coil : DC12V,40mA(Max)

Fig. 4-5

\

a. Inspecting installation

(1) Inspect all parts whether assembled correctly

(2) Inspect wiring

(3) Inspect voltage whether it is sale voltage for the device.

(4) Inspect all the cable to be arranged in good position properly.

(5) inspect load during opening and closing.

b. Automatic self learning operation

(1) Turn on power after you inspect above item 5.1

(2) When power turns on, door will be opened and closed at same speed in one cycle.

(3) This is procedure to find out optimized condition (opening width, door load) as automatic self learning operation.

Do not touch and hold door during this procedure to prevent any kind of error in operation.

(4) Setting opening direction :initial direction is l , ◄— (Left; open to left) when supplied by factory. If you opened to the right , or double leaf door, it must be modified by manual.

➢ **Setting direction of opening and closing.**

no	Setting	Direction	display	remarks
1	Press 0.5 sec to change direction	→▮	R	Opening to the right
2	Press again	◄—	L	Opening to both direction
3	Press again	◄— →▮	D	Opening to the left
4	Setting once pressing (automatic setting in 5 sec after choosing direction)			

Fig. 5-1

✧ **During setting direction, directional signal (arrow) is blinking and display window shows current value.**

✧ **Once you change opening direction, self leaning driving is automatically in progress.**

c. Self learning driving

Press ⏎ about 0.5sec until you hear beep sound, and then door starts self learning driving. After self learning driving, basic value will be saved to the factory initial automatically as optimal operation condition.

6. MANUAL SETTING

Even though it comes to optimized operation condition after self learning driving, you can set again more accurately according to your demand. KM1001 controller has many built-in special functions, so you need to use manual setting if you want to use these functions properly

KM1001controller has 8 items of basic menu to control opening and closing as well as 14 items of auxiliary function and special function of 11 items.

Figure 6-1 shows front setting panel of controller and function are as below.

⏻	Power on	
🔒	Lockup	
⚡	Communication	
🚶	Sensor	
E	Error	
⇤ ⇥	Opening Direction	
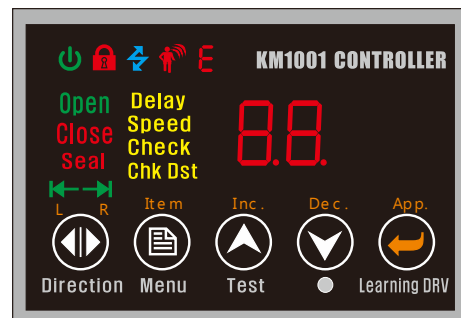
Fig. 6-1

➢ **Button function**

button	Operating mode	Setting mode
◐	Changing opening direction (long press)	-
📄	Start with basic menu setting mode(long press)	Shift to setting items(next item)
▲	Test operation (one time opening and closing)	Increasing setting value
▼	Auxiliary menu setting mode (long press)	Decreasing setting value
⏎	Self learning driving (long press)	Shift to operation mode after saving.

Fig. 6-1

a. Main menu

main menu is adjustable to control opening and closing operation

i. Setting range of main menu

no	item	Setting range	Basic value	unit	explanation
1	opening waiting time	0-60	2	Second	Time from opening of door until closing
2	Opening driving speed	1-10	A	Step	Opening driving speed (high speed section)
3	Opening. Slow speed	1-5	A	Step	Opening. slow speed section (check)speed
4	opening slow speed distance	1-10	2	Cm	Opening. Slow speed section(Check) distance
5	closing driving speed	1-10	3	Step	Closing. Driving (high speed section) speed
6	closing slow speed	1-5	A	Step	Closing .Slow speed section(Check) speed
7	closing slow speed distance	1-10	3	Cm	Closing. Slow speed section(Check) distance.
8	Avoiding gap	0-5	0	Step	Avoiding gap, power (0:no gap present)

Fig. 6-2

⬦ **All item of main menu are restored during self learning driving, "A" is automatically setting.**

ii. main menu setting

(1) Press 🗏 and hold switch to the setting mode with beep sound (about 0.5 sec), the current item will appear on the display. Setting values of current items appear on the display

(2) .press 🗏 again , if you move to next items.

(3) When you find desired item and then you can scroll values by pressing 🔼 and 🔽

(4) Once you press ↵ , all adjusted value is saved and become to opration mode.

