Control Single Relay

Send code: 01 05 00 00 FF 00 8C 3A

Field	Description	Note
01	Device Address	Fixed 0x01
05	05 Command	Relay control
00 00	Address	The register addresses of the relays to be controlled, 0x0000-0x0007
FF 00	Command	0xFF00: relay on; 0x0000: relay off; 0x5500: relay toggle
8C 3A	CRC16	The CRC16 checksum of the first 6 bytes of data

Return code: 01 05 00 00 FF 00 8C 3A

Field	Description	Note
01	Device Address	Fixed 0x01
05	05 Command	Relay control
00 00	Address	The register address of the relay to be controlled, 0x0000-0x0007
FF 00	Command	0xFF00: relay on; 0x0000: relay off; 0x5500: relay toggle
8C 3A	CRC16	The CRC16 checksum of the first 6 bytes of data

For example: [Address 1 device]:

Relay 0 on: 01 05 00 00 FF 00 8C 3A

Relay 0 off: 01 05 00 00 00 00 CD CA

Relay 1 on: 01 05 00 01 FF 00 DD FA

Relay 1 off: 01 05 00 01 00 00 9C 0A

Relay 2 on: 01 05 00 02 FF 00 2D FA

Relay 2 off: 01 05 00 02 00 00 6C 0A

Relay 3 on: 01 05 00 03 FF 00 7C 3A

Relay 3 off: 01 05 00 03 00 00 3D CA

Relay 0 toggle: 01 05 00 00 55 00 F2 9A

Relay 1 toggle: 01 05 00 01 55 00 A3 5A

Relay 2 toggle: 01 05 00 02 55 00 53 5A

Relay 3 toggle: 01 05 00 03 55 00 02 9A

Control All Relays

Send code: 01 05 00 FF FF 00 BC 0A

Field	Description	Note
01	Device Address	Fixed 0x01
05	05 Command	Relay control
00 FF	Address	Fixed 0x00FF
FF 00	Command	0xFF00: relay on; 0x0000: relay off; 0x5500: relay toggle
BC 0A	CRC16	The CRC16 checksum of the first 6 bytes of data

Return code: 01 05 00 FF FF 00 BC 0A

Field	Description	Note
01	Device Address	Fixed 0x01
05	05 Command	Relay control
00 FF	Address	Fixed 0x00FF
FF 00	Command	0xFF00: relay on; 0x0000: relay off; 0x5500: relay toggle
BC 0A	CRC16	The CRC16 checksum of the first 6 bytes of data

For example: [Address 1 device]:

All relays on: 01 05 00 FF FF 00 BC 0A

All relays off: 01 05 00 FF 00 00 FD FA

All relays toggle: 01 05 00 FF 55 00 C2 AA

Read Relay Status

Send code: 01 01 00 00 00 08 3D CC

Field	Description	Note

01	Device Address	Fixed 0x01
01	01 Command	Query relay status
00 00	Start Address	Relay start address, 0x0000-0x0007
00 08	Relay Number	Cannot exceed the maximum number of relays
3D CC	CRC16	The CRC16 checksum of the first 6 bytes of data

Receive code: 01 01 01 00 51 88

Field	Description	Note
01	Device Address	Fixed 0x01
01	01 Command	Query relay status
01	Byte Number	The number of all bytes of the returned status information
00	Query status	Received relay status Bit0: the first relay status; Bit1: the second relay status; And so on, with the idle high bit being zero
51 88	CRC16	The CRC16 checksum of the first 6 bytes of data

For example: [Address 1 device]:

Send: 01 01 00 00 00 08 3D CC //Query all relays

Receive: 01 01 01 00 51 88 //all relays off

Send: 01 01 00 02 00 01 5C CA //Query relays 2

Receive: 01 01 01 01 90 48 //Relay 1 on

Send: 01 01 00 01 00 03 2D CB //Query relays 1, 2, 3 status

Receive: 01 01 01 05 91 8B //Relays 1 and 3 are on, relay 2 is off

Write Relay Status

Send code: 01 0F 00 00 00 08 01 FF BE D5

Field	Description	Note
01	Device Address	Fixed 0x01
0F	0F Command	Write relay status

00 00	Relay Start Address	The register address of the relay to be controlled, 0x0000 - 0x0007
00 08	Relay Number	The number of relays to be operated, which must not exceed the maximum number of relays
01	Byte Number	The byte number of the status
FF	Relay Status	Bit0: the first relay status; Bit1: the second relay status; And so on, with the idle high bit being zero
BE D5	CRC16	The CRC16 checksum of the first 6 bytes of data

