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Highpowered and programmable Power supply

IT6500C/D Series Programming Guide

Model: IT6512C/IT6513C/IT6514C/IT6515C/IT6516C/IT6517C/
IT6522C/IT6523C/IT6524C/IT6525C/IT6526C/IT6527C/
IT6532C/IT6533C/IT6534C/IT6535C/IT6536C/IT6537C
/IT6542C/IT6543C/IT6544C/IT6545C/IT6546C/IT6547C
/IT6552C/IT6553C/IT6554C/IT6555C/IT6556C/IT6557C
/IT6562C/IT6563C/IT6564C/IT6565C/IT6566C/IT6567C
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IT6592D/IT6593D/IT6594D/IT6595D/IT6596D/IT6597D

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Notices

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CAUTION

A CAUTION sign denotes a hazard. It calls attention to an operating procedure or practice that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a CAUTION sign until the indicated conditions are fully understood and met.

WARNING

A WARNING sign denotes a hazard. It calls attention to an operating procedure or practice that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a WARNING sign until the indicated conditions are fully understood and met.

NOTE

A NOTE sign denotes important hint. It calls attention to tips or supplementary information that is essential for users to refer to.

Quality Certification and Assurance

We certify that IT6500C/D series power supply meets all the published specifications at time of shipment from the factory.

Warranty

ITECH warrants that the product will be free from defects in material and workmanship under normal use for a period of one (1) year from the date of delivery (except those described in the Limitation of Warranty below).

For warranty service or repair, the product must be returned to a service center designated by ITECH.

- The product returned to ITECH for warranty service must be shipped PREPAID. And ITECH will pay for return of the product to customer.
- If the product is returned to ITECH for warranty service from overseas, all the freights, duties and other taxes shall be on the account of customer.

Limitation of Warranty

This Warranty will be rendered invalid if the product is:

- Damaged resulting from customer-wired circuits or customer-supplied parts or accessories;
- Modified or repaired by customer without authorization;
- Damaged resulting from customer-wired circuits or use in an environment not designated by us;
- The product model or serial number is altered, deleted, removed or made illegible by customer;
- Damaged as a result of accidents, including but not limited to lightning, moisture, fire, improper use or negligence.

Safety Symbols

⎓	Direct current	|	ON (power)
∿	Alternating current	○	OFF (power)
≂	Both direct and alternating current	⎍	Power-on state
⏚	Chassis (earth ground) symbol.	⊓	Power-off state
⏚	Earth (ground) terminal	±	Reference terminal
⚠	Caution	+	Positive terminal
⚠	Warning (refer to this manual for specific Warning or Caution information)	−	Negative terminal
⊥	A chassis terminal	-	-

Safety Precautions

The following safety precautions must be observed during all phases of operation of this instrument. Failure to comply with these precautions or specific warnings elsewhere in this manual will constitute a default under safety standards of design, manufacture and intended use of the instrument. ITECH assumes no liability for the customer's failure to comply with these precautions.

WARNING

- **Do not use the instrument if it is damaged. Before operation, check the casing to see whether it cracks. Do not operate the instrument in the presence of inflammable gasses, vapors or dusts.**
- **The power supply is provided with a power line during delivery and should be connected to junction box. Before operation, be sure that the power supply is well grounded. Make sure to use the power cord supplied by ITECH.**
- **Check all marks on the instrument before connecting the instrument to power supply.**
- **Use electric wires of appropriate load. All loading wires should be capable of bearing maximum short-circuit of instrument without overheating. If there are multiple loads, each pair of the load power cord must be carry out the full rated short-circuit output current of the power securely.**
- **Ensure the voltage fluctuation of mains supply is less than 10% of the working voltage range in order to reduce risks of fire and electric shock.**
- **Do not install alternative parts on the instrument or perform any unauthorized modification.**
- **Do not use the instrument if the detachable cover is removed or loosen.**
- **To prevent the possibility of accidental injuries, be sure to use the power adapter supplied by the manufacturer only.**
- **We do not accept responsibility for any direct or indirect financial damage or loss of profit that might occur when using the instrument.**
- **This instrument is used for industrial purposes. Do not apply this product to IT power supply system.**
- **Never use the instrument with a life-support system or any other equipment subject to safety requirements.**

CAUTION

- **Failure to use the instrument as directed by the manufacturer may render its protective features void.**
- **Always clean the casing with a dry cloth. Do not clean the internals.**
- **Make sure the vent hole is always unblocked.**

Environmental Conditions

The instrument is designed for indoor use and an area with low condensation. The table below shows the general environmental requirements for the instrument.

Environmental Conditions	Requirements
Operating temperature	0°C to 40°C
Operating humidity	20%-80% (non-condensation)

Storage temperature	-10°C to 70 °C
Altitude	Operating up to 2,000 meters
Installation category	II
Pollution degree	Pollution degree 2

Note

To make accurate measurements, allow the instrument to warm up for 30 min.

Regulatory Markings

CE	The CE mark indicates that the product complies with all the relevant European legal directives. The specific year (if any) affixed refers to the year when the design was approved.
	The instrument complies with the WEEE Directive (2002/96/EC) marking requirement. This affix product label indicates that you must not discard the electrical/electronic product in domestic household waste.
	This symbol indicates the time period during which no hazardous or toxic substances are expected to leak or deteriorate during normal use. The expected useful life of the product is 10 years. The product can be used safely during the 10-year Environment Friendly Use Period (EFUP). Upon expiration of the EFUP, the product must be immediately recycled.

Waste Electrical and Electronic Equiment (WEEE) Directive

2002/96/EC Waste Electrical and Electronic Equipment (WEEE) Directive

This product complies with the WEEE Directive (2002/96/EC) marking requirement. This affix product label indicates that you must not discard the electrical/electronic product in domestic household waste.

Product Category

With reference to the equipment classifications described in the Annex 1 of the WEEE Directive, this instrument is classified as a “ Monitoring and Control Instrument “.

To return this unwanted instrument, contact your nearest ITECH office.

Compliance Information

Complies with the essential requirements of the following applicable European Directives, and carries the CE marking accordingly:

- Electromagnetic Compatibility (EMC) Directive 2014/30/EU
- Low-Voltage Directive (Safety) 2014/35/EU

Conforms with the following product standards:

EMC Standard

IEC 61326-1:2012/ EN 61326-1:2013 [1,2,3]

Reference Standards

CISPR 11:2009+A1:2010/ EN 55011:2009+A1:2010 (Group 1, Class A)
IEC 61000-4-2:2008/ EN 61000-4-2:2009
IEC 61000-4-3:2006+A1:2007+A2:2010/ EN 61000-4-3:2006+A1:2008+A2:2010
IEC 61000-4-4:2004+A1:2010/ EN 61000-4-4:2004+A1:2010
IEC 61000-4-5:2005/ EN 61000-4-5:2006
IEC 61000-4-6:2008/ EN 61000-4-6:2009
IEC 61000-4-11:2004/ EN 61000-4-11:2004

1. The product is intended for use in non-residential/non-domestic environments. Use of the product in residential/domestic environments may cause electromagnetic interference.
2. Connection of the instrument to a test object may produce radiations beyond the specified limit.
3. Use high-performance shielded interface cable to ensure conformity with the EMC standards listed above.

Safety Standard

IEC 61010-1:2010/ EN 61010-1:2010

Content

Chapter1 SCPI Command Introduction

1.1 Overview

SCPI is short for Standard Commands for Programmable Instruments which defines a communication method of bus controller and instrument. It is based on ASCII and supply for testing and measuring instruments. SCPI command is based on hierarchical architecture which also known as tree system. In this system, Relevant Command is returned to a common node or root, so that a subsystem is formed.

A part of OUTPut subsystem is listed below:

OUTPut:

SYNC {OFF|0|ON|1}

SYNC:

MODE {NORMal|CARRier}

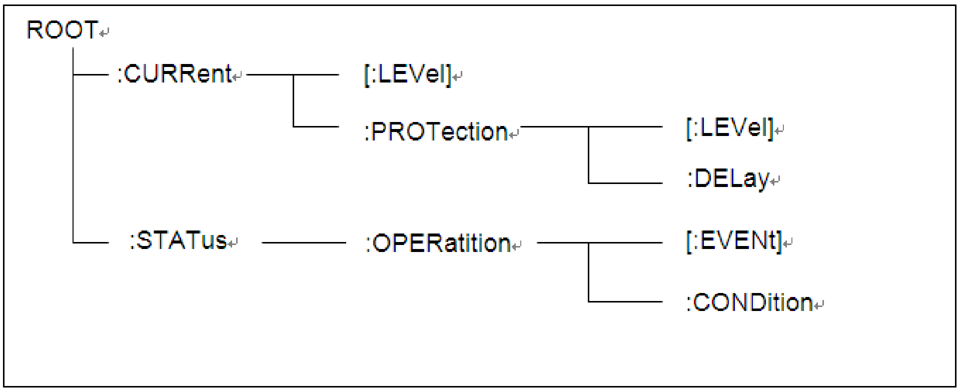
POLarity {NORMal|INVerted}

OUTPut is the root class keyword, SYNC is the second keyword, MODE and POLarity are the third keyword. Colon(:) is used for separating the command keyword and the next level keyword.

1.2 Command Type of SCPI

SCPI has two types of commands, common and subsystem.

- Common commands generally are not related to specific operation but to controlling overall instrument functions, such as reset, status, and synchronization. All common commands consist of a three-letter mnemonic preceded by an asterisk: *RST *IDN? *SRE 8.
- Subsystem commands perform specific instrument functions. They are organized into an inverted tree structure with the "root" at the top. The following figure shows a portion of a subsystem command tree, from which you access the commands located along the various paths.



