Programmable DC power supply SCPI communication protocol documentation

Introduction

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Contents

1. SCPI command format and usage

1.1 Command Format

USB communication and RS232 communication command format:

No frame header + command content + no check + frame tail (0x0A or 0x0D0A)

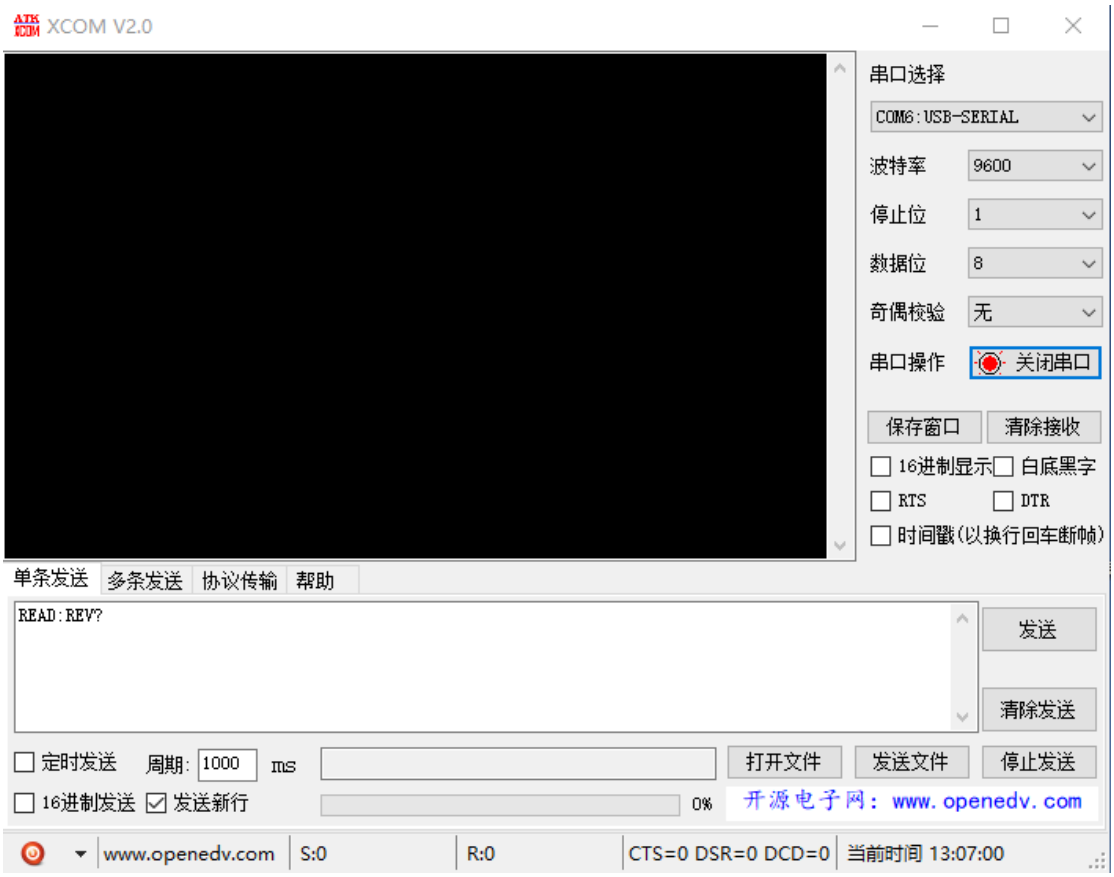
RS485 communication command format:

No frame header + address (M@SXXX)+ command content + no check + frame tail (0x0A or 0x0D0A)

XXX indicates the local address, ranging from 000 to 031.

1.2 Serial tool use

The operation interface of the serial tool is shown in the following figure.



1. Information display area: the information returned by the device after receiving the

communication instruction will be displayed on the information window, as shown in the black window display area;

2. Serial port number: find the corresponding serial port number in the serial port selection bar, as shown in COM6: USB-SERIAL;

3. Baud rate: select the appropriate baud rate, as shown in the figure 9600;

4. Frame check type: select none;

5. Stop bit: 1;

6. Data bit: 8;

7. Command input field: Fill in the SCPI command according to the format of command + frame tail, as shown in the figure READ:REV? ;

8. Frame end processing: The command ends with 0x0A(i.e., "line feed") or 0x0D0A(i.e., "Return line feed"). The recommended method of adding frame tail: After entering the command in the command input area, directly place a checkmark at the place where the new line is sent;

9. Timed sending: According to the need to enter the time interval, the serial port tool will automatically and continuously send the command at the time interval, often used to collect data within a period of time.

2. Command Set

2.1 IEEE488.2 Standard commands

*IDN?

Read device information, including device name, device model, serial number, version number, and company name.

*RST

Restore the device Settings parameters to factory values.

2.2 Set commands

SOUR:VOLT value

Set the voltage setting value.

Value Range: 0 to the rated voltage.

SOUR:VOLT?

Query the voltage setting.

SOUR:CURR value

Set the current setting value.

Value Range: 0 to rated current.

SOUR:CURR?

Query the current setting.

SOUR:M1 value1 value2

Set the voltage setting value and current setting value stored by M1.

Value1 Range: 0 to rated voltage value.

Value2 range: 0 to rated current value.

SOUR:M1?

Query the voltage setting value and current setting value stored on the M1.

SOUR:M2 value1 value2

Set the voltage setting value and current setting value stored by M2.

Value1 Range: 0 to rated voltage value.

Value2 range: 0 to rated current value.

SOUR:M2?

Query the voltage setting value and current setting value stored by M2.

SOUR:M3 value1 value2

Set the voltage setting value and current setting value for M3 storage.

Value1 Range: 0 to rated voltage value.

Value2 range: 0 to rated current value.

SOUR:M3?

Query the voltage Settings and current Settings stored in M3.

SOUR:APPLY value

Call the stored voltage set value and current set value.

Value range: M1, M2, M3.

2.3 Query command

READ:REV?

Query the voltage read-back value.

READ:REI?

Query the current read-back value.

READ:REP?

Query the power read-back value.

READ:ALL?

Query both the voltage read-back value and the current read-back value.

READ:SPEV?

Query the voltage rating.

READ:SPEI?

Query the current rating.