

Manson Power Supply SCPI command list

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SCPI Syntax

SCPI(Standard Commands for Programmable Instruments) is standard programmable commands to use in controlling measurement devices. The standard commands is based on ASCII command language.

Basic Syntax explanation :

- Command syntax** Each command in SCPI is defined in Upper case and lower case part. The upper case part is mandate and lower case part is optional.
e.g. "VOLTage?" is same as "VOLT?"
SCPI command is not case sensitive. It means "VOLTage?" is same as "VOLTAGE?" and "voltage?" during communication.
- Square bracket []** - The command in bracket is optional.
e.g. "[:SOURce]VOLTage?" can be replaced by "VOLTage"
The [:SOURce] is skipped.
- Angle bracket < >** - Indicate this is parameter for command. For example "VOLTage <value>", it means the VOLTage need to pass a value.
e.g. VOLTage 5V

e.g. Command "[:SOURce]VOLTage[:LEVel][:IMMediate][:AMPLitude]?" can be write as "volt?"

Remark: It need "\n" at the end of each command for power supply. e.g. "volt?\n"

General Command list

1 Set and read output Voltage

[[:SOURce]VOLTage[:LEVel][:IMMEDIATE][:AMPLitude] <value>

Description: Set output voltage, (Unit: V or mV)

Return Value: none

Example: "VOLT 1.00V"

means set output voltage to 1.00V

[[:SOURce]VOLTage[:LEVel][:IMMEDIATE][:AMPLitude]?

Description: Read output voltage setting

Return Value: set value of out voltage in Volt.

Example: "VOLT?"

return "1.00V"

means the output voltage is set to 1.00V

2 Set and read output Current limit

[[:SOURce]CURRent[:LEVel][:IMMEDIATE][:AMPLitude] <value>

Description: Set output current limit. (Unit: A or mA)

Return Value: none

Example: "CURR 1.00A"

means set output current limit to 1.00A

[[:SOURce]CURRent[:LEVel][:IMMEDIATE][:AMPLitude]?

Description: Read output current limit setting

Return Value: set value of out current limit in Amp.

Example: "CURR?"

return 1.00A"

means the output current limit is set to 1.00A

3 Read actual output voltage

MEASure[:SCALar]:VOLTage[:DC]?

Description: Read the actual output voltage.

Return Value: actual value of output voltage in Volt.

Example: "MEAS:VOLT?"

return "5.00V"

means the actual output voltage is 5.00V

4 Read actual output current

MEASure[:SCALar]:CURRent[:DC]?

Description: Read the actual output current.

Return Value: actual value of output current in Amp.

Example: "MEAS:CURR?"

return "1.00A"

means the actual output current is 1.00A

5 Read actual output power

MEASure[:SCALar]:POWer[:DC]?

Description: Read the actual output power

Return Value: actual value of output power in Watt

Example: "MEAS:POW?"

return "20.00W"

means the actual output power is 20.00W

6 Set and read Upper Voltage Limit(UVL)

[:SOURce]VOLTage:LIMit <value>

Description: Set Upper Voltage Limit value

Return Value: none

Example: "VOLT:LIM 5.00V"

means set UVL to 5.00V

[:SOURce]VOLTage:LIMit?

Description: Read Upper Voltage Limit setting

Return Value: set value of Upper Voltage Limit

Example: "VOLT:LIM?"

return "5.00V"

means set value of UVL is 5.00V

7 Set and read Upper Current Limit(UCL)

[:SOURce]:CURRent:LIMit <value>

Description: Set Upper Current Limit value

Return Value: none

Example: "CURR:LIM 1.00A"

means set UCL to 1.00A

[:SOURce]:CURRent:LIMit?

Description: Read Upper Current Limit setting

Return Value: set value of Upper Current Limit

Example: "CURR:LIM?"

return "1.00A"

means set value of UCL is 1.00A

8 Set and read output ON/OFF status

OUTPut[:STATe] <bool>

Description: Set output ON/OFF. <bool> = 0|1|ON|OFF

Return Value: none

Example: "OUTP 0" or "OUTP ON"

means set OUTPUT to ON

OUTPut[:STATe]?

Description: Read output ON/OFF status

Return Value: return 0|1

Example: "OUTP ?"

return "0"

means the output is ON

9 Set and read value of 4 preset programs

SYSTem:PRESet# <value1>, <value2>

Description: Set voltage and current of preset program #. # is between 0 to 3. Voltage value unit is V|mV and Current value unit is A|mA

Return Value: none

Example: "SYST:PRES3 5.00V, 1.00A"

means set preset program 3 to 5.00V and 1.00A

SYSTem:PRESet#?

Description: Read voltage and current of preset program#. # is between 0 to 9.

Return Value: return set value of voltage and current of preset program #

Example: "SYST:PRES4?"

return "10.00V, 2.00A"

means the set value of preset program 4 is 10.00V and 2.00A

10 Set power supply to local mode or remote mode

SYSTem:LOCal

Description: Set power supply to local mode. Power supply indicate unlocked.

Return Value: none

Example: "SYST:LOC"

means set power supply to local access. The keypad and Jog are unlocked.

SYSTem:REMOte

Description: Set power supply to remote mode. Power supply indicate locked

Return Value: none

Example: "SYST:REM"

means set power supply to remote access. The keypad and Jog are locked.

11 Read band,model,serial number,software version

***IDN?**

Description: Read product information

Return Value: MANSON,KPS-6300,2015091813,V1.1.0

Example: "*IDN?"

return "MANSON,KPS-6300,2015091813,V1.1.0"

means year 1999, version 0

12 Read SCPI version and Serial number

SYSTem:VERSion?

Description: read SCPI version

Return Value: "YYYY.V", YYYY is year, V is version.

Example: "SYST:VER?"

return "1999.0"

means year 1999, version 0

SYSTem:SN?

Description: Read Serial Number

Return Value: Serial number of power supply

Example: "SYST:SN?"

return "2015091813"

SYSTem:PN?

Description: Read Part Number

Return Value: Serial number of power supply

Example: "SYST:PN?"

return "9876543210"

Internal Program Operation commands

1 Introduction of Internal Programs

The power supply has 10 internal program which customer can be define. These program can be run in defined number of cycles.

2 Edit value for internal program

PROG:DATA# <value1>,<value2>,<value3>

Description: Edit value for program #. If # is ignored, it use point defined in PROG:LEVel. <value1> is Voltage value with unit V|mV. <value2> is Current value with unit A|mA. <value3> is run duration with unit S|MIN|HR.

Return Value: none

Example: "PROG:DATA2 5.00V, 2.00A, 35S"

means set program 2 to 5V, 2A and duration 35s

3 Save edited internal program value

PROG:SAVe

Description: Save edited internal program value

Return Value: none

Example: "PROG:SAV"

4 Read set value of internal program

PROG:DATA#?

Description: Read set value of internal program #. # is between 1~20

Return Value: return set value of Voltage, Current and Duration of program #

Example: "PROG:DATA1?"

return "5.00V, 1.00A, 15S"

means the program 1 has set 5.00V, 1.00A and duration 15S

5 Start to run of internal program

PROG:STARt <value1>,<value2>,<value3>

Description: Start running of internal program. <value1> is Start step, Start point<value1>Always equal to 1, <value2> is End. have range 2~10. <value3> is number of cycle to be run. The range of <value3> is 1~999

Return Value: none

Example: "PROG:STAR 1, 5, 100"

means run from program 1 to program 5 for 100 cycles.

6 Stop the current running internal program

PROG:STOP

Description: Stop the current running internal program.

Return Value: none

Example: "PROG:STOP"