

Communication Commands with Computer

S/No.	Command Modes		Command Interpretation	Command Examples	
	Commands	Parameter Description		Setup	Query
1	*IDN?	no	Return product information	no	*IDN? Return product information
2	*SAV	<NR1> 1-100	Store to unit	The current value is saved in 20	no
3	*RCL	<NR1> 1-100	Recall the storage unit	*RCL 20 Recall 20 units	no
4	*TRG	no	Simulate an external trigger command, only valid in the pulse mode and the flip mode.	*TRG Simulate trigger once	no
5	:SYSTem :SYST	BEEP BAUD	Set system parameters such as buzzer, baud rate setting query etc.	:SYSTem:BEEP ON Beep ON	:SYSTem:BEEP? >ON Query the beep ON
6	:STATus? :STAT?	Baud rate: 0, 9600 1, 19200 2, 38400 3, 57600 4, 115200	Query the device status The first byte is the buzzer status and the second byte is the baud rate; other bytes are to be determined.	no	:STATus? >0, 4, 0, 0, 0, 0

7	:INPut	<Boolean> OFF ON	Set the query of the device ON/OFF	:INPut ON Switch on the device	
8	:VOLTage :VOLT	<NR2>MAX MIN	Set CV voltage and query CV voltage	:VOLTage 20V Set the CV voltage as 20V	:VOLTage? >20V The CV voltage is 20V
9	:VOLTage:UPPer? :VOLT:LOWer?	no	Query the max/min voltage of the device	no	:VOLTage:UPPer? >150V Return the max voltage of the device
10	:CURRent :CURR	<NR2>MAX MIN	Set the CC current and query it	:CURRent 2A Set the CC voltage as 2A	:CURRent? >2A The CC current is 2A
11	:CURRent:UPPer? :CURR:LOWer?	no	Query the max/min current	no	:CURRent:UPPer? >30A Return the max current of the device
12	:RESistance :RES	<NR2>MAX MIN	Set the CR resistor and query it	:RESistance 200HM Set the CR resistor as 20 Ω	:RESistance? >2000HM The CR resistor is 20 Ω

13	:RESistance:UPPer? :RES:LOWer?	no	Query the max/min resistor of the device	no	:RESistance:UPPer >75000OHM Return the max resistor of the device
14	:POWer :POW	<NR2>MAX MIN	Set the CW power and query it	:POWer 20W Set the CW power as 20W	:POWer? >20W The CW power is 20W
15	:POWer:UPPer? :POW:LOWer?	no	Query the max/min power of the device	no	:POWer:UPPer? >300W Return the max power of the device
16	:FUNctIon :FUNC	VOLT CURR RES POW SHORT Define the functions: voltage, current, resistor and power	Only can switch CV, CC, CR, CW Can query CV, CC, CR, CW, that in continuous mode, pulse, flip, battery and all the other modes.	:FUNctIon VOLT Set the constant voltage mode	:FUNctIon? >VOLT The current mode is constant voltage
17	:MEASure:CURRent	<NR2>	Return the load current. Unit A	no	:MEASure:CURRent? >0.789A
18	:MEASure:VOLTage	<NR2>	Return the load voltage. Unit V	no	:MEASure:VOLTage? >1.4999V
19	:MEASure:POWer	<NR2>	Return the load power. Unit W	no	:MEASure:POWer? >1.1968W

20	:LIST		Output all steps in order	<p>:LIST 2, 3A, 2, 1A, 0. 1A/uS, 5S, 2A, 0. 1A/uS , 5S, 3</p> <p>This command means CC range 3A, LIST step is 2 steps; the current of the first step is 1A and the slope is 0.1A/uS; the time is 5s; the current of the second step is 2A, the slope is 0.1A/uS, the time is 5s. Repeatedly run 3 times and saved in LIST 2.</p>	no
21	:RCL:LIST	1-7	Recall/query the LIST unit Recall the query unit before query, or an unknown condition occurs.	:RCL:LIST 2 Recall LIST 2	:RCL:LIST? >3A, 2, 1A, 0. 1A/uS, 5S, 2A , 0. 1A/uS, 5S, 3 Query LIST 2

22	:OCP		Output all steps in OCP mode	<p>:OCP 10V, 5S, 3A, 0.1A, 0.1A, 0.2S, 2A, 2V, 1.5A, 0.9 A, 5</p> <p>This command means: VON voltage is 10V, VON delays 5s, current range is 3A. Initial current is 0.1A, stepping current 0.1A, stepping delay 0.2s, cutoff current 2A, OCP voltage 2V, max overcurrent 1.5A and min 0.9A, which save in LIST 5.</p>	no
23	:RCL:OCP	1-10	Recall/query the OCP's unit. Recall the query unit before query and then use the query.	<p>:RCL:OCP 2</p> <p>Recall the OCP mode and save in LIST 2.</p>	<p>:RCL:OCP? >10V, 5S, 3A, 0.1A, 0.1A, 0.2S, 2A, 2V, 1 .5A, 0.9A, 2 Query the value of OCP mode in LIST 2</p>

24	:OPP		Output all steps in OPP mode	:OPP 10V, 5S, 5A, 0.1W, 1W, 1S, 12W, 7V, 6.5W, 5.6W, 5 This command means: VON voltage is 10V, VON delay 5s, current range 5A, initial power 0.1W, stepping power 1W, stepping delay 1s, cutoff power 12W, OPP voltage 7V, the max overpower 6.5W and min 5.6W, which save in LIST 5.	no
25	:RCL:OPP	1-10	Recall/query OPP's unit. Recall the query unit before query and then use the query.	:RCL:OPP 3 Recall the OPP mode and save in LIST 3.	:RCL:OPP? >10V, 5S, 5A, 0.1W, 1W, 1S, 12W, 7V, 6.5W , 5.6W, 3 Query LIST 3

26	:BATTery :BATT		Output all steps according to the battery mode	:BATT 2, 30A, 7A, 35V, 11AH, 50S This command means: setting the battery range 30A, discharge current 7A, discharge cutoff voltage 35V, discharge cutoff capacity 11AH, and discharge time 50s, which save in LIST 2.	no
27	:RCL:BATTery :RCL:BATT	1-10	Recall/query the battery unit. Recall the query unit before query and then use the query.	:RCL:BATT 5 Recall the battery storage LIST 5	:RCL:BATT? >30A, 7A, 35V, 11AH, 5S Query LIST 5
28	:BATTery:TIM		Query the time in the battery mode	no	:BATTery:TIM >5.00S
29	:BATTery:CAP		Query the capacity in battery mode	no	:BATTery:CAP >5.00AH
30	:DYNamic	<NR1> 1-6	Query and set the dynamic test mode: 1 refers to dynamic CV, 2 refers to dynamic CC, 3 dynamic CR, 4 dynamic CW, 5 indicates pulse mode and 6 flip mode.	:DYN 1, 1.0001V, 2.0003V, 1.101HZ, 50.0001% dynamic CV	:DYN? >1, 1.0001V, 2.0003V, 1.101HZ, 50.0001% Return the value of the dynamic mode; set before using this command.

- Note:
1. The unit voltage of all commands is V, current A, the current slope A/uS, the resistance OHM, power W, time s, capacity AH and percentage %.
 2. All commands can be abbreviated in SCPI format, for example, DYNamic? and :DYN? are the same command.