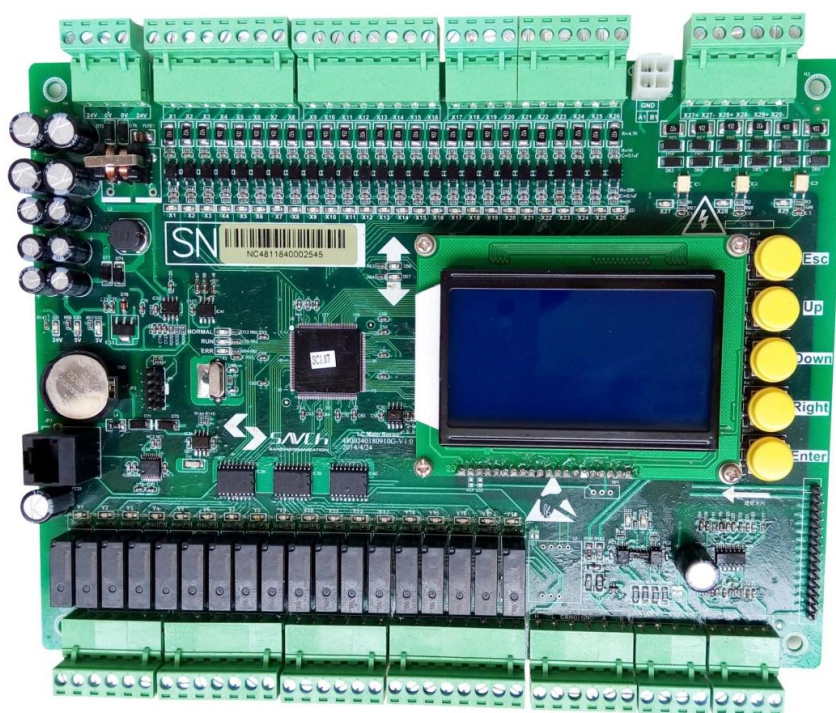# SEC-M500 Elevator Controller

User manual

SEC-M500 elevator controller

User manual

File No.   520005002800

Vision No.   V1.0

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SAVCH electric provide a full range of technical support for our customers.

All users could contact with the nearest SAVCH office or service center,

also could contact with our headquarters directly.

Contents

PREFACE

Thank you very much for choosing SAVCH elevator controller! This manual contains the operating instructions and precaution, shall be delivered to the end-user.

For safety running and effective operation, this instruction manual shall be read thoroughly prior to use, which shall also be preserved for later use. Provided problems occur and solution is not provided in this instruction manual, contact your SAVCH ELECTRIC representative or contact with our company directly. Our professional technicians will serve for you actively. And please continue to adopt products of SAVCH, give valuable opinion and advice.

1. Reading Instructions

Symbols of" DANGER" and" CAUTION" in the manual indicates that, for safety running or maintenance of controller or other electrical products, attention shall be attached during delivering, installation, operation and checks for the controller. And these notes shall be applied for a better and safer operation.

⚡ **DANGER**	If not used correctly, personnel damage even death may be caused.
⚠ **CAUTION**	If not used correctly, serious damage to inverter or machine may be resulted.

⚡ DANGER

●Never connect wires while power on. Do not check components or signal for circuit board during operation.

●Do not dismantle or change inner wire, circuit or components unnecessarily.

⚠ CAUTION

●Do not perform a withstand voltage test for components of inverter, it can cause semi-conductor components to be damaged by high voltage.

●Never connect the controller's weak input section to a strong electrical input.

●The controller has a strong electric input detection circuit, do not touch the strong electric circuit part.

2. Products receiving

All products have been performed with strict test and inspection. After receiving the product, the following checks shall be performed.

●To check that SAVCH product, an instruction manual is inside of the package.

●To check whether model number correspond with model and capacity your purchase order.

●To check whether there are damaged parts during transportation and delivering. If there are, do not connect with power supply.

If any of the above checkpoints are not satisfactory, contact your SAVCH ELECTRIC representative for a quick resolution.

1.1 Safety Precautions

Use note

⚡ **DANGER**
● This product can be used for passenger elevators, cargo lift and other vertical elevator.
● This product is manufactured under strict quality control conditions. If the product is used in the equipment which is possible to be damaged by our product cause of fault, please set up the safety device in case of any accident. Otherwise, it may cause an accident!

Installation note

⚠ **CAUTION**
● Prevent the line crumbs, paper, wood chips, dust, metal and so on from attaching on the product PCB.
● When change installation place, please use the correct screwdriver in case of damaging product. Otherwise, it may cause damage to this product!
● Do not install or run the damaged controller in case of accident. Otherwise, it may cause accident or injury!

Operation note

⚡ **DANGER**
● The product must be tested under finishing install the electrical protection and electrical safety circuit.
● Wet hands are strictly prohibited to operate. Otherwise it might get electrocuted. Otherwise, it may cause an electric shock!
● The shaft way self-leaning acts only when the electrical input signal is normal and the car is located in the bottom.
● Before testing of automate operation system, please ensure that no one is close to or out of the elevator, otherwise it can open or close the door in the automatic operation.

Maintenance and placement of parts note

⚡ **DANGER**
● Maintenance and placement of parts must be assigned by the specializing person.
● Metal objects (ring, watch etc) should be removed before operation.
● Operation with insulation tools.
● Modification of this product is strictly prohibited in case of any accident. Otherwise, it may cause electric shock or injury!

Abandonment note

⚠ **CAUTION**
● Please treat the product as industrial waste when its scrapped in case of any accident. Otherwise, it may cause injury!

1.2 Notes for Operation Environment

Direct sunlight	Corrosive gas or fluids	Oil
Salt or saline	Rain, moisture	Iron chips and dust
Large impelling	Extreme low temperatures	Extreme high ambient temperatures (Above 40℃)
Electromagnetic waves and ultra high-angle rays (For example，locations of welding machines and etc.)	Radioactive materials	Locations of inflammable materials
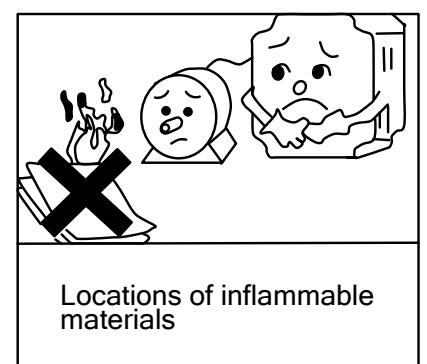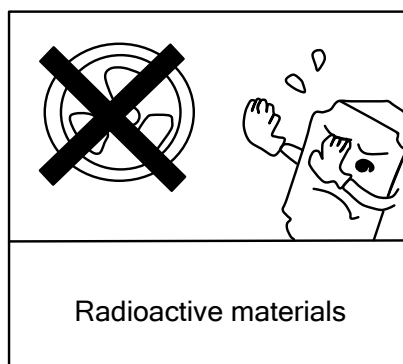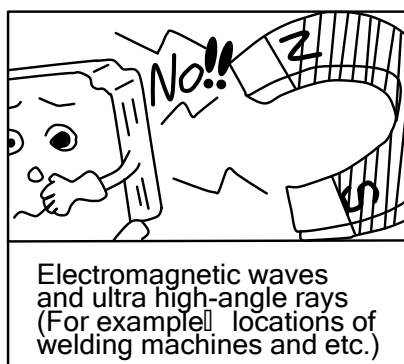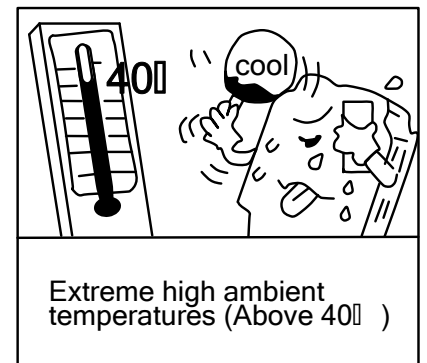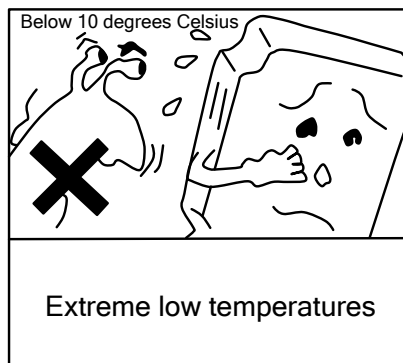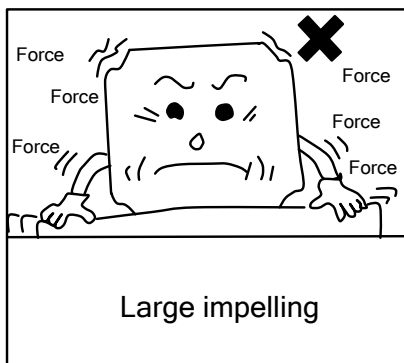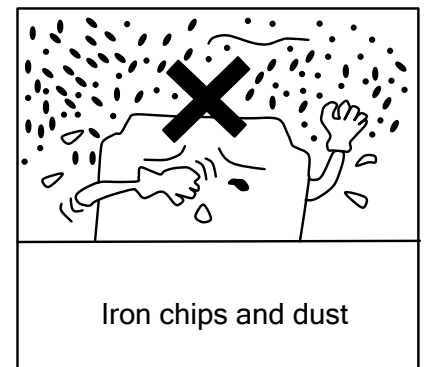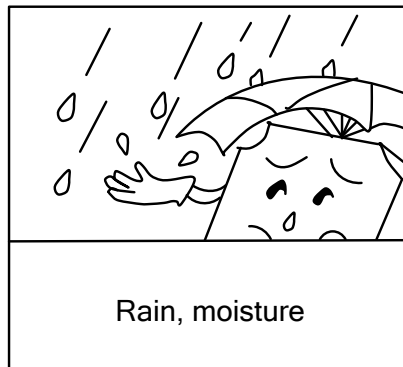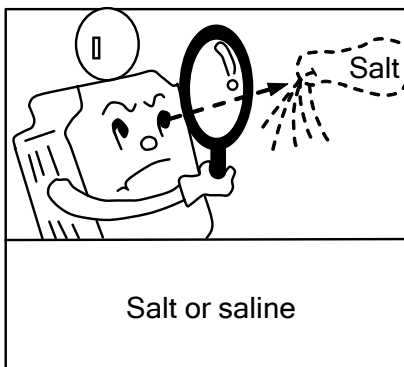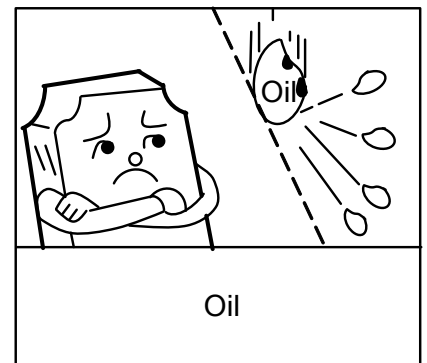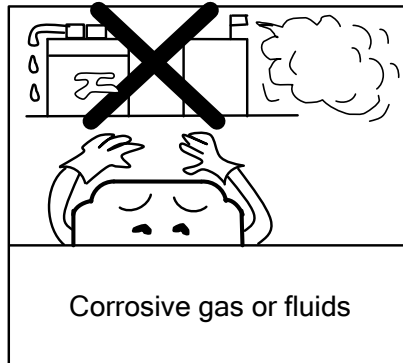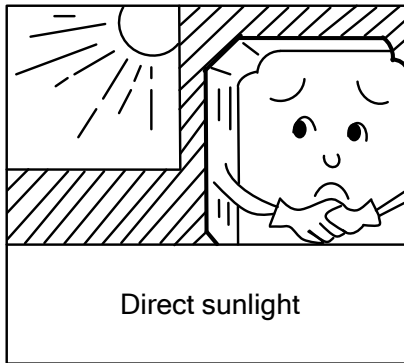
2. FUNCTION INTRODUCTION

Item	Function	Description	Remark
Common function			
1	Floor service	The system supports the floor service not more than 32 floors.	
2	Power supply management	When there is no operation and the time reach to the power management set, turn off the car lights and fans to save energy.	
3	Bell time switch	When the function is opened, during the setted time, the bell is ready. Exceed the setted time, the function is off in case of disturbing, and save energy.	
4	Collective selective control	Set the full selective, up selective, Down selective.	
5	Homing floor	If elevator without operation time is over homing time, elevator records the homing floor and back to the homing floor to wait.	
6	Floor stop setting	Flexible to set stopping at some floors, others do not stop.	
7	Open door set for front door and back door	Flexible defining some floors open in front door, some floors open back door, and others open front and back doors.	
8	Floor display set	Set the display code for floors.	
9	Reverse cancelling	When the running direction changed, system cancels all car callings.	
10	Re-leveling when the door is open	The lift stop at the floor station, a large number of persons or goods entering and leaving, The leveling fluctuated because of the elastic deformation of elevator Wire Rope and the rubber. System allows run automatically at the speed of re-leveling to leveling station in the state of the door opened.	
11	Full load by pass	When the car with full load the elevator does not respond to hall calls, but only car calling.	
12	Button stuck check	The system can automatically judge the button stuck situation at hall calling and remove the stuck calling.	
13	Cancel the wrong direction	Passengers can press the command button continuously(within 3 seconds) twice in the control box to cancel the last error registration instructions.	
14	Anti-nuisance	If the car is at normal duty and there is more than 3 commands, the system will cancel all car callings.	
15	Light Curtain checking	During close, when light curtain is blocked, the action of closing will turn to opening.	
16	Extend close in	During opening, if users press extend close button, the time of closing will be extended, which is set according to parameter.	