For setting: open waiting time from 2 sec to 3sec ,

slow opening to change from 2 to 1 cm

no	Button operation		items		display	explanation
1	Hold pressing	open	waiting time		**2**	Switch to setting mode Current mode 2sec)
2	push	open	Waiting time		**3**	Changed from 2sec to 3 sec.
3	Press 3 times	open	slow speed distance		**2**	Move to open slow speed distance. current 2.
4	press	open	slow speed distance		**1**	Adjusted from 2sec to 1sec
5	press				**Sa**	Save and exit

figure6-3 basic menu setting.

b. secondary menu

This menu helps to control driving in more accurate and set operation mode including in and output option.

i. Secondary menu and setting range in items.

no	Item	display	Setting range	Basic value	Explanation
1[note1]	Electric lock	**L c**	0-2	1	0 no exist , 1 constant operation , 2 closing when leaving
2[note1]	Electric lock closing strength	**Ld**	1~9	2	Required electric lock closing strength (Lc 2)
3[note1]	Reverse sensitivity	**R e**	0-9	5	0 minimum sensitivity , 9 maximum sensitivity
4[note1]	Opening cushion power	**o u**	1-5	3	1: weak power, 5 ;strong power
5[note1]	Closing cushion power	**c u**	1-5	3	1 weakest, 5 strongest
6	Partial opening ratio	**P t**	10-90%	70	Ratio for the total opening width
7[note1]	Accelerating power	**A c**	1-5	3	Mobility : 1 weakest . 5 strongest
8[note1]	Decelerating power	**b p**	1-5	A	break: 1 weakest, 5 strongest

no	Item	display	Setting range	Basic value	Explanation
9	Operation mode	**S o**	1-3	1	1;auto, 2;semiauto, 3;one touch, v4;long touch
10	Panic option	**P o**	0-3	3	0;disable, 1 open, 2;closed, 3 ;auto(Au will open when 1)
11	Auxiliary input option	**A u**	0-5	1	0;do not use, 1;swing out, 2 ;sensor 3;stop (semi auto), 4 exit(toggle), 5 exit
12	Opening check. output	**S u**	0-2	1	0:disable, 1 when open, 2 after open, 3-4 reverse output, 5~8 : opening by force(ref)
13note1	Warming up mode	**P a**	1-3	Single door: 2 Doubled oor:1	1 open, 2 closed, 3 stop
14	reset	**l n**	0-1	0	0;not initialized, 1 Restoration to factory initial value

Fig. 6-4

✧ **Note 1 : restoration to the basic value when self learning "A" auto setting.**

ii. Secondary menu

(1) push and hold ⬇ to switch to setting mode with beep sound(0.5 sec), current items appear on dispaly

(2) press 📄 to go to next items

(3) If you press ⬆ or ⬇ after you find desired item, you can see current value on the display and you can increase and decrease value with button.

(4) You can set all item you want through process of (2) – (3)

(5) when you press ↩, all desired valuve is saved and switched to operation mode .

Example of secondary menu setting. (changing opening cushion power from 3 to 4)

number	Button	display	explanation
1	▼ Push and hold	**L c**	Switch to auxiliary menu (current item **Lc**)
2	📄 Push 3 times	**o u**	Switch to opening cushion power (**ou**)
3	push ▲ or ▼	**3**	"**ou**"as setting value appears (current 3)
4	▲ Push again	**4**	Changing setting value from 3 to 4"3"
5	↵ Push	**Sa**	Completed after saving

Figure 6-5setting of secondary menu

c. Special menu

This will do changing sensor connector and ID for telecommunication and load value

as well as checking speed of opening and closing.