Multiple commands in a message

Multiple SCPI commands can be combined and sent as a single message with one message terminator. There are two important considerations when sending several commands within a single message:

- Use a semicolon to separate commands within a message.
- Head paths influence how the instrument interprets commands.

We consider the head path as a string which will be inserted in front of every command of a message. As for the first command of a message, the head path is a null string; for each subsequent command, the head path is a string which is defined to form the current command until and including the head of the last colon separator. A message with two combined commands: CURR:LEV 3;PROT:STAT OFF

The example indicates the effect of semicolon and explains the concept of head path. Since the head path is defined to be "CURR" after "curr: lev 3", the head of the second command, "curr", is deleted and the instrument explains the second command as: CURR:PROT:STAT OFF

If "curr" is explicitly included in the second command, it is semantically wrong. Since combining it with the head path will become "CURR:CURR:PROT:STAT OFF", resulting in wrong command.

Movement in the subsystem

In order to combine commands from different subsystems, you need to be able to reset the header path to a null string within a message. You do this by beginning the command with a colon (:), which discards any previous header path. For example, you could clear the output protection and check the status of the Operation Condition register in one message by using a root specifier as follows:

```
PROTection:CLEAr;:STATus:OPERation:CONDition?
```

The following message shows how to combine commands from different subsystems as well as within the same subsystem:

```
POWer:LEVel 200;PROTection 28; :CURRent:LEVel 3;PROTection:STATe ON
```

Note the use of the optional header LEVel to maintain the correct path within the voltage and current subsystems, and the use of the root specifier to move between subsystems.

Including Common Commands

You can combine common commands with subsystem commands in the same message. Treat the common command as a message unit by separating it with a semicolon (the message unit separator). Common commands do not affect the header path; you may insert them anywhere in the message.

```
VOLTage:TRIGgered 17.5;:INITialize;*TRG
```

OUTPut OFF;*RCL 2;OUTPut ONIT872X-3X SCPI Communication protocol 17

Case sensitivity

Common commands and SCPI commands are not case sensitive. You can use upper or lower, for example:

*RST = *rst

:DATA? = :data?

:SYSTem:PRESet = :system:preset

Long-form and short-form versions

A SCPI command word can be sent in its long-form or short-form version. However, the short-form version is indicated by upper case characters. Examples:

:SYSTem:PRESet long-form

:SYST:PRES short form

:SYSTem:PRES long-form and short-form combination

Note that each command word must be in long-form or short-form, and not something in between.

For example, :SYSTe:PRESe is illegal and will generate an error. The command will not be executed.

Query

Observe the following precautions with queries:

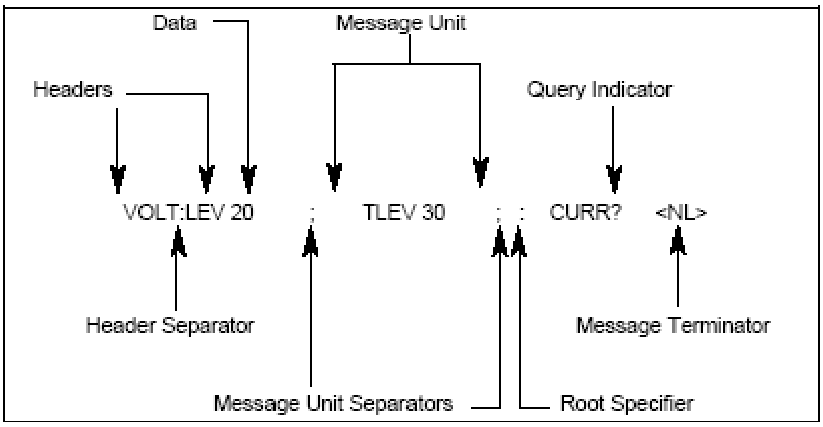
- Set up the proper number of variables for the returned data. For example, if you are reading back a measurement array, you must dimension the array according to the number of measurements that you have placed in the measurement buffer.
- Read back all the results of a query before sending another command to the instrument. Otherwise a Query Interrupted error will occur and the unreturned data will be lost.

1.3 Message Typeof SCPI

There are two types of SCPI messages, program and response.

- program message: A program message consists of one or more properly formatted SCPI commands sent from the controller to the instrument. The message, which may be sent at any time, requests the instrument to perform some action.
- response message: A response message consists of data in a specific SCPI format sent from the instrument to the controller. The instrument sends the message only when commanded by a program message called a "query."

The next figure illustrates SCPI message structure:



The Message Unit

The simplest SCPI command is a single message unit consisting of a command header (or keyword) followed by a message terminator. The message unit may include a parameter after the header. The parameter can be numeric or a string.

ABORt<NL>

VOLTage 20<NL>

Headers

Headers, also referred to as keywords, are instructions recognized by the instrument. Headers may be either in the long form or the short form. In the long form, the header is completely spelled out, such as VOLTAGE, STATUS and DELAY. In the short form, the header has only the first three or four letters, such as VOLT, STAT and DEL.

Query Indicator

Following a header with a question mark turns it into a query (VOLTage?, VOLTage:PROTection?). If a query contains a parameter, place the query indicator at the end of the last header(VOLTage:PROTection?MAX).

Message Unit Separator

When two or more message units are combined into a compound message, separate the units with a semicolon (STATus:OPERation?;QUEStionable?).

Root Specifier

When it precedes the first header of a message unit, the colon becomes the root specifier.

Message Terminator

A terminator informs SCPI that it has reached the end of a message. Three permitted message terminators are:

- newline (<NL>),decimal 10 or hexadecimal 0X0A in ASCII.
- end or identify (<END>)
- both of the above (<NL><END>).

In the examples of this guide, there is an assumed message terminator at the end of each message.

Command execution rules

- Commands execute in the order that they are presented in the program message.
- An invalid command generates an error and, of course, is not executed.
- Valid commands that precede an invalid command in a multiple command program message are executed.
- Valid commands that follow an invalid command in a multiple command program message are ignored.

1.4 Response Data Type

Character strings returned by query statements may take either of the following forms, depending on the length of the returned string:

- **<CRD>:** Character Response Data. Permits the return of character strings.
- **<AARD>:** Arbitrary ASCII Response Data. Permits the return of undelimited 7-bit ASCII. This data type has an implied message terminator.
- **<SRD>:** String Response Data. Returns string parameters enclosed in double quotes.
- **<Block>**: arbitrary block data.

Response messages

A response message is the message sent by the instrument to the computer in response to a query command.

Sending a response message

After sending a query command, the response message is placed in the Output Queue. When the instrument is then addressed to talk, the response message is sent from the Output Queue to the computer.

Multiple response messages

If you send more than one query command in the same program message, the multiple response messages for all the queries is sent to the computer when the instrument is addressed to talk. The responses are sent in the order that the query commands were sent and are separated by semicolons (;). Items within the same query are separated by commas (,). The following example shows the response message for a program message that contains four single item query commands:

0; 1; 1; 0

Response message terminator (RMT)

Each response is terminated with an LF (line feed) and EOI (end or identify). The following example shows how a multiple response message is terminated:

0; 1; 1; 0; <RMT>

Message exchange protocol

Two rules summarize the message exchange protocol:

Rule 1.You must always tell the IT6500 Series what to send to the computer.

The following two steps must always be performed to send information from the instrument other computer:

1. Send the appropriate query command(s) in a program message.

2. Address the IT6500 Series to talk.

Rule 2.The complete response message must be received by the computer before another program message can be sent to the IT6500 Series.

1.5 Command Format

Formats for command display are as follows:

[SOURce[1|2]:]VOLTage:UNIT {VPP|VRMS|DBM}

[SOURce[1|2]:]FREQuency:CENTer {<frequency>|MINimum|MAXimum|DEFault}

Based on the command syntax, most commands (and certain Parameter) are expressed in both upper and lower cases. Upper case refers to abbreviation of commands. Shorter program line may send commands in abbreviated format. Long-format commands may be sent to ensure better program readability.

For example, both formats of VOLT and VOLTAGE are acceptable in the above syntax statements. Upper or lower case may be used. Therefore, formats of VOLTAGE, volt and Volt are all acceptable. Other formats (such as VOL and VOLTAG) are invalid and will cause errors.

- Parameter options with given command strings are included in the brace ({ }). The brace is not sent along with command strings.
- Vertical stripes (|) separate several parameter options with given command strings. For example, {VPP|VRMS|DBM} indicates that you may assign "APP", "VRMS" or "DBM" in the above commands. Vertical stripes are not sent along with command strings.
- Angle brackets (< >) in the second example indicates that a value must be assigned to the parameter in the brace. For example, the parameter in the angle bracket is <frequency> in the above syntax statements. Angle brackets are not sent along with command strings. You must assign a value (such as "FREQ:CENT 1000") to the parameter, unless you select other options displayed in the syntax (such as "FREQ:CENT MIN").
- Some syntax elements (such as nodes and Parameter) are included in square brackets ([ ]). It indicates that these elements can be selected and omitted. Angle brackets are not sent along with command strings. If no value is assigned to the optional Parameter, the instrument will select a default value. In the above examples, "SOURce[1|2]" indicates that you may refer to source channel 1 by "SOURce" or "SOURce1" or "SOUR1" or "SOUR". In addition, since the whole SOURce node is optional (in the square bracket), you can refer to the channel 1 by omitting the whole SOURce node. It is because the channel 1 is the default channel for SOURce language node. On the other hand, if you want to refer to channel 2, "SOURce2" or "SOUR2" must be used in the program line.

