

# HDL-MHRCU.433 User Manual

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## HDL<sup>®</sup>HDL-MHRCU.433

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## **Update History**

The form below contains the information of every update. The latest version contains all the updates of all former versions.

No.	Version	Update Information	Date
1	V1.0.0	Initial release	May.22 <sup>nd</sup> , 2020

## 1 Introduction

HDL Bus Enable RCU Mix Control Actuator (See Figure 1) has the functions of gateway, mix controller, dry contact, and LED output. Hotel room mix module has 22 channel outputs, 24-channel dry contacts and 12-channel LED outputs.



Figure 1

#### 1.1 Functionality

#### **Mix control functions**

- It supports 12 scenes.
- Channel 1 to 13 are relay outputs, and each channel outputs 5A current. The load types are incandescent lamp, halogen lamp, low voltage halogen lamp.
- Channel 14 to 17 are relay outputs, and each channel outputs 10A current. The load types are incandescent lamp, halogen lamp, low voltage halogen lamp.
- Channel 18 to 21 are dimming outputs, each channel outputs 0.8A current. It has short circuit protection with replaceable fuse. If the channel is short circuit or the fuse is wrong, the fuse indicator will flash.
- Channel 22 is 1A relay output channel.

#### **Dry contract**

HDL<sup>®</sup>HDL-MHRCU.433

24-channel dry contact inputs.

#### **Door bell function**

■ 5-channel LED outputs. (It can connect to the third-party door bell panel.)

#### LED output function

■ 6-channel switch indicator outputs.

#### 1.2 Parameters

Electrical Parameters :	
Working voltage	20~30V DC
Working current	300mA/24V DC
Input voltage	AC100-240V(50/60Hz)
Communication interface	HDL Buspro, RJ45
RJ45 interface	UDP/IP network interface
TRIAC	16A TRIAC, minimum load is 30W
Buspro terminal	0.75 - 0.85mm single-core cable
Relay output	5A/10A
External Environment:	
Working temperature	-5℃~45℃
Working relative humidity	≪90%
Storage temperature	-20℃~60℃
Storage relative humidity	≪93%
Specifications:	
Dimensions	216mm $ imes$ 90mm $ imes$ 56mm
Net weight	725g
Housing material	Nylon
Installation	35mm DIN rail installation
Protection rating (Compliant with EN 60529)	IP20

#### 1.3Product Interface

The connection and interface of HDL Bus Enable RCU Mix Control Actuator like the below figure 2.



Figure 2

- A1: LED indicators of 5CH doorbell
- A2: Doorbell control
- A3: Resistor of  $1k \Omega$  -5k  $\Omega$  recommended, which depends on the working voltage of the LED lamp.
- A4: 6CH dry contact LED display. When the dry contact closes, the LED will be on, otherwise, keeps off.
- A5: 24CH dry contacts
- A6: RJ45 port
- A7: Button and Indicator: The indicator flickers in green when the module is working properly. Keep pressing for 2s to read and set the start channel when the indicator turns red. Keep pressing for 10s, it will turn red, the module will be reset to factory setting.

Default setting parameters:

IP: 192.168.10.250

Router IP:192.168.10.1

The network segment of the module should be same as the PC.

A6: Fuse socket

## 2 Configuration

#### 2.1 Connection

		O
Connection Channel Zone Setting Scene Cu	urtains Dry Contact Security Setup Stair light HVAC RS485>BUS BUS>RS485 Doorbell	
IP: 192_168_10_250	Connection preferences Active connections	
Router IP:         192         168         10         1           IP MAC:         48         44         4C         21         0D         DD	Your connection will automatically be detected. Only IP Port Remaining change these settings if you want to remote programming.	
Mask IP: 255 . 255 . 0 Port: 6000	Type: v	
	Group name: HDLRCU12	
Read Save	Project name: HDLRCU12	
	User: HDLRCU12 PWD: 123456	
	Preferred server: 192 . 168 . 10 . 22 Port: 9999	
	Alternate: 192_168_10_1 Port: 9999	
Broadcast Channels status Every 5S	Time zone: UTC+08 V : 0 Zone Enable	
Dimming Voltage     O 220V     110V	Save	
RS485<>BUS mode	Access log	
ASCII control and feedback \vee 👔	Date Version IP Port	
485 Serial Port Configuration		
485		
Volatge adjust		
Value: < > 0.0V		
1		Read log
	🖄 📓 📓 Save & Close	
Current Device :   100-100\		

