

SDP-2XXX series
Power Supply
SCPI command list

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Table of contents	
SCPI Syntax.....	3
General Command list.....	4
Set and read output Voltage.....	4
Set and read output Current limit.....	4
Read actual output voltage.....	4
Read actual output current.....	5
Read actual output power.....	5
Set and read Upper Voltage Limit(UVL).....	5
read Upper Current Limit(UCL).....	5
Set and read output ON/OFF status.....	6
Set and read value of 9 preset programs.....	6
Read SCPI version and Serial number.....	7
Read Identity of power supply.....	7
Internal Program Operation commands.....	7
Introduction of Internal Programs.....	7
Set number of points and cycle to run.....	7
Read number of points and cycle to run setting.....	8
Edit value for internal program.....	8
Read set value of internal program.....	8
Start to run of internal program.....	8
Stop the current running internal program.....	8

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

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

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

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

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

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

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

read Upper Current Limit(UCL)

[: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

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

Set and read value of 9 preset programs

SYSTem:PRESet# <value1>, <value2>

Description: Set voltage and current of preset program #. # is between 1 to 9. 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 1 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

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"

Read Identity of power supply

***IDN?**

Description: Read identity of power supply

Return Value: "Manufacturer Name, Model, S/N, Software Version"

Example: "*IDN?"

return "Manson,SDP-2210,XXXXXXXXXX, 01-01"

Internal Program Operation commands

Introduction of Internal Programs

The power supply has 20 points internal program which customer can be define. These program can be run in defined number of cycles.

Set number of points and cycle to run

PROGram:LEVel <Value1> <Value2>

Description: Set number of points to run and number of cycle to run. <Value1> is range of points to be run. Its value range from 2~20. The starting point should be from point 1. <Value2> is cycle time from 0~9999. 0 means run forever.

Return Value: none

Example: "PROG:LEV 2,9999"

means run points 1 to 2 and 9999 cycle

Read number of points and cycle to run setting

PROG:LEVel?

Description: Read setting of number of points to run and number cycle to run

Return Value: return number of points and number of cycle

Example: "PROG:LEVel?"

Return Value:2,9999

means point 1 to 2 and run 9999 cycle

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.

Return Value: none

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

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

Read set value of internal program

PROG:DATA#?

Description: Read set value of internal program #. # is between 0~19

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

Start to run of internal program

PROG:STARt

Description: Start running of internal program.

Return Value: none

Example: "PROG:STAR"

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

Stop the current running internal program

PROG:STOP

Description: Stop the current running internal program.

Return Value: none

Example: "PROG:STOP"