Colon (:)

It is used to separate key words of a command with the key words in next level. As shown below:

APPL:SIN 455E3,1.15,0.0

In this example, APPLy command assigns a sine wave with frequency of 455

KHz, amplitude of 1.15 V and DC offset of 0.0 V.

Semicolon (;)

It is used to separate several commands in the same subsystem and can also minimize typing. For example, to send the following command string:

```
TRIG:SOUR EXT; COUNT 10
```

has the same effect as sending the following two commands:

```
TRIG:SOUR EXT
TRIG:COUNT 10
```

Question mark (?)

You can insert question marks into a command to query current values of most Parameter. For example, the following commands will trigger to set the count as 10:

```
TRIG:COUN 10
```

Then, you may query count value by sending the following command:

```
TRIG:COUN?
```

You may also query the allowable minimum or maximum count as follows:

```
TRIG:COUN?MIN
TRIG:COUN?MAX
```

Comma (,)

If a command requires several Parameter, then a comma must be used to separate adjacent Parameter.

Space

You must use blank characters, [TAB] or [Space] to separate Parameter with key words of commands.

Generic commands (*)

The IEEE-488.2 standard defines a set of common commands that perform functions such as reset, self-test, and status operations. Generic commands always start with a asterisk (*) and occupy 3 character sizes, including one or more Parameter. Key words of a command and the first parameter are separated by a space. Semicolon (;) can separate several commands as follows:

```
*RST; *CLS; *ESE 32; *OPC?
```

Command terminator

Command strings sent to the instrument must end with a <Newline> (<NL>) character. IEEE-488 EOI (End or Identify) information can be used as <NL> character to replace termination command string of <NL> character. It is acceptable to place one <NL> after a <Enter>. Termination of command string always resets current SCPI command path to root level.

NOTE

As for every SCPI message with one query sent to the instrument, the instrument will use a <NL> or newline sign (EOI) to terminate response of return. For example, if "DISP:TEXT?" is sent, <NL> will be placed after the returned data string to terminate response. If an SCPI message includes several queries separated by semicolon (such as "DISP?;DISP:TEXT?"), <NL> will terminate response returned after response to the last query. In all cases, the program must read <NL> in response before another command is sent to the instrument, otherwise errors will be caused.

1.6 Data Type

SCPI language defines several data types used for program message and response messages.

- Numerical parameter

Commands requiring numerical parameter support the notations of all common decimal notations, including optional signs, decimal points, scientific notation, etc. Special values of numerical parameter are also acceptable, such as MIN, MAX and DEF. In addition, suffixes for engineering units can also be sent together with numerical Parameter (including M, k, m or u). If the command accepts only some specific values, the instrument will automatically round the input parameter to acceptable values. The following commands require numerical Parameter of frequency value:

[SOURce[1|2]:]FREQuency:CENTer {<Frequency>|MINimum|MAXimum}

- <NR1>: represents an integer value, such as 273;
- <NR2>: represents a real number in floating-point format, such as 0.273;
- <NR3>: represents a real number in scientific notation, such as 2.73E+2;
- <Nrf>:The extensible form includes <NR1>, <NR2> and <NR3>;
- <Nrf+>: The extensible decimal form includes <NRf> and MIN MAX DEF, MIN and MAX represent the minimum and maximum finite number. DEF is the default of the parameter.

- Discrete parameter

Discrete Parameter are used for settings with limited number of programming values (such as IMMediate, EXTernal or BUS). They can use short and long format like key words of commands. They may be expressed in both upper and lower case. The query response always returns uppercase Parameter in short format. The following commands require discrete Parameter in voltage unit:

[SOURce[1|2]:]VOLTage:UNIT {VPP|VRMS|DBM}

- Boolean parameter

Boolean Parameter refer to true or false binary conditions. In case of false conditions, the instrument will accept "OFF" or "0". In case of true conditions, the instrument will accept "ON" or "1". In query of Boolean settings, the instrument will always return "0" or "1". Boolean Parameter are required by the following commands:

DISPlay {OFF|0|ON|1}

- ASCII string Parameter

String Parameter may actually include all ASCII character sets. Character strings must start and end with paired quotation marks; and single quotation marks or double quotation marks are both allowed. Quotation mark separators may also act as one part of a string, they can be typed twice without any character added between them. String parameter is used in the following command:

DISPlay:TEXT <quoted string>

For example, the following commands display message of "WAITING..." (without quotation marks) on the front panel of the instrument.

DISP:TEXT "WAITING..."

Single quotation marks may also be used to display the same message.

DISP:TEXT 'WAITING...'

- <CPD>: character program data;
- <SPD>: string program data. String parameters enclosed in single or double quotes.

1.7 Communication Interface

IT6500C have five standard communication interfaces: RS232, USB, GPIB, LAN and CAN. The customer can choose any one according to his demands.

Please refer to user manual for detailed introductions of the remote interface connections.

Chapter2 SCPI status register

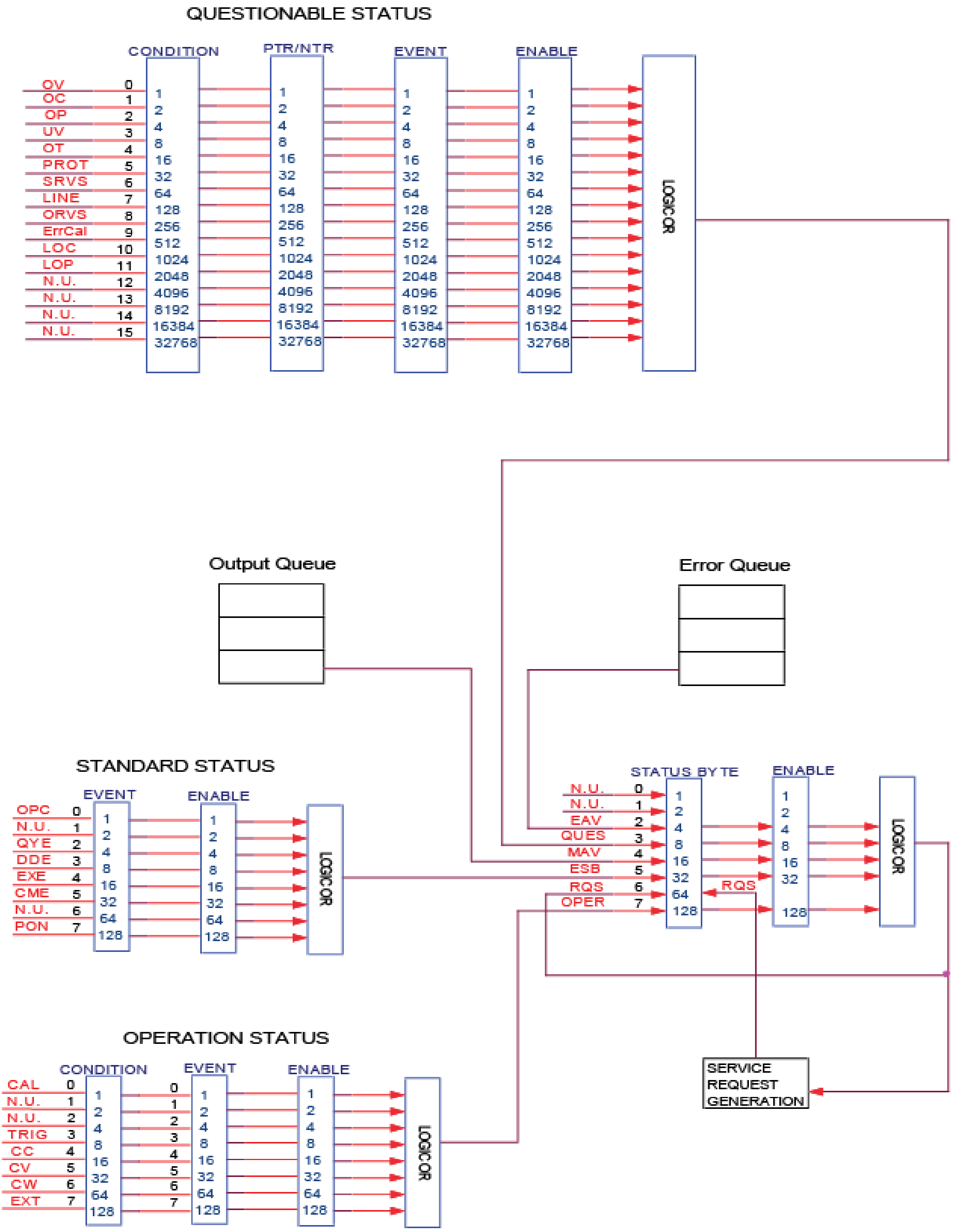
You can get the current status of the power supply by reading the operation status registers. The power supply records the different status of the instrument through the four status register group, the four status register group are: status byte register, standard event register, query status register and operation status register. Status byte register records the

information of the other status register

BIT	Signal	Meaning
		Operation status register
0	CAL	The power supply is calculating the new calibration
3		parameter.
4	TRIG	The power supply is triggered.
5	CC	The power supply is in constant current status.
6	CV	The power supply is in constant voltage status.
7	CW	The power supply is in constant power status.
	EXT	Ext-Ctrl is enabled.
		Query status register
0	OV	Over voltage
1	OC	Over current
2	OP	Over power
3	UV	Under Voltage
4	OT	Over temperature
5	PROT	All of protect function status
6	SRVS	Remote Sense Reverse
7	LINE	Off Line
8	ORVS	Output Reverse protect
9	ErrCal	Calibration error
10	LOC	The load over current
11	LOP	The load over power
		Standard event register
0	OPC	Operation completed. All the parallel operations are
2		completed.
3	QYE	Query error. Output buffer data lost.
4	DDE	Instrument memory data loss or self test error
5	EXE	Execute error. Command parameter over flow or the
7		operation condition is not consistent
	CME	Command error. There is syntax or semantic error in
		the command received.
	PON	Power on bit, this bit is set to 1 after power on
		Status byte register
2	EAV	Error buffer available
3	QUES	This bit is set to 1 when any one status of enabled
		query status register changes.
4	MAV	Output buffer available
5	ESB	Bit ESB is set to 1 when the status of a enabled
		standard event status
6	RQS	register changes
	OPER	If the status of enabled operation register

7		changes,then this bit is set to1.