Figure 3

#### 2.1.1 IP Address

IP:	192 . 168 . 10 . 250
Router IP:	192 . 168 . 10 . 1
IP MAC:	48.44.4C.21.0D.DD
Mask IP:	<sup>255</sup> . <sup>255</sup> . <sup>255</sup> . <sup>0</sup>
Port:	6000
DHCP	
R	ead Save

## HDL HDL-MHRCU.433 Set the IP address for RCU: IP: Set the IP address for RCU. Router IP: Input the IP address of router. IP MAC: Set the MAC IP of RCU. Mask IP: Set the Mask IP.

**DHCP:** If enable this function, the RCU use DHCP IP address.

#### 2.1.2 Other Setting

Broadcast Channels status Every 5S												
Dimming Voltage												
220	V	0 11	0V	4								
RS485<	RS485<>BUS mode											
ASCII	control a	and feed	back 🗸	٢								
485 Sei	rial Port	Configu	ration –									
4	85											
Volatge	adjust											
Value:	<			>	0.0V							
				¢								

Figure 5

**Broadcast Channels status Every 5S:** We can enable/disable the broadcast function.

Dimming Voltage: We can select 220V or 110V.

RS485<->BUS mode: We can select five different mode

485 Serial Port Configuration: Set the baud rate, stop bit and parity bit.

Voltage adjust: adjust the voltage of dimming channels output.

### 2.1.3 Connection Preferences

	Connection prefere	ences		
	cha	Your connection will autpmatical ange these settings if you want to	y be det remote	ected. Only programming.
	Туре:	Remote Server		~
	Group name:	HDLRCU12		
	Project name:	HDLRCU12		
	User:	HDLRCU12	PWD:	123456
	Preferred server:	<sup>192</sup> . <sup>168</sup> . <sup>10</sup> . <sup>22</sup>	Port:	9999
	Alternate:	192 . 168 . 10 . 1	Port:	9999
	Time zone:	UTC+08 ~ : 0	$\checkmark$	Zone Enable
]				Save

Figure 6

We can select different connection type from here.

## 2.2 Channel

100-100\						—	o X	
Connection Ch	nannel Zone Setting Scene Curtain	s Dry Contact Secur	ity Setup Stair light H	IVAC RS485>BUS BU	S>RS485 Doorbell			
Chn No.	Name	Low Limit	High Limit	Max Level	ON delay(0-25.0S)	Protect delay(0-60M)	ON	
1-Relay		N/A	N/A	N/A	0.0	0		
2-Relay		N/A	N/A	N/A	0.0	0		
3-Relay		N/A	N/A	N/A	0.0	0		
4-Relay		N/A	N/A	N/A	0.0	0		
5-Relay		N/A	N/A	N/A	0.0	0		
6-Relay		N/A	N/A	N/A	0.0	0		
7-Relay		N/A	N/A	N/A	0.0	0		
8-Relay		N/A	N/A	N/A	0.0	0		
9-Relay		N/A	N/A	N/A	0.0	0		
10-Relay		N/A	N/A	N/A	0.0	0		
11-Relay		N/A	N/A	N/A 0.0		0		
12-Relay		N/A	N/A	N/A	0.0	0		
13-Relay		N/A	N/A	N/A 0.0		0		
14-Relay		N/A	N/A	N/A	0.0	0		
15-Relay		N/A	N/A	N/A	0.0	0		
16-Relay		N/A	N/A	N/A	0.0	0		
17-Relay		N/A	N/A	N/A	0.0	0		
18-Dimmer		0	100	100	N/A	N/A		
19-Dimmer		0	100	100	N/A	N/A		
20-Dimmer		0	100	100	N/A	N/A		
21-Dimmer		0	100	100	N/A	N/A		
22-Relay	1	N/A	N/A	N/A	0.0	0		
		Ø			Save & Close			1
Current Devic	e:   100-100\		h				_	

Figure 7

**Channel Number:** There are totally 22 channels, 18 relay channels and 4 dimming channels.

Name: We can set the remark for each channel from here.