i. Special menu and setting range of each item

no	item	display	range	Basic value	explanation
1	version	**==**	1.0-9.9		Program version ; reading only
2[note1]	open load value	**D o**	3-11	A	Read-only
3[note1]	close load value	**D c**	3-11	A	Read-only
4[note1]	Safe speed	**S r**	0-10	A	Speed of safe work
5[주1]	Warm-up speed	**Ps**	1-10	A	Turn on to prepare driving speed
6	Start driving	**Fc**	0-1	0	0normal opening and closing 1400mm safe speed after high speed opening
7	End Gap	**Cg**	3-20 (mm)	5	Cushion distance, door is not inverted in this distance.
8	Sensor function	**S f**	0-4	1	0 safety sensor ,ignore, 1 normal , 2safety sensor→external sensor 3external sensor→safety sensor, 4safety→external. external→safety
9	Display option	**Fd**	1-4	1	1 normal, 2 door speed , 3 load, 4 ENC Err
10	458ID	**I d**	1-99	1	Up to 256
11	TCP/IP Address	**T c**	1-99	1	Maximum 65,536 when work together at 256, 485ID

figure6-6

✧ **Note 1 : when learning to drive, restore to basic value and "A" is automatically setting.**

ii. How to set special menu

(1) Press ![icon] and ![icon] simutaneously in 0.5secound and then it become to sepcial setting mode with beep sound, current special menu will apprear on the display window.

(2) Once pressing ![icon] , you can go to next tiems.

(3) When you find desired items, press ![icon] or ![icon] to adjust value to meet your requirement and current value will bw appeared on the display window. (some item are ready only, can not be adjusted)

(4) You can get all desired value though abov(2) ~ (3) process.

(5) Press ![icon] to save all changed value and go to operation mode

7. VARIABLE SETTING FUNCTION

a. MAIN MENU

(1) Waiting time in opened : time until closing from opening (0-60second)

(2) Opening (closing) in driving speed :speed in fast speed section ;1 ~10(step)

(3) opening(closing) in slow speed : speed in slow speed section during opening and closing
1 ~5(step)

Figure 8-1

(4) opening (closing)in slow speed distance : section of distance of slow speed

during opening and closing 1~10 (Cm)

(5) gap prevention: function to prevent from leaving gap between two leafs after closing.

    0 : no function

    1 ~ 5(step) : maintain door closed tightly, it goes to close tightly if opening is done by force.

    (high number show more tight closing)
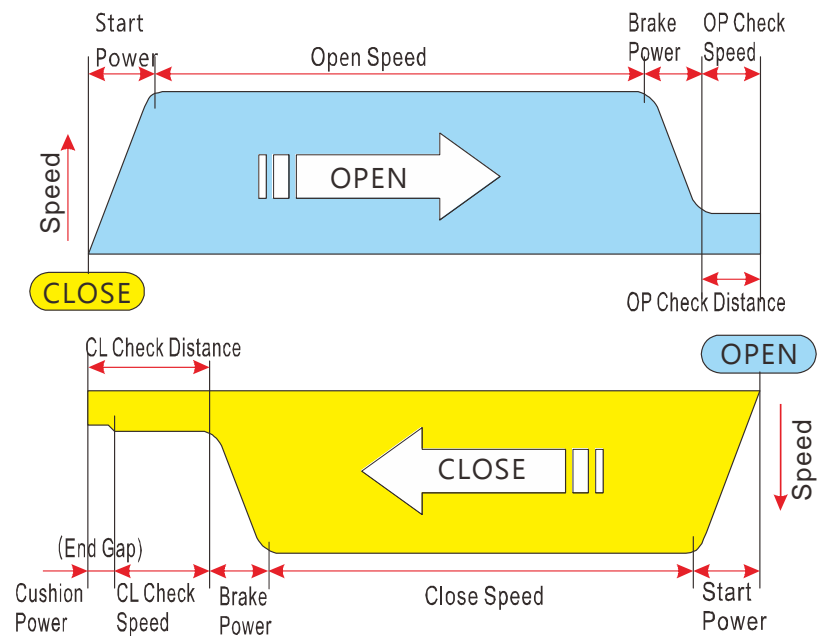
b. Auxiliary menu

(1) Electric lock option (Lc) : electric lock working system

    0 : no lock

    1 : constant working (lock is locking unconditionally when door is closed.

    2 : locking when exit

(2) Electric lock power sensitivity (Ld) : sensitivity of automatic locking when exit mode.

    1 ~ 9(mm) ; (electric lock is working when door is opened in 2mm at value 2)

(3) Reversing sensitivity (re) : sensitivity of reopening when object is between two doors

    0 ~ 9 (step) : high number is more stronger

(4) Cushion power (open: ou, close: cu) : driving force just before stopping

    1 ~ 5(step) : high number is more stronger

(5) Partial opening ratio(pt) : adjusting distance by selection function switch(option)

    10~ 90% : adjustable by 10% ratio.(this is subject to selection function switch device)

(6) Accelerating power (ac) : accelerating power in operation

    1 ~ 5 (step) : high number is more faster

(7) Reduction power (bp): reduction power converting from high speed to low speed (break)

    1 ~ 5 (step) : high number is more powerful.