Receive code: 01 0F 00 00 00 08 54 0D

Field	Description	Note
01	Device Address	Fixed 0x01
0F	0F Command	Control all registers
00 00	Address	Relay start address
00 08	Relay Number	The number of relays to be written
54 0D	CRC16	The CRC16 checksum of the first 6 bytes of data

For example: [Address 1 device]:

All relays on: 01 0F 00 00 00 08 01 FF BE D5

All relays off: 01 0F 00 00 00 08 01 00 FE 95

0-1 on; 3-7 off: 01 0F 00 00 00 08 01 03 BE 94

Relays 1, 2, and 3 on: 01 0F 00 01 00 03 01 07 F3 55

Relay Flash ON/OFF Command

Send code: 01 05 02 00 00 07 8D B0

Field	Description	Note
01	Device Address	Fixed 0x01
05	05 Command	Single control command
02	Command	02: flash on, 04: flash off

00	Relay Address	The address of the relay to be controlled, 0x00~0x07
00 07	Interval Time	The interval time: data*100ms Value: 0x0007, Interval time: 7*100MS = 700MS The maximum setting for the flash-on flash-off time is 0x7FFF
8D B0	CRC16	The CRC16 checksum of the first 6 bytes of data

Receive code: 01 05 02 00 00 07 8D B0

Field	Description	Note
01	Device Address	Fixed 0x01
05	05 Command	Single control command
02	Command	02: flash on, 04: flash off
00	Relay Address	The address of the relay to be controlled, 0x00~0x07
00 07	Interval Time	The interval time: data*100ms Value: 0x0007, Interval time: 7*100MS = 700MS The maximum setting for the flash-on flash-off time is 0x7FFF
8D B0	CRC16	The CRC16 checksum of the first 6 bytes of data

For example: [Address 1 device]:

Relay 0 flash on: 01 05 02 00 00 07 8D B0 //700MS = 7*100MS = 700MS

Relay 1 flash on: 01 05 02 01 00 08 9C 74 //800MS

Relay 0 flash off: 01 05 04 00 00 05 0C F9 //500MS

Relay 1 flash off: 01 05 04 01 00 06 1D 38 //600MS

Read Input Status

Send code: 01 02 00 00 00 08 79 CC

Field	Description	Note
01	Device Address	Fixed 0x01
02	02 Command	Read input status
00 00	Input Start Address	Input start address, 0x0000-0x0007
00 08	Register Number	The number of the input channels to be read, which must not exceed the maximum number of the input channels

79 CC	CRC16	The CRC16 checksum of the first 6 bytes of data

Receive code: 01 02 01 00 A1 88

Field	Description	Note
01	Device Address	Fixed 0x01
02	02 Command	Read input status
01	Byte Number	The number of all bytes of the returned status information
00	Query status	Received input channel status Bit0: the first channel status; Bit1: the second channel status; And so on, with the idle high bit being zero
A1 88	CRC16	The CRC16 checksum of the first 6 bytes of data

For example: [Address 1 device]:

Send: 01 02 00 00 00 08 79 CC //Query all input channels

Receive: 01 01 01 00 51 88 //Inputs are all untriggered

Send: 01 02 00 00 00 08 79 CC //Query all input channels

Receive: 01 02 01 41 61 B8 //Channels 1 and 7 input is triggered, and the rest of channels are not triggered

Send: 01 02 00 01 00 03 69 CB //Query input channels 2, 3, and 4

Receive: 01 02 01 03 E1 89 //Channels 2 and 3 input is triggered, and channel 4 is not triggered

Read Relay Control Mode

Send code: 01 03 10 00 00 08 40 CC

Field	Description	Note
01	Device Address	Fixed 0x01
03	03 Command	Read Holding Register
10 00	Register Start Address	0x1000 - 0x1007 corresponds to 1~8 input channels
00 08	Register Number	Read register number, up to 8 channels
40 CC	CRC16	The CRC16 checksum of the first 6 bytes of data

Receive code: 01 03 10 00 00 00 00 00 00 00 00 00 00 00 00 00 00 E4 59

Field	Description	Note
01	Device Address	Fixed 0x01
03	03 Command	Read Holding Register
10	Byte Number	The number of all bytes of the returned status information
00 00 …… 00 00	Control Mode	Indicates relay 1 - 8 control mode, 0x0000~0x0003 indicate four control modes 0x0000: **Normal mode**, the relay is directly controlled by commands; 0x0001: **Linkage mode**, relay status is the same as the corresponding input channel status; 0x0002: **Toggle mode**, the corresponding relay toggles once when the input channel inputs a pulse; 0x0003: **Jump Mode**, the corresponding relay status toggles once when the input channel level jumps once **Note:** All modes except Linkage mode support relay control by command.
E4 59	CRC16	The CRC16 checksum of the first 6 bytes of data