The following chart is the Status register Structure of the power supply:



Chapter3 SCPI Command Description

STATus:QUEStionable[:EVENt]?

This command can be used to read the value in query event register.The power supply will return a decimal number corresponding to the binary weighted sum of each unit digit of register. These digits will be latched. After executing this command, the query event register will be cleared.

Query syntax

STATus:QUEStionable[:EVENt]?

Arguments

None

Returns

<NR1>

Related Command

STATus:QUEStionable:ENABle

STATus:QUEStionable:CONDition?

This command is used to read the value of query condition register and gets the status of power supply.

Query syntax

STATus:QUEStionable:CONDition?

Arguments

None

Returns

<NR1>

STATus:QUEStionable:ENABle

This command edits the enable register value of query event. In query, the power supply will return a decimal number representing the binary weighted sum of the enable register.

Command syntax

STATus:QUEStionable:ENABle <NRf>

Arguments

<.NR1> 0～65535

Default set

Refer to *PSC command

Example

STATus:QUEStionable:ENABle 16

Query syntax

STATus:QUEStionable:ENABle?

Returns

<NR1>

Related Command

*PSC

STATus:QUEStionable:PTRansition

This command is used to edit the positive transition trigger register of query event.

Command syntax

STATus:QUEStionable:PTRansition <NR1>

Arguments

0~65535

Example

STAT:QUES:PTR 2000

Query syntax

STATus:QUEStionable:PTRansition?

Returns:

NR1

STATus:QUEStionable:NTRansition

This command is used to edit the negative transition trigger register of query event.

Command syntax

STATus:QUEStionable:NTRansition <NR1>

Arguments

0~65535

Example

STAT:QUES:NTR 1000

Query syntax

STATus:QUEStionable:NTRansition?

Returns

NR1

STATus:OPERation[:EVENt]?

This command can read the parameter from operation event register. After executing this order, operation event register is reset.

Query syntax

STATus:OPERation[:EVENt]?

Arguments

None

Returns

<NR1>

Related Command

STATus:OPERation:ENABle

STATus:OPERation:CONDition?

This command can read the parameter from the operation condition register. When the parameter of operation condition register changes, the bit corresponding in operation event register is 1.

Query syntax

STATus:OPERation:CONDition?

Arguments

None

Returns

<NR1>

STATus:OPERation:ENABle

This command can set the parameter of operation event enable register. Setting parameter can determine which bit value of operation event register is 1 and the bit will cause OPER of status byte register to be 1.

Command syntax

STATus:OPERation:ENABle <NR1>

Arguments

0～65535

Example

STATus:OPERation:ENABle 128

Query syntax

STATus:OPERation:ENABle?

Returns

<NR1>

STATus:OPERation:PTRansition

This command is used to edit the positive transition trigger register of operation event.

Command syntax

STATus:OPERation:PTRansition <NR1>

Arguments

0～65535

Example

STATus:OPERation:PTRansition 1000

Query syntax

STATus:OPERation:PTRansition?

Returns

<NR1>

STATus:OPERation:NTRansition

This command is used to edit the negative transition trigger register of operation event.

Command syntax

STATus:OPERation:NTRansition <NR1>

Arguments

0～65535

Example

STATus:OPERation:NTRansition 1000

Query syntax

STATus: OPERation:NTRansition?

Returns

<NR1>

SYSTem:BEEPer:IMMediate

This command is used to test the beeper. After executing this command, the instrument will beeper immediately.

Command syntax

SYSTem:BEEPer:IMMediate

Arguments

None

Example

SYST:BEEP:IMM

Query syntax

None

SYSTem:BEEPer[:STATe]

This command is used to turn on/turn off the beeper, when the arguments is set to 1/ON, the beeper is enabled and press keyboard will beeper, otherwise, it is mute.

Command syntax

SYSTem:BEEPer <bool>

Arguments

OFF|ON|0|1

Example

SYSTem:BEEP 1

Query syntax

SYSTem:BEEPer[:STATe]?

Returns

0|1

SYSTem:VERSion?

This command is used to query the current SCPI version. The returned parameter is a string like “YYYY.V “, in which the YYYY is the year of that version, V is the software version of that year.

Command syntax

SYST:VERS?

Arguments

None

Returns

<NR2>

SYSTem:ERRor?

This command is used to read the error information.

Command syntax

SYSTem:ERRor?

Arguments

None

SYSTem:REMote

This command is used to switch to the remote control mode(PC control).

In this mode, the keys on front panel is invalid except [**Shift**]+Meter], [**On/Off**] and [**Meter**].

Command syntax

SYSTem:REMote

Arguments

None

Query syntax

None

Example

SYST:REM

SYSTem:LOCal

This command is used to switch the instrument to local control mode(control from panel). In this mode ,all of keys on front panel is valid.

Command syntax

SYSTem:LOCal

Arguments

None

Query syntax

None

Example

SYST:LOC

SYSTem:RWLock

This command is transmit through RS232 interface, the same function as **SYSTem:REMote**, but the difference is: this command can lock " LOCAL " button as well. When this command is executed, the " Local " button can't switch to local control mode.

Command syntax

SYSTem:RWLock

Arguments

None

Example:

SYST:RWL

SYSTem:COMMunicate:SELect

This command is used to select the communication interface.

Arguments

RS232|USB|GPIB|LAN

Example

SYST:COMM:SEL RS232

Query syntax

SYSTem:COMMunicate:SELect?

Returns

RS232|USB|GPIB|LAN

SYSTem:COMMunicate:GPIB:ADDRess

This command is used to set the address of GPIB interface.

Command syntax

SYSTem:COMMunicate:GPIB[:SELF]:ADDRess <NR1>

Arguments

<1-30>

Reset Value

15

Query syntax

SYSTem:COMMunicate:GPIB[:SELF]:ADDRess?

Returns

NR1

SYSTem:COMMunicate:SERial:BAUDrate

This command is used to set the baudrate of RS232.

Command syntax

SYSTem:COMMunicate:SERial:BAUDrate<4800|9600|19200|38400|57600|115200>

Arguments

4800|9600|19200|38400|57600|115200

Example

SYSTem:COMM:SER:BAUD 4800

Query syntax

SYSTem:COMMunicate:SERial:BAUDrate?

Returns

<NR1>

SYSTem:COMMunicate:LAN:CURRent:ADDRess

This command is used to set IP address of power supply.

Command syntax

SYSTem:COMMunicate:LAN:CURRent:ADDRess <STR>

Arguments

<STR>

Unit

None

*RST

192.168.0.200

Example

SYST:COMM:LAN:CURR:ADDR "192.168.0.200"

Query syntax

SYSTem:COMMunicate:LAN:CURRent:ADDRess?

Returns

<STR>

SYSTem:COMMunicate:LAN:CURRent:DGATeway

This command is used to set gateway of power supply.

Command syntax

SYSTem:COMMunicate:LAN:CURRent:DGATeway

Arguments

<STR>

Unit

None

*Reset Value

192.168.0.1

Example

SYST:COMM:LAN:CURR:DGAT "192.168.0.1"

Query syntax

SYSTem:COMMunicate:LAN:CURRent:DGATeway?

Returns

<STR>

SYSTem:COMMunicate:LAN:CURRent:SMASk

This command is used to set the subnet mask of power supply.

Command syntax

SYSTem:COMMunicate:LAN:CURRent:SMASk

Arguments

<STR>

Unit

None

*RST

255.255.255.0

Example

SYST:COMM:LAN:CURR:SMAS "255.255.255.0"

Query syntax

SYSTem:COMMunicate:LAN:CURRent:SMASk?

Returns

<STR>

SYSTem:COMMunicate:LAN:DHCP[:STATe]

This command is used to set Dynamic IP address of power supply.

Command syntax

SYSTem:COMMunicate:LAN:DHCP[:STATe] <bool>

Arguments

0|1|OFF|ON

Reset Value

0

Example

SYST:COMM:LAN:DHCP 1

Query syntax

SYSTem:COMMunicate:LAN:DHCP[:STATe]?

Returns

0|1

SYSTem:COMMunicate:LAN:SOCKetport

This command is used to set socket port of communication.

Command syntax

SYSTem:COMMunicate:LAN:SOCKetport <NR1>

Arguments

<NR1>

Unit

None

*RST 值

30000

Query syntax

SYSTem:COMMunicate:LAN:SOCKetport?

Returns

<NR1>

SYSTem:COMMunicate:LAN:MACaddress?

This command is used to return the MAC address of LAN communication.

Command syntax

SYSTem:COMMunicate:LAN:MACaddress?

Arguments

<STR>

Chapter4 Display Related Command

DISPlay[:WINDow][:STATe]

This command is used to set the screen state.

Command syntax

DISPlay[:WINDow][:STATe] <bool>

Arguments

0|1|OFF|ON

Example

DISP 1

Query syntax

DISPlay[:WINDow][:STATe]?

