

Command (VC STK-3000)

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1. *IDN?

Command Syntax:

*IDN?

Indication: Read the calibrator's identification string.

2. BEEP

This command is used to control the buzzer of the calibrator and is not controlled by the buzzer switch under the system setting interface.

Command Syntax:

BEEP 100

Indication: Keep the buzzer buzzing for 100ms. The acceptable parameters of this instruction are integers between 0 and 1500.

Command Syntax:

BEEP 100,6

Indication: Keep the buzzer buzzing for 100ms, 6 times, with an interval of 100ms.

Command Syntax:

BEEP?

Indication: Query buzzer status. Same as command SYST:BEEP?. Return ON or OFF.

3. SYST

These instructions are used to set system parameters. It is equivalent to the operation of calibrator setting interface.

3.1 [:STAT]

Command Syntax:

SYST:STAT?

Indication: Query whether the calibrator is in working state or system state. In working state (measurement / output interface), return "WORK"; In system status (system setting interface), return "SYSTEM".

Command Syntax:

SYST:STAT WORK

Indication: If the calibrator is in the system state (system setting interface), send this command to switch the system state to the working state (measurement / output interface). Equivalent to key ESC and command SYST: ESC.

Command Syntax:

SYST:STAT SYSTEM

Indication: If the calibrator is in working state (measurement / output interface), send this command to switch the system state to system state (system setting interface).

3.2 :APO

Command Syntax:

SYST:APO 20

Indication: Set the automatic shutdown time of the calibrator to 20 minutes. The acceptable parameters of this Directive are integers between 0~60. When the parameter is 0, which means that the calibrator is not allowed to shut down automatically.

Command Syntax:

SYST:APO?

Indication: Query the automatic shutdown time.

3.3 :BRIG

Command Syntax:

SYST:BRIG 20

Indication: Set the calibrator screen brightness to 20%. The acceptable parameters of this instruction are integers between 10 and 100.

Command Syntax:

SYST:BRIG?

Indication: Query the calibrator screen brightness.

3.4 :BEEP

Command Syntax:

SYST:BEEP ON

Indication: Set the buzzer ON or OFF. The acceptable parameters of this command are: ON or OFF.

Command Syntax:

SYST:BEEP?

Indication: Query the buzzer status of the calibrator.

3.5 :ESC

Command Syntax:

SYST:ESC

Indication: The function is the same as the ESC key of the calibrator. In the system setting interface, send this command to exit the setting interface; Under the ramp output function, can exit the ramp output, etc.

4. FUNC

This command is used to query the function of the calibrator. All measurement functions and output functions

Command Syntax:

FUNC?

Indication: Query the function of the calibrator. Under the measurement function, return the format, such as "0, VIN", Where 0 represents measurement function; Under the output function, return the format, such as "1, VIN", Where 1 represents output function; In the system setting interface, the return format is "2, VIN", where 2 represents the function is the system setting interface, and VIN represents the voltage measurement function before entering the system setting interface.

5. READ

This command is used to read the measured value of the measurement function. Applicable to millivolt measurement, voltage measurement, current measurement, on-off measurement, on-off measurement and LOOP measurement.

Command Syntax: READ?

Indication: Before communicating with the calibrator, you need to manually turn on the communication function in the calibrator setting interface. The baud rate of serial port is 115200bps. All commands sent shall be marked with the end of carriage return. Instructions are not case sensitive. The following is no longer explain.

5.1 :MILL

This command is used to read the measured value of the millivolt measurement function. Using this command, the calibrator must be in the millivolt measurement function, otherwise the command will report an error.

Command Syntax:

READ:MILL?

READ:MILLivolt?

Indication: It is recommended to use command READ?.

5.2 :VOLT

This command is used to read the measured value of the volt measurement function. Using this command, the calibrator must be in the volt measurement function, otherwise the command will report an error.

Command Syntax:

READ:VOLT?

READ:VOLTage?

Indication: It is recommended to use command READ?.

5.3 :CONT

This command is used to read the measured value of the On-off measurement function. Using this command, the calibrator must be in the function of On-off measurement, otherwise the command will report an error.

Command Syntax:

READ:CONT?

Indication: It is recommended to use command READ?.

5.4 :CURR

This command is used to read the value of the current measurement function. Using this command, the calibrator must be in the current measurement function, otherwise the command will report an error.

Command Syntax:

READ:CURR?

Indication: **Query current measurement value.** It is recommended to use command READ?.

5.5 :LOOP

This command is used to read the measured value of the loop function Using this command, the calibrator must be in the loop function, otherwise the command will report an error

Command Syntax:

READ:LOOP?

Indication: Query LOOP value. It is recommended to use command READ?.

5.6 :FREQ

This command is used to read the measured value of the frequency measurement function Using this command, the calibrator must be in the frequency measurement function, otherwise the command will report an error.

Command Syntax:

READ:FREQ?

Indication: Query frequency value. It is recommended to use command READ?.

