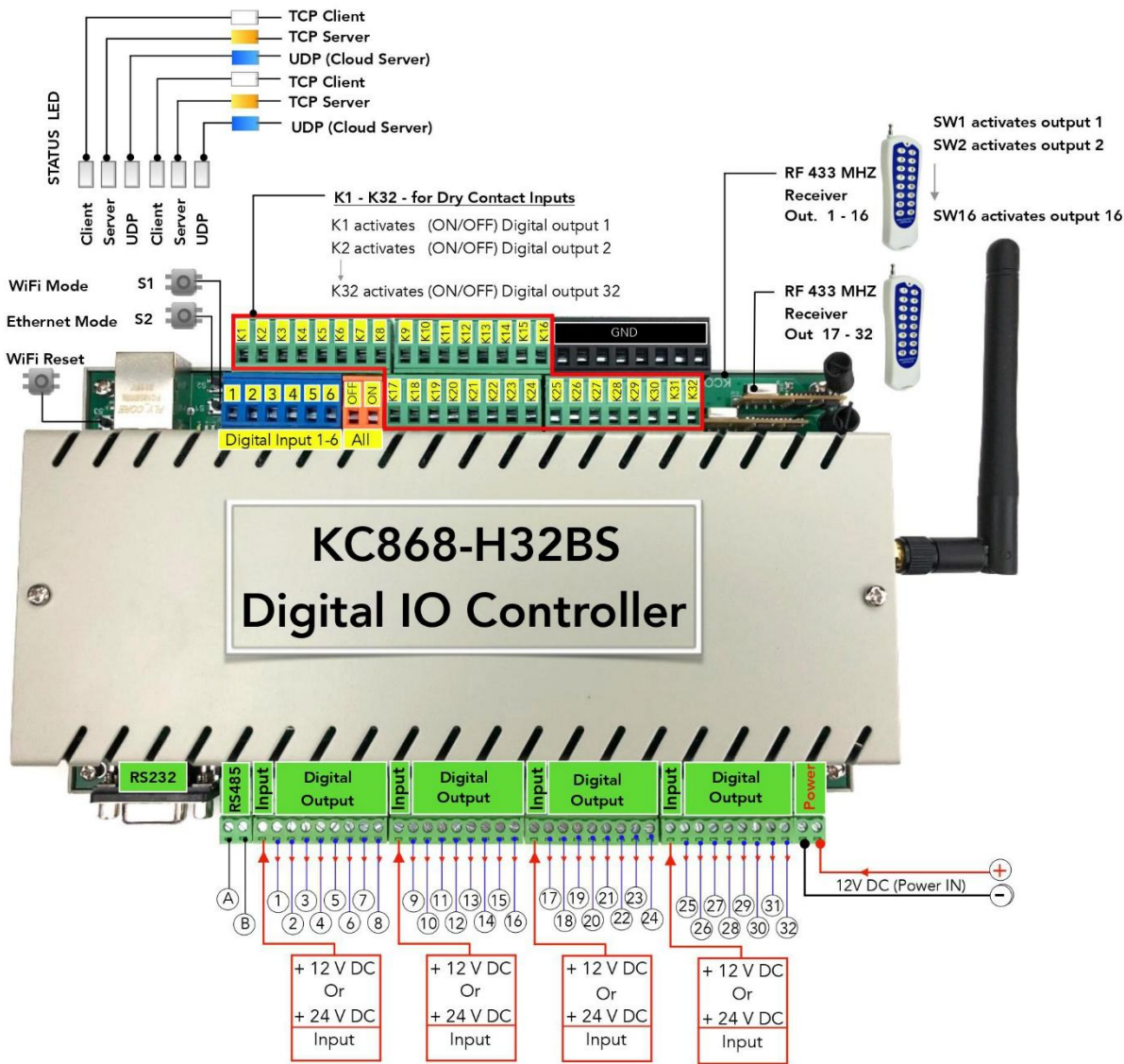


# KinCony KC868-H32BS Smart Controller RS485 Modbus protocol

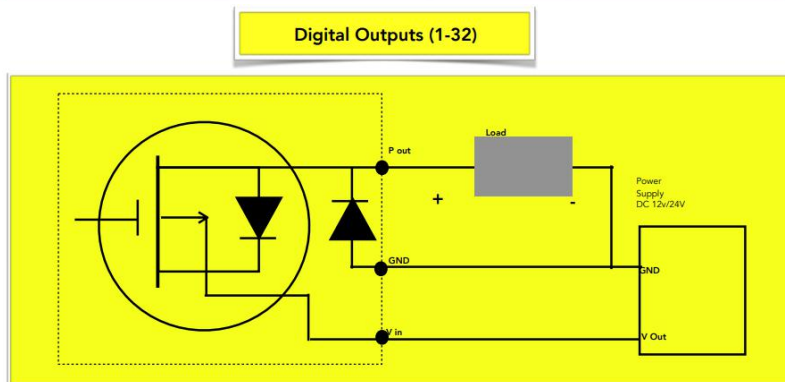
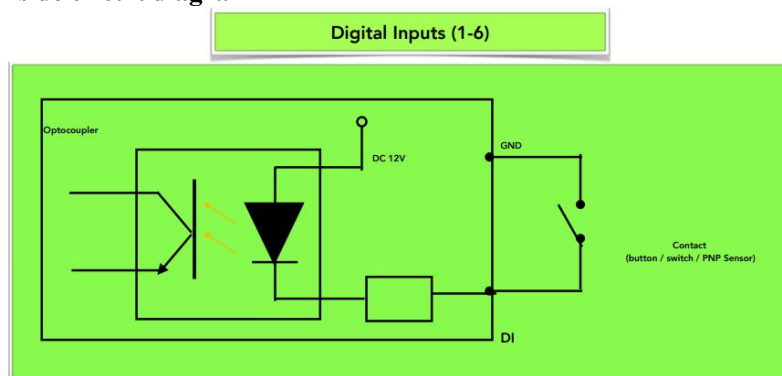
## 1. Specification