Returns

0|1

DISPlay[:WINDow]:TEXT[:DATA]

This command is used to display a character string on point area.

Command syntax

DISPlay[:WINDow]:TEXT[:DATA] <NR1>,<str>

Arguments

<NR1>,<str>

Example

DISP:TEXT 1, “HELL0 “

Query syntax

DISPlay[:WINDow]:TEXT[:DATA]?

Returns

<str>

DISPlay[:WINDOW]:TEXT:CLEar

This command is used to clean the screen.

Command syntax

DISPlay[:WINDOW]:TEXT:CLEar

Arguments

None

Example

DISP:TEXT:CLE

Chapter5 Trigger Command

TRIGger[:IMMediate]

This command is used to create a trigger signal.

Command syntax

TRIGger[:IMMediate]

Arguments

None

TRIGger:SOURce

This command is used to set the trigger source.

Command syntax

TRIGger:SOURce <MANUal|BUS|EXTernal>

Arguments

MANUal|BUS|EXTernal

Query syntax

TRIGger:SOURce?

Returns

<CRD>

Chapter6 Input Measuring Commands

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

This command is used to enquire the actual output voltage.

Command syntax

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

Arguments

None

Returns

〈NRf〉

Unit

V

Example

MEAS:VOLT?

FETCh[:SCALar]:VOLTage[:DC]?

This command is used to fetch the DC voltage value in buffer.

Command syntax

FETCh[:SCALar]:VOLTage[:DC]?

Returns

<NRf>

Unit

V

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

This command is used to enquire the latest DC current value.

Command syntax

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

Arguments

None

Returns

<NRf>

Unit

A

Example

MEAS:CURR?

FETCh[:SCALar]:CURRent[:DC]?

This command is used to fetch the DC current value in buffer.

Command syntax

FETCh[:SCALar]:CURRent[:DC]?

Returns

<NRf>

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

This command is used to enquire the latest output power .

Command syntax

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

Arguments

None

Returns

〈NRf〉

Returns Unit

W

Example

MEASure:SCALar:POWer:DC?

FETCh[:SCALar]:POWer[:DC]?

This command is used to fetch the power value in buffer.

Command syntax

FETCh:POWer?

Returns

<NRf>

FETCh?

This command is used to fetch the measurements of voltage, current and power.

Command syntax

FETCh?

Returns

<NRf>,<NRf>,<NRf>

MEASure?

This command is used to enquire the latest measurements of voltage, current and power.

Command syntax

MEASure?

Returns

<NRf>,<NRf>,<NRf>

Chapter7 Output Commands

[SOURce:]CURRent[:LEVel][:IMMediate][:AMPLitude]

This command is used to set the output current value.

Command syntax

[SOURce:]CURRent[:LEVel][:IMMediate][:AMPLitude]<MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

A

Reset Value

0.5 (The reset value of different models are different)

Example

CURR 2.0

Query syntax

[SOURce:]CURRent[:LEVel][:IMMediate][:AMPLitude]? [MINimum|MAXimum]

Returns

NRf

[SOURce:]CURRent:MINimum[:LEVel]

This command is used to set the minimum value of current.

Command syntax

[SOURce:]CURRent:MINimum[:LEVel] <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

A

Reset Value

0.0

Example

CURR:MIN   0.0

Query syntax

[SOURce:]CURRent:MINimum[:LEVel]? [MINimum|MAXimum]

Returns

NRf

Related Command

CURR:MAX,CURR

[SOURce:]CURRent:MAXimum[:LEVel]

This command is used to set the maximum value of current.

Command syntax

[SOURce:]CURRent:MAXimum[:LEVel] <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

A

Reset Value

MAXimum

Example

CURR:MAX 120.0

Query syntax

[SOURce:]CURRent:MAXimum[:LEVel]? [MINimum|MAXimum]

Returns

NRf

Related Command

CURR:MIN ,CURR

[SOURce:]CURRent:RISE[:LEVel]

This command is used to set rising time of current.

Command syntax

[SOURce:]CURRent:RISE[:LEVel] <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

S

Reset Value

0.001

Example

CURR:RISE 10.0

Query syntax

[SOURce:]CURRent:RISE[:LEVel]? [MINimum|MAXimum]

Returns

NRf

[SOURce:]CURRent:FALL[:LEVel]

This command is used to set falling time of current.

Command syntax

[SOURce:]CURRent:FALL[:LEVel] <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

S

Reset Value

0.001

Example

CURR:FALL 2.0

Query syntax

[SOURce:]CURRent:FALL[:LEVel]? [MINimum|MAXimum]

Returns

NRf

[SOURce:]CURRent:PROTection:STATe

This command is used to set over current protection state.

Command syntax

[SOURce:]CURRent:PROTection:STATe <bool>

Command Arguments

ON|OFF|1|0

Example

CURR:PROT:STAT 1

Reset Value

1

Query syntax

[SOURce:]CURRent:PROTection:STATe?

Returns

0|1

[SOURce:]CURRent:PROTection[:LEVel]

This command is used to set current value for over current protection.

Command syntax

[SOURce:]CURRent:PROTection[:LEVel] <MINimum|MAXimum|DEFault|NRf>

Arguments

MINimum|MAXimum|DEFault|NRf

Unit

A

Reset Value

MAXimum

Example

CURR:PROT 10.0

Query syntax

[SOURce:]CURRent:PROTection[:LEVel]? [MINimum|MAXimum|DEFault]

Returns

NRf

[SOURce:]CURRent:PROTection:DELay

This command is used to set delay time for over current protection.

Command syntax

[SOURce:]CURRent:PROTection:DELay <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

S

Reset Value

0.2

Example

CURR:PROT:DEL 6.0

Query syntax

[SOURce:]CURRent:PROTection:DELay? [MINimum|MAXimum]

Returns

NRf

[SOURce:]VOLTage[:LEVel][:IMMediate][:AMPLitude]

This command is used to set output Voltage value.

Command syntax

[SOURce:]VOLTage[:LEVel][:IMMediate][:AMPLitude]
<MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

V

Reset Value

0.0

Example

VOLT 60.0

Query syntax

[SOURce:]VOLTage[:LEVel][:IMMediate][:AMPLitude]? [MINimum|MAXimum]

Returns

NRf

[SOURce:]VOLTage:MINimum[:LEVel]

This command is used to set minimum value of voltage.

Command syntax

[SOURce:]VOLTage:MINimum[:LEVel] <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

V

Reset Value

MINimum

Example

VOLT:MIN 2.0

Query syntax

[SOURce:]VOLTage:MINimum[:LEVel]? [MINimum|MAXimum]

Returns

NRf

[SOURce:]VOLTage:MAXimum[:LEVel]

This command is used to set maximum value of voltage.

Command syntax

[SOURce:]VOLTage:MAXimum[:LEVel] <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

V

Reset Value

MAXimum

Example

VOLT:MAX 24.0

Query syntax

[SOURce:]VOLTage:MAXimum[:LEVel]? [MINimum|MAXimum]

Returns

NRf

[SOURce:]VOLTage:RISE[:LEVel]

This command is used to set rising time of voltage.

Command syntax

[SOURce:]VOLTage:RISE[:LEVel] <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

S

Example

VOLT:RISE 5.0

Query syntax

[SOURce:]VOLTage:RISE[:LEVel]? [MINimum|MAXimum]

Returns

NRf

[SOURce:]VOLTage:FALL[:LEVel]

This command is used to set falling time of voltage.

Command syntax

[SOURce:]VOLTage:FALL[:LEVel] <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

S

Reset Value

0.001

Example

VOLT:FALL 2.0

Query syntax

[SOURce:]VOLTage:FALL[:LEVel]? [MINimum|MAXimum]

Returns

NRf

[SOURce:]VOLTage:PROTection:STATe

This command is used to set over voltage protection state.

Command syntax

[SOURce:]VOLTage:PROTection:STATe <bool>

Arguments

ON|OFF|1|0

Query syntax

[SOURce:]VOLTage:PROTection:STATe?

Returns

0|1

[SOURce:]VOLTage:PROTection[:LEVel]

This command is used to set voltage value of OVP.

Command syntax

[SOURce:]VOLTage:PROTection[:LEVel] <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

V

Reset Value

MAXimum

Example

VOLT:PROT MAX

Query syntax

[SOURce:]VOLTage:PROTection[:LEVel]? [MINimum|MAXimum]

Returns

NRF

[SOURce:]VOLTage:PROTection:DELay

This command is used to set delay time for over voltage protection.

Command syntax

[SOURce:]VOLTage:PROTection:DELay <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

S

Reset Value

0.02

Example

VOLT:PROT:DEL 0.4

Query syntax

[SOURce:]VOLTage:PROTection:DELay? [MINimum|MAXimum]

Returns

NRf

[SOURce:]POWer[:LEVel][:IMMediate][:AMPLitude]

This command is used to set output power.

Command syntax:

[SOURce:]POWer[:LEVel][:IMMediate][:AMPLitude]
<MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

W

Reset Value

MAXimum

Example

POW 5.0

Query syntax

[SOURce:]POWer[:LEVel][:IMMediate][:AMPLitude]? [MINimum|MAXimum]

Returns

NRf

[SOURce:]POWer:MINimum[:LEVel]

This command is used to set minimum value of power.

Command syntax

[SOURce:]POWer:MINimum[:LEVel]

Arguments

MINimum|MAXimum|NRf

Unit

W

Reset Value

0.0

Example

POW:MIN 2.0

Query syntax

[SOURce:]POWer:MINimum[:LEVel]? [MINimum|MAXimum]

Returns

NRf

[SOURce:]POWer:MAXimum[:LEVel]

This command is used to set maximum value of power.