Item	Function	Description	Remark
Common function		
17	Time of automatic closing door	Set the time of automatically close door according to type of elevator, inside calling, hall calling.	
18	Nudging	If the light curtain block cause closing or opening door normally exceeding 10 times and the nudging is open, the light curtain block will be ignored and then nudging.	
19	Open door at the level	Under the normally running, during closing door, if user press the level is effective, the action of closing will turn to open.	
20	Open door when stop at level	The elevator stops and the door opens automatically at the permitted floor.	
21	Repetition of door opening	When opening fails, it will close and then open again. Repeat this actions, till 6 times.	
22	Repetition of door closing	When closing fails, it will open and then close again. Repeat this actions, till 6 times.	
23	Closing button for door-closing in advance	If it exceeds the door opening protection time, users can press closing button to close door in advance.	
24	Driver operation	The functions of driver operation state is as below: signal orientation, driver selection orientation, without automatic close door, by pass function and so on.	
25	VIP operation	When VIP operation, the elevator can not response to hall calling and only for one target floor in each operation.	
26	History fault record	It recorded 20 faults, including fault content, time and so on.	
Firefighting and safety		
27	Firemen operation	When fire mode back to base floor, firemen operation do not response to hall calling and only response to one command in car once. When close door under firemen state, please press door open longer to limit, otherwise it turns to door close automatically.	
28	Low speed self-rescue function	When the elevator is in a state of non-maintenance, and does not stop at the leveling, if it meets the safety requirements to run, the lift will automatically run slowly to the nearest floor area, and then open the door.	
29	Maintenance reminder	Maintenance reminder can be setted according to times or time operation. When the running time reaches to maintenance setted, it will enter lock state and remind.	
30	Elevator-locking	In automatically run state, after the elevator locked, the system eliminates all calls registered. When the lock switch has been reset the elevator re-entered to normal service state.	

Item	Function	Description	Remark
Inspection and debugging				

Item	Function	Description	Remark
		Inspection and debugging	
31	Maintenance operation	When elevator is under condition of running and is at maintenance state, closing maintenance up/maintenance down makes elevator running at the maintenance speed. When open, the elevator stops. Open door operation, please refer to related parameter.	
32	Automatic operation	Automatic running according to the running time, running time interval, car calling generate at random to run elevator, open/none-open setting.	
33	Manual calling	It is permitted to set all floors car calling, up calling, down calling by HMI manually	
34	Shaft self-learning	Before form operation, it need shaft self-leaning, test and get all data of shaft and preserve. Those data includes level height, position of protection switch, the position of decline speed switch, the length of clapboard and so on.	
35	Car location automatically correct	The system will calibrate the floor when elevator runs to the limit of the terminal station and the limit of first level down speed. And before each starting, the pulse on the floor is calibrated	
36	LCD HMI	Board with keyboard+LCD display, Chinese&English. Compared with the digital tube, the information display is more comprehensive and clear, which makes it easy for users to interact with each other.	
37	Host learning	At the mode of inspection, users set this function by menu. Start the terminal output of host learning is convenient to ac inverter to get information from motor.	
		Protection	
38	Brake operation feedback protection	It can be used to detect the gate output and brake limit, and improve the feedback and protection of the brake	
39	Overload protection	When overload, do not close door and the buzzer sounds	
40	Limit protection	When the limit switch acts, emergency stop protection running	
41	Inverter failure protection	Emergency stop when the inverter failure is received, and reset inverter, try to rework	
42	Safety circuit protection	If the safety circuit is disconnected, the elevator stops working immediately	
43	Door lock protection	Only when all the hall doors and car doors are closed, can it runs normally	

3.1 Main control panel SEC-M500

3.1.1 External dimension
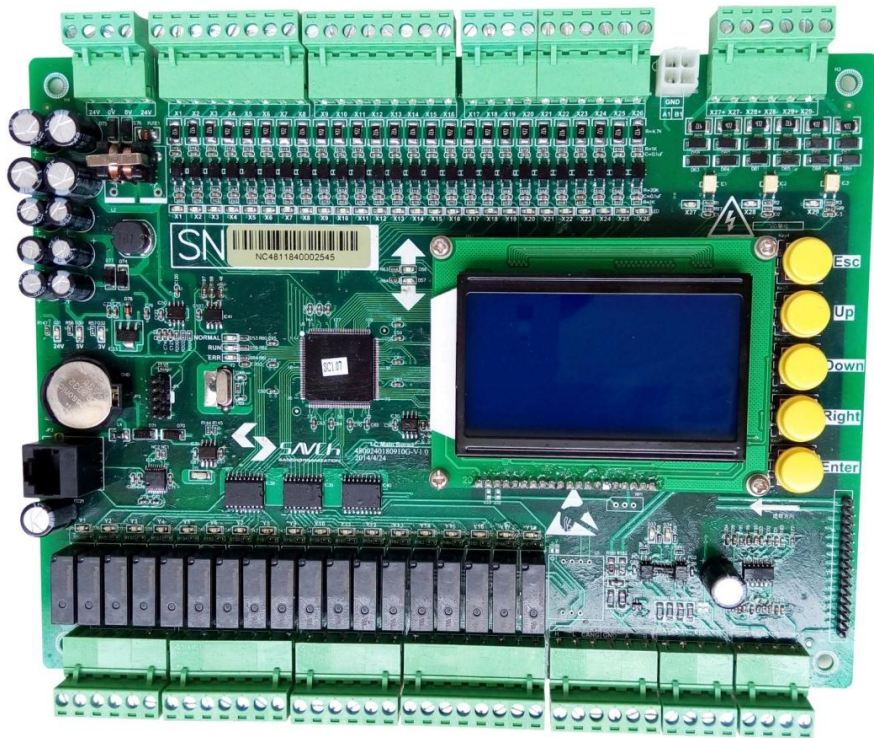
Figure 3-1 outlook of main control panel SEC-M500
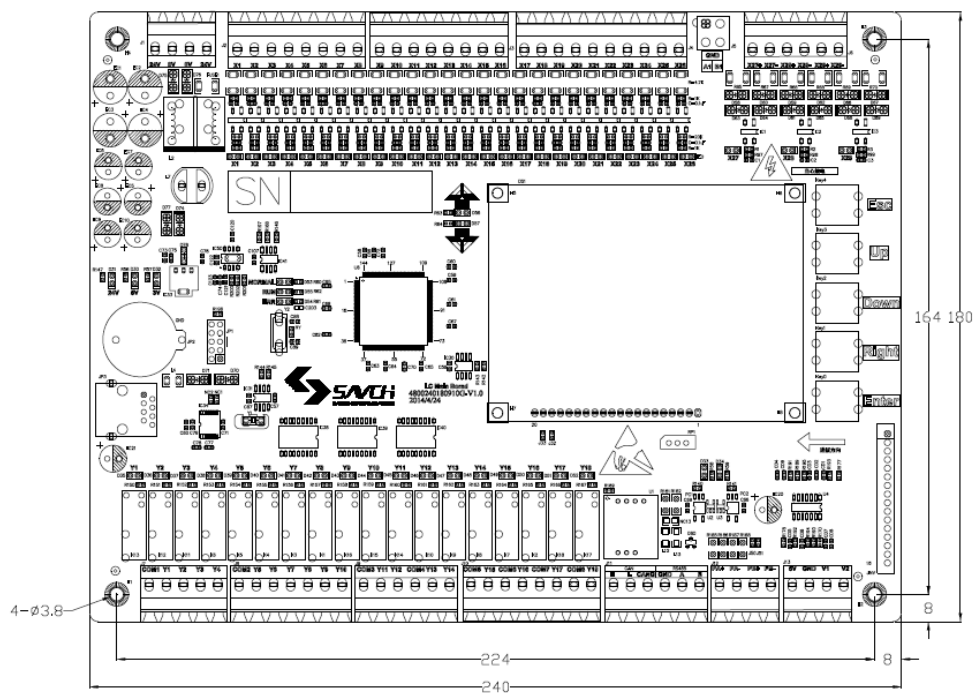
Figure 3-2 installation dimension of main control panel SEC-M500

3.1.2 Port instruction

Port type of SEC-M500: power supply port, common optical coupling input, high speed optical coupling input.

AC110V input, relay output, analog 0~10V output, communication ports.

① **Power supply port**

SEC-M500 is single power supply input, at J1.

Table 3-1 power feature

Rated voltage	24V
Voltage amplitude	±5%
Max current	2A (below 10 floors)
	4.5A (above 10 floors)

Table 3-2 power terminal distribution

J1.1	24V, DC24V positive pole power
J1.2	24VGND, DC24V power negative pole power
J1.3	24VGND, DC24V power negative pole power
J1.4	24V, DC24V positive pole power

② **Common optical input**

SEC-M500 has 26 common optical isolation inputs, at J2, J3, J4.
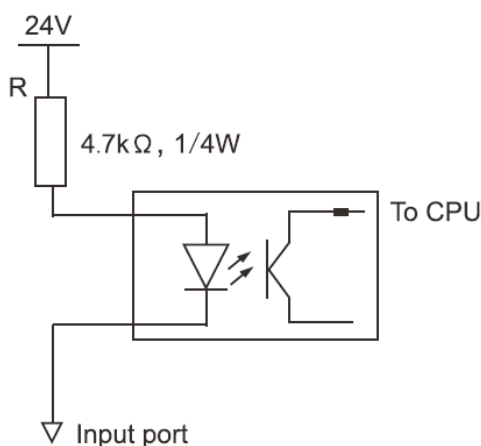
Figure 3-3 common optical Circuit diagram

Table 3-3 input feature

Input		Photoelectric coupling isolation
Type of voltage input	"1" signal	DC12~24V
	"0" signal	DC0~5 V
Type of current input	"1" signal	4~10mA
	"0" signal	0~2mA
Delay		10ms
Input frequency		<100Hz
Cable length		800 meters if shield
		400 meters if not shield

Table 3-4 distribution

Item	Terminal	Type	Definition (default working state)	Logic level	
				Default	Optional
X1	J2.1		Lock feedback signal, it is effective when it connects	0	1
X2	J2.2		Safety circuit feedback signal, it is effective when the safety signal is on	0	1
X3	J2.3		Down force to change speed signal. When the down force to change signal is effective, the signal input is disconnected	1	0
X4	J2.4		Up force to change speed signal. When the up force to change signal is effective, the signal input is disconnected	1	0
X5	J2.5		When down limit signal is effective, the signal input is disconnected	1	0
X6	J2.6		When up limit signal is effective, the signal input is disconnected	1	0
X7	J2.7		When firemen union input signal is effective, it is connected	0	1
X8	J2.8		Maintenance / automatic, the port is connected, the system into the automatic running state, open into the maintenance state.	1	0
X9	J3.1		Down landing signal; under maintenance state, you can point to run the elevator down to the lower limit signal action, the elevator stops running.	0	1
X10	J3.2	Digital input	Up landing signal; under maintenance state, you can point to run the elevator uplink, up to the limit signal action, the elevator stops running.	0	1
X11	J3.3		Operation contactor feedback, it is effective when running contactor pull-in.	0	1
X12	J3.4		Brake contactor feedback, brake contactor is effective when close.	0	1
X13	J3.5		Overload signal, when connected, the elevator into the overload state.	0	1
X14	J3.6		Full load signal, when connected, the elevator into full load state.	0	1
X15	J3.7		Down level, when level, it connects	0	1
X16	J3.8		Up level, when level, it connect	0	1
X17	J4.1		Brake limit signal, when the brake, it opens. When it does not connect, the elevator can not start.	0	1
X18	J4.2		inverter operation signal, as a necessary condition for opening the gate.	0	1
X19	J4.3		AC inverter fault. When it connects and the inverter is fault, the elevator should stop at once.	0	1
X20	J4.4		Motor over heat	0	1

Item	Terminal	Type	Definition (default working state)	Logic level	
				Default	Optional
X21	J4.5	Digital input	Spare 1	0	1
X22	J4.6		Spare 2	0	1
X23	J4.7		Spare 3	0	1
X24	J4.8		Spare 4	0	1
X25	J4.9		Spare 5	0	1
X26	J4.10		Spare 6	0	1

a. 0:0 indicates that the active state is closed after the signal source is active.

　1:1 indicates that the active state is open after the signal source is active.

b. Logical attributes are only for logical terminals, not for setting function ports. If port is defined X8 as the maintenance / automatic, the port logical attribute is effective and signal is disconnected. if the port is defined as the maintenance of the down landing, the original definition of the port logical properties have not changed, you need to return the port logic back to the dynamic signal.

c. If Alternate input function setting is the same as the default function, the standby input function port is priority and the default function port is invalid; spare input port setting should be paid attention.

d. The active level of all inputs is 24V/GND.