For example: [Address 1 device]:

Read relay 1-8 control mode: 01 03 10 00 00 08 40 CC

Read relay 1 control mode: 01 03 10 00 00 01 80 CA

Read relay 2 control mode: 01 03 10 01 00 01 D1 0A

Read relay 3-5 control mode: 01 03 10 02 00 03 A0 CB

Set Single Relay Control Mode

Send code: 01 06 10 00 00 01 4C CA

Field	Description	Note
01	Device Address	Fixed 0x01
06	06 Command	Write single register
10 00	Register Start Address	0x1000 - 0x1007 correspond to relay control modes for channels 1~8
00 01	Control Mode	Indicates relay 1 - 8 control mode, 0x0000~0x0003 indicate four control modes 0x0000: **Normal mode**, the relay is directly controlled by commands;

		0x0001: **Linkage mode**, relay status is the same as the corresponding input channel status; 0x0002: **Toggle mode**, the corresponding relay toggles once when the input channel inputs a pulse; 0x0003: **Jump Mode**, the corresponding relay status toggles once when the input channel level jumps once **Note:** All modes except Linkage mode support relay control by command.
4C CA	CRC16	The CRC16 checksum of the first 6 bytes of data

Return code: 01 06 10 00 00 01 4C CA

Field	Description	Note
01	Device Address	Fixed 0x01
06	06 Command	Write single register
10 00	Register Start Address	0x1000 - 0x1007 correspond to relay control modes for channels 1~8
00 01	Control Mode	Relay control modes, 0x0000~0x0003 indicate four control modes
4C CA	CRC16	The CRC16 checksum of the first 6 bytes of data

For example: [Address 1 device]:

Set relay 1 as Linkage mode: 01 06 10 00 00 01 4C CA

Set relay 2 as toggle mode: 01 06 10 01 00 02 5D 0B

Set Multiple Relay Control Mode

Send code: 01 10 10 00 00 08 10 00 01 00 01 00 01 00 01 00 01 00 01 00 01 00 01 7C B1

Field	Description	Note
01	Device Address	Fixed 0x01
10	10 Command	Write multiple registers
10 00	Register Start Address	0x1000 - 0x1007 correspond to relay control modes for channels 1~8
00 08	Register Number	Set register number, up to 8 channels

10	Byte Number	Set the number of bytes to be output
00 01 …… 00 01	Control Mode	Indicates relay 1 - 8 control mode, 0x0000~0x0003 indicate four control modes 0x0000: **Normal mode**, the relay is directly controlled by commands; 0x0001: **Linkage mode**, relay status is the same as the corresponding input channel status; 0x0002: **Toggle mode**, the corresponding relay status toggles once when the input channel inputs a pulse; 0x0003: **Jump Mode**, the corresponding relay state toggles once when the input state of the input channel changes once **Note:** All modes except Linkage mode support relay control by command.
7C B1	CRC16	The CRC16 checksum of the first 6 bytes of data

Return code: 01 10 10 00 00 08 C5 0F

Field	Description	Note
01	Device Address	Fixed 0x01
10	10 Command	Write multiple registers
10 00	Register Start Address	0x1000 - 0x1007 correspond to relay control modes for channels 1~8
00 08	Register Number	Set register number, up to 8 channels
C5 0F	CRC16	The CRC16 checksum of the first 6 bytes of data

For example: [Address 1 device]:

Set channel 1-8 relay as Normal mode: 01 10 10 00 00 08 10 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 0B 5C

Set channel 1-8 relay as Linkage mode: 01 10 10 00 00 08 10 00 01 00 01 00 01 00 01 00 01 00 01 00 01 00 01 00 01 7C B1

Set channel 3-5 relay as Toggle mode: 01 10 10 02 00 03 06 00 02 00 02 00 02 4A 4B

Read Software Version Command

Send code: 01 03 80 00 00 01 AD CA

Field	Description	Note

01	Device Address	Fixed 0x01
03	03 Command	Read Holding Register
80 00	Command register	0x8000: read software version
00 01	Byte Number	Fixed 0x0001
AD CA	CRC16	The CRC16 checksum of the first 6 bytes of data

Receive code: 01 03 02 00 64 B9 AF

Field	Description	Note
01	Device Address	Fixed 0x01
03	03 Command	Read Holding Register
02	Byte Number	The number of bytes returned
00 64	Software Version	Converting to decimal and then shifting the decimal point two places to the left will represent the software version 0x0064 = 100 = V1.00
B9 AF	CRC16	The CRC16 checksum of the first 6 bytes of data

For example:

Send: 01 03 80 00 00 01 AD CA

Receive: 01 03 02 00 C8 B9 D2 //0x00C8 = 200 =V2.00