**Low Limit:** When commanded to a level that lower than the Lower limit, this channel will go to 0%, setting range:  $00 \sim$ Higher limit.

**High Limit:** When commanded to a level that is higher than the High limit, this channel will go to Max level. setting range: Lower limit ~ Max level.

**Max Level:** Max brightness of a channel. Range  $00 \sim 100\%$ .

**On delay:** When send a on command to this channel, it will turn on after the delay time, the range is from 0-25s.

**Protect delay:** when turn off load, can not turn on it immediately until the protection delay time elapse.

### 2.3 Zone setting

All Zone	bry contact   security setup   stair right	Channels Waitting	Allocation	
- All-Zonel	Name: Zone1	Chn No.	Name	ON
		6-Relay		
1-Relay-	Modify name	7-Relay		
🔶 2-Relay-	Add Zone	8-Relay		
- 3-Relay-		9-Relay		
'	Delete Zone	10-Relay		
<b>4</b> -Relay-	<<<	11-Relay		
		12-Relay		
	>>>	13-Relay		
		14-Relay		
		15-Relay		
		16-Relay		
		17-Relay		
		18-Dimmer		
		19-Dimmer		
		20-Dimmer		
		21-Dimmer		
		22-Relay		

Figure 8

As shown in the figure 8, from the zone setting page, we can modify zone name, add zone, delete zone, shift-in and remove the channel.

**Modify name:** after enter the zone name in blank, click "modify name" to modify the zone name.

Add zone: when click the "add zone" button, the page will create a new zone on the left side.

**Delete zone:** select the zone on the left side, click "delete zone" to delete the selected zone.

The left-hand arrow: shift-in the channel to the zone.

The right-hand arrow: remove the channel from the zone.

## 2.4 Scene

100-100\					- 0 X
Connection Cha	annel Zone Setting Scene	Curtains Dry Contact Security	Setup Stair light HVAC	RS485>BUS BUS>RS485 Doorbell	
Choose zone:	1-Zone1	~	Output on site		
Scene restore	mode after power on:	Scene before power off	O Specified scene	2	
All scenes			Channel Informatio	n	
Scene No.	Name	Runtime(mm:ss)	Chn No.	Name	ON/OFF
0		0:0	1-Relay		OFF
1		0:0	2-Relay		ON
2		0:0	3-Relay		ON
3		0:0	4-Relay		ON
4		0:0	5-Relay		OFF
5		0:0			
6		0:0			
7		0:0			
8		0:0			
9		0:0			
10		0:0			
11		0:0			
12		0:0			
				Deed and the later	
				Read current level	
		Ø	H	Save & Close Refresh scenes level	
Current Device	e:   100-100\				.:

Figure 9

As shown in the figure 5, from the scene setting page, we can select the zone, set the scene restore mode after power on and so on.

**Choose Zone:** if you create several zone, you can select different zone in scene setting page.

Output on site: if you check this option, it will output current scene.

Scene before power off: if you check this option, when power comes again, the dimmer will restore the scene before power off.

**Specified scene:** if you check this option, when the power comes again, the dimme r will restore the specified scene, modify the scene name and so on.

**Scene No.:** Scene number, all channel are 0 by default in scene 0, cannot modify the intensity of channels in scene 0.

Name: we can modify the scene name, for example "ALL OFF", "Morning".

**Runtime(mm:ss):** it means the channel running times in the scene, take an exampl e as scene 1, if we set the runtime with 2s, it means it will take 2 seconds to reac h the setting intensity in the scene.

Channel information: we can modify the intensity of each channel in this area.

