4CH/5CH programmable DC power supply S CPI protocol programming manual

command format

Follow the SCPI command syntax, support short mnemonic capital format.

1. The parameter options for a given command string are included in the braces ({}). Brkets are not sent with the command string.

2. Vertical bar (|) separates multiple parameter selections from a given command string. For example, in the above command, {0 | 1 | OFF | ON} means you can specify "" 0 "," "1", "" OFF "," "ON". The vertical bar is not sent with the command string.

3. Sharp brackets (<>) indicate that a value must be specified for the parameters in the parentheses. For example, VOLTage {<Voltage Value>}, the sharp brackets are not sent with the command string. You must specify a value for the parameter. Such as: VOLT 1.23

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

5. Question mark (?) By adding a question mark to the command (?) You can query for the current value of the parameter. For example: MEAS: VOLT?

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

7. The command string of the end character sent to the instrument must end with a \ r \ n (0X0D, 0X0A) character. The 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. The following content helps you understand how to control the output of the power supply through the PC.

Communication Settings

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

Baud rate: 9600 / 19200 /

Data bit: 8

Stop position: 1

verification:None

IEEE 488.2 General command

*IDN?

This query command reads the identity string of the power supply.

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

*RST

This command resets the power supply to the factory-setting state.

SYSTem Command

SYSTem The command is used to set and query the system-related status

SYSTem:LOCal

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

Example: SYST: LOC

SYSTem:REMote
This command sets the power supply to the remote operation mode.
Example: SYST: REM

SYSTem: BEEPer {0 | 1 | OFF | ON}
This command enables or disables power prompts.
Example: SYST: BEEP OFF "Disabled power prompt tone"
      SYST: BEEP 1 "Power-enabled prompt tone"

SYSTem :BEEPer?
This command queries the prompt status of the power supply.
Example: SYST: BEEP?
Return parameter: 0 (disabled) | 1 (enabled)

APPly order
The APPly command is used to set or read the voltage value, current value, overvoltage value, overcurrent state, and output state of the three channels simultaneously.

APP ly :V OLTage {<CH1 Voltage >, <CH2 Voltage >,<CH3 Voltage , < CH 4 Voltage >,<CH 5 Voltage   >}
This command also sets the voltage value of the three channels
Example: APP: VOLT 12,5,3,20.1,30.5
  The output voltage is set to be 12V, 5V, 3V, 20.1V,30.5V respectively

APP l y :V OLTage ?
This command simultaneously queries the set voltage value of the three channels
Example: APP: VOLT?
Return parameter: CH 1 set voltage (X. XXX), CH2 set voltage (X. XXX), CH3 set voltage (X. XXX) CH 4 set voltage (X. XXX), CH 5 set voltage (X.XXX)

APP ly:CURR ent   {<CH1 C urrent   >, <CH2 C urrent   >,<CH2 C urrent   >, <CH 4 C urrent   >,<CH 5 C urrent   >}
This command also sets the current value of the three channels
Example: APP: CURR 3,1,3,2.123,5,
  The output current is set to 3A, 1A, 3A, 2.123A, 5A respectively

APP l y :CURRnet ?
This command simultaneously queries the set current value of the three channels
Example: APP: CURR?
Return parameter: CH 1 set current (X. XXX), CH2 setting current (X. XXX), CH3 setting current (X. XXX), CH 4 setting current (X. XXX), CH 5 setting current (X.XXX)

APP ly :V OLTage: PROTection {<CH1 OVP >, <CH2 OVP >,<CH3 OVP >}
This command also sets the overvoltage protection value of the three channels
Example: APP: VOLT: PROT 12,5,3
  The overvoltage protection value is set to be 12V, 5V and 3V respectively

APP l y :V OLTage : PROTection ?

  This command also queries the set overvoltage protection value of the three channels

Example: APP: VOLT: PROT?

Return parameter: CH 1 set overvoltage value (X. XXX), CH2 set overvoltage value (X. XXX), CH3 set overvoltage value (X.XXX)

APP ly:CURR ent : PROTection {<0 |1 |ON|OFF>, <0 |1 |ON |OFF >,<0 |1 |ON|OFF >}

This command also sets the over-current protection state of the three channels

Example: APP: CURR: PROT OFF, 0,1

  Set the output current protection status as OFF, OFF and ON respectively

APP l y :CURRnet: PROTection ?