6. CONF

These instructions are used to control the measuring functions of the calibrator. Applicable to millivolt measurement, voltage measurement, current measurement, loop current measurement, frequency measurement and on-off measurement.

Command Syntax:

CONF?

Indication: Query the measurement function. If the calibrator's function is not a measurement function, the instruction will report an error.

6.1 :MILL

Command Syntax:

CONF:MILL

Indication: Set the calibrator function to millivolt measurement function.

Command Syntax:

CONF:MILL?

Indication: Query the measurement function. If the current function is not millivolt measurement, the command will report an error.

6.2 :VOLT

Command Syntax:

CONF:VOLT

Indication: Set the calibrator function to volt measurement function.

Command Syntax:

CONF:VOLT?

Indication: Query the measurement function. If the current function is not volt measurement, the command will report an error.

6.3 :CONT

Command Syntax:

CONF:CONT

Indication: Set the calibrator function to on-off measurement function.

Command Syntax:

CONF:CONT?

Indication: Query the measurement function. If the current function is not on-off measurement, the command will report an error.

6.4 :CURR

Command Syntax:

CONF:CURR

Indication: Set the calibrator function to current measurement function.

Command Syntax:

CONF:CURR?

Indication: Query the measurement function. If the current function is not current measurement, the command will report an error.

6.5 :LOOP

Command Syntax:

CONF:LOOP

Indication: Set the calibrator function to loop current measurement function.

Command Syntax:

CONF:LOOP?

Indication: Query the measurement function. If the current function is not loop measurement, the command will report an error.

6.6 :FREQ

Command Syntax:

CONF:FREQ

Indication: Set the calibrator function to FREQ measurement function.

Command Syntax:

CONF:FREQ?

Indication: Query the measurement function. If the current function is not frequency measurement, the command will report an error.

7. SOUR

These instructions are used to control the output functions of the calibrator Suitable for millivolt output, voltage output, current output, passive current (SIM) output, frequency output and pulse output.

Command Syntax:

SOUR?

Indication: If the current function is an output function, the command returns the current function name Otherwise, an error will be reported.

7.1 [:MILL]

Command Syntax:

SOUR:MILL

Indication: Set the calibrator function to millivolt output function.

Command Syntax:

SOUR:MILL 12

Indication: Set the millivolt output value is 12mV.

Command Syntax:

SOUR:MILL?

Indication: Query the output value of the millivolt output.

7.1.1 :RANG

Command Syntax:

SOUR:MILL:RANG?

Indication: Query the current range of millivolt output function.

Command Syntax:

SOUR:MILL:RANG RANGE1

Indication: Set the range of the millivolt output function to the second range The acceptable parameters of this instruction are: Range0 and range1 There must be at least one space between the instruction and the parameter.

7.2 :VOLT

Command Syntax:

SOUR:VOLT

Indication: Set the calibrator function to volt output function.

Command Syntax:

SOUR:VOLT 10

Indication: Set the voltage output value to 10V The parameter of this instruction cannot be greater than 11.

Command Syntax:

SOUR:VOLT?

Indication: Query the current range of volt output function.

7.3 :CURR

Command Syntax:

SOUR:CURR

Indication: Set the calibrator function to current output function.

Command Syntax:

SOUR:CURR 10

Indication: Set the current output value to 10mA. The parameter of this command cannot be greater than 24Ma.

Command Syntax:

SOUR:CURR?

Indication: Query the output value.

7.4 :SIM

Command Syntax:

SOUR:SIM

Indication: Set the calibrator function to passive current(SIM) output function.

Command Syntax:

SOUR:SIM 10

Indication: Set the passive current output value to 10mA.The parameter of this command cannot be greater than 24mA.

Command Syntax:

SOUR:SIM?

Indication: Query the output value.

7.5 :FREQ

Command Syntax:

SOUR:FREQ

Indication: Set the calibrator function to frequency output function.

Command Syntax:

SOUR:FREQ 10

Indication: Set the frequency output value to 10 (k) Hz (the parameter unit is the unit of the current range of the current function) . The parameter of this command is the maximum value of the current range of the current function

Command Syntax:

SOUR:FREQ?

Indication: Query the output value.

7.5.1 :RANG

Command Syntax:

SOUR:FREQ:RANG?

Indication: Query the current range of frequency output function.

Command Syntax:

SOUR:FREQ:RANG RANGE1

Indication: Set the range of the frequency output function to the second range The acceptable parameters of this instruction are: Range0, range1 and range2 There must be at least one space between the instruction and the parameter.

7.5.2 :AMP

Command Syntax:

SOUR:FREQ:AMP?

Indication: Query the current frequency amplitude of frequency output function.

Command Syntax:

SOUR:FREQ:AMP 5.0

Indication: Set the frequency amplitude of the frequency output function to 5.0V. There must be at least one space between the instruction and the parameter. The acceptable parameter range of the instruction is 0.5 ~ 12.0V. If the parameter exceeds this range, the instruction will report an error.