## 2.5 Curtains

100-100\											
Connection Cha	annel Zone Set	ting Sc	ene Curtains	Dry Contact	Security Setup	Stair light	HVAC	RS485>BUS	BUS>RS485	Doorbell	
Curtain Infomation											
Curtain No.	Enable		Open Delay(M	M:SS)		Close Delay(	MM:SS)		Runir	ng Time(MM:SS)	
1(Channel 1 &.	Disable	$\sim$	0:0.0		(	0:0.0			0:0.0		
2(Channel 4 &.	Disable	~	0:0.0		(	0:0.0			0:0.0		
3(Channel 6 &.	Disable	$\sim$	0:0.0		(	0:0.0			0:0.0		
4(Channel 8 &.	Disable	~	0:0.0		(	0:0.0			0:0.0		
5(Channel 10	. Disable	~	0:0.0		(	0:0.0			0:0.0		
6(Channel 12	. Disable	~	0:0.0		(	0:0.0			0:0.0		
7(Channel 14	. Disable	~	0:0.0		(	0:0.0			0:0.0		
8(Channel 16	. Disable	$\sim$	0:0.0		(	0:0.0			0:0.0		



Curtain No.: From number 1 to number 8.

Enable: We can enable and disable the curtain function from this option.

Open Delay: When open the curtain, it will open after the delay time.

Close Delay: When close the curtain, it will close after the delay time.

**Running Time:** We need to measure the running time for the curtain and input from here.

## 2.6 Dry Contact.

																O		
Connection	Channel Zone Setting	Scene	Curtains	Dry Contact	Secu	rity Setup Stair light	HVAC	RS485>BUS	BUS>RS485	Doorbe	ell							
ID	Remark			Mode		ON delay (MM:SS)	OFF of	lelay (MM:SS)	Enable/d	isable	Enable	e lock	^	Min. din	nming valu	e setting		
1			Single ON/	OFF	~ N	I/A	N/A					2		Value:	<		> 5	í0
2			Single ON/	OFF	~ N	1/A	N/A				C				Setti	ng		
3				OFF	~ N	1/A	N/A				Ŀ	3			Torgota	otting		
4			Single ON/	OFF	~ N	1/A	N/A				Ŀ	3			largets	setting		
5			Single ON/	OFF	~ N	1/A	N/A				Ŀ	3						
6			Single ON/	OFF	~ N	1/A	N/A				Ŀ	3						
7			Single ON/	OFF	~ N	I/A	N/A					3						
8			Single ON/	OFF	~ N	I/A	N/A					3						
9				OFF	~ N	I/A	N/A					3						
10			Single ON/	OFF	~ N	I/A	N/A					3						
11			Single ON/	OFF	~ N	I/A	N/A				Ŀ	3						
12			Single ON/	OFF	~ N	I/A	N/A					3						
13			Single ON/	OFF	~ N	I/A	N/A				Ŀ	3						
14			Single ON/	OFF	~ N	I/A	N/A				Ŀ	3						
15			Single ON/	OFF	~ N	I/A	N/A				Ŀ	3						
16			Single ON/	OFF	~ N	I/A	N/A				Ŀ	3						
17		Single ON/OFF		OFF	~ N	I/A	N/A					3						
18			Single ON/	OFF	~ N	I/A	N/A					3						
19			Single ON/	OFF	~ N	I/A	N/A					3						
										60			~					

Current Device : | 100-100\

#### Figure 11

ID: The RCU has 24 dry contact channels, from ID1 to ID24.

Remark: Set the remark for each channel.

Mode: We can set the mode for each channels.

**Mechanic Switch:** Send out a command (generally the on command, e.g., light on.) when Switch is connected, send out another (generally the off command) when the Switch is disconnected.