Command syntax

[SOURce:]POWer:MAXimum[:LEVel] <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

W

Reset Value

MAXimum

Example

POW:MAX min

Query syntax

[SOURce:]POWer:MAXimum[:LEVel]? [MINimum|MAXimum]

Returns

NRf

[SOURce:]POWer:RISE[:LEVel]

This command is used to set rising time of power.

Command syntax

[SOURce:]POWer:RISE[:LEVel] <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

S

Example

POW:RISE 5.0

Query syntax

[SOURce:]POWer:RISE[:LEVel]? [MINimum|MAXimum]

Returns

NRf

[SOURce:]POWer:FALL[:LEVel]

This command is used to set falling time of power.

Command syntax

[SOURce:]POWer:FALL[:LEVel] <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

S

Reset Value

0.001

Example

POW:FALL 3.0

Query syntax

[SOURce:]POWer:FALL[:LEVel]? [MINimum|MAXimum]

Returns

NRf

[SOURce:]POWer:PROTection:STATe

This command is used to set over power protection state.

Command syntax

[SOURce:]POWer:PROTection:STATe<bool>

Arguments

ON|OFF|1|0

Reset Value

1

Example

POW:PROT:STAT 1

Query syntax

[SOURce:]POWer:PROTection:STATe?

Returns

0|1

[SOURce:]POWer:PROTection[:LEVel]

This command is used to set power value for over power protection.

Command syntax

[SOURce:]POWer:PROTection[:LEVel] <MINimum|MAXimum|DEFault|NRf>

Arguments

MINimum|MAXimum|DEFault|NRf

Unit

w

Query syntax

[SOURce:]POWer:PROTection[:LEVel]? [MINimum|MAXimum|DEFault]

Returns

NRf

[SOURce:]POWer:PROTection:DELay

This command is used to set delay time for over power protection.

Command syntax

[SOURce:]POWer:PROTection:DELay <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

S

Reset Value

0.02

Example

POW: PROT: DEL 2.0

Query syntax

[SOURce:]POWer:PROTection:DELay? [MINimum|MAXimum]

Returns

NRf

[SOURce:]RESistance[:LEVel][:IMMediate][:AMPLitude]

This command is used to set internal resistance.

Command syntax

[SOURce:]RESistance[:LEVel][:IMMediate][:AMPLitude]
<MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

Ohms

Reset Value

MINimum

Example

RES 3.0

Query syntax

[SOURce:]RESistance[:LEVel][:IMMediate][:AMPLitude]?
[MINimum|MAXimum]

Returns

NRf

[SOURce:]PROTection:TRIGgered?

This command is used to query executing state of over voltage protection.

Command syntax

[SOURce:]PROTection:TRIGgered?

Arguments

None

Returns

NR1

[SOURce:]PROTection:CLEar

This command is used to clear the OVP state.

Command syntax

[SOURce:]PROTection:CLEar

Arguments

None

[SOURce:]APPLy

This command is used to set output voltage and current.

Command syntax

[SOURce:]APPly <NRf+>,<NRf+>

Arguments

<MINimum|MAXimum|NRf >,< MINimum|MAXimum|NRf >

Unit

V, A

Example

APPL 12.0V,24.0A

Query syntax

[SOURce:]APPLy?

Returns

NRf,NRf

[SOURce:]EXTern[:STATe]

This command is used to set external control state.

Command syntax

[SOURce:]EXTern[:STATe] <bool>

Arguments

ON|OFF|1|0

Reset Value

0

Example

EXT 1

Query syntax

[SOURce:]EXTern[:STATe]?

Returns

0|1

[SOURce:]EXTern:MONitor:RANGe

This command is used to set output range of external monitor.

Command syntax

[SOURce:]EXTern:MONitor:RANGe <10V|5V>

Arguments

10V|5V

Reset Value

10V

Example

EXT:MON:RANG 5V

Query syntax

[SOURce:]EXTern:MONitor:RANGe?

Returns

10V|5V

[SOURce:]EXTern:PROGram:MODE

This command is used to set external program mode.

Command syntax

[SOURce:]EXTern:PROGram:MODE <VOLTage| RESistance>

Arguments

VOLTage|RESistance

Reset Value

VOLTage

Example

EXT:PROG:MODE VOLT

Query syntax

[SOURce:]EXTern:PROGram:MODE?

Returns

VOLTage|RESistance

[SOURce:]EXTern:PROGram:RANGe

This command is used to set external program range.

Command syntax

[SOURce:]EXTern:PROGram:RANGe <10V/10K|5V/5K>

Arguments

10V/10K|5V/5K

Reset Value

10V/10K

Example

EXT:PROG:RANG 10V/10K

Query syntax

[SOURce:]EXTern:PROGram:RANGe?

Returns

[SOURce:]EXTern:PROGram:RANGe?

[SOURce:]OUTPut[:STATe]

This command is used to control the output switch state.

Command syntax

[SOURce:]OUTPut[:STATe] <bool>

Arguments

0|1|OFF|ON

Reset Value

0

Example

OUTP 1

Query syntax

[SOURce:]OUTPut[:STATe]?

Returns

0|1

[SOURce:]CV:PRIority

This command is used to set the CV priority.

Command syntax

[SOURce:]CV:PRIority <HIGH|LOW>

Arguments

HIGH|LOW

Reset Value

HIGH

Example

CV:PRI HIGH

Query syntax

[SOURce:]CV:PRIority?

Returns

<CRD>

[SOURce:]CC:PRIority

This command is used to the CC priority.

Command syntax

[SOURce:]CC:PRIority <HIGH|LOW>

Arguments

HIGH|LOW

Reset

HIGH

Example

CC:PRI HIGH

Query syntax

[SOURce:]CC:PRIority?

Returns

<CRD>

[SOURce:]PRIority:TYPE

This command is used to query type of priority.

Command syntax

[SOURce:]PRIority:TYPE <CV|CC>

Arguments

CV|CC

Reset Value

CV

Example

PRI:TYPE CV

Query syntax

[SOURce:]PRIority:TYPE?

Returns

<CRD>

[SOURce:]FILTer:LEVel

This command is used to set level of filter.

Command syntax

[SOURce:]FILTer:LEVel <LOW|MEDium|FAST>

Arguments

LOW|MEDium|FAST

Query syntax

[SOURce:]FILTer:LEVel?

Returns

<CRD>

[SOURce:]SENSe:RVERse:PROTect[:STATe]

This command is used to set the status of sense reverse protection.

Command syntax

[SOURce:]SENSe:RVERse:PROTect[:STATe] <bool>

Arguments

0|1|OFF|ON

Query syntax

[SOURce]SENSe:RVERse:PROTect[:STATe]?

Returns

<0|1>

Chapter8 DCR Command

DCR[:STATe]

This command is used to set state of DCR function.

Command syntax

DCR[:STATe] <bool>

Arguments

0|1|OFF|ON

Reset Value

OFF

Example

DCR 0

Query syntax

DCR[:STATe]?

Return Arguments

0|1

"DCR:DATA?",

This command is used to query DCR value.

Command syntax

DCR:DATA?

Arguments

None

Reset Value

0

Example

DCR:DATA?

Return Arguments

<NRf>

DCR:BATTery:CAPAcity[:LEVel]

This command is used to enter capacity of under test battery.

Command syntax

DCR:BATTery:CAPAcity <NRf>

Arguments

<NRf>

Reset Value

0

Example

DCR:BATTery:CAPAcity 0.1

Query syntax

DCR:BATTery:CAPAcity?

Return Arguments

<NRf>

Chapter9 Load Related Command（IT6500C）

Except LOAD[:STATe] command, other commands are specially for IT6500C, which are not suitable for IT6500D series models.

LOAD[:STATe]

This command is used to set load state. When the load of IT6500C Series power supply is on, you need to select internal load or external load. Default load is internal load. IT6500D Series power supply only has internal load. This command is used to turn on and off load function state.

Command syntax

LOAD[:STATe] <bool>

Arguments

0|1|OFF|ON

Reset Value

OFF

Example

LOAD 0

Query syntax

LOAD[:STATe]?

Returns

0|1

LOAD:SELection

This command is used to select internal load or external load, which is applicable for IT6500C Series power supply.

Command syntax

LOAD:SELection <INTernal|EXTernal>

Arguments

INTernal|EXTernal

Reset Value

INTernal

Example

LOAD:SELection INT

Query syntax

LOAD:SELection?

Returns

<CRD>

LOAD:NUMBer[:EXTernal]

This command is used to set the number of external loads. When IT6500C Series power supply uses external load function, you need to set the number of external loads.

Command syntax

LOAD:NUMBer[:EXTernal] <1~3>

Arguments

<1~3>

Reset Value

1

Example

LOAD:NUMB 1

Query syntax

LOAD:NUMBer[:EXTernal]?

Returns

NR1

LOAD:CURRent[:LEVel][:IMMediate][:AMPLitude]

This command is used to set current of load.

Command syntax

LOAD:CURRent[:LEVel][:IMMediate][:AMPLitude] <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

A

Reset Value

5 (The reset value of different models are different)

Example

LOAD:CURR 2.0

Query syntax

LOAD:CURRent[:LEVel][:IMMediate][:AMPLitude]? [MINimum|MAXimum]

Returns

NRf

LOAD:CURRent:MINimum[:LEVel]

This command is used to set minimum value of load current.