③ **High speed optocoupler input**

SEC-M500 has two high speed input port, used to pulse input, detect elevator running speed, record car location and so on. It is distributed on J12.
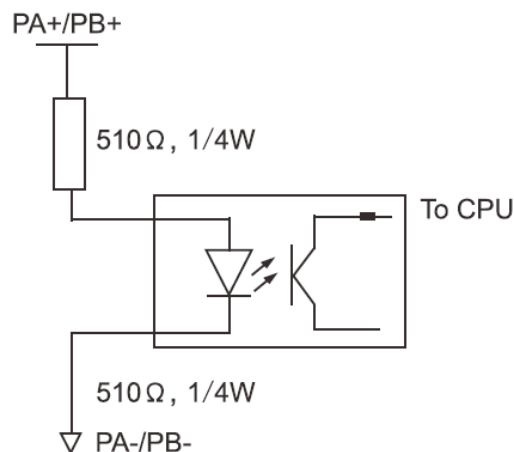
Figure 3-4 High - speed optocoupler circuit diagram

Table 3-5 input character

Input		Photoelectric coupling isolation
Type of voltage input	"1" signal	DC5~24V
	"0" signal	DC0~3V
Type of current input	"1" signal	4~10mA
	"0" signal	0~2mA
Input frequency		<100kHz
Allow the length of the wire		Shield 800 meters
		Non-Shield 400 meters

Table 3-6 Distribution

Item	Terminal	Type	Definition(default working state)	Logic level
PA+	J12.1	Digital input	Pulse a input	Effective if connect
PA-	J12.2			
PB+	J12.3	Digital input	Pulse b input	Effective if connect
PB-	J12.4			

④ **AC110V input**

SEC-M500 has 3 high voltage input port, safe circuit, car door lock, hall door lock input, distributing on J6. It can be used with low voltage signal and used independently.
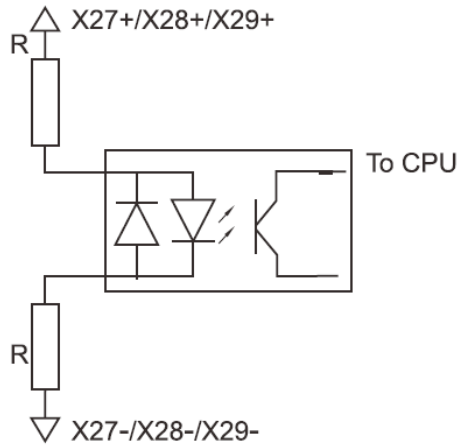
Figure 3-5 high voltage input circuit

Table 3-7 input character

Type of input		Photoelectric coupling isolation
Type of voltage input	"1" signal	AC70~120V
	"0" signal	AC0~70V
Type of current input	"1" signal	4~10mA
	"0" signal	0~2mA
Delay		10ms
Input frequency		<100Hz
Allow length of wire		Shield 1000 meters
		Non-shield 800 meters

Table 3-8 distribution

Iterm	Terminal	Type	Definition(default working state)	Logic level
X27+	J6.1	Digital input	Safe safety circuit high voltage acquisition signal(AC110V)	Effective if connect
X27-	J6.2			
X28+	J6.3	Digital input	Hall door lock circuit high voltage acquisition signal(AC110V)	Effective if connect
X28-	J6.4			
X29+	J6.5	Digital input	Car door circuit high voltage acquisition signal(AC110V)	Effective if connect
X29-	J6.6			

⑤ **Relay output**

SEC-M500 has 18 relays output port as the running part of elevator control, distributing on J7,J8,J9,J10.
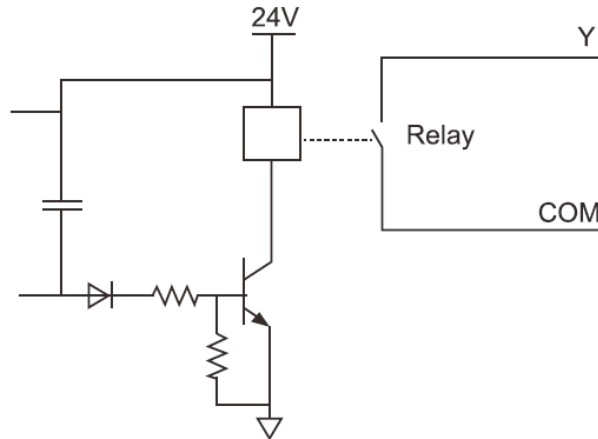
Figure 3-6 relay output circuit diagram

Table 3-9   output character

Connect form		Relay output isolation
Load voltage	Rated output	DC24V/AC24~230V
	Allow range	DC5~30V/AC20~250V
Contact capacity	Resistive load	Max 5A
	Inductive load	Max 3A
Contact life	Machanical life	5000,000 times
	Operation life	200,000 times

Table 3-10 distribution

Item	Terminal	Type	Definition(default working state)	The common terminal of relay contacts
Y1	J7.2	Digital output	Running output	COM1
Y2	J7.3	Digital output	Brake output	COM1
Y3	J7.4	Digital output	Input control	COM1
Y4	J7.5	Digital output	Brake keep contactor control output	COM1
Y5	J8.2	Digital output	Down landing signal	COM2
Y6	J8.3	Digital output	Up landing signal	COM2
Y7	J8.4	Digital output	Section speed 1	COM2
Y8	J8.5	Digital output	Section speed 2	COM2
Y9	J8.6	Digital output	Section speed 3	COM2
Y10	J8.7	Digital output	Enable signal	COM2
Y11	J9.2	Digital output	Open door relay(front door)	COM3
Y12	J9.3	Digital output	Close door relay (front door)	COM3
Y13	J9.5	Digital output	Open door relay(back door)	COM4
Y14	J9.6	Digital output	Close door relay(back door)	COM4

Item	Terminal	Type	Definition(default working state)	The common terminal of relay contacts
Y15	J10.2	Digital output	Spare output1	COM5
Y16	J10.4	Digital output	Spare output2	COM6
Y17	J10.6	Digital output	Spare output3	COM7
Y18	J10.8	Digital output	Spare output4	COM8

3.2 Hall calling display board SEC-E01

3.2.1 External dimension
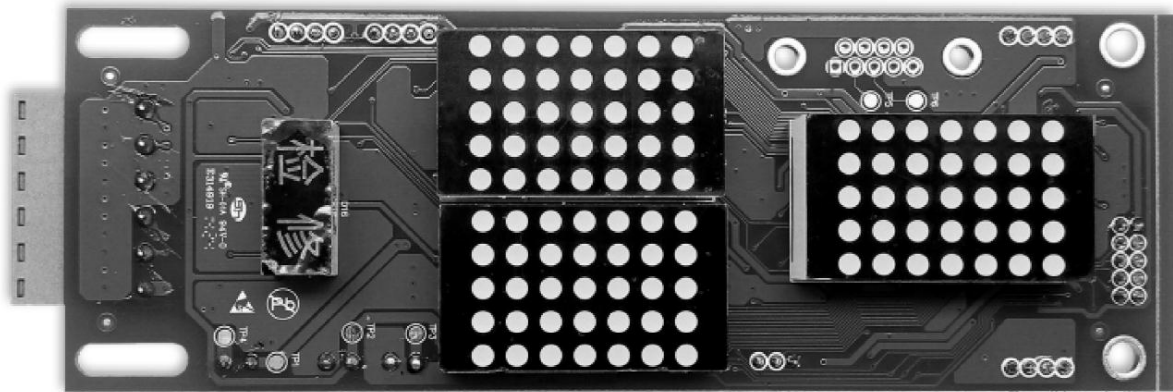
Figure 3-7 outlook SEC-E01 of hall calling display board
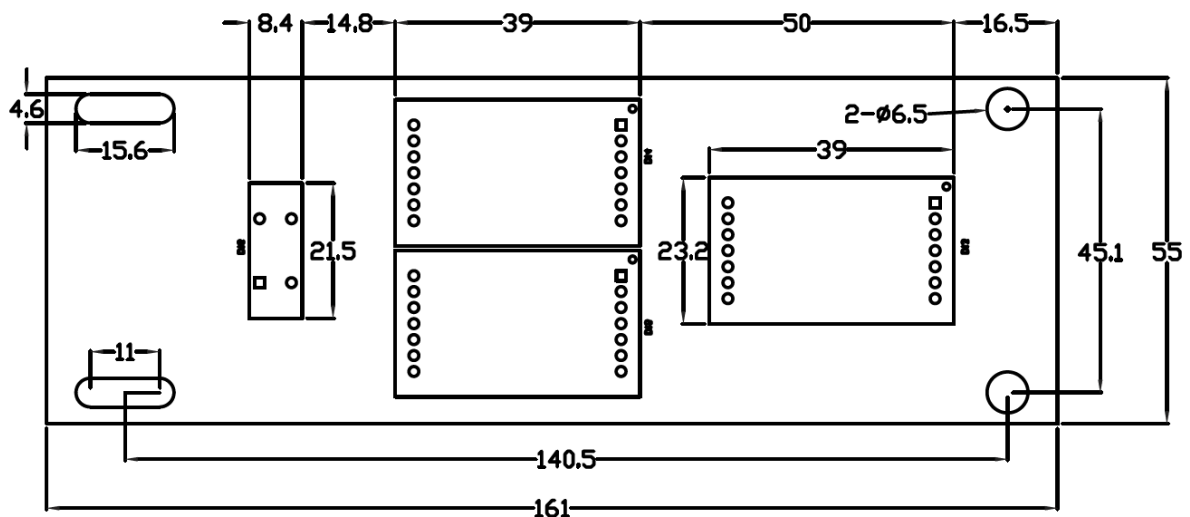
Figure 3-8 installation dimensions of hall calling display board SEC-E01

3.2.2 Port instruction

The hall calling display board unit is as a device for displaying the number of floors and other information. Meanwhile, hall calling signal and response lamp are handled by hall calling display board unit. The cancellation mode is completed by the hall calling display board unit and the main control board.

①Power supply and communication wiring
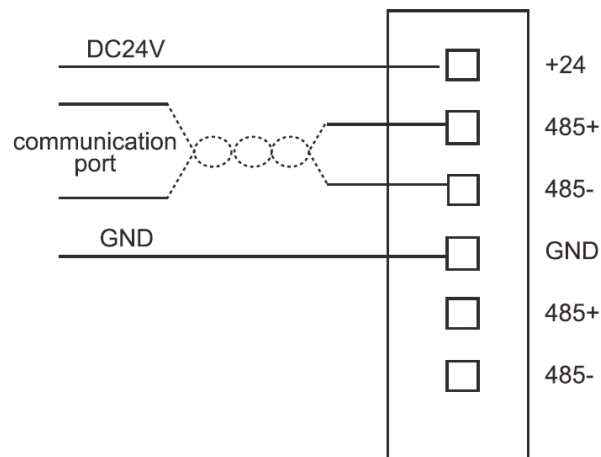
Figure 3-9 the display board power supply and communication wiring of hall call

②Button and indicator light wiring
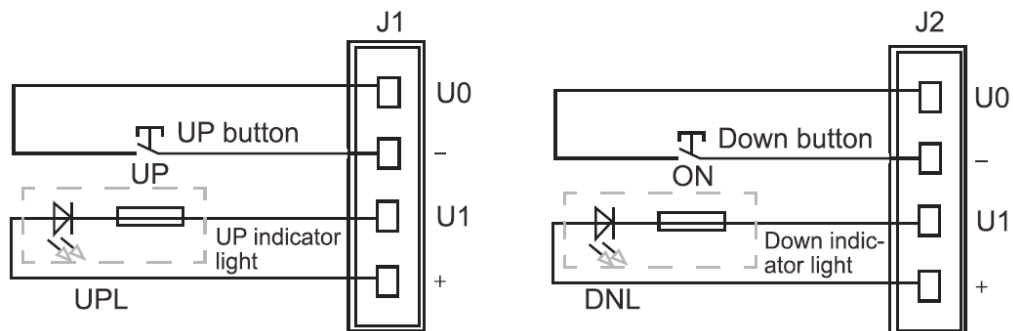
Figure 3-10 the display board button and indicator light wiring of hall call

③Fire and elevator lock wiring
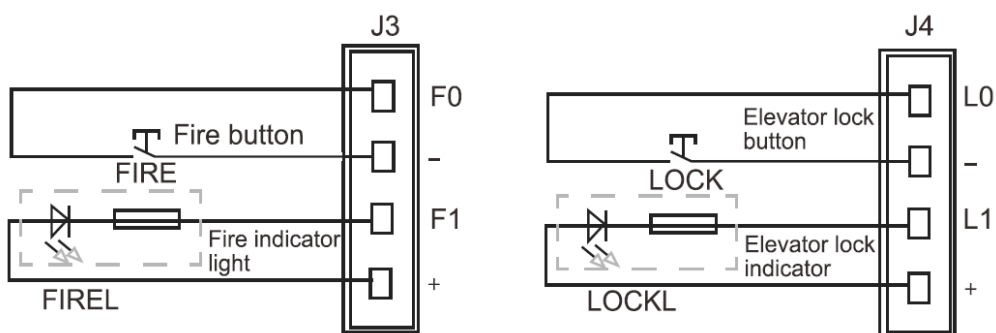
Figure 3-11 the display board fire elevator lock and indicator light wiring of hall call

④Distribution

Table 3-11 distribution

Port	Function
J5	Power supply and communication port
J1	Up landing calling button port
J2	Down landing calling button port
J3	Fire input signal port
J4	Lift locking input signal port

3.2.3 Floor setting

SCE-E01 and other units adopt communication address to differentiate. Thus, each unit has its own independent communication address, 0 can be repeated, and other addresses should be correspondence with independent unit.

If user presses Continously the button behind the display panel three times, the board will display "F", that means the front door address setting is available and you can observe the address from 0 increments. When arrive at the floor you want to set, press the button, finish the setting.

If user presses Continously the button behind the display panel four times, the board will display "B" that means the back door address setting is available. The other operation is same to front door setting.