**Single on:** Assign the Switch can turn on one object only (one channel, or one scene, or one sequence, etc.)

**Single off:** Assign the Switch can turn off one object only (one channel, or one scene, or one sequence, etc.)

**Single on/off:** Assign the Switch can turn on/off one object only (one channel, or one scene, or one sequence, etc.)

**Combination on:** Assign the Switch can turn on multiple objects (channels, scenes, sequence, etc.)

**Combination off:** Assign the Switch can turn off multiple objects (channels, scenes, sequence, etc.)

**Combination on/off:** Assign the Switch can turn on/off multiple objects (channels, scenes, sequence, etc.)

#### Multi-function:

HDL<sup>®</sup>HDL-MHRCU.433

Long press – combination off (or dim, if dimming is enabled in the Dry Contact module. Dim the first object only, though.)

Short press - single on/off

Double click – Combination on

This mode can be used in, maybe, meeting, by double-click all the lighting can be on, by long-press, all lighting can be off, this can avoid mishandling and so it is more secure. **Parallel Switch:** 

This key mode is originally designed for retrofit project where the end-users want to implement smart system – HDL-BUS, but they want to reserve the existing toggle buttons, the toggle buttons are to control one public area lighting (e.g., stair lighting) from multiple places.



Wiring

Figure 12

Connect the two toggle buttons to two different dry contact channels

Setting

Select "Parallel switch" for both dry contact channels

**Combination ON & OFF:** Assign the Switch can turn on/off multiple objects (channels, scenes, sequence, etc.), on target and off target can be different.

Min dimming value setting: We can set minimum dimming value from here.

Setting: We can select switch mode, dimming two-way, dimming up and dimming down from this page.

📕 Button detail info	ormation		- 0	×					
D. H									
Button Setup									
ID	Remark	Mode	Dimable	^					
1		Single/double click	Switch Mode	~					
2		Single ON/OFF	Switch Mode						
3		Single ON/OFF	Dimming Two-way Dimming Up						
4		Single ON/OFF	Dimming Down						
5		Single ON/OFF	Switch Mode						



## 2.7 Security Setup

onnection Cl	hannel Zone Setting Scene	Curtains Dry Contact Security Setup Sta	ir light HVAC RS485>BUS BUS>RS485 Doorbell	
ID	Enable	Subnet ID	Device ID	Area No.
L		0	0	0
2		0	0	0
		0	0	0
		0	0	0
		0	0	0
		0	0	0
		0	0	0
		0	0	0
		0	0	0
0		0	0	0
1		0	0	0
2		0	0	0
3		0	0	0
4		0	0	0
5		0	0	0
6		0	0	0
7		0	0	0
8		0	0	0
9		0	0	0
0		0	0	0
1		0	0	0
12		0	0	0

Figure 14

We can enable and disable the security function of dry contact from this page.

**ID:** It is the channel number of dry contact.

Enable: Enable and disable the channel.

Subnet ID, Device ID and Area No.: The subnet ID, device ID and area number of security module.

## 2.8 Stair light

Chn No.	Name		Stair light	Auto Close(S)	Test	
1-Relay				3		
2-Relay				3		
3-Relay				3		
4-Relay				3		
5-Relay				3		
6-Relay				3		
7-Relay				3		
8-Relay				3		
9-Relay				3		
10-Relay				3		
11-Relay				3		
12-Relay				3		

#### Figure 15

From this page, we can set the stair light function for each relay channel.

Stair light: enable and disable the relay channel.

Auto Close: Set the auto close time for relay channel.

Test: Test the stair light function for the relay channel.

#### 2.9 HVAC

Connection Channel Zone Setting Scene Curtains Dr AC Configuration HVAC enable AC Setup More	y Contact Security	Setup Stair light HVAC RS485>BUS BUS>RS485 Doorbell  Mode OF Test Relay Enable  Mode
Sensor Setting Temperature Adjust: < > Oper Type:    Read Temperature Interval:   5 S   Subpot ID   Device ID	-5	Mode I:       Mode III:       Mode III:         FAN Speed       Medium:       Low:       Image: Compared to the second to th
□ Sensor1         0         0         1         ∨           ☑ Sensor2         0         250         1         ∨           ☑ Sensor3         0         0         1         ∨           ☑ Sensor4         0         1         ∨		Host Enable Slave No.: 1 Enable Subnet ID: 100 Device ID: 100
All -Conductor Delay     Minute <ul> <li>Second</li> <li>Compressor Startup Delay:</li> <li>Compressor Switch OFF Delay:</li> <li>FAN Startup Protect Delay:</li> <li>FAN Switch OFF Delay:</li> <li>Y</li> </ul>	(S) (S) (S) (S)	Protect Check Temperature Norn Protect Status: C Protect Ways: Close FAN Re  Subnet ID: 250 Device ID: 250 Channel No.: 250 Trigger range 10 - 50
	¢	📓 📓 Save & Close