(8) Operation mode (So) : it can decide connection way for sensor or other switches

    1 : standard mode   : open and close by sensor

    2 : semi auto mode : it works by switch position (fig4.a)

    3 : one touch toggle mode : toggling will be done by one touch switch(fig4.b)

    1 : long press mode : door could be stopped if you press touch switch long ad hold. (fig 4-3)

(9) Panic option (Po) : working during power is off. (UPS required)

    0 : normal open and close

    1 : door opening

    2 : door closing

    3 : automatic(AU) 1is also setting to door opening.

(10) Auxiliary input option (Au) : setting function of (AUX Connector).

1 : detecting swing out

2 : driving sensor

3 : stopping at semi auto mode(So:"2")

4 : exit mode(toggle)

5: exit mode 2 (toggle)

(11) Opening output option (Su) : (OUT Connector) :setting output signal

    0 : no output

    1 : signal output at time of opening

    2 : signal output after opened completely.

    3 : output in reverse at values 1

    4 : reverse output at valuse2

    5~8 output at time of opening by force

     Values5 → 3sec , value 6 → 8sec , value 7→ 13sec , value8→ 18sec

(12) Warming- up mode (PA) : preparing when power turn on

    1 :open   ,   2 : close ,   3 : stop (open when sensor is detected)

    ◇ **During self learning, 2; closing for one leaf door. 1: opening for two leaf door**

(13) Initial stage (1n) : restore to the factory manufacturing status.

    0 : no initialization

    1: all variable to the factory manufacturing status.

c. Special menu

(1) program version (==) : read only

(2) Opening load value (do) : door load variable when opening.(Read only)

(3) Closing load value (dc) : door load variable during self learning operation(read only)

(4) Safe driving speed(SR) : door will be reopened when some object is in between two doors during door is closing. After waiting in opening, door will be closed again. "SR" decide driving speed(1-10 step)

(5) Warming-up speed(PS) : after power is on, setting driving speed. (1-10 step)

(6) Starting operation (Fc) : first opening operation by driving signal after warming-up.

    0 : normal opening and closing

    1 : it opens until the end at safe speed after opening driving speed at about 400mm

(7) End Gap(cg) : last section of cushion when door is closing.

Door is not reversing in this section even though object is between two doors. 3-20mm

(8) Sensor function (SF) : function of sensor

0 : no safety sensor   1 : normal status   2 : detect safety sensor by external sensor.

3 : detect external sensor by safety sensor   4 : exchanging function of safety and external sensors

(9) Display window option (Fd) : contents in the display during operation.

1 : normal(show operation status)

2 : show speed of opening and closing (Cm/sec)

3 : load of opening and closing

4: encoder error count

(10) 485 ID (Id) : setting ID during telecommunication RS485

1~99 (up to 256)

(11) TCP/IP address (tc) : when internet connected: TCP/IP Address.

1~99(up to 256) : 65,536 will be done if work together with 485 ID,

9. MAINTENANCE

This is essential to ensure machines in safe and good operation from unexpected trouble or danger.

(1) If there is manual lock , it must be unlock before power on. When you lock , power must be off before locking

(2) Do not stop and push by force during door is operating.

(3) Clean circumstance to keep working of machine in good condition.

(4) In case of large quantity of goods, turn off power and door must be left opened until it is completed.

(5) Cleaning during rain or else, it must be protected not to let water in the device from water.

(6) Keep off wet painting and oil etc.

(7) If this machine is damaged from big shock etc, turn power off and contact us for proper treatment.