3.3 Car board SEC-C01

3.3.1 External dimension
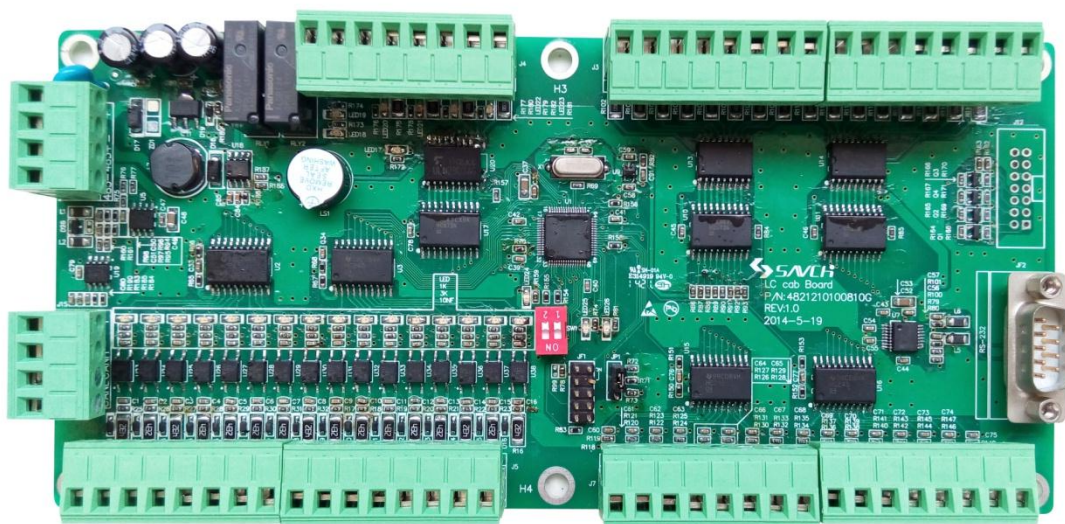
Figure 3-12 outlook of car board SEC-C01
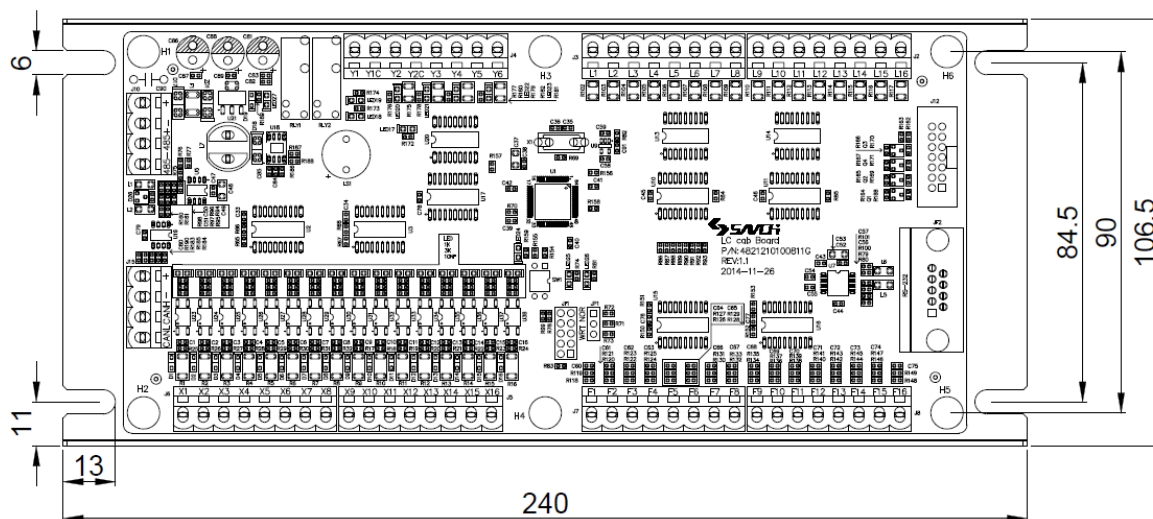
Figure 3-13 installation dimension of car board SEC-C01

3.3.2 Port instruction

Car communication unit is used to collect car command signal and output answer lamper. The SEC-C01 is equipped with 16 input ports (when voltage is low, it is effective), two empty relay and four open collector output ports as function input and output ports.

①**Button wiring**
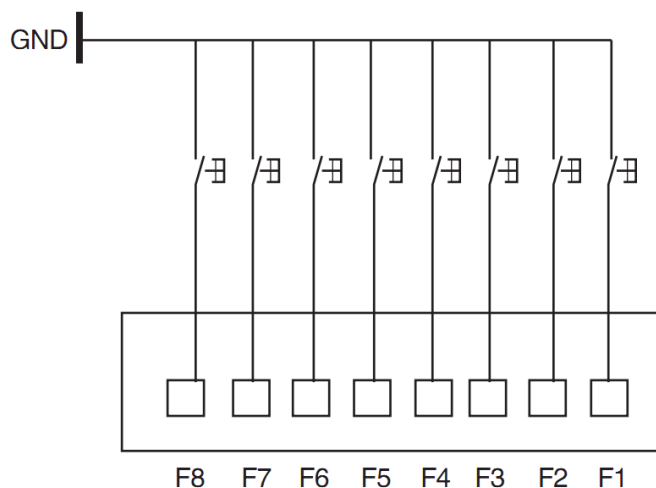
Figure 3-14 button wiring

②**Answer lamp wiring**
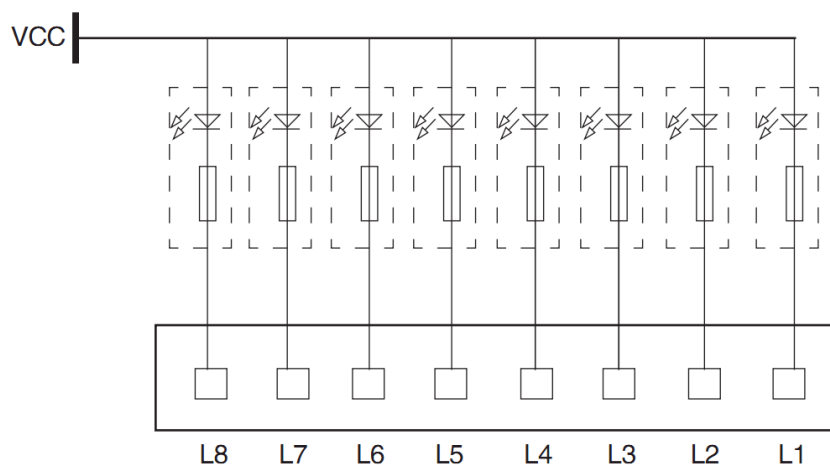
Figure 3-15 answer lamper wiring

③**Input port**
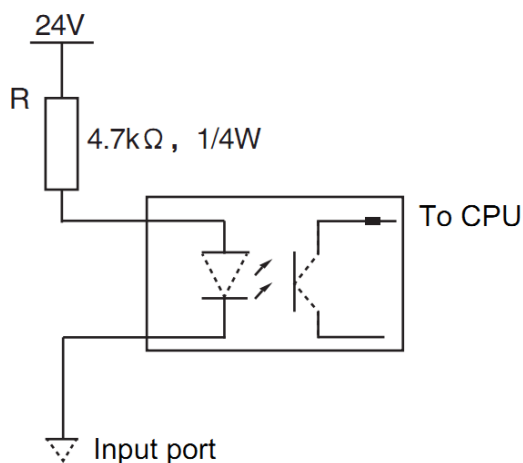
Figure 3-16 input port

④Relay output
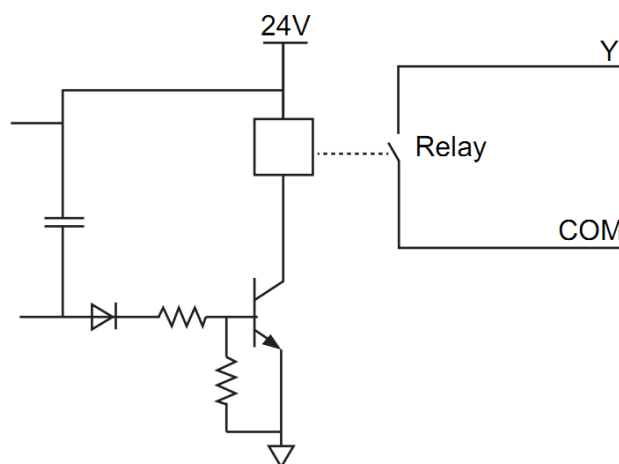
Figure 3-17 relay output

⑤Transistor output
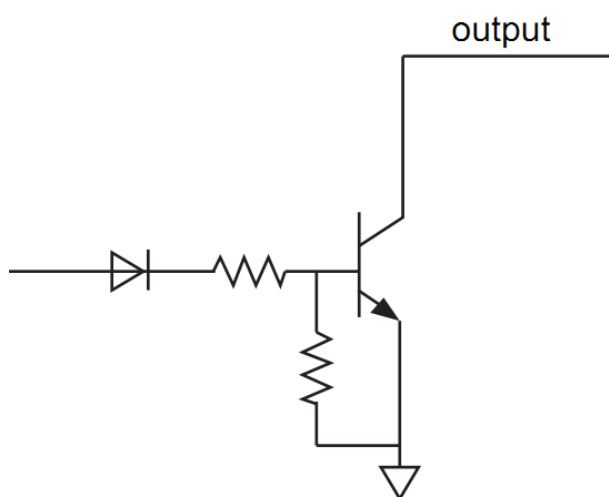
Figure 3-18 transistor output

⑥ Detailed dispatch

Table 3-12 distribution

Item	Termial	Type	Definition
+	J10	Power	DC24V positive power input
-	J10	Power	DC24V negative power input
A	J10	Communication A	Communication A
B	J10	Communication B	Communication B
X1	J6.1	Digital input	Light load signal input
X2	J6.2	Digital input	Full load signal input
X3	J6.3	Digital input	Overload signal input
X4	J6.4	Digital input	Driver signal input
X5	J6.5	Digital input	By pass signal input
X6	J6.6	Digital input	Special for fire signal input

Item	Termial	Type	Definition
X7	J6.7	Digital input	VIP signal input
X8	J6.8	Digital input	Command input of delay
X9	J5.1	Digital input	Door open button
X10	J5.2	Digital input	Door close button
X11	J5.3	Digital input	Door open limit signal input
X12	J5.4	Digital input	Door close limit signal input
X13	J5.5	Digital input	Light curtain 1
X14	J5.6	Digital input	Door 2 open limit signal input
X15	J5.7	Digital input	Door 2 close limit signal input
X16	J5.8	Digital input	Light curtain 2
Y1	J4.1	Digital utput	Power management output
Y2	J4.2	Digital utput	Bell control output
Y3	J4.3	Digital utput	Door open indicator
Y4	J4.4	Digital utput	Door close indicator
Y5	J4.5	Digital utput	Beep output
Y6	J4.6	Digital utput	Keep door open indicator
Fn	J7,J8	Digital utput	1~16 calling command
Ln	J2,J3	Digital utput	1~16 indicator output

Note: if it is 17th to 32rd floor, the car calling Extension module is needed**.**

4. OPERATION INTERFACE

4.1 Brief introduction

SEC-M500 provides a friendly man-machine interface on the board, which offers a great convenience to debugging, maintenance, monitoring. It uses a widescreen LCD (128 * 64) display, and has a keyboard settings function to support the English & Chinese mode of operation. The keyboard contains five buttons for quick and easy parameter setting. Parameter changes are confirmed automatically saved, without too much save operation.


```
  ==RUN STATE==

02F           AUTO --

ERR08         0.000m/s

09:03         0012345T
```

ESC

UP

DOWN

RIGHT

ENTER
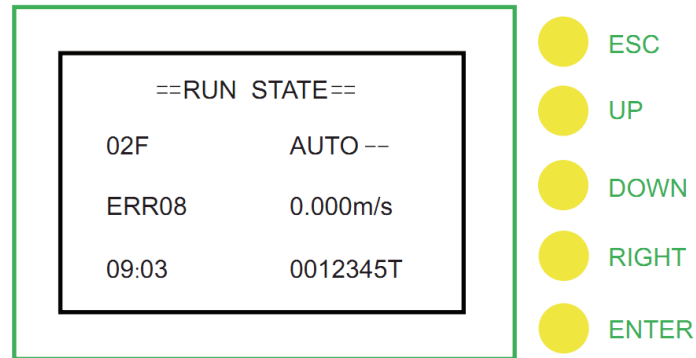
Figure 3-1 Man-machine interface diagram

4.1.1 Key introduction

Table 4-1 Key introduction

Key	Introduction
ESC	1. Return to the previous menu; 2. Cancel the input when input data.
UP	1. Move up a option when select function; 2. +1 at current number when input data.
DOWN	1.Move down a option when select function; 2. -1 at current number when input data.
RIGHT	1.Move right a option when select function; 2.Move the cursor left when input data.
ENTER	1.Enter when select function; 2.Save when input data.

4.1.2 Interspace introduction

Table 4-2 Interspace introduction

Interface name	Content
Open interface	When power on, it displays savch and model.
Running interface	Elevator status display, maintenance, automatic operation, fire and other state; car floor; fault state; operating speed; current time.

Interface name	Content
Logging interface	Before input the right password, before enter right pass words, this interface will turn up firstly from running interface to function option interface when the users will be asked to enter pass- words.
Parameter selection	User parameters, function parameters, operating parameters, time parameters, optional parameters, commissioning parameters, monitoring parameters, etc. 7 parameters for option. Each parameter option also has sub-menu of second, third level function selection.
Detailed function	After entering the corresponding specific function, the specific function parameter value can be viewed and modified.