The default channel for HAVC is from channel 1 to channel 5.

#### 2.9.1 AC Configuration

HVAC enable: enable and disable HAVC function.

**AC Setup:** We can set the temperature type, fan speed option, mode option, power saving, wind sweeper and temp range.

□ HVAC enable	AC Setup	More		Mode OF Test	Relay Enable		
ensor Setting Temperature Adjust:	<		> -5	Mode I:	Mode II:	Mode III:	
Oper Type:							
Read Temperature Inte	rval: 5 S		emperature Mode	Temp Range			
Subnet II	Device ID	Channel 1	Temperature Typ	e: C 🗸			
Sensor2 0	250	1	Air-Condition Cor	ntrol Infomation			
□ Sensor3 0 ✓ Sensor4 0	0	1	FAN Speed:	<ul><li>✓ Auto</li><li>✓ High</li></ul>	Mode:	<ul><li>✓ Cooling</li><li>✓ Heating</li></ul>	
ir -Condition Delay				Medium		FAN	
<ul> <li>Minute          <ul> <li>Second</li> </ul> </li> </ul>	d			Low		Auto	
Compressor Startup De	lay: 5						
Compressor Switch OF	Delay: 3		Dawar Cavina				
FAN Startup Protect De	elay: 5		✓ Power-saving				
FAN Switch OFF Delay:	2		Windsweeper	r			

Figure 17

2.9.2 Sensor Setting

-Sensor Setting Temperature	Adjust:	<		>	-5	
Oper Type:				$\sim$		
Read Temper	rature Interva	l: 5 S		$\sim$		
	Subnet ID	Device ID	Chan	nel		
Sensor1	0	0	1	$\sim$		
☑ Sensor2	0	250	1	~		
Sensor3	0	0	1	~		
✓ Sensor4	0	0	1	~		

Figure 18

Temperature Adjust: Adjust the temperature of sensor.

Read Temperature interval: Set the read temperature interval time of sensor.

Sensor1: Set the ID and channel of the other device that contain the temperature sensor.

#### 2.9.3 Air-Condition Delay

Air -Condition Delay				
<ul> <li>Minute          <ul> <li>Second</li> </ul> </li> </ul>				
Compressor Startup Delay:	5	$\sim$	(S)	
Compressor Switch OFF Delay:	3	$\sim$	(S)	
FAN Startup Protect Delay:	5	$\sim$	(S)	
FAN Switch OFF Delay:	2	$\sim$	(S)	

Figure 19

We can set the AC delay time from here.

2.	9.4	Air-Cone	dition	Delay
----	-----	----------	--------	-------



Figure 20

After check this option, we can test the relay function of AC.

#### 2.9.5 Host enable

Host Enable					
Slave No.:	1	~	Enable		
Subnet ID:	100		Device ID:	100	

Figure 21

We can enable/disable the slave AC from here, slave number can be from 1 to 8.

#### 2.9.6 Heating Protect Enable

		L]			
	✓ Heating Pro	tect Enable			
	Protect Check	Temperature Norr	n Protect Statu	is: C	
	Subnet ID:	250	Device ID:	250	
3	Channel No.:	250	Trigger range	10 - 50	

Figure 22

We can enable/disable heating protect from here.

Protect Ways: There are 3 protect ways, close fan relay, close mode relay and all close.

