

# 电梯监控通讯接口

## Elevator Monitoring System Interface

# 使用说明书

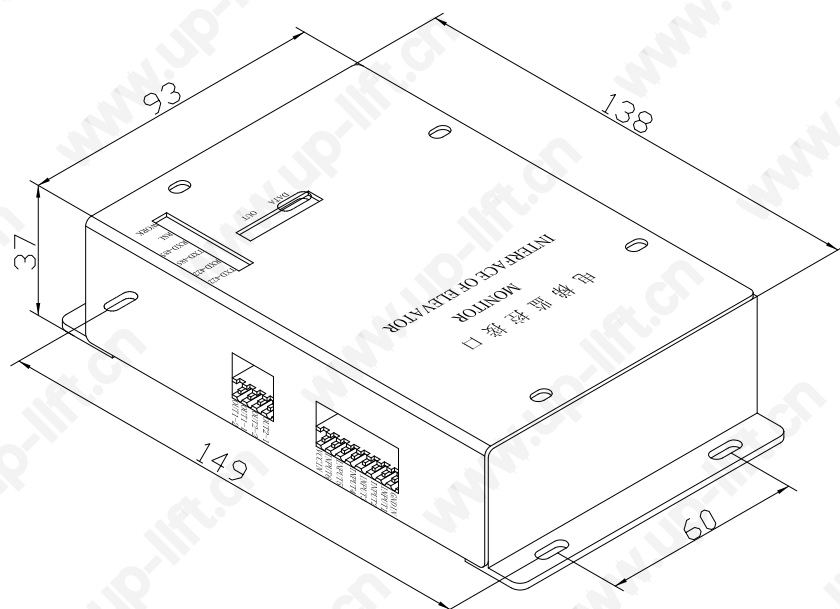
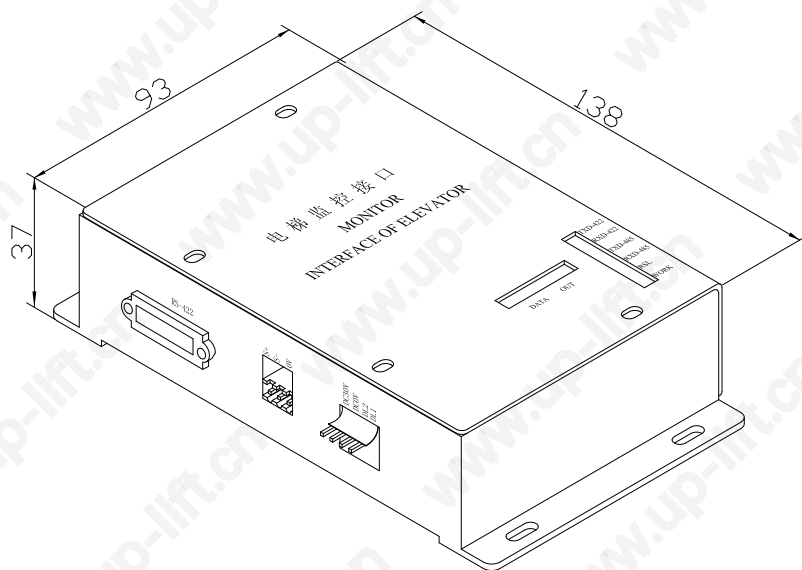
## operation • installation • adjustment

### Summarize:

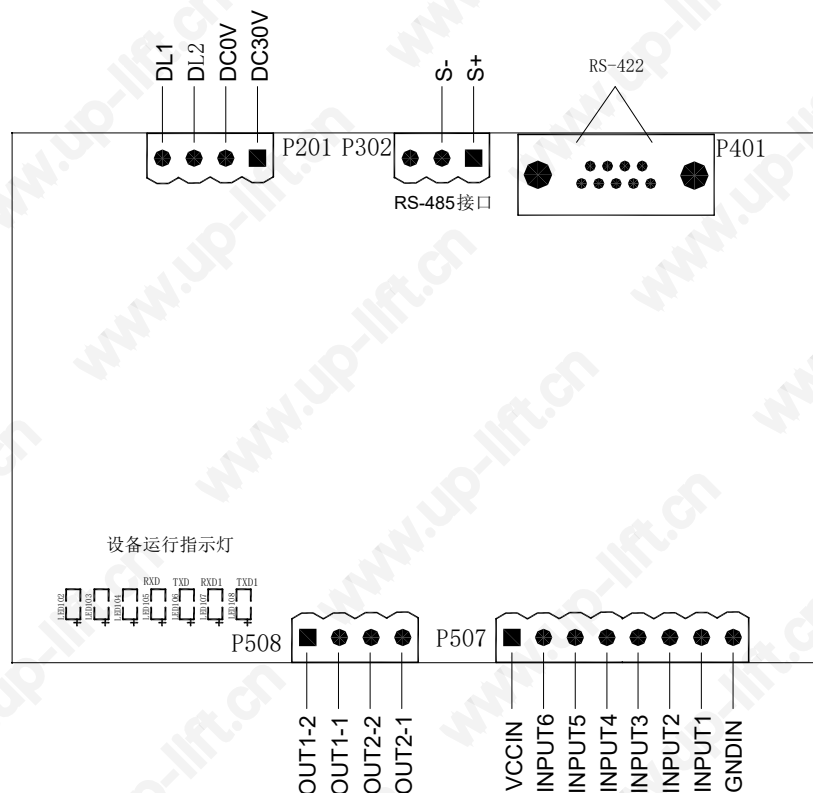
The interface of monitoring system in the lift litter which is a interface of single transfer in connecting lift and common monitoring system. With this interface we can watch and control the lift by monitoring system to guarantee the security of lift using . The interface of monitoring system links up with monitoring system by interface RS-485,the data exchange of which is using the standard MODBUS RTUP ROTOCOL. The interface carries out the corresponding operation to lift according with the control information by monitoring system ,such as the press-button popedom or the pitching on press-button and so on.