4.2 Operation introduction

4.2.1 Permission to login
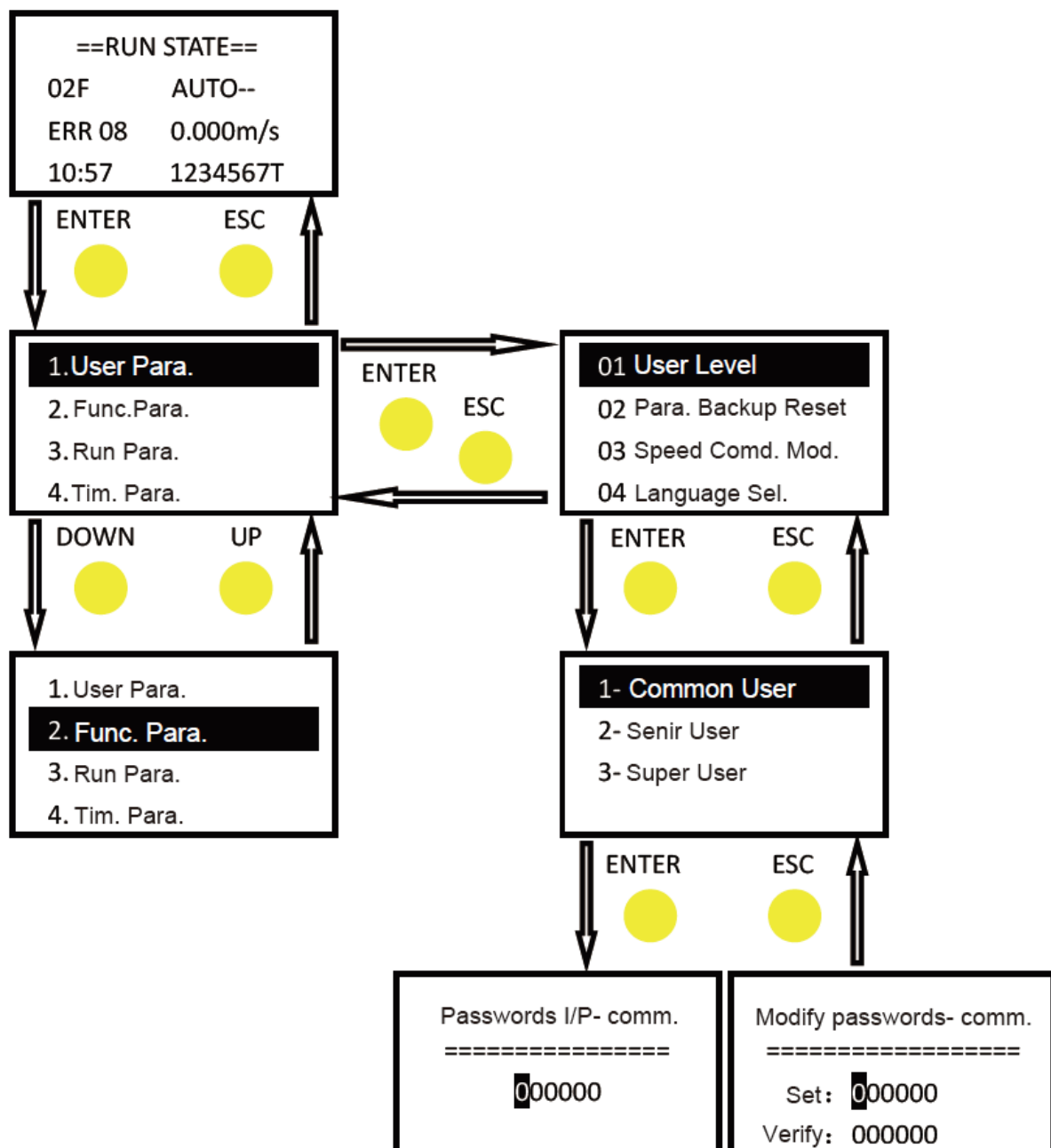
4.2.2 Spare input X21 function set

```
      ==RUN STATE==
02F          AUTO--
ERR 08       0.000m/s
10:57        1234567T
```

ENTER   ESC

1. User Para.
2. Func.Para.
3. Run Para.
4. Tim. Para.

DOWN   UP

1. User Para.
2. Func. Para.
3. Run Para.
4. Tim. Para.

ENTER   ESC

01 Total Floor
02 Elevator-Locking Floor
03 Fire Floor
04 Homing Floor

DOWN   UP

04 Homing Floor
05 System type
06 Control mode
07 Spare I/P Fun.

ENTER   ESC

```
  07   Spare I/P Fun.
  =================
     X21        03
     00    Safty Signal
```

DOWN   UP

```
  07   Spare I/P Fun.
  =================
     X21        00
     00    Undefined
```

RIGHT

```
  07   Spare I/P Fun.
  =================
     X21        00
     00    Undefined
```

4.3 Instruction of permission login

The system provides three sets of password protection function according to the user types, each level password is independent. And according to different permissions, it opens different parameter options. If you have not input any password, you can not view and modify the parameters.

User level	Value range	Default value	Value instruction	Remark
Ordinary user	000000~999999	000000	Common user can modify the parameters for the corresponding permissions, but the debug mode and senior user parameters can not be used.	
Advance user	000000~999999	000000	Senior user can modify the parameters that ordinary users can modify, but also can enter the debug mode which refers to the debug conditions in order to meet the part of the detection mode.	
Super user	000000~999999	000000	For super user using.	

5. FUNCTION PARAMETER LIST

1. User menu

Item	No.	Range	Unit	Default value	Remark
User level	1				
Ordinary user	1-1	000000~999999	/	000000	1.Input the password to change the debug parameters. 2.This parameter is divided into the enter password and modify password options.
Advance user	1-2	000000~999999	/	000000	1.Input the password to change the debug parameters. 2.This parameter is divided into the enter password and modify password options. 3.The debug mode is available under senior password state.
Super user	1-3	000000~999999	/	000000	1. Input the password then the 7 major directories are available. 2. Only 7 contents. 3. Input passwords first.
Speed command mode	2	0~1	/	0	0:Multi-speed mode. 1:(reserve) analog mode.
Parameter backup reset	3	0~3	/	0	0:no effect. 1:Restore factory fault value. 2:Restore to user backup value. 3:Back up user parameters.
Language selection	4	0~1	/	0	0:Chinese 1:English
Modify current time	5	/	/	/	
Standby interface selection	6	0	/	0	0: General purpose.
Warming of maintenance times	7	/	/	/	Input senior passwords, it will display and will be setted.
Reminder of maintenance time	8	/	/	/	

2. Setup menu

Item	No.	Range	Unit	Default value	Remark
Total Floor	1	2~64	/	2	Setting according to actual floors
Parking Floor	2	1~total floors	/	1	Not higher than the highest floor. And the floor which the elevator will not stop at can not be defined.
Fire Floor	3		/	1	
Homing Floor	4		/	1	
system type	5	0~2	/	0	0:Single elevator 1:Parallel A elevator 2:Parallel B elevator
control mode	6	0~2	/	0	0: Full Collective 1: Up Collective 2: Down Collective
Spare Input selection	7	/	/	0	Select function and attribution of spare Input port X21~X26.
Spare output selection	8	/	/	0	Select function of output port Y15~Y18.
Input Type Enter	9	/	/		Set input port X1~X26.
Set Indication	10	/	/		Select the display code for each floor
Set Stop Floor	11	/	/		0: stop 1: no stop
Set Jump Floor	12	/	/		0:no jump 1: jump
Door Select	13	/	/		0: no-open 1: open
Locks selection	14	0~2	/	0	0:Lock is effective only under low voltage 1:Lock is effective only under high voltage 2:Lock is effective both under low & high voltage
Safety selection	15	0~2	/	0	0:Safety signal is effective only under low voltage 1:Safety signal is effective only under high voltage 2:Safety signal is effective both under low & high voltage
Auto Level	16	0~5	/	3	0:None 1:Run to direction of light load. 2:Up to level.

2. Setup menu

Item	No.	Range	Unit	Default value	Remark
					3:Down to level. 4:Run to direction of shortest distance. 5:Run according to maintenance order. If no order, up to level.
Open Close Mode	17	0~4	/	1	0:Related to limit. 1:Output of keeping open-close door. 2:Output of keeping close door. 3:Output of keeping open door. 4:Output of keeping close door when running.
CloseNon-Level	18	0~1	/	0	0:No movement. 1:If it is not level, it runs as closing under normal situation.
Forced Close	19	0~1	/	1	Light curtain block 0: No action 1: Action
Inspect Open function	20	0~3	/	3	0: No-effect 1: Maintenance order close 2: Maintenance to open normally 3: Both effect
Inspect Open Button function	21	0~1	/	1	0: Effective at level 1: Effective at any place
Brake Limit FB	22	0~1	/	0	0: Close 1: Open
Load Setting	23	0~1	/	0	0: As per loading signal of connection or disconnection 1: (reserve)supply as per loading signal of connection or disconnection and loading fuzzy test
Fire Mode Enter	24	0~1	/	0	0: close 1: open
Cancel Fun Sel	25	0~1	/	1	0: close 1: open
Anti-nuisance	26	0~1	/	1	0: close 1: open

3. Running menu

Item	No.	Range	Unit	Default value	Remark
Speed command				0	Speed order mode-multi speed mode
Car Speed	1	0.200~6.000	m/s	1.000	
Motor Speed	2	50~9999	rpm	1440	
Encoder Pulses	3	100~999	ppr	1024	
User-defined floor	4	0~9	/	0	Reserve
Zero Spd Sel	5	0~8	/	1	
Leveling Spd Sel	6	0~8	/	2	
Decel Spd Sel	7	0~8	/	3	
Insp Spd Sel	8	0~8	/	4	
User Spd Sel	9	0~8	/	5	
V0 Spd Sel	10	0~8	/	6	
V1 Spd Sel	11	0~8	/	7	
V2 Spd Sel	12	0~8	/	8	
User Decel Dista	13	0~9.990	m	1.500	
DecelDistanceS	14	0~9.990	m	1.500	
DecelDistanceS	15	0~9.990	m	1.500	
DecelDistanceS	16	0~9.990	m	1.500	
Leveling Adj	17	0~99	mm	0	
Speed command				1	(the mode function is reserved)speed order mode-analog mode
Car Speed	1	0.200~6.000	m/s	1.000	
Motor Speed	2	50~9999	rpm	1440	
Encoder Pulses	3	100~9999	ppr	1024	
Max Running speed	4	0.200~6.000	m/s	1.000	
Inspection Speed	5	0.000~0.500	m/s	0.250	
Emergency speed	6	0.000~0.630	m/s	0.250	
Relevel Speed	7	0.000~0.300	m/s	0.200	Give relevel speed when analog running.
Least Speed	8	0.010~elevator speed	m/s	0.800	
Zero Speed	9	0~100	rpm	5	
Acceleration	10	0.100~9.999	m/s^2	0.550	
Deceleration	11	0.100~9.999	m/s^2	0.550	

3. Running menu

Item	No.	Range	Unit	Default value	Remark
S Curve T1	12	0.100~9.999	Sec.	1.300	Start the first S curveT1.
S Curve T3	13	0.100~9.999	Sec.	1.100	Start the end of S curve T2.
S Curve T3	14	0.100~9.999	Sec.	1.100	Decline the first of S curveT3.
S Curve T4	15	0.100~9.999	Sec.	1.300	Decline the end of S curve T4.
Slowdown Adj	16	0.000~0.200	m	0	In advance of adjust the decline point.
Leveling Adj	17	0.000~0.100	m	50	Adjust level distance
Up Adj	18	0.000~0.100	m	0.050	If not reach, when up landing, increase up adjustment, when down landing, increase down adjustment.
Down Adj	19	0.000~0.100	m	0.050	If out of the level, when up landing, decrease up adjustment, when down landing, decrease down adjustment.
DAC Update	20	0.001~0.100	Sec.	0.010	

4.Time menu

Item	No.	Range	Unit	Default value	Remark
RunDelayTime	1	0~9.9	Sec.	0.1	When enable is effective, delay to give direction.
Brake On Time	2	0~9.9	Sec.	0.1	
Start Spd Time	3	0~9.9	Sec.	0.2	
Brake Off Time	4	0~9.9	Sec.	0.1	
Stop Time T1	5	0~9.9	Sec.	0.6	Stop then extend last release running contactor.
Stop Time T2	6	0~9.9	Sec.	0.3	Stop then release enable and direction extend.
Stop Time T3	7	0~9.9	Sec.	0.1	When maintenance, release direction and enable delay.
Stop Time T4	8	0~9.9	Sec.	0.1	Delay to open the door after stop.
Brake Hold Time	9	0~9.9	Sec.	0.5	
Door Run Time	10	2~99	Sec.	10	
Door Open Time	11	1~99	Sec.	10	Car calling delay to automatic closing door.
DoorOpen Time 2	12	1~99	Sec.	10	Hall calling delays to automatic closing door.

4.Time menu

Item	No.	Range	Unit	Default value	Remark
DoorOpen Time 3	13	1~99	Sec.	20	Automatic closing delay.
Open Extend Time	14	1~99	Min.	5	
Locks Filter	15	0~9.9	Sec.	0.2	
Light Manage T	16	0~60	Min.	10	Set it as 0, the function is not effective.
Bell Hold Time	17	0~9.9	Sec.	1.0	
Homing Time	18	0~60	Min.	10	Set it as 0, the function is not effective.
Pulse Lost Time	19	0.1~5.0	Sec.	1.0	Not zero speed and not floor level, it is effective.
Car Stuck Timer	20	20~45	Sec.	45	It is fault if not pass a level within setting time.
Landing WTD	21	5~99	Sec.	50	It is fault if one level enter door area and the other does not enter door area.

5. Option menu

Item	No.	Range	Unit	Default value	Remark
Emergency run	1	0~1	/	0	0: None 1: Emergency run(reserve)
Car Function Sel	2	0~4	/	0	0:Disable 1:EnInDriverMode. 2: Enable In Auto. 3: AllMode Enable. 4: EnBeepIn Driver.
Advance Door Open	3	0~1	/	0	0: No 1: Yes reserve
Re-level When Open	4	0~1	/	0	0:No 1:Yes reserve
LandS/W Select	5	0~1	/	1	0:with independent foor area signal 1: use up or down level signal as door area signal reserve.
Start Time Enter	6	/	/	/	24 hours format. It is uneffetive if same to stop time enter (reserve).
Stop Time Enter	7	/	/	/	24 hours format. It is not effective if same to start time enter (reserve).

