4 Channels Triacs Dimmer Module with RS485 Interface Modbus Protocol

HD4504M
User Manual

VER: 2.3
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Features:

- **4 triacs outputs channels (up to 220V/2A each channel).**
- **5 switch input channels to control output.**
- **Non isolation RS485 interface.**
- **Standard Modbus-RTU protocol.**
- **DIN mount rail.**
- **Dimensions: 88*72*59mm.**
- **Operating temperature: 0~50°C .**

Triacs connector (12Pins) description:

- **PIN 1(N): AC null line input.**
- **PIN 2(N): Connect to PIN1 inside.**
- **PIN 3(N): Connect to PIN1 inside.**
- **PIN 4(L1): Channel No.1 live line output.**
- **PIN 5(N): Connect to PIN1 inside.**
- **PIN 6(L2): Channel No.2 live line output.**
- **PIN 7(N): Connect to PIN1 inside.**
- **PIN 8(L3): Channel No.3 live line output.**
- **PIN 9(N): Connect to PIN1 inside.**
- **PIN 10(L4): Channel No.4 live line output.**
- **PIN 11(L): AC live line input.**
- **PIN 12(L): Connect to PIN 11 inside.**

RS485 & DC power connector (4Pins) description:

- **PIN 1(A):RS485 interface-A.**
- **PIN 2(B):RS485 interface-B.**
- **PIN 3(G): DC power GND input.**
- **PIN 4(V): DC power VCC input.**
  9-24 VDC operating voltage.

Switch connector (6Pins) description:

- **PIN 1(SW1): Switch input No.1.**
- **PIN 2(SW2): Switch input No.2.**
- **PIN 3(SW3): Switch input No.3.**
- **PIN 4(SW4): Switch input No.4.**
- **PIN 5(SW5): Switch input No.5.**
- **PIN 6(G): common port (connect to DC power GND inside).**

Protocol description:

- **Standard Modbus-RTU protocol.**
- **Data Bits: 8bits.**
- **Stop Bits: 1.**
- **Baud rate: 1200, 2400, 4800, 9600(Default), 19200, 38400, 57600,115200.**

- **Parity: None, Odd, Even (Default).**
- **Device ID: 1-247(default ID=96).**

Modbus registers description:

- **Holding registers**

Address	High byte	Low byte
00H	Channel No.1 output value	Channel No.2 output value
01H	Channel No.3 output value	Channel No.4 output value
02H	Channel No.1 control register	Channel No.2 control register
03H	Channel No.3 control register	Channel No.4 control register
200H	Device ID	Connect register
201H	Switch delay register	Smooth register
202H	Reserve	Reserve
203H	Reserve	Reserve
204H	Reserve	Reserve
205H	Reserve	Reserve
206H	Switch No.1 click value.	Switch No.2 click value.
207H	Switch No.3 click value.	Switch No.4 click value.
208H	Channel No.1 power on value	Channel No.2 power on value
209H	Channel No.3 power on value	Channel No.4 power on value

Output Value (0-63): Triacs output value. The output off when value is 0, the output max when value is 63, the output remains the same when value is 255.

Control Register (0-9):control output.

7-4	3-0
Value1	command

Command:

0: Idle.
1: Output maxim value.
2: Output minimum value.
3: Store current output value, then output minimum value.
4: Restore last output value.
5: Output value increase 1. Output=Output+1
6: Output value decrease 1. Output=Output-1
7: Reserve.
8: Output value increase. Output=Output+value1
9: Output value decrease. Output=Output-value1

Connect register：

7	6	5	4	3	2	1	0
Reserve		Parity		Baud rate			

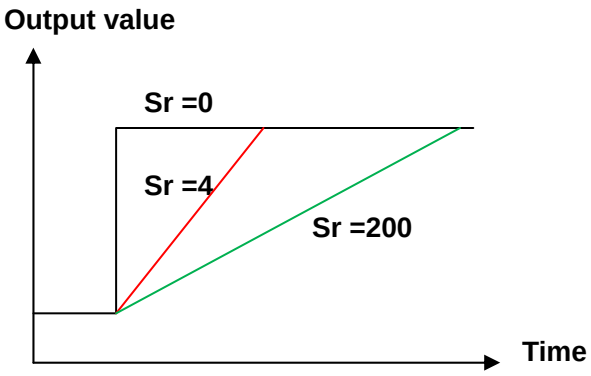
Parity:00=Even(default),01=Odd,02=None

Baud rate:

0=1200bps
1=2400bps
2=4800bps
3=9600bps (default)
4=19200bps
5=38400bps
6=57600bps
7=115200bps.

Switch delay register (1-255): Switch control output value change speed.1=fastest, 255=slowest.

Smooth Register (0-255):



Switch click output value (0-63): When click the switch the output value.
Power on value (0-63): When power on the output value.

Protocol example

1. **Set channel No.1 output value is 0(off), channel No.2 output value is 32(50%)**
   Send: 60 06 00 00 00 20 80 63
   Ans: 60 06 00 00 00 20 80 63
2. **Set channel No.1 output value is 63(100%). Channel No.2 output value is unchanged..**
   Send: 60 06 00 00 3F FF D0 0B
   Ans: 60 06 00 00 3F FF D0 0B
3. **Get Channel 1-4 output value**
   Send: 60 03 00 00 00 02 CC 7A
   Ans: 60 03 04 3F 20 00 00 87 2B

Contact us

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