### Installation and interface illumination

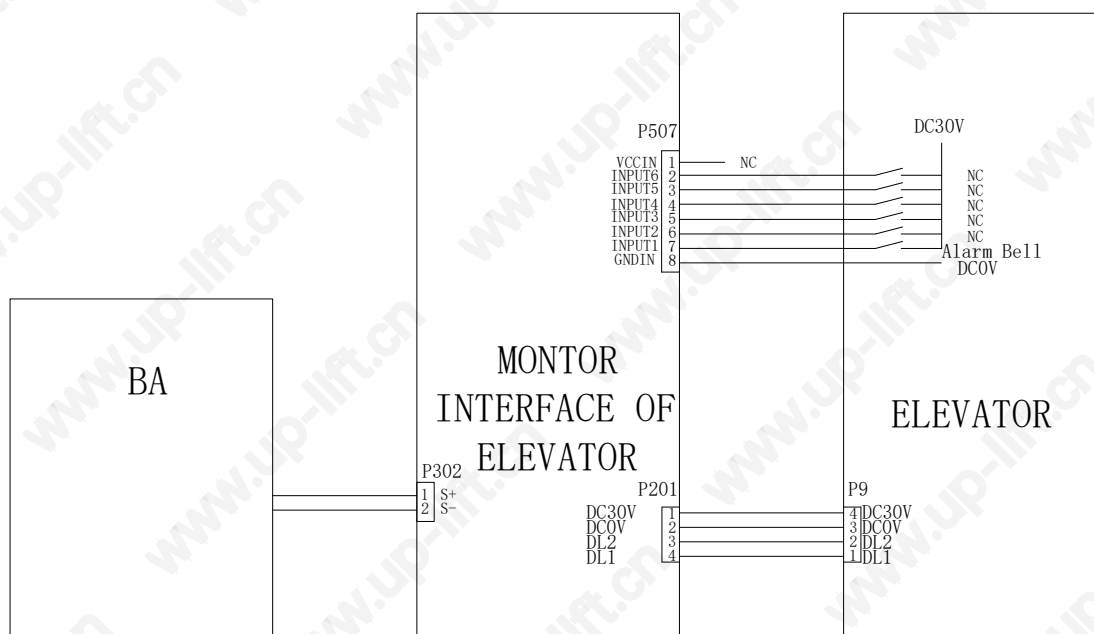
1. installation : The interface can be installed in the control cabinet or near the control cabinet by hanging.
2. exterior size:       unit: mm



### 3. interface :(the concrete interface as follows)



#### 4、Connection with the elevator



**A、 interface RSL: It is DC30V、 DC0V、 DL1 and DL2; Connecting with the corresponding interface of lift's RSL total line, which of the communicating protocol according with the RSL communicating rule .( RCBII Motherboard bus using hall link)**

- B、RS-485 segregated interface : It is S+ and S- .Connecting with the RS-485 total line of monitoring system ,which of the communicating protocol is MODBUS RTU format. The frame format is one start bit, eight data bits , one stop bit and one odd bit . The communicating velocity is 9600bps.The frondose protocol refer to the additive table .
- C、 Server interface : the standard DB9 bore (OTIS server interface); It can be connected with server interface ,which can intercalate the corresponding parameter . And the communicating parameter is compatible with OTIS server .
- D、 Output interface : this port is exported by relay.
- E、 Input interface : the input signal can be choosed to high or low availability.

## The protocol introduction

Modbus communication uses principal and subordinate technology, that is the principal facility demands the subordinate facility and the subordinate facility provide with data response according to the demand instruction of principal facility .

- (1) Demanding the function code in the demand instruction can be told which function the subordinate facility of pitched on should execute. The data sect contains any accessional information which the subordinate facility should execute . For example ,the function code 03 requires reading holding register from facility and return their content . The data sect contains the told information from register : reading from which register and the amount of the register should be read .The error check field supply with a way of validating whether the content of the information right or wrong .
- (2) If it can be producted a normal response, the response of message to the function code which is the responses to the demand of message to the function code .The data sect contains the data which collects from facility : the value of register or the state . If there is something wrong ,the function code of response will be modified , which indicates that the response message is wrong ,at the same time ,the data sect contains the code which is describing this wrong information .