5. Option menu

Item	No.	Range	Unit	Default value	Remark
Enable Bell Time	8	/	/	/	24 hours format. From that moment to bell time disable, during this period, the bell is effective.
Forbid Bell Time	9	/	/	/	24 hours format. From that moment to bell time enable, bell stop output.
Lift For Disable	10	0~1	/	0	0:No 1: Function for disable reserve.
Two-Door Mode	11	0~6	/	0	

6. Debug menu

Item	No.	Range	Unit	Default value	Remark
Self-learning start	1				
User calling	2	1~ total floor quantity	/	/	When user calling enable, both hall calling and car calling disable.
Enable user calling	2-1	0~1	/	0	0:Disable user calling. 1: Enable User Calling.
User call open	2-2	0~1	/	0	0:Disable 1:Enable
User call Enter	2-3	0~total floor quantity	/	the present floor	The car calling and hall calling functions can be simulated.
Automatic running	3				
Repeat interval	1	5~600	Sec.	60	
Repeat times	2	1~10000	Times	100	
Auto repeat open	3	0~1	/	0	0:Disable 1:Enable
Enable repeat	4	0~1	/	0	0:Disable repeat 1:Enable repeat
Start repeat	5	/	/	/	

7. View menu

Item	No.	Range	Unit	Default value	Remark
Fault Report	1	/	/	/	Include fault report clear option.
Running Report	2	/	/	/	Include times of running and time.
I/O Input State	3	/	/	/	Input port state checking.
Output State	4	/	/	/	Output port state checking.
Car Call State	5	/	/	/	Check car calling information.
Hall Up Call	6	/	/	/	Check hall up call information.
Hall Down Call	7	/	/	/	Check hall down call information.
Com1 State	8	/	/	/	Check the communication point connected with communication port 1.
Com2 State	9	/	/	/	Check the communication point connected with communication port 2.
Reserve	10	/	/	/	
Reserve	11	/	/	/	
Floor Height	12	/	/	/	Check the floor height of each one.
Level Length	13	/	m	0	Use to check after self learning.
Down Spd Limit	14	/	m	0	
Up Spd Limit	15	/	m	0	
Down SpdLimit 2	16	/	m	0	
Up Spd Limit 2	17	/	m	0	
Device Number	18	/	/	/	Automatic generation.
Soft Version	19	/	/	/	Automatic generation.

6. FUNCTION PARAMETER DESCRIPTION

1. User menu

1－1	User level-Ordinary user		Default value	000000
	Range	000000~999999		
1－2	User level-Senior user		Default value	000000
	Range	000000~999999		
1－3	User level-Super user		Default value	000000
	Range	000000~999999		

📖 Normal user login parameter, enter this parameter when not logged in is the login password entry. When logging in, enter this parameter for login password modification. Logon only allows parameter viewing and modification.

2	Spd Cmd Sel		Default value	0
	Range	0	MultiSpdMode	
		1	AnalogMode(Reserved)	

📖 This parameter is control inverter mode and frequency given mode.

3	Para Reset		Default value	0
	Range	0	Disabled	
		1	Reset to Def-reset all parameters to default value factory default value	
		2	Reset to Bak-reset all parameters to user backup value	
		4	Bak UserPara-save all parameters to the user backup area	

4	Language Sel		Default value	0
	Range	0	Chinese	
		1	English	

📖 This parameter is to select the system language.

5	Time Setting		Default value	
	Range	20XX－XX－XX－XX－XX		

📖 This parameter is divided into year - month - day - hour - minute, each part of the changes are saved separately, so each part changed requires to press the Enter key to save, otherwise the amendment is invalid.

6	Standby Menu			Default value	0
	Range	0	Common		

📖 Used to display standby menu

7	ServiceNumTips		Default value	
	Range	00000000~99999999		

8	ServiceTimeTip		Default value	
	Range	20XX . XX . XX . XX . XX		

📖 Service parameters need to enter the senior password before checking and setting. The service number takes precedence over the service time, that is, the service time is invalid when the service number is valid.

Enter into below screen when the service number is not set:

ServiceNumTips
=================
00000000

Enter into below screen when the service number is set:

ServiceNumTips	
=================	
00000000	
Random number	Remaining number

Enter into below screen when the service time is not set:

ServiceTimeTip
=================
2000.00.00.00

Enter into below screen when the service time is set:

ServiceTimeTip	
=================	
0000000000	
Random number	Remaining time(hour)

2. Setup menu

1	Total Floor		Default value	2
	Range	2~64		

📖 2nd-32nd floor is in accessibility, 33rd-64th is under development.

2	Parking Floor		Default value	1
	Range	1~Max.floor		
3	Fire Floor		Default value	1
	Range	1~Max.floor		
4	Homing Floor		Default value	1
	Range	1~Max.floor		

📖 The three parameters set Range is not higher than the total number of floors, non-stop layer can not be set.

5	System type			Default value	0
		0	Single elevator		
	Range	1	Parallel A elevator		
		2	Parallel B elevator		

📖 In parallel, for the AB elevator running mode, A elevator as the main control elevator ,performs the scheduling control, B elevator as the salve-elevator, accept the scheduling of A elevator.

6	Ctrl Type			Default value	0
		0	Full Collective		
	Range	1	Up Collective		
		2	Down Collective		

📖 Full Collective: Hall Up Call, Hall Down Call are both Response

Up Collective: Only up Hall Up Call response.

Down Collective: Only Hall Down Call response.

7	SpareInput Sel			Default value	0
		0	Nothing		
		1	Dr1 locks		
		2	Dr2 locks		
	Range	3	Safety LV FB		
		4	Down Limit SW		
		5	Up Limit SW		

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			6	Down Spd Limit
			7	Up Spd Limit
			8	Down Spd Limit 2
			9	Up Spd Limit 2
			10	Down Spd Limit 3
			11	Up Spd Limit 3
			12	Reserved
			13	RunContactorFB
			14	Brake Feedback
			15	/Insp/Auto
			16	Insp Up
			17	Insp Down
			18	Down Leveling
			19	Up Leveling
			20	MotorOverH
			21	Reserved
			22	InvRunning FB
			23	InvFaultSignal
			24	Fire signal
			25	LiftLockSignal
			26	DoorOpenButton
			27	DrClose Button
			28	Dr1 Open Limit
			29	Dr1 CloseLimit
			30	Light Curtain1
			31	Door2Openlimit
			32	Dr2 CloseLimit
			33	Light Curtain2
			34	Overload
			35	Full load
			36	Light load
			37	Driver Ctrl
			38	Bypass
			39	VIP

		40	Fire Signal
		41	Union Fire
		42	Extend Open In
		43	Driver Down
		44	Driver Up
		45	Back DoorSel SW
		46	Calibration SW
		47	(Reserved)EMG Power Sel(Reserved)
		48	Brake Limit

When the Spare Sel function overlaps the default port function, the Spare Sel has a higher priority than the default port.

8	SpareOutputSel		Default value	0
		0	Disable	
		65	Speed 1	
		66	Speed 2	
		67	Speed 3	
		68	Up Cmd	
		69	Down Cmd	
		70	Reset Inverter	
		71	Run Contactor	
		72	Inv Run Enable	
		73	Front Door Open	
	Range	74	Front Door Close	
		75	Back Door Open	
		76	Back Door Close	
		77	Brake Ctrl	
		78	Brake Hold Ctrl	
		79	Inv Power Ctrl	
		80	Light Ctrl	
		81	Reserved	
		.....	Reserved	
		88	Reserved	
		89	Fire Landing	

		90	Bell Ctrl
		91	Beep Ctrl
		92	Over loadOverload Output
		93	Up Indication
		94	Down Indication

📖 When the spare Sel function overlaps the default port function, the spare Sel has a higher priority than the default port.

9	InputTypeEnter			Default value	0
	Range	0	Normal closed is enabled		
		1	Normal open is enabled		

📖 Can set the InputTypeEnterto X1~X26.

10	Displayset Indication			Default value	0
		0	Display 0		
		1	Display 1		
		2	Display 2		
		…..	…..		
		47	Display 47		
		48	Display 48		
		49	Display B1		
		50	Display B2		
		51	Display B3		
		52	Display B4		
	Range	53	Display A		
		54	Display B		
		55	Display C		
		56	Display D		
		57	Display E		
		58	Display F		
		59	Display-1		
		60	Display-2		
		61	Display-3		
		62	Display-4		
		63	No display		

11	Set Stop Floor			Default value	0
	Range	0	Stop		
		1	Non-stop		

📖 Used to set the elevator stop and non-stop.

12	Set Jump Floor			Default value	0
	Range	0	Non-jump		
		1	Jump		

📖 This parameter applies to set the double elevator in parallel, set the no stop floor that is required to jump.

13	Door Select			Default value	0
	Range	0	Non-open		
		1	Open		

14	Locks Correct			Default value	0
	Range	0	Only Enable LV		
		1	Only Enable HV		
		2	All Enabled		

15	Safety Correct			Default value	0
	Range	0	Only Enable LV		
		1	Only Enable HV		
		2	All Enabled		

16	Auto Level Sel			Default value	3
	Range	0	None		
		1	Refer to Load (Reserved)		
		2	Up Landing		
		3	Down Landing		
		4	Short Landing		
		5	Insp Dir Or Up		

17	OpenCloseMode			Default value	0
	Range	0	Related to limit		
		1	Hold Output		
		2	Hold When Close		
		3	Hold When Open		
		4	Close When Run		

18	CloseNon-Level			Default value	0
	Range	0	Close		
		1	Open		

19	light curtain blocked			Default value	1
	Range	0	Close		
		1	Open		

20	Insp Door Enter			Default value	3
	Range	0	Disabled		
		1	Insp Cmd Close		
		2	Open-Insp2Auto		
		3	All Enabled		

21	Insp Open Button			Default value	1
	Range	0	Enable In Dr Zone		
		1	All Enabled		

22	Brake Limit FB			Default value	0
	Range	0	Close		
		1	Open		

23	Load Setting			Default value	0
	Range	0	Given by load SW		
		1	Given by load SW and load fuzzy determination		

📖 This function is reserved.

24	FireMode Enter			Default value	0
	Range	0	Close		
		1	Open		

25	Cancel Fun Sel			Default value	1
	Range	0	Close		
		1	Open		

📖 After turning on the cancel function, Press the button after the first call, after 3s and then press once to clear the number. 3s later, you need to double-click twice to clear the number.

26	Anti-nuisance			Default value	1
	Range	0	Close		
		1	Open		

📖 After turning on the anti-nuisance, when the light load signal is received, the number of call layers in the car exceeds 2, that is, all the number are cancelled.

3. Running menu

①MultiSpdMode

01	Car Speed(m/s)		Default value	1.000
	Range	0.200~6.000		

📖 This parameter is related to calculating the elevator speed , therefore, it needs to be set correctly.

02	Motor Speed(rpm)		Default value	1440
	Range	50~9999		

📖 This parameter is related to calculating the elevator speed therefore, it needs to be set correctly.

03	Encoder Pulses(ppr)		Default value	1024
	Range	100~9999		

📖 This parameter is related to calculating the elevator speed therefore, it needs to be set correctly.

04	MultiSpdMode		Default value	0
	Range	0~9		

📖 This parameter is set by manufacturer.

05	Zero Spd Sel		Default value	1
	Range	0~8		

📖 Select the inverter step speed control by Y7Y8Y9 output when zero speed.

06	LevelingSpdSel		Default value	2
	Range	0~8		

📖 Select the inverter step speed control by Y7Y8Y9 output when leveling.

07	Decel Spd Sel		Default value	3
	Range	0~8		

📖 Select the inverter step speed control by Y7Y8Y9 output when deceleration.

08	Insp Spd Sel		Default value	4
	Range	0~8		

📖 Select the inverter step speed control by Y7Y8Y9 output when inspection

09	User Spd Sel		Default value	5
	Range	0~8		

📖 Select the inverter step speed control by Y7Y8Y9 output when user define the floor.

10	V0 Spd Sel		Default value	6
	Range	0~8		

📖 Select the inverter step speed control by Y7Y8Y9 output when the distance is single floor.

11	V1 Spd Sel		Default value	7
	Range	0~8		

📖 Select the inverter step speed control by Y7Y8Y9 output when the distance is dual floor.

12	V2 Spd Sel		Default value	8
	Range	0~8		

📖 Select the inverter step speed control by Y7Y8Y9 output when the distance is multi- floor

The following table describes the specific output of the Y7Y8Y9, the black fill zone is the output.

Table 6-1 The actual output of the step speed combination

Step Speed combination	Y9	Y8	Y7
1			
2			■
3		■	
4		■	■
5	■		
6	■		■
7	■	■	
8	■	■	■

The following figure describes the SEC-M500 control SAVCH elevator dedicated inverter S3500, take the multi-step speed logic control timing diagram.
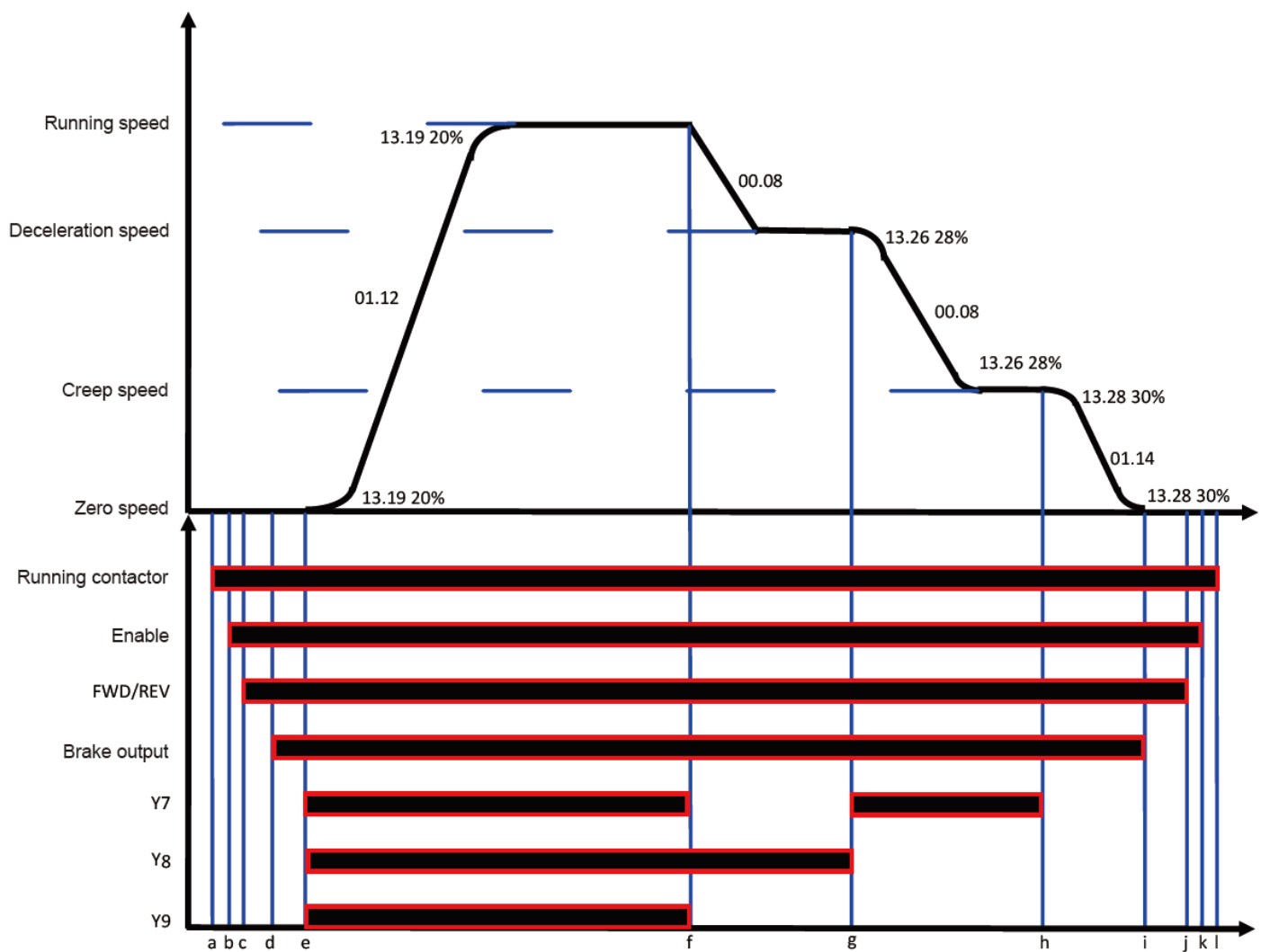