7.5.3 :ESC

Command Syntax:

SOUR:FREQ:ESC

Indication: In the amplitude editing state of frequency output, send this command to exit the amplitude editing state of frequency output.

7.6 :PULS

Command Syntax:

SOUR:PULS

Indication: Set the calibrator function to pulse output function.

Command Syntax:

SOUR:PULS 100

Indication: Set the pulse frequency value to 100Hz. The acceptable parameters of this command are limited to the maximum and minimum values of the current range.

Command Syntax:

SOUR:PULS?

Indication: Query the output frequency of pulse output function.

7.6.1 :RANG

Command Syntax:

SOUR:PULS:RANG?

Indication: Query the current range of pulse output function.

Command Syntax:

SOUR:PULS:RANG RANGE1

Indication: Set the range of the pulse output function to the second range. The acceptable parameters of this instruction are: Range0, range1 and range2. There must be at least one space between the instruction and the parameter.

7.6.2 :CNT

Command Syntax:

SOUR:PULS:CNT?

Indication: Query the pulse number of pulse output function.

Command Syntax:

SOUR:PULS:CNT 1000

Indication: Set the number of pulse outputs to 1000 There must be at least one space between the instruction and the parameter The acceptable parameter range of the instruction is 0 ~ 100000. If the parameter exceeds this range, the instruction will report an error.

7.6.3 :AMP

Command Syntax:

SOUR:PULS:AMP?

Indication: Query the current amplitude of pulse output function.

Command Syntax:

SOUR:PULS:AMP 5.0

Indication: Set the amplitude of pulse output to 5.0V. There must be at least one space between the instruction and the parameter. The acceptable parameter range of the instruction is 0.5 ~ 12.0V. If the parameter exceeds this range, the instruction will report an error.

7.6.4 :START

Command Syntax:

SOUR:PULS:START?

Indication: Query whether the pulse output function is performing.

Command Syntax:

SOUR:PULS:START

Indication: Start pulse output before using the command, please confirm that the parameters such as pulse frequency and number of pulses have been set and are not 0, otherwise the command will report an error.

7.6.5 :ESC

Command Syntax:

SOUR:PULS:ESC

Indication: Exit pulse output state. When the pulse is being output, send this command, the pulse stops output and the number of pulses is cleared

7.7 :PERCENT

Command Syntax:

SOUR:PERCENT

Indication: Set the output value to 100% of the current range.

Command Syntax:

SOUR:PERCENT?

Indication: Query the 100% value of the current range.

7.7.1 [:MAX]

Command Syntax:

SOUR:PERCENT:MAX

Indication: Set the output value to 100% of the current range.

Command Syntax:

SOUR:PERCENT:MAX?

Indication: Query the 100% value of the current range.

7.7.1.1 :VAL

Command Syntax:

SOUR:PERCENT:MAX:VAL 8

Indication: Set the value of 100% of the current range of the current output function to 8 (the unit is the unit of the current output function) The parameter value carried by the command cannot be greater than the maximum value and less than the minimum value of the current range (graduation) of the current output function, and the parameter value cannot be less than 0% of the current range (graduation).

Command Syntax:

SOUR:PERCENT:MAX:VAL?

Indication: Query the 100% value of the current range.

7.7.2 :MIN

Command Syntax:

SOUR:PERCENT:MIN

Indication: Set the output value to 0% of the current range.

Command Syntax:

SOUR:PERCENT:MIN?

Indication: Query the 0% value of the current range.

7.7.2.1 :VAL

Command Syntax:

SOUR:PERCENT:MIN:VAL 8

Indication: Set the 0% value of the current range of the current output function to 8 (the unit is the unit of the current output function) The parameter value carried by the command shall not be less than the minimum value and greater than the maximum value of the current range (graduation) of the current output function, and the parameter value shall not be greater than 100% of the current range (graduation)

Command Syntax:

SOUR:PERCENT:MIN:VAL?

Indication: Query the 0% value of the current range.

7.7.3 :INC

Command Syntax:

SOUR:PERCENT:INC

Indication: Increase the current output value by 25% of the current range (graduation) of the current output function. The 25% value depends on the 100% value and the 0% value. The output value cannot be greater than 100%.

7.7.4 :DEC

Command Syntax:

SOUR:PERCENT:DEC

Indication: Reduce the current output value by 25% of the current range (graduation) of the current output function. The 25% value depends on the 100% value and the 0% value. The output value cannot be less than 0%.

7.8 :RAMP

Command Syntax:

SOUR:RAMP SINGLE

Indication: Under the output function, set the ramp output mode to single ramp. The acceptable parameters of the instruction are: single, double and step, which correspond to three functional modes: single slope, double slope and step. To exit the ramp output, use the SYST:ESC command. If the output function prompts overload and other alarm information, the command will report an error.

Command Syntax:

SOUR:RAMP?

Indication: Query the current ramp output mode.

7.9 :STAT

Command Syntax:

SOUR:STAT?

Indication: Check whether the current output function is overloaded. If the current output function is overloaded, "load" is returned, and if it is not overloaded, "normal" is returned.