Command syntax

LOAD:CURRent:MINimum[:LEVel] <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

A

Reset Value

0.0

Example

LOAD:CURR:MIN 2.0

Query syntax

LOAD:CURRent:MINimum[:LEVel]? [MINimum|MAXimum]

Returns

NRf

Related Command

LOAD:CURR:MAX,LOAD:CURR

LOAD:CURRent:MAXimum[:LEVel]

This command is used to set maximum value of load current.

Command syntax

LOAD:CURRent:MAXimum[:LEVel] <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

A

Example

LOAD:CURR:MAX 3.0

Query syntax

LOAD:CURRent:MAXimum[:LEVel]? [MINimum|MAXimum]

Returns

NRf

Related Command

LOAD:CURR:MIN,LOAD:CURR

LOAD:CURRent:RISE[:LEVel]

This command is used to set rising time for load current.

Command syntax

LOAD:CURRent:RISE[:LEVel] <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

S

Reset Value

0.001

Example

LOAD:CURR:RISE 4.0

Query syntax

LOAD:CURRent:RISE[:LEVel]? [MINimum|MAXimum]

Returns

NRf

LOAD:CURRent:FALL[:LEVel]

This command is used to set falling time for load current.

Command syntax

LOAD:CURRent:FALL[:LEVel] <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

S

Reset Value

0.001

Example

LOAD:CURR:FALL 1.0

Query syntax

LOAD:CURRent:FALL[:LEVel]? [MINinum|MAXimum]

Returns

NRf

LOAD:CURRent:PROTection:STATe

This command is used to set load OCP state.

Command syntax

LOAD:CURRent:PROTection:STATe <bool>

Arguments

ON|OFF|1|0

Reset Value

1

Example

LOAD:CURR:PROT:STAT 1

Query syntax

LOAD:CURRent:PROTection:STATe?

Returns

0|1

LOAD:CURRent:PROTection[:LEVel]

This command is used to set current value of load OCP.

Command syntax

LOAD:CURRent:PROTection[:LEVel] <MINimum|MAXimum|DEFault|NRf>

Arguments

MINimum|MAXimum|DEFault|NRf

Unit

A

Reset Value

MAXimum

Example

LOAD:CURR:PROT 24.0

Query syntax

LOAD:CURRent:PROTection[:LEVel]? [MINimum|MAXimum]

Returns

NRf

LOAD:CURRent:PROTection:DELay

This command is used to set delay time for load OCP.

Command syntax

LOAD:CURRent:PROTection:DELay <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

s

Reset Value

0.2

Example

LOAD:CURR:PROT:DEL 0.02

Query syntax

LOAD:CURRent:PROTection:DELay? [MINimum|MAXimum]

Returns

NRf

LOAD:POWer[:LEVel][:IMMediate][:AMPLitude]

This command is used to set the load power.

Command syntax

LOAD:POWer[:LEVel][:IMMediate][:AMPLitude] <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

W

Reset Value

MAXimum

Example

LOAD:POW MIN

Query syntax

LOAD:POWer[:LEVel][:IMMediate][:AMPLitude]? [MINimum|MAXimum]

Returns

NRf

LOAD:POWer:MINimum[:LEVel]

This command is used to set minimum power of load.

Command syntax

LOAD:POWer:MINimum[:LEVel] [MINimum|MAXimum|NRf]

Arguments

MINimum|MAXimum|NRf

Unit

W

Reset Value

0.0

Example

LOAD:POW:MIN 2.0

Query syntax

LOAD:POWer:MINimum[:LEVel]? [MINimum|MAXimum]

Returns

NRf

Related Command

LOAD:POW:MAX,LOAD:POW

LOAD: POWer:MAXimum[:LEVel]

This command is used to set maximum value of power.

Command syntax

LOAD:POWer:MAXimum[:LEVel] < MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

W

Reset Value

MAXimum

Example

LOAD:POW:MAX 3100

Query syntax

LOAD:POWer:MAXimum[:LEVel]? [MINimum|MAXimum]

Returns

NRf

Related Command

LOAD:POW:MIN,LOAD:POW

LOAD: POWer:RISE[:LEVel]

This command is used to set rising time for load power.

Command syntax

LOAD:POWer:RISE[:LEVel] <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

S

Reset Value

0.001

Example

LOAD:POWer:RISE[:LEVel] 200ms

Query syntax

LOAD:POWer:RISE[:LEVel]? [MINimum|MAXimum]

Returns

NRf

LOAD:POWer:FALL[:LEVel]

This command is used to set falling time for load power.

Command syntax

LOAD:POWer:FALL[:LEVel]

Arguments

MINimum|MAXimum|NRf

Unit

S

Reset Value

0.001

Example

LOAD:POW:FALL 0.2

Query syntax

LOAD:POWer:FALL[:LEVel]? [MINimum|MAXimum]

Returns

NRf

LOAD:POWer:PROTection:STATe

This command is used to set over power protect state.

Command syntax

LOAD:POWer:PROTection:STATe <bool>

Arguments

ON|OFF|1|0

Reset Value

1

Example

LOAD:POW:PROT:STAT 1

Query syntax

[SOURce:]POWer:PROTection:STATe?

Returns

0|1

LOAD:POWer:PROTection[:LEVel]

This command is used to set power value of load OPP.

Command syntax

LOAD:POWer:PROTection[:LEVel] <MINimum|MAXimum|DEFault|NRf>

Arguments

MINimum|MAXimum|DEFault|NRf

Unit

W

Reset Value

MAXimum

Example

LOAD:POW:PROT MAX

Query syntax

LOAD:POWer:PROTection[:LEVel]? [MINimum|MAXimum|DEFault]

Returns

NRf

LOAD:POWer:PROTection:DELay

This command is used to set delay time for load OPP.

Command syntax

LOAD:POWer:PROTection:DELay <MINimum|MAXimum|NRf>

Arguments

MINimum|MAXimum|NRf

Unit

S

Reset Value

0.5

Example

LOAD:POW:PROT:DEL 0.04

Query syntax

LOAD:POWer:PROTection:DELay? [MINimum|MAXimum]

Returns

NRf

Chapter10 List Operation Commands

LIST[:STATe]

This command is used to set the state of list mode. If the state is ON (1), and the list file can not be edit.

Command syntax

LIST[:STATe]<bool>

Arguments

0|1|OFF|ON

Reset Value

0

Example

LIST:STAT 1

Query syntax

LIST:STATe?

Returns

0|1

LIST:RECall

This command is used to recall a list file.

Command syntax

LIST:RECall <MINimum|MAXimum|<1~10>>

Arguments

MINimum|MAXimum|<1~10>

Example

LIST:REC 1

Query syntax

LIST:RECAll?

Returns

NR1

LIST:EDIT

This command is used to select list file which has been edited.

Command syntax

LIST:EDIT <MINimum|MAXimum|1~10>

Arguments

MINimum|MAXimum|<1~10>

Example

LIST:EDIT 10

Query syntax

LIST:EDIT?

Returns

NR1

LIST:REPeat

This command is used to edit the running times of list file.

Command syntax

LIST:REPeat <MINimum|MAXimum|1~65535>

Arguments

MINimum|MAXimum|<1 to 65535>

Example

LIST:REP 2000

Query syntax

LIST:REPeat? [MINimum|MAXimum]

Returns

NR1

LIST:SEQuence:COUNt

This command is used to edit the wave count of list file.

Command syntax

LIST:SEQuence:COUNt <1-10>

Arguments

<1~10>

Example

LIST:SEQ:COUN 1

Query syntax

LIST:SEQuence:COUNt?

Returns

<NR1>

LIST:SEQuence:SELect

This command is used to edit the selected wave sequence in LIST file. For each List, you can select 1-10 wave files from 100 wave files and combine them to a List file in sequence.

Command syntax

LIST:SEQuence:SELect<1~10>.<1~100>

Arguments

<1-10>,<1-100>

Example

LIST:SEQ:SEL 1,20

Query syntax

LIST:SEQuence:SELect? <NR1>

Returns

NR1

LIST:SEQuence:REPeat

This command is used to edit the running count of sequence which is linked to the List file.

Command syntax

LIST:SEQuence:REPeat <1~10>,<MINimum|MAXimum|<NR1>

Arguments

<1~10>,MINimum|MAXimum|<1~65535>

Query syntax

LIST:SEQuence:REPeat? [MINimum|MAXimum]

Returns

NR1

LIST:SAVe

This command is used to save the list file in a nonvolatile memory.

Command syntax

LIST:SAVe <1~10>

Arguments

<1-10>

Example

LIST:SAV 4

LIST:PAUSe[:STATe]

This command is used to pause the list and continue.

Command syntax

LIST:PAUSe[:STATe] <bool>

Arguments

0|1|OFF|ON

Example

LIST:PAUS 0

Query syntax

LIST:PAUSe[:STATe]?

Returns

0|1

Chapter11 Wave Operation Command

SEQuence:EDIT

This command is used to select the wave file to be edited.

Command syntax

SEQuence:EDIT <MINimum|MAXimum|1~100>

Arguments

MINimum|MAXimum|<1~100>

Example

SEQ:EDIT 3

Query syntax

SEQuence:EDIT? [MINimum|MAXimum]

Returns

NR1

SEQuence:RECall

This command is used to recall a wave file.

Command syntax

SEQuence:RECall <NR1>

Arguments

MINimum|MAXimum|<1-100>

Example

SEQ:REC 1

Query syntax

SEQ:REC?

Returns

NR1

SEQuence:STEP:COUNt

This command is used to edit the step count of wave file.

Command syntax

SEQuence:STEP:COUNt <1~10>

Arguments

<1-10>

Example

SEQ:STEP:COUN 5

Query syntax

SEQuence:STEP:COUNt?