Figure 6-1 speed logic time chart

a→b: The time interval from running the contactor effective to a given enabling.

b→c: Specifies the time interval for a given run direction.

c→d: The time interval from the given direction to the brake output.

d→e: The time interval at which the brake is output to the given multi-layer speed.

f: Multi-step speed switch to the deceleration speed switching point.

g:Deceleration speed to the leveling speed switching point, enter the door area switching point.

h→i: The time interval from zero speed to the brake release.

i →j: The time interval from release to given released direction.

j→k: The time interval from direction release to enabling release.

k→l: The time interval from enabling release to t contactor release.

13	User Deceleration(m)		Default value	1.500
	Range	0~9.990		

📖 The distance from user speed to deceleration speed in advance.

14	DecelDistanceS(m)		Default value	1.500
	Range	0~9.990		

📖 The distance from single speed to deceleration speed in advance.

15	DecelDistanceS(m)		Default value	1.500
	Range	0~9.990		

📖 The distance from double speed to deceleration speed in advance.

16	DecelDistanceS(m)		Default value	1.500
	Range	0~9.990		

📖 The distance from multi-step speed to deceleration speed in advance.

The following table shows the recommended deceleration distance for each elevator speed.

Table 6-2 The recommended deceleration distance for each elevator speed.

Elevator speed(m/s)	odd-level deceleration distance (m)	even-level deceleration distance (m)	levels deceleration distance (m)
0.5	0.8	----	-----
0.63	1.0	----	----
1.00	1.5	----	----
1.5	1.5	2.0	----
1.75	1.5	2.5	----
2.00	1.5	2.5	3.5
2.50	1.5	2.5	4.5
3.00	1.5	2.5	5.8

Note: The distance described above is the actual distance from the slowdown point to the leveling sensor of the docking station.

17	Leveling Adj(Plu)		Default value	0
	Range	0~99		

📖 After entering the leveling area, perform the leveling adjustment to the pulse value.

②**AnalogMode (this mode function is reserved)**

1	Car Speed(m/s)		Default value	1.000
	Range	0.200~6.000		

📖 This parameter is related to calculating the elevator speed and needs to be set correctly.

2	Motor Speed (ppr)		Default value	1440
	Range	50~9999		

📖 This parameter is related to calculating the elevator speed and needs to be set correctly.

3	EncoderPulses (ppr)		Default value	1024
	Range	100~9999		

📖 This parameter is related to calculating the elevator speed and needs to be set correctly.

4	MaxRunningSpd (m/s)		Default value	1.000
	Range	0.200~6.000		

📖 The running speed is not more than this speed.

5	Insp Speed (m/s)		Default value	0.250
	Range	0.000~0.500		

📖 The running speed when the elevator is during inspection.

6	EmergencySpd (m/s)		Default value	0.250
	Range	0.000~0.630		

📖 The running speed when the elevator is during emergency leveling.

7	RelevelSpeed (m/s)		Default value	0.200
	Range	0.000~0.300		

📖 The running speed when the elevator is during re-leveling speed.

8	Least Speed(m/s)		Default value	0.800
	Range	0.010~ Max.run speed		

📖 The running speed when the elevator is during least speed.

9	Zero Speed(rpm)		Default value	5
	Range	0~100		

📖 The motor rotation when the motor is zero speed.

10	Acceleration(m/s^2)		Default value	0.550
	Range	0.100~9.999		

📖 Positive acceleration from zero speed starting.

11	Deceleration(m/s^2)		Default value	0.550
	Range	0.100~9.999		

📖 Negative acceleration from high speed stopping.

12	S Curve T1(s)		Default value	1.300
	Range	0.100~9.999		

📖 Start the beginning of the initial bending time.

13	S Curve T2(s)		Default value	1.100
	Range	0.100~9.999		

📖 Start the end of the initial bending time.

14	S Curve T3(s)		Default value	1.100
	Range	0.100~9.999		

📖 Decelerate the beginning of the initial bending time.

15	S Curve T4(s)		Default value	1.100
	Range	0.100~9.999		

📖 Decelerate the end of the initial bending time.

16	Slowdown Adj(m)		Default value	0
	Range	0.000~0.200		

📖 The distance when it is slow down.

17	Leveling Adj(m)		Default value	0. 050
	Range	0.000~0.100		

📖 The error distance when leveling.

18	Up Adj(m)		Default value	0. 050
	Range	0.000~0.100		

📖 When the leveling is not on and it increases when up, the leveling adjust and increases when down the down leveling adjust; the leveling is washed up, it decreases when up, the leveling adjust, and it decreases when down, the down leveling adjust.

19	Down Adj(m)		Default value	0. 050
	Range	0.000~0.100		

📖 When the leveling is not on and it increases when up, the leveling adjust and increases when down the down leveling adjust; the leveling is washed up, it decreases when up, the leveling adjust, and it decreases when down, the down leveling adjust.

20	DACUpdateTime(s)		Default value	0. 010
	Range	0.001~0.100		

📖 The time interval when the analog output is updated.

4. Time menu

1	RunDelayTime (s)		Default value	0.1
	Range	0~9.9		

📖 After the inverter enabling, how long it extend before giving direction.

2	Brake On Time (s)		Default value	0.1
	Range	0~9.9		

📖 After the running signal is given, how long it extends before brake output.

3	Start Spd Time (s)		Default value	0.2
	Range	0~9.9		

📖 After the brake output, how long it extends before giving running speed.

4	Brake Off Time (s)		Default value	0.1
	Range	0~9.9		

📖 After zero speed running, how long it extends before the brake is released.

5	Stop time T1 (s)		Default value	0.6
	Range	0~9.9		

📖 After stop, how long it extends before releasing running contactor.

6	Stop time T2 (s)		Default value	0.3
	Range	0~9.9		

📖 After stop, how long it extends before releasing enabling and direction.

Note: Please refer to figure 6-1 when setting above time parameters.

7	Stop time T3 (s)		Default value	0.1
	Range	0~9.9		

📖 After inspecting the stop, how long it extends before releasing enabling and direction.

8	Stop open extend time T4 (s)		Default value	0.1
	Range	0~9.9		

📖 After inspecting the stop, how long it extends before opening.

9	BrakeHold Time (s)		Default value	1.0
	Range	0~9.9		

📖 The delay time from brake output to brake hold.

10	Door Open Time (s)		Default value	10
	Range	2~99		

📖 Door Open Time.

11	DoorOpen Time (s)		Default value	10
	Range	1~99		

📖 The time from car run to door open time when the open is on.

12	DoorOpen Time2 (s)		Default value	10
	Range	1~99		

📖 The time from outgoing call to door open time when the open is on.

13	Door Open Time3 (s)		Default value	20
	Range	1~99		

📖 When using elevator specialized for disabled people, the time from no operation to auto-close when the open is on. This function is reserved.

14	OpenExtendTime (min)		Default value	5
	Range	1~99		

📖 If the door open extension signal is valid, the door keeps opening at the maximum time.

15	Locks Filter (s)		Default value	0.2
	Range	0~9.9		

📖 The time from the door open to lock judge time.

16	Light Manage T(min)		Default value	10
	Range	0~60		

📖 If the elevator does not operate for this time, the car's power supply will be managed .

If it is "0", this function is turned off .

17	Bell Hold Time(s)		Default value	1
	Range	0~9.9		

📖 It indicates the bell hold time.

18	Homing Time(min)		Default value	10
	Range	0~60		

📖 The car has no run operation to reach this time and is not in the Homing floor.

Return to homing floor operation. When it is 0, it is disabled.

19	PulseLost Time (s)		Default value	1
	Range	0.1~5.0		

📖 Non-zero speed and non-zone state to monitor the pulse loss and output alarm.

20	Car Stuck Time (s)		Default value	45
	Range	20~45		

📖 After running, this time did not go out area and output alarm.

21	Landing WTD (s)		Default value	50
	Range	5~99		

📖 A landing enter into the door area, during this time another landing does not enter into the door area and output alarm.

5. Option menu

1	Emergency Run			Default value	0
	Range	0	Close		
		1	Open		

📖 This function is reserved.

2	CarFunctionSel			Default value	0
		0	Close		
		1	Enabled In Driver Mode		
	Range	2	Enable In Auto		
		3	All Mode Enable		
		4	Enabled Beep In Driver		

📖 The second function of the buzzer except output alarm.

3	AdvanceDrOpen			Default value	0
	Range	0	Close		
		1	Open		

📖 This function is reserved.

4	Re-levelWhenOp			Default value	0
	Range	0	Close		
		1	Open		

📖 This function is reserved.

5	LandS/W Select			Default value	1
	Range	0	P2P Level		
		1	Up/Down Level		

📖 This function is reserved.

6	StartTimeEnter		Default value	-
	Range	24hour mode		
7	StopTime Enter		Default value	-
	Range	24 hour mode		

📖 This function is reserved.

8	EnableBellTime		Default value	
	Range	24hour mode		

9	ForbidBellTime		Default value	
	Range	24Hour mode		

📖 This function can be used to set the night off station clock function to prevent people. The station clock will always work when the station clock turn-off time coincides with the arrival clock turn-on time.

10	LiftForDisable		Default value	0
	Range	0	Close	
		1	Open	

📖 This function is reserved.

11	Two-Door Mode		Default value	0
	Range	0	Close	
		1	Open	
		2	Open	
		3	Open	
		4	Open	
		5	Open	
		6	Open	

📖 This function is reserved.

Note: Marked with the function of the parameters reserved is the planning development function, but the current version can not support the function temporarily

6. Debug menu

1	Calibration		Default value	–
	Range	EnterPush enter button to perform		

Parameter acquisition

This is the installation location of the flat plate. In principle, the control system enter into stop processing immediately once collect the up and down level after the signal. It requires the installation location of the level plate must be absolutely correct to ensure the leveling accuracy of the elevator. Car ground and hall door are in the same level, the level of the center of the sensor should be aligned with the center of the partition plate, level plate installation location as shown below:

Figure 6-2 Leveling isolation magnet installation position

According to the above figure, the length of the door partition plate L2 allows the length of 100mm~400mm, it is recommended to use 200mm partition plate, requiring all floors of the magnetic plate length are the same. The lengt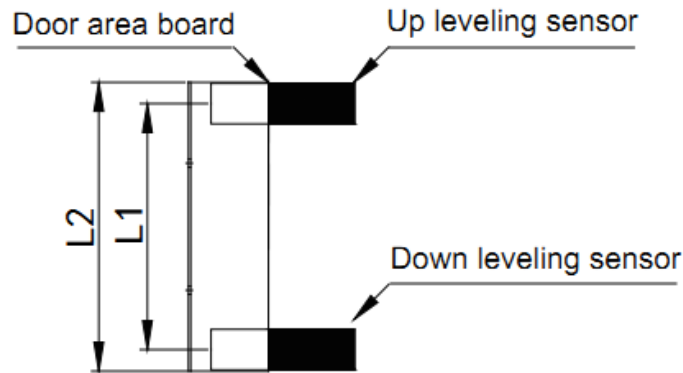h of the upper and lower leveling sensor installation depends on the length of the diaphragm. The minimum length of the two leveling sensors is 20mm, that is, L2-L1≥20mm.

In the multi-speed mode, L2-L1≥80mm, and L1 value as small as possible, but L1 should not be less than 50mm in the analog curve mode, L2-L1≥ 20mm can.

Parameter Calibration

Start the calibration of the well road parameters, to meet the following conditions:

a. The elevator is in the service.

b. The car is in the bottom door area.

c. The lower limit is not active.

d. The highest number of floors has been set.

e. Pulse feedback is working properly.

f. All door area light block / partition board installation is correct.

g. The system has normal operating conditions.

h. All safety components are working properly (upper and lower limit, limit device is reliable).

i. No dirt in the well.

After meet the above conditions, set the parameters the calibration starts. After confirmation, start the calibration, the elevator will run to the max speed with the inspection speed from the bottom (with the first level under the forced deceleration switch floor) and stop after arrive to the door of the max floor.

During the calibration process, the values in the display displays window should be incremented until the calibration is finished and the maximum number of floors is displayed.

After completing the calibration parameters, please confirm the following:

a. If there is fault trip displaying?

b. After complete the calibration of well, check whether the distance of the forced deceleration switch to the leveling position is consistent with the actual.

c. Please check if the number of floors tuned by the system corresponds to the total number of floors?