  This command simultaneously queries the set current protection status of the three channels

Example: APP: CURR: PROT?

Return parameters: CH 1 set current protection state (0 | 1), CH2 set current protection state (0 | 1), and CH3 set current protection state (0 | 1)

APP ly:OUT put   {<0 |1 |ON|OFF>, <0 |1 |ON |OFF >,<0 |1 |ON|OFF >}

This command also sets the output status of the three channels

Example: APP: OUT OFF, 0,1

  Set the three-channel output state to be OFF, OFF and ON respectively

APP l y :OUT put?

  This command simultaneously queries the output status of the three channels

Example: APP: OUT?

Return parameters: CH 1 (0 | 1), CH2 (0 | 1), CH3 Output (0 | 1)

MEASure Command

  MEASure Command is used to query the actual output voltage and current values of the power supply

MEASure : VOLTage?

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

Example: MEAS: VOLT?

  Return parameter: Actual voltage value (X.XXX)

MEASure:VOLTage:ALL?

  This command also queries the actual output voltage value of the power supply three channels

Example: MEAS: VOLT: ALL?

  Return parameter: CH 1 Actual voltage value (X. XXX), CH 2 actual voltage value (X. XXX), CH 3 actual voltage value (X.XXX)

MEASure : CURRent?

  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)

MEASure: CURRent :ALL?

  This command also queries the actual output current value of the power supply three channels

Example: MEAS: CURR: ALL?

Return parameter: CH 1 actual current value (X. XXX), CH 2 actual current value (X. XXX), CH 3 actual current value (X.XXX)

OUTPut Command

OUTPut The command is used to set and query the power supply output and the output time

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

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

Example: OUTP OFF Disable power output"

OUTP 1 Enable Power Output

OUTPut ?

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

example:OUTP?

Return parameter: 0 (disabled output) | 1 (enable output)

OUTPut:TIMer {<OutputTime>}

This command sets the output time value for the power supply's current channel

Example: OUTP: TIM 2300

The current channel output time is set to 230 seconds

Note: When the setting time is greater than 0, the timer is on, otherwise close the timer.

OUTPut:TIMer?

This command queries the set output time of the current channel of the power supply

Example: OUTP: a TIM?

Return parameter: Time

VOLTage Command

VOLTage Command is used to set and query the set voltage value and overvoltage protection value

VOLTage {<voltage>}

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

Example: VOLT 12.345

Set the voltage to be at 12.345V

VOLTage?

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

example:VOLT?

Return parameter: Voltage SetPoint (X.XXX)

VOLTage: PROTection   {<ovp >}

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

Example: VOLT: PROT 12.3

Set the overvoltage value of the current channel of the power supply to be 12.3V

Note: When the overpressure protection value is set as greater than 0V, the overpressure protection state is turned on, otherwise it is closed.

VOLTage: PROTection ?

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

Example: A VOLT: a PROT?

Return parameter: Overvoltage protection value of the current channel of the power supply (X.X XX)

CURRent Command

CURRent The command is used to set and query the set current value and over-current protection status

CURRent {<current >}

This command is used to set the output current value for the current channel

Example: CURR 2.345

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

CURRent?

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

example:CURR?

Return parameter: current channel (X.XXX)

CURRent: PROTection   {<0|1|ON|OFF>}

This command is used to set the overprotection state of the current power channel

Example: CURR: PROT ON

Set the power protection protection of the current channel

CURRent: PROTection ?

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

Example: CURR: A PROT?

Return parameter: Overcurrent protection of the current channel of the power supply (0 | 1)

INSTrument Command

INSTrument The command switches the current channel for the power supply

INSTrument {<1|2|3|FIRst|SECond|THIrd>}

This command switches the current channel for the power supply

Example: INST FIR

Set the power supply CH 1 channel as the current channel

INSTrument ?

This command is used to query which channel the power supply channel currently is

Example: I NST?

Return parameter: Power supply current channel (1 | 2 | 3)