#### 2.10 RS485->BUS

100-10	0\												- 0 >
Conne	ction Channel	Zone Setting	Scene	Curtains	Dry Contact	Security Setup	Stair light	HVAC	RS485>BUS	BUS>RS485	Doorbell		
Com	mand Infomati	on											
Inpi	ut Command N	umber(1-49):	From	1	То	10	Read						
ID	Remark				Enable	2	Format		Characte	er string			End String
1					Invalid		ASCII						NONE
2					Invalid		ASCII						NONE
3					Invalid		ASCII						NONE
4					Invalid		ASCII						NONE
5					Invalid		Invalid						NONE
6					Invalid		Invalid						NONE
7					Invalid		Invalid						NONE
8					Invalid		Invalid						NONE
9					Invalid		Invalid						NONE
10					Invalid		Invalid						NONE
Targ	ots Information	of Current Com	mand										
	Subnet ID	Device I	n	Type				Da	vram1		Daram?	Daram?	2
1	0	0	0	Invalid				N/	Δ		N/A	N/A	,
2	0	0		Invalid				N/	Δ		N/A	N/A	
3	255	255		Invalid				N/	Δ		N/A	N/A	
		200						,				110	
						¢				Save & Clos	e		
Curre	ent Device :	100-100\								_			
Surre		1 200 2001											

Figure 23

In the RS485->BUS page, it is configured to control HDL devices from the third party device.

## 2.11 BUS $\rightarrow$ RS485

100-100\							—	o x
Connection	Channel Zon	e Setting Scene Cu	irtains Dry Contact Secu	rity Setup Stair light HVAC	RS485>BUS BUS>RS4	85 Doorbell		
Command	I Infomation							
Input Cor	mmand Numbe	r(1-49) From 1	To 10	Read				
ID	Remark			Туре		Parameter 1	Parameter 2	^
1				Invalid		255(Switch no.)	ON(Switch Statu	s)
2				Invalid		255(Switch no.)	OFF(Switch Statu	is)
3				Invalid		255(Switch no.)	OFF(Switch Statu	is)
4				Invalid		255(Switch no.)	OFF(Switch Statu	is)
5				Invalid		255(Switch no.)	ON(Switch Statu	5)
6				Invalid		255(Switch no.)	ON(Switch Statu	5)
7				Invalid		255(Switch no.)	ON(Switch Statu	5)
8				Invalid		255(Switch no.)	OFF(Switch Statu	is)
9				Invalid		255(Switch no.)	OFF(Switch Statu	is)
10				Invalid		255(Switch no.)	OFF(Switch Statu	<i>i</i> s)
11 Targets In	formation of Cur	ront Command		Involid		255/Switch no.)	ON/Switch Statu	-) Ý
		Format	Character String					End String
1 Inv	alid	ASCIL	character string					NONE
2 Inv	alid	Invalid						NONE
3 Inv	alid	Invalid						NONE
			¢		Save & C	Close		
Current D		100						

Figure 24

In the BUS -> RS485 page, it is configured to control the third party device from the HDL devices.

## 2.12 Doorbell

100\ nection Channel Zone Setting Sci	ene Curta	ins Dry Conta	ct Security Setup	Stair light HVAC	RS485>BUS BUS>RS48	5 Doorbell	-		
Doolbell Relay enable									
t the relation between LED lights –							UV switch 13(wait) off delay		
Select LED: Wait $\vee$	ON	○ OFF					Delay(0-3600S): 2	(S)	
UV switch.13(wait)	ON		O Recovery	○ No control					
UV switch.14(DND)	ON	O OFF	Recovery	O No control					
JV switch.15(clean)	ON		O Recovery	O No control					
JV switch.16(room No.)	ON	O OFF	Recovery	O No control					
JV switch.17(doorbell)	ON	O OFF	Recovery	O No control					
UV switch.18(RF card)	O ON	O OFF	O Recovery	No control					
l setting tton No. Name			N	Aode			OFF delay		
		Single ON/OFF					N/A		
,			,						

Doorbell Relay enable: Enable and disable the doorbell relay.

Set the relation between LED lights: It is used to set relation of the indicator status. Targets: The targets of doorbell.