The transfer manner and the information frame :

All of the facility on the same Modbus network should choose the same transfer mode and the parameter of the serial interface . The frame of Modbus RTU information frame as follows:

Start bit	Address code	Function code	Data	CRC	Stop bit
T1-T2-T3-T4	8 位	8 位	$N \times 8$ 位	16 位	T1-T2-T3-T4

The sending of message should at least with the interval of 3.5 character .(such as the chart as ). After finishing the sending of the last character ,a halt of at least the interval of 3.5 character demarcates the end of message . A new message can be started after this halt .

Data segment : The data segment contains the mission which should execute from facility or the return message which is collecting from facility . These message can be data、 the referenced address and so on .For example ,function code shows the value which is reading from register ,and the data segment must contains the start address and the length from the wanted register . To the different subordinate facility ,the address and the data is different.

## Supervise table

RS485    velocity is 9600bps    eight data bits    one stop bit    one odd bit

Variable name	type	address	purview	Data describe
Stop/Running	bit	40001(bit0)	read	one means Running , zero means Stop
Alarm Bell	bit	40001(bit1)	read	one means CAL , zero means it is not
Lock control	bit	40002(bit0)	write	one means lock control , zero means function control

Query use 0x03 code, control use 0x10 code.

exemple:

query command:

BAS receive data (HEX) 01 03 00 00 00 01 84 0A

1st byte is device number, second byte “03” is function code, third and forth byte is starting address, fifth and sixth byte is quantity of registers; the last two bytes “84 0A” is CRC check.

BAS device response data (HEX) 01 03 02 00 01 79 84

01 is device number, 03 is function code, 0A is byte count, 01 means 40001 is 1, “79 84” is CRC check.

control command:

BAS receive data (HEX) 01 10 00 01 00 01 02 00 00 A7 81 (PKS control)

1st byte is device number, second byte “10” is function code, third and forth byte is starting address, fifth and sixth byte is quantity of registers, seventh byte is byte count, eighth and ninth byte is register value, “A7 81” is CRC check.

BAS device response (HEX) 01 10 00 01 00 01 50 09

1st byte is device number, second byte “10” is function code, third and forth byte is starting address, fifth and sixth byte is quantity of registers, “50 09” is CRC check.

## Debug and function illumination

### 5.1 Elevator-related information

#### 5.1.1 LCBII system motherboard :

For reference only, the specific parameters vary from version .

No.	RSL I/O	SYMBOL	NAME	SETTINGS
1	558	OOS1M	FAULT	
2	549	HUDL	UP	Generally 60.1
3	550	HDDL	DOWN	Generally 60.2
4	674	DO	OPEN DOOR	
5	716	EFL	EFK signal	
6	553	PKL	PKS signal	
7	16	EFK	EFK control	
8	11	PKS	PKS control	

### 5. 1. 2 RCBII system motherboard:

For reference only, the specific parameters vary from version .

No.	RSL I/O	SYMBOL	NAME	SETTINGS
1	1240	COS1M	FAULT	
2	1231	HUDL	UP	Generally 60.1
3	1230	HDDL	DOWN	Generally 60.2
4	1275	HDO	OPEN DOOR	
5	1290	EFL	EFL signal	
6	1238	PKL	PKS signal	
7	1106	EFL	EFL control	
8	1109	PKS	PKS control	

## 5. 2 BA interface parameters

### 5. 2. 1 Description:

SET: enter set	ADR SET: RSL address set	ID: read ID
MONITOR: enter monitor		

### 5.2.2 Parameter setting

#### 2.1、M-1-1: read ID.

2.2、M-1-2: RSL address setting . It can be set the opening of the button popedom of address on every state , every address change can be saved by ENTER. And through GO ON or GO BACK in can be switched to the next or the prior state setting ;

Table settings are as follows :

SYMBOL	NAME
DO	OPEN DOOR
UDL	UP
DDL	DOWN
PKL	PKS signal
EFL	EFL signal
NAV	FAULT
PKS	PKS control
EFL	EFL control

For example: set to open the door (DO) signals.

The first step: insert the OTIS TT into the SVT pin, enter the setting menu(LCBII M-1-3-2).look up the information of elevator, according to the different main board of elevator, there is different I/O

information(see I/O address 5.1). if RSL address of the signal is 00,0 ,set an empty rsl address & save it. Then if address is not empty(for example 59,1),please record the RSL address

The second step: insert the OTIS TT into the rs-422 pin of the device, enter M-1-2,you can see the setting page of signal(you can press GO ON or GO BACK to change the different page). Press the address you recorded(for example 59,1),then press ENTER to save it.

### 5. 2. 3 Port connect

3. 1 put the P201 port connect to the RSL port of elevator , advert sequence of pin. Turn on the power, "LED101","LED109" and "LED110" pilot lamps will shine .
3. 2 put the P302 port connect to RS485 bus, if the right data has sent, RXD,TXD two pilot lamps will coruscate, if there is only RXD lamp coruscate, examine S+ and S- line which at the P302 port to show if them have reverse.
3. 3 put the 401 port connect to the server port of elevator.

### Use

Connect the all the lines of device,set up the parameter complete,and than turn on the power,the device will run natural.