Elevator well data from the calibration does not pass. the system will display the following error code, please verify the code and make the corresponding treatment.

Table 6-3 The failure reasons for not successful calibration

Code	Alarm reason	Corrective-measures
Err65	RunFactorErr	Check the lock/safe signal is on.
Err66	Level2Long	Check installation location of the up/down leveling sensor and shorten the distance between the two sensors.
Err67	LevelLineErr	Check the wiring.
Err68	UpLimitWork2	1.Check the car location. 2.Check the action status of the up switch. 3.Check the input attributes of up switch.
Err69	CarPositionE	1.Check the car position. 2.Check the action status of SpeedLimit SW. 3.Check the input attributes of SpeedLimit SW.
Err70	FloorNumErr	1.Check the maximum number of the setting floor. 2.check the number of separate plate. 3.check the installation position of the separate plate.
Err71	Scale2 Small	Within 10mm pulse number should meet the standard0<p≤255
Err72	Scale2 Large	
Err73	FloorDataErr	
Err74	No Pulse	No pulse input during operation.

Note: Besides, other failure will be possible to happen during calibration.

2-1	EnableUserCall		Default value	0
	Range	0	Close	
		1	Open	

2-2	User Call Open		Default value	0
	Range	0	Close	
		1	Open	

2-3	UserCall Enter	Default value	-
	Range	0~Maximum floor	

📖 Including car call, up call, down call setting.

3-1	RepeatInterval(s)	Default value	60
	Range	5~600	

📖 The repeat interval of the main board.

3-2	Repeat Times		Default value	100
	Range	1~10000		

3-3	AutoRepeatOpen		Default value	0
	Range	0	Close	
		1	Open	
3-4	Enable Repeat		Default value	0
	Range	0	Close	
		1	Open	

3-5	Start Repeat		Default value	-
	Range	EnterPush enter		

4	host machine learning		Default value	-
	Range	"enter" means enter, "Esc" means quit		

📖 Host learning needs to be carried out in maintenance mode.

The output contactor and frequency converter enable output when entering the host learning.

7. View menu

1	Fault Report		Default value	-
	Range			

📖 Inquiry history fault report.

2	Running Report		Default value	-
	Range			

📖 Check the running times

3	I/O InputState		Default value	-
	Range			

📖 The valid state is indicated by ■, and the invalid state is indicated by □.

4	I/O OutputState		Default value	-
	Range			

📖 The valid state is indicated by ■, and the invalid state is indicated by □.

5	Car Call State		Default value	-
	Range			

📖 The valid state is indicated by ∎, and the invalid state is indicated by ▢.

6	Hall Up Call		Default value	-
	Range			

📖 The valid state is indicated by ∎, and the invalid state is indicated by ▢.

7	Hall Down Call		Default value	-
	Range			

📖 The valid state is indicated by ∎, and the invalid state is indicated by ▢.

8	Com1 State		Default value	-
	Range			

📖 The valid state is indicated by ∎, and the invalid state is indicated by ▢.

9	Com2 State		Default value	-
	Range			

📖 The valid state is indicated by ∎, and the invalid state is indicated by ▢.

10	Reserved		Default value	-
	Range			

11	Reserved		Default value	-
	Range			

12	FFloor Height		Default value	-
	Range			

📖 Inquiry the height of each floor, indicated by pulse number, it can be checked after calibration.

13	Level Length (m)		Default value	-
	Range			

📖 It can be checked after calibration.

14	Down Spd Limit (m)		Default value	-
	Range			

📖 It can be checked after calibration.

15	Up Spd Limit (m)		Default value	-
	Range			

📖 It can be checked after calibration.

16	Down SpdLimit2 (m)		Default value	-
	Range			

📖 It can be checked after calibration.

17	Up Spd Limit2 (m)		Default value	-
	Range			

📖 It can be checked after calibration.

18	Device Number		Default value	-
	Range			

📖 This function is reserved.

19	Soft Version		Default value	-
	Range			

7. FAILURE INDICATION AND COUNTERMEASURES

No.	Abbreviation	Alarm description	Possible causes of the alarm	Reset method
1	LockOffInRun	Lock Off In Run	1.Lock wiring circuit loosen. 2.Retiring cam touch the gate ball.	Auto reset
2	Lock Stuck	Lock Stuck	Open output exceeds the open protection time.	Check reset or auto reset after enter into normal state and keep.
3	Car Lock Err	Car Lock Errorhigh voltage is valid	After auto stop, lock off, but car lock disabled.	Check reset or close door to reset and keep.
4	HallLock Err	Hall Lock Error (when high voltage is collected)	After auto stop, lock off, but hall lock disabled.	Check reset or close door to reset and keep.
5	OpenLimitErr	Reserved	Reserved	Reserved
6	CloseLimitEr	Reserved	Reserved	Reserved
7	Close Err	The door can not be closed after repeat	1.Lock relay error. 2.Crane machine system stuck. 3.Crane does not work or slippery.	Close button or check reset
8	Inv Fault	Inv Fault	1.Inverter works out of work. 2.Inverter parameter error. 3.The fault signal port logic attribute is set incorrectly.	Auto reset
9	NoInvRunFB	Inverter run command error	1.Inverter works out of work. 2.Inverter parameter error. 3.The fault signal port logic attribute is set incorrectly.	Auto reset
10	LostInvRunFB	Inverter run command lost	1.Inverter fault in run but not giving fault signal. 2.Run feedback signal lost.	Auto reset
11	Car Comm Err	Car Communication Error	1.No car communication signal. 2.Car communication address error.	Auto reset
12	HallComm Err	Hall Communication Error	1.No hall communication signal. 2.Hall communication address repeat setting.	Auto reset
13	GroupCommErr	Group Communication Error A,B	A,B setting error.	Auto reset
14	Limit Fault	Limit Fault	1.Up/down limit enabled at the same time. 2.At least one limit switch is damaged. 3.Limit signal port logic attribute is set incorrectly.	Reset after recovery to normal.

No.	Abbreviation	Alarm description	Possible causes of the alarm	Reset method
15	SpeedLimitEr	Speed Limit Error	1.Up/down 1st speed limit enabled at the same time. 2.Up/down 2nd speed limit enabled at the same time. 3.Speed limit signal port logic attribute is set incorrectly.	reset after recovery to normal
16	UpLimitWork	Up Limit Work	1.Up limit is enabled. 2.Up limit signal port logic attribute is set incorrectly. 3. Up limit switch is broken or stuck.	reset after recovery to normal
17	DnLimitWork	Dn Limit Work	1.Down limit work. 2.Down limit signal port logic attribute is set incorrectly. 3.The down limit switch is broken or stuck.	reset after recovery to normal
18	Un-LevelStop	Un-Level Stop	1.Car stop in un-level due to other requirement of immediate stop fault. 2.Car is not in un-level when power on.	reset after recovery to normal
19	Car Stuck	Car Stuck time counter is enabled	The high-speed running time between adjacent two-door zones exceeds the time set by the car stuck timer.	No reset, stop to keep fault
20	MotorOverH	Motor Over Heat	1.Motor temperature detection switch enabled, the motor overheat. 2.The motor temperature detection signal port logic attribute is set incorrectly.	reset after recovery to normal
21	MotorReverse	Reserved	Reserved	Reserved
22	Over Speed	Reserved	Reserved	Reserved
23	Low Speed	Reserved	Reserved	Reserved
24	Car Skate	Reserved	Reserved	Reserved
25	Up Level Err	Not receive the up level signal for more than 3 times	1.Up level sensor damage. 2.Up level wiring broken.	Auto reset
26	DownLevelErr	Not receive the down level signal for more than 3 times	1.Down level sensor damage. 2.Down level wiring broken.	Auto reset
27	Start Over T	After start for 3s, one of up/down level sensor does not leave level	1.There is a level sensor that is broken. 2.Car stuck. 3.Whether the inverter parameter setting is reasonable (mainly acceleration / deceleration time). 4.The speed is given incorrectly.	Auto reset

No.	Abbreviation	Alarm description	Possible causes of the alarm	Reset method
28	StopOverTime	After entering the door for 5s, not receive level signal	1.The inverter speed setting is incorrect. 2.Level sensor is disabled.	Auto reset
29	EMGStopInRun	EMG Stop In Run	Safe circuit is broken in run.	Always hold until the alarm recovery
30	EMG Stop	EMG Stop	Safe circuit is broken in stop.	Always hold until the alarm recovery
31	GetInspInRun	Get the inspection signal in run	Check if the inspect switch is connected correctly	Auto reset
32	OutputKM Err	Output KM Error	1.When KM2 is not output, the output feedback point has signal input (output relay stuck). 2.When outputting KM2, the output feedback point has no signal input (output contactor is brake Off).	Always hold until the alarm recovery
33	Brake KM Err	Brake KM Error	1.When JZD is not output, the brake feedback point has signal input (brake contactor stuck). 2.When there is output JZD, the brake feedback point no signal input (brake contactor brake off).	Auto reset
34	Brake On Err	Brake On Error	1.When the brake contactor brake on, the brake limit is disabled. 2.Brake limit signal port logic attribute setting is wrong.	Auto reset
35	BrakeOff Err	Brake Off Error	1.When the brake contactor brake off, the brake limit is enabled. 2.Brake limit signal port logic attribute setting is wrong.	Auto reset
36	Safety Err	Safety Error high voltage is valid	1.Safety relay can not brake off as normal. 2.Safety relay stuck. 3.The safety circuit input signal is not consistent with the high voltage acquisition signal.	Always hold until the alarm recovery
37	DecLen2Long	The distance is too long when Multi-step speed distance	1.The distance is shorter than the distance. 2.The deceleration distance is set incorrectly.	Auto recovery
38	CarButtStuck	Reserved	Reserved	Reserved
39	HallButStuck	Reserved	Reserved	Reserved

No.	Abbreviation	Alarm description	Possible causes of the alarm	Reset method
40	Curtain Err	Curtain/safety touch board signal enabled for 30s	1.Curtain, security touch board signal port logic attribute settings are wrong. 2.Curtains, safety touch panels are blocked.	No display, output buzzer output alarm
41	InspCmd Err	Inspect that up/down signal are enabled at the same time	1.Check and inspect up and down signal switch. 2.Inspect up/down signal port logic attribute setting is wrong.	Always hold until the alarm recovery
42	Quit Group	Quit parallel or group	1.Quit parallel or group due to itself fault. 2.Quit parallel or group due to counterpart fault.	Reserved
43	Service Note	Service Note	1.Service time is up. 2.Service times is up.	Always hold until reset
44	Overload	Over load	Elevator load weight exceeds the rated weight	Always hold until the alarm recovery
45	AntiNuisance	Anti Nuisance enabled	Car call is more than 3 in light load	Auto reset
46	Fire Active	Fire back base station function enabled	Fire command input.	Auto reset
47	ParameterErr	Parameter Error	1.Encoder pulse is set incorrectly. 2.Elevator rated speed setting is wrong.	Hold until the setting is correct
48	UpLimit2Low	Up Limit position too Low	Up limit installation position is too low.	Auto reset
49	DnLimitHigh	Down limit position too high	Down limit installation position is too high.	Auto reset
50	MemoryFault	Memory Fault	Data memory is damaged ,need to change the memory.	Always hold
51	MemoryLineEr Error	Memory external line Error	Memory external line is damaged, need to change the main board.	Always hold
52	MemoryDataEr	Memory data error	An abnormal condition causes an error in data storage or read, resetting the parameter, and power on again.	Always hold
53	AccOrDecErr	Acc Or Dec speed is set to 0 at analog	1.Acceleration parameter is set to 0. 2.Deceleration parameter is set to 0.	Always hold until it is set correctly
54	SCurveTimeEr	S curve time set to be 0 at analog	Curve time T0,T2,T4,T6 has parameter setting.	Always hold until it is set correctly
55	a Or T Err	Analog Parameter Error	Analog curve parameter is not set correctly.	Auto reset
56	No Calibrate	Run high speed without well road calibration	Run high speed without calibration.	Always hold

No.	Abbreviation	Alarm description	Possible causes of the alarm	Reset method
57	Reserved	Reserved	Reserved	Reserved
58	a Or T Err 1	Analog Parameter Error	Analog curve parameter T1,T5,SAdd, SDec is not set correctly.	Auto reset
59	a Or T Err 2	Analog Parameter Error	Analog curve parameter T1,T5 is not set correctly.	Auto reset
60	a Or T Err 3	Floor number data error	Analog curve parameter is not set correctly.	Auto reset
61	LeastSpdHigh	Least speed too high or T0_Set is set too small	Least speed too high or T0_Se is set too small.	Auto reset
62	Reserved	Reserved	Reserved	Reserved
63	Reserved	Reserved	Reserved	Reserved
64	Reserved	Reserved	Reserved	Reserved
65	RunFactorErr	The system does not meet the calibration factors	1.System has fault. 2.Door is closed.	Auto reset
66	Level2Long	Two level signal can not appear in the separate plate at the same time	1.The distance between the two level sensor is too large. 2.Level separate plate is too long.	Auto reset
67	LevelLineErr	Door signal input at the same time	1.Wiring error. 2.The two level sensor signal port logice attributes is set incorrectly.	Auto reset
68	UpLimitWork2	Up limit work before the calibration starts	Wiring error or car position is wrong.	Auto reset
69	CarPositionE	Car position error when calibration	Down speed limit is disabled or car is at the bottom of the door are before the calibration starts.	Auto reset
70	FloorNumErr	The setting floor does not match the actual door number	1.Check the level separate plate. 2.Check the setting number of the total floor.	Auto reset
71	Scale2 Small	Scale2 Small	The line number of the using encoder is too small.	Auto reset
72	Scale2 Large	Scale2 Large	The line number of the using encoder is too small.	Auto reset
73	FloorDataErr	Floor Data Error	The line number of the using encoder is too big.	Auto reset
74	No Pulse	No Pulse	1.Check the encoder access circuit. 2.Check that the motor is running.	Auto reset

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Qualification
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