(8) In case of smoke and big noise, turn off power and contact the supplier you bought from.

a. STATUS and ERROR CODE

i. Status code

code	contents	remark
Fc	Function selection switch "closed"	
Fo	Function selection switch "opened"	
or	Resetting of opening section	Automatic setting
cr	Resetting of closing section	Automatic setting
Sc	Exit mode	
Si	Swing –out status	
ba	Run out of battery	(auxiliary power)
Hd	Stopped in opening(HOLD)	"in case So is 2,3,4
number	Sensor detection	signal

Fig. 9-1

◇ **In case of ,number on the display window indicates below function**

1 : internal sensor   2 : external sensor   3 : safety sensor   4 : auxiliary input(Au)

(sensor number will appear alternately if more than one sensor are detected)

ii. Error code

In case of error, Ǝ appear on the upper side of controller and number shows on the display window.

code	content	remarks
E 01	JAM happened during driving	
E 02	Electric lock is working	In case of electric lock installed
E 03	Failure of engine(motor)	
E 04	Failure of controller electric circuit	
E 05	Failure of motor driving circuit	
E 06	Failure of door.	

Fig. 9-2

b. Trouble shooting

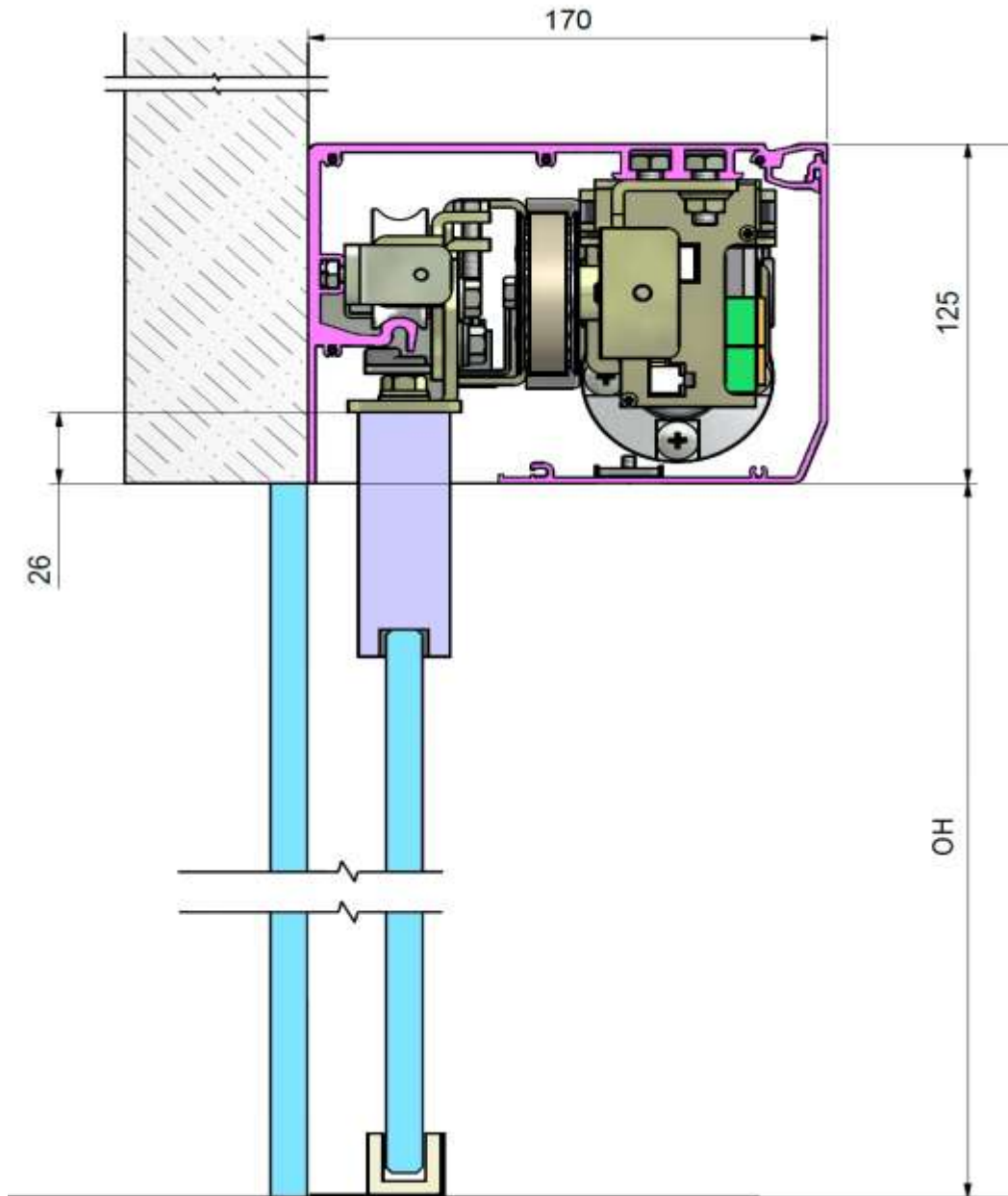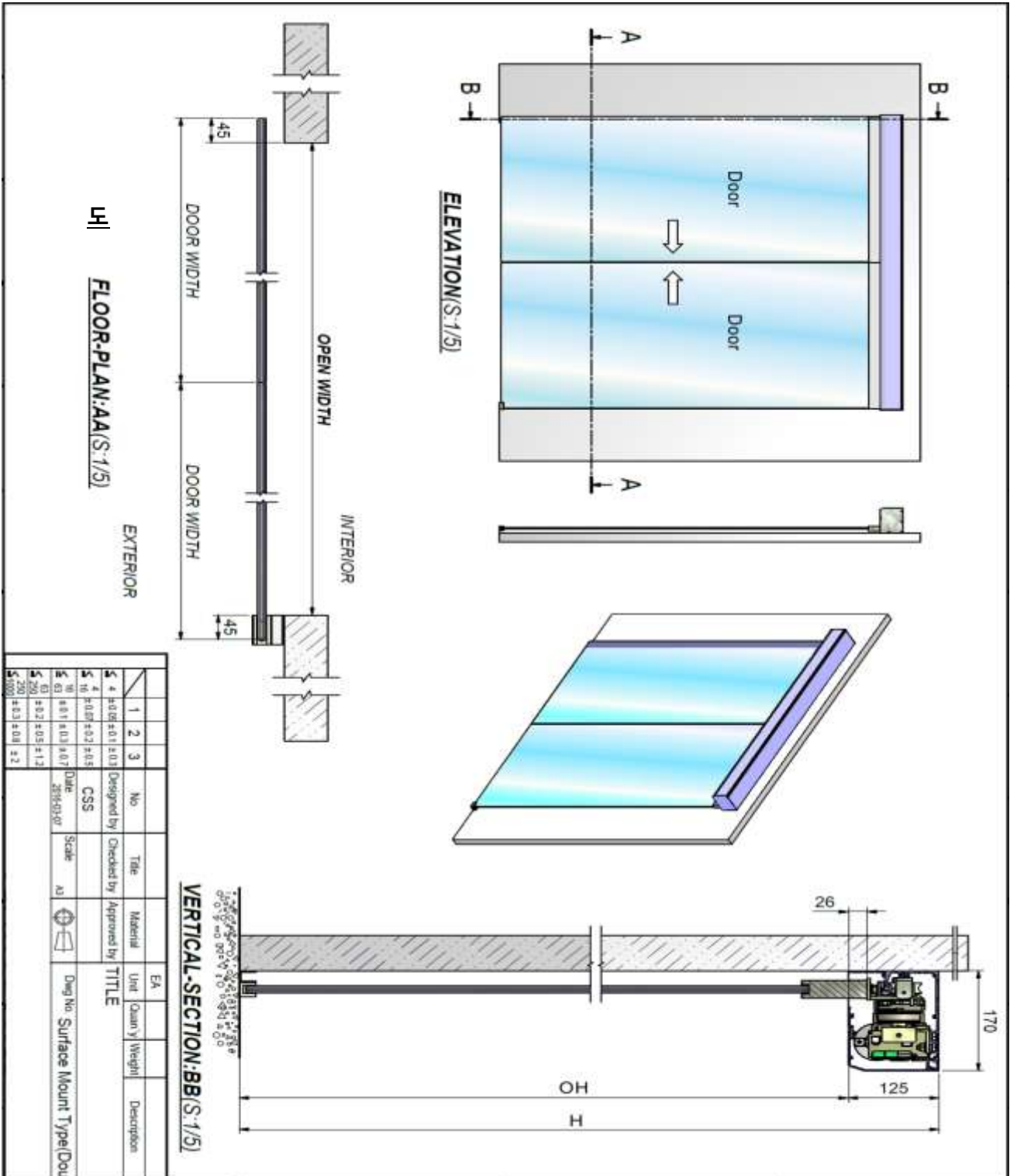| symptom	check	Do proper measure
Totally not working	Power switch	Check power switch (breaker)
Not opening	🚶 is appeared even sensor is working	Check connection to the sensor Check the working of sensor detector and signal.
	Fc is appeared on the display window	Selection switch is turned to the closure.
	E & **6**" are appeared on the display window	Door does not move.. check whether there is lock or any other objects in the device
Not closing	🚶 & "**1**or **2**"appear on the display window.	Sensor continues to work or out of order. Electric wire is disconnected.
	🚶 & **3**"appear on the display window	Safety sensor is detected. Check safety sensor and transmitter ,
	🚶 &"**4**"appear on the display window	Auxiliary sensor is working or out of order. Electric wire is disconnected.
	Fo"appear on the display window	Selection switch is turned to open status.
	"**Hd**" appear on the display window	Press shortly closing button or touch switch.
Reopening again after closing	**E** & **1**" appear on the display window	Obstacle is between two leafs. Remove this object
	🚶 Appear with number on the display	Sensor detect door during operation, adjust angle of sensor and fix it tightly.
Stopping after short moving	**E** & **3** appear on the display window	Check 2 cables connected from controller to engine.