- Digital input channel 6ch (Low level input)
- Digital output channel 32ch (PNP MOSFET output, 500mA)
- Working temperature -20~70°C
- Power supply DC12V 1A
- Installation method Standard DIN slide rail or screw
- Dimension 215×117×40mm

## 2. Interface description



### 3. Input and Output inside circuit diagram



### 4. Communication description

#### 4.1 Communication parameter: 9600, None, 8, 1 (default setting)

Parameter	Description
9600	baud rate
None	check bit
8	data bit
1	stop bit

#### 4.2 Command for digital input data reading

Send: 01 02 00 00 00 08 79 CC (example/hex)

data	byte	data description	remark
01	1	module address	address range:01-FE
02	1	function code	02-read digital input register
0000	2	register address (1X type)	0000-starting register address
0008	2	register number	0008-read 8 registers
79CC	2	CRC check code	CRC check code for all data

Receive: 01 02 01 23 E0 51 (example/hex)

data	byte	data description	remark
01	1	module address	address range:01-FE
02	1	function code	02-read digital input register
01	1	byte of data	01-read 1 byte
23	1	read data	C2-digital input data
E051	2	CRC check code	CRC check code for all data

This command reads module's digital input data.

The data of the digital input is "23", it will be "00100011" after converting to binary data. The eight bits of data correspond to DI\_08-DI\_01. KC868-H32BS use DI\_06-DI\_01.

It means DI\_06, DI\_02 and DI\_01 are ON.

#### 4.3 Command for digital output data setting (Control of multiple channels)

Send: 01 0F 00 00 00 20 04 FF 00 FF 00 B5 6C (example/hex)

data	byte	data description	remark
01	1	module address	address range:01-FE
0F	1	function code	0F-write multiple digital output register
0000	2	register address (0X type)	0000-starting register address
0020	32	register number	0008-write 8 registers
04	4	byte of data	04-write 4 byte
FF00FF00	4	write data	FF 00 FF 00 -digital output data
B56C	2	CRC check code	CRC check code for all data

Receive: 01 0F 00 00 00 20 54 13 (example/hex)

This command sets module to output multiple channels.

The data of the digital output is "FF00FF00", it will be "11111111000000001111111100000000" after converting to binary data. That means:

relay1,relay2,relay3,relay4,relay5,relay6,relay7,relay8,relay9,relay10,relay12,relay13,relay14,relay15,relay16,relay17,relay18,relay19,relay20,relay21,relay22,relay23,relay24,relay25,relay26,relay27,relay28,relay29,relay30,relay31,relay32

"11111111000000001111111100000000" means:

relay1,relay2,relay3,relay4,relay5,relay6,relay7,relay8 are ON

relay9,relay10,relay12,relay13,relay14,relay15,relay16 are OFF

relay17,relay18,relay19,relay20,relay21,relay22,relay23,relay24 are ON

relay25,relay26,relay27,relay28,relay29,relay30,relay31,relay32 are OFF

When module receives correct command, it will send response back to the master.

#### 4.4 Command for digital output data setting (Control of single channel)

Send: 01 05 00 00 FF 00 8C 3A (example/hex)

data	byte	data description	remark
01	1	module address	address range:01-FE
05	1	function code	05-write single digital output register
0000	2	register address (0X type)	0000-digital output channel 1 register 0001-digital output channel 2 register 0002-digital output channel 3 register 0003-digital output channel 4 register 0004-digital output channel 5 register 0005-digital output channel 6 register 0006-digital output channel 7 register 0007-digital output channel 8 register 0008-digital output channel 9 register ..... until 001F-digital output channel 32 register
FF00	2	write data	FF00-ON, 0000-OFF
8C3A	2	CRC check code	CRC check code for all data

Receive: 01 05 00 00 FF 00 8C 3A (example/hex)

This command sets module to output single channel.

When module receives correct command, it will send response back to the master.

#### 4.5 Command for digital output data reading

Send: 01 01 00 00 00 20 3D D2 (example/hex)

data	byte	data description	remark
01	1	module address	address range:01-FE
01	1	function code	01-read digital output register
0000	2	register address (0X type)	0000-starting register address
0020	32	register number	0020-read 32 registers
3DD2	2	CRC check code	CRC check code for all data

Receive: 01 01 04 00 FF 00 FF 8B A1 (example/hex)

data	byte	data description	remark
01	1	module address	address range:01-FE
01	1	function code	01-read digital output register
04	4	byte of data	04-read 4 byte
00FF00FF	4	read data	32 digital output data
8BA1	2	CRC check code	CRC check code for all data

This command reads module's digital output data.

The data of the digital output is "00FF00FF", it will be "0000000011111110000000011111111" after converting to binary data. That means:

relay32,relay31,relay30,relay29,relay28,relay27,relay26,relay25,relay24,relay23,relay22,relay21,relay20,relay19,relay18,relay17,relay16,relay15,relay14,relay13,relay12,relay11,relay10,relay9,relay8,relay7,relay6,relay5,relay4,relay3,relay2,relay1

"0000000011111110000000011111111" means:

relay1,relay2,relay3,relay4,relay5,relay6,relay7,relay8 are ON

relay9,relay10,relay12,relay13,relay14,relay15,relay16 are OFF

relay17,relay18,relay19,relay20,relay21,relay22,relay23,relay24 are ON

relay25,relay26,relay27,relay28,relay29,relay30,relay31,relay32 are OFF