

MPS-H-1 Series SCPI Programming Protocol

Case sensitivity

SCPI commands are case insensitive: you can use upper or lower case or any combination of upper and lower case.

For example: *RST = *rst

*IDN? = *idn?

*RCL = *rcl

Command format

1.The curly braces ({}) contain the parameter options for the given command string. Braces are not sent with the command string.

2.a vertical bar (|) separates multiple argument selections for a given command string.For example, in the above command, { 0 | 1 | OFF | ON } means that you can specify "0", "1", "OFF", "ON".Vertical bars are not sent with the command string.

3.Angle brackets (< >) indicate that a value must be specified for the parameter within the brackets.For example, VOLT { < voltage value > }, the angle brackets are not sent with the command string. You must specify a value for the parameter. Example: VOLT 1.234

4.The colon (:) is used to separate the command keyword from the next level keyword. For example: SYST:LOC

5.Question mark (?) You can query the current value of a parameter by adding a question mark (?) To the command. Example: MEAS:VOLT?

6.Space You must use a white space character, [TAB], or [space] to separate the parameter from the command keyword.

7.Terminator The command string sent to the instrument must end with a \ R \ n (0X0D, 0X0A) character.Command string termination always resets the current SCPI command path to the root level.

Remote interface connection

The power supply can be connected to the RS-232 interface through the DB9 plug on the rear panel through the level conversion circuit.The following can help you understand how to control the output of the power supply from your PC.

Communication settings

Before communication, you should first match the power supply with the following parameters of the PC.

Baud rate: 9600

Data bits: 8

Stop bit: 1

Check: None

IEEE 488.2 General Command

*IDN?

This query command reads the power supply's identification string.

Return parameters: manufacturer name, product model, hardware version number, software version number.

*RST

This command resets the power supply to the factory default state.

SYST command

The SYST command is used to set and query the status of the system

SYST:LOC

This command sets the power supply to the local operating mode.

SYST:REM

This command sets the power supply to remote operation mode.

SYST: BEEP {0 | 1 | OFF | ON}

This command enables or disables the power tone.

Example: SYST: BEEP OFF "a power-off tone."

SYST: BEEP 1 "Enable power tone"

SYST :BEEP?

This command queries the tone status of the power supply.

Example: SYST: BEEP?

Return parameters: 0 (disable tone) | 1 (enable tone)

SYST: SENS {0 | 1 | OFF | ON}

This command enables or disables the power tone.

Example: SYST: SENS OFF "Disable Power SENS"

SYST: SENS 1 "Enable Power SENS"

SYST : SENS?

This command queries the SENS status of the power supply.

Example: SYST: SENS?

Return parameters: 0 (disable SENS) | 1 (enable SENS)

MEAS command

The MEAS command is used to query the actual output voltage and current values of the power supply

MEAS: VOLT?

This command queries the actual output voltage of the current channel of the power supply

Example: MEAS: VOLT?

Return parameter: actual voltage value (X. XX)

MEAS:VOLT:ALL?

This command queries the actual output voltage values of both power channels at the same time.

Example: MEAS: VOLT: ALL?

Return parameter: CH1 actual voltage value (X. XX), CH2 actual voltage value (X. XX)

MEAS: CURR?

This command queries the actual output current value of the current channel of the power supply

Example: MEAS: CURR?

Return parameter: actual current value (X. XXX)

MEAS: CURR:ALL?

This command queries the actual output current values of both channels of the power supply at the same time.

Example: MEAS: CURR: ALL?

Return parameter: CH1 actual current value (X. XXX), CH2 actual current value (X. XXX)

OUTP command

The **OUTP** command is used to set and query the output of the power supply and the output time.

OUTP {<0 | 1 | OFF | ON>}

This command enables or disables the output state of all channels of the power supply

Example: OUTP OFF "Disable Power Output"

OUTP 1 "Enable power output"

OUTP?

This command queries the output status of all channels of the power supply

Example: OUTP?

Return parameters: 0 (disable output) | 1 (enable output)

CHAN command

The **CHAN** command is used to set and query the output status of the current channel of the power supply

CHAN:OUTP {<0 | 1 | OFF | ON>}

This command enables or disables the output state of the current channel of the power supply

Example: CHAN: OUTP OFF "Disable Power Output"

CHAN: OUTP 1 "Enable power output"

CHAN:OUTP?

This command queries the output status of the current channel of the power supply

Example: CHAN: OUTP? "

Return parameters: 0 (disable output) | 1 (enable output)

CHAN?

This command queries the current channel of the power selection

Example: CHAN?

Return parameter: CH1

VOLT command

The **VOLT** command is used to set and query the set voltage value and overvoltage protection value.

VOLT {<voltage>}

This command sets the output voltage value for the current channel of the power supply

Example: VOLT 12.345

Set voltage to 12.345 V

VOLT?

This command is used to query the set voltage value of the current channel of the power supply

Example: VOLT?

Returned parameter: voltage setting value (X. XXX)

VOLT: PROT {<OVP_SET>}

This command sets the overvoltage protection value for the current channel of the power supply

Example: VOLT: PROT 12.345

Set the overvoltage value of the current channel of the power supply to 12.345 V

VOLT: PROT?

This command is used to query the overvoltage protection value of the current channel of the power supply

Example: VOLT: PROT?

Return parameter: overvoltage protection value of current channel of power supply (X. XXX)

VOLT: PROT :STAE{<0 | 1 | OFF | ON >}

This command sets the overvoltage protection status of the current channel

Example: VOLT: PROT: STAE 0

Set the current channel overvoltage protection status to off

VOLT: PROT:STAE?

This command queries the overvoltage protection status of the current channel

Example: VOLT: PROT: STAE?

Return parameter: set overvoltage status of current channel (0 | 1)

CURR command

The CURR command is used to set and query the set current value and the overcurrent protection status

CURR {<current>}

This command sets the output current value for the current channel of the power supply

Example: CURR 2.345

Set the output current value of the current channel of the power supply to 2.345 A

CURR?

This command is used to query the set current value of the current channel of the power supply

Example: CURR?

Return parameter: current setting value of current channel of power supply (X. XXX)

CURR: PROT {<OCP_SET>}

This command sets the overcurrent protection value for the current channel of the power supply

Example: CURR: PROT 2.34

Set the overcurrent value of the current channel of the power supply to 2.34 A

CURR: PROT?

This command is used to query the overcurrent protection value of the current channel of the power supply

Example: CURR: PROT?

Return parameter: overcurrent protection value of current channel of power supply (X. XXX)

CURR: PROT :STAE{<0 | 1 | OFF | ON >}

This command sets the overcurrent protection status of the current channel

Example: CURR: PROT: STAE 0

Set the current channel overcurrent protection status to off

CURR:PROT:STAE?

This command queries the overcurrent protection status of the current channel

Example: CURR: PROT: STAE?

Return parameter: set overcurrent status of current channel (0 | 1)