Fig. 9-3

✧ **If you face any other issues or faults during installation,**

please call supplier or manufacturer before repairing by yourself.

10. Part List

Item	Part Name	Image	Quantity		Unit	Description
			Single	Double		
1	Head Rail		1	1	Set	Aluminium extrusion. Anodized,
2	Controller		1	1	Pcs.	
3	Motor		1	1	Pcs.	
4	Idle Pulley		1	1	Pcs.	
5	Door Hanger		2	4	Set.	With derailing proof.
6	Belt Clamp-S		1	1	Pcs.	Single & Double Door (Left Leaf)
7	Belt Clamp-D		-	1	Pcs.	Double Door (Right Leaf)
8	Door Stopper		1	2	Pcs.	
9	Power Switch Set		1	1	Pcs.	
10	Rail Side Cover		1	1	Set	
11	Timing Belt		1	1	Set	
12	Program Selector		1	1	Pcs.	Option
13	Motion Sensor		2	2		Option
14	Safety Sensor		1	1		Option

11. Cross section of operator (Side View)

ELEVATION(S:1/5)

Door

Door

FLOOR-PLAN:AA(S:1/5)

내

EXTERIOR

DOOR WIDTH

OPEN WIDTH

DOOR WIDTH

INTERIOR

45

45

VERTICAL-SECTION:BB(S:1/5)

OH

H

26

170

125

KIMMATIC
AUTOMATIC DOOR

RAIL AND COVER CROSS SECTION AND CALCULATION OF DOOR

CROSS SECTION

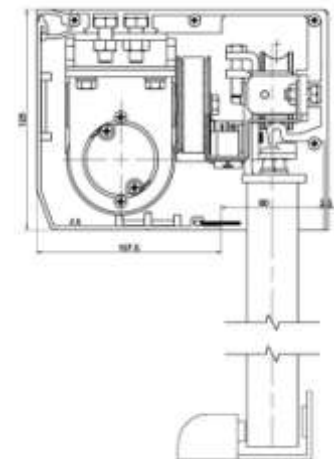**FRAMELESS GLASSDOOR**
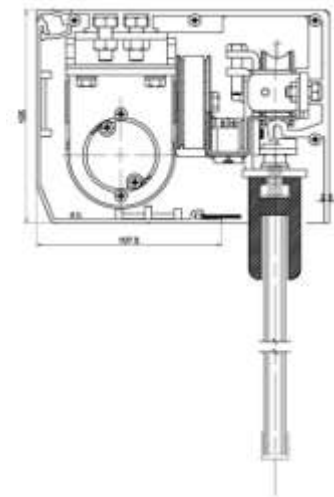
Calculation of size for frame less door
KIMMATIC

KM-1001

Door width	single door	door width = OW + 50 mm
	double door	door width = OW / 2 + 50 mm
Door height	with cover 125 mm	door height = Passage height - 5 mm

CROSS SECTION

FRAME DOOR

Calculation of size for frame or wooden door
KIMMATIC

KM-1001

Door width	single door	door width = OW + 50 mm
	double door	door width = OW / 2 + 50 mm
Door height	with cover 125 mm	door height = Passage height + 15 mm