Returns

NR1

SEQuence[:STEP]:VOLTage

This command is used to edit the voltage of specified step of the wave file.

Command syntax

SEQuence[:STEP]:VOLTage <NR1>,<MINimum|MAXimum|NRf>

Arguments

<1-10>,MINimum|MAXimum|NRf

Unit

V

Example

SEQ:VOLT 6,7.0V

Query syntax

SEQuence[:STEP]:VOLTage？ <NR1>,[MINimum|MAXimum]

Returns

NRf

SEQuence[:STEP]:CURRent

This command is used to edit the current of specified step of a wave file.

Command syntax

SEQuence[:STEP]:CURRent <NR1>,<MINimum|MAXimum|NRf>

Arguments

<1~10>,MINimum|MAXimum|NRf

Unit

A

Example

SEQ:CURR 1,12.0

Query syntax

SEQuence[:STEP]:CURRent? <NR1>,[MINimum|MAXimum]

Returns

NRf

SEQuence[:STEP]:LOAD:CURRent?

This command is used to edit the load current of specified step of a sequence file. This command is prepared for IT6500C model.

Arguments

<NR1>,MINimum|MAXimum|NRf

Unit

s

Example

SEQ:LOAD:CURR 1,0.5

Query syntax

SEQuence[:STEP]:LOAD:CURRent? <NR1>

Returns

<NRf>

SEQuence[:STEP]:WIDTh

This command is used to edit the width of specified step of the wavefile .

Command syntax

SEQuence[:STEP]:WIDth <NR1>,<MINimum|MAXimum|NRf>

Arguments

<1~10>,MINimum|MAXimum|NRf

Unit

s

Example

SEQ:WIDT 1,64

Query syntax

SEQuence[:STEP]:WIDTh? <NR1>,[MINimum|MAXimum]

Returns

NRf

SEQuence[:STEP]:SLOPe

This command is used to edit the slope of a specified step of the wave file.

Command syntax

```
SEQuence[:STEP]:SLOPe <NR1>,MINimum|MAXimum|NRf
```

Arguments

<NR1>,MINimum|MAXimum|NRf

Unit

s

Example

```
SEQ:SLOP 1,4
```

Query syntax

```
SEQuence[:STEP]:SLOPe? <NR1>,[MINimum|MAXimum]
```

Returns

NRf

SEQuence:SAVe

This command is used to save the wave file.

Command syntax

```
SEQuence:SAVe <NR1>
```

Arguments

<1~100>

Example

```
SEQ:SAV   1
```

Chapter12 Car Wave Command（IT6500C）

The car wave command is a special command of IT6500C, but it's not suitable for IT6500D Series.

CARWave:ISO16750:SHORt:DROP[:STATe]

This command is used to analog ISO short drop wave of car.

Command syntax

CARWave:ISO16750:SHORt:DROP <bool>

Arguments

ON|OFF|1|0

Reset Value

0

Example

CARW:ISO16750:SHOR 1

Query syntax

CARWave:ISO16750:SHORt:DROP[:STATe]?

Returns

0|1

CARWave:ISO16750:SHORt:DROP:VOLTage[:LEVel]

This command is used to select ISO analog voltage of short drop wave of car.

Command syntax

CARWave:ISO16750:SHORt:DROP:VOLTage <12V|24V>

Arguments

12V|24V

Reset Value

12V

Example

CARW:ISO16750:SHOR:DROP:VOLT 24V

Query syntax

CARW:ISO16750:SHOR:DROP:VOLT?

Returns

<CRD>

CARWave:ISO16750:RESet[:STATe]

This command is used to analog ISO reset wave of car.

Command syntax

CARWave:ISO16750:RESet <bool>

Arguments

ON|OFF|1|0

Reset Value

0

Example

CARWave:ISO16750:RES 1

Query syntax

CARWave:ISO16750:RESet?

Returns

0|1

CARWave:ISO16750:RESet:VOLTage[:LEVel]

This command is used to set minimum supply voltage of ISO reset wave of car

Command syntax

CARWave:ISO16750:RESet:VOLTage <value>

Arguments

MINimum|MAXimum|NR3

Reset Value

12

Example

CARW:ISO16750:RES:VOLT 5.0 , CARW:ISO16750:RES:VOLT? MAX

Query syntax

CARWave:ISO16750:RESet:VOLTage? [MINimum|MAXimum]

Returns

NR3

CARWave:ISO16570:STARtup:PROFile[:STATe]

This command is used to analog ISO startup wave of car.

Command syntax

```
CARWave:ISO16750:STARtup:PROFile:STATe
```

Arguments

ON|OFF|1|0

Reset Value

0

Example

```
CARW:ISO16750:STAR:PROF　0
```

Query syntax

```
CARWave:ISO16750:STARtup:PROFile?
```

Returns

0|1

CARWave:ISO16750:STARtup:PROFile:VOLTage[:LEVel]

This command is used to select ISO startup wave voltage of car.

Command syntax

```
CARWave:ISO16750:STRTtup:PROFile:VOLTage <12V|24V>
```

Arguments

12V|24V

Reset Value

12V

Example

```
CARW:ISO16750:STAR:PROF:VOLT 12V
```

Query syntax

```
CARWave:ISO16750:STARtup:VOLTage?
```

Returns

<CRD>

CARWave:ISO16750:STARtup:PROFile:INDex

This command is used to select ISO startup wave level of car.

Command syntax

CARWave:ISO16750:STARtup:PROFile:INDex <1|2|3|4>

Arguments

1|2|3|4（12V）, 1|2|3（24V）

Reset Value

1

Example

CARW:ISO16750:star:prof:ind 1

Query syntax

CARWave:ISO16750:STARtup:PROFile:INDex?

Returns

<CRD>

CARWave:STARtup:DIN40839[:STATe]

This command is used to analog DIN40839 startup wave of car.

Command syntax

CARWave:STARtup:DIN40839 <bool>

Arguments

0|1|OFF|ON

Reset Value

0

Example

CARW:STAR:DIN40839 1

Query syntax

CARWave:STARtup:DIN40839?

Returns

0|1

CARWave:STARtup:DIN40839:VOLTage[:SELect]

This command is used to select DIN40839 startup wave voltage of car.

Command syntax

CARWave:STARtup:DIN40839:VOLTage <12V|24V>

Arguments

12V|24V

Reset Value

12V

Example

CARW:STAR:DIN40839:VOLT 12V

Query syntax

CARWave:STARtup:DIN40839:VOLTage?

Returns

<CRD>

CARWave:STARtup:DIN40839:VOLTage:STARt:LEVel

This command is used to set user-defined DIN40839 start voltage level.

Command syntax

CARWave:STARtup:DIN40839:VOLTage:STARt:LEVel <Value>

Arguments

12V|24V

Reset Value

12V

Example

CARW:STAR:DIN40839:VOLT:STAR:LEV

Query syntax

CARWave:STARtup:DIN40839:VOLTage:STARt:LEVe?

Returns

<CRD>

CARWave:ISO21848:Umaxdyn:TEST:PULSe[:STATe]

This command is used to in ISO21848Umaxdyn test pulse.

Command syntax

CARWave:ISO21848:Umaxdyn:TEST:PULSe[:STATe] 0|1

Arguments

0|1|ON|OFF

Reset Value

0

Example

CARW:ISO21848:Umaxdyn:TEST:PULS 1

Query syntax

CARWave:ISO21848:Umaxdyn:TEST:PULSe[:STATe]?

Returns

<CRD>

CARWave:ISO21848:MOMENTary:VOLTage:DROP[:STATe]

This command is used to select ISO21848 analog voltage of short drop wave of car.

Command syntax

CARWave:ISO21848:MOMENTary:VOLTage:DROP[:STATe] 0|1

Arguments

0|1|ON|OFF

Reset Value

0

Example

CARWave:ISO21848:MOMENTary:VOLTage:DROP 1

Query syntax

CARWave:ISO21848:MOMENTary:VOLTage:DROP[:STATe]?

Returns

<CRD>

CARWave:ISO21848:RESet[:STATe]

This command is used to analog ISO21848 reset wave of car.

Command syntax

CARWave:ISO21848:RESet[:STATe] <bool>

Arguments

ON|OFF|1|0

Reset Value

0

Example

CARWave:ISO21848:RES 1

Query syntax

CARWave:ISO21848:RESet[:STATe]?

Returns

0|1

CARWave:ISO21848:RESet:VOLTage[:LEVel]

This command is used to set minimum supply voltage of ISO21848 reset wave of car

Command syntax

CARWave: ISO21848:RESet:VOLTage[:LEVel]

Arguments

MINimum|MAXimum|NR3

Reset Value

0.0

Example

CARW:ISO21848:RES:VOLT 5.0 , CARW:ISO21848:RES:VOLT? MAX

Query syntax

CARWave:ISO21848:RESet:VOLTage[:LEVel]? [MINimum|MAXimum]

Returns

NR3

CARWave:ISO21848:STARtup:PROFile[:STATe]

This command is used to analog ISO21848 startup wave of car.

Command syntax

CARWave:ISO21848:STARtup:PROFile[:STATe] 0|1

Arguments

0|1

Reset Value

0

Example

CARWave:ISO21848:STARtup:PROFile 1

Query syntax

CARWave:ISO21848:STARtup:PROFile[:STATe]?

Returns

<CRD>

CARWave:ISO16750:LOAD:DUMP[:STATe]

This command is used to simulate load dump wave of car.

Command syntax

CARWave:ISO16750:LOAD:DUMP <bool>

Arguments

ON|OFF|1|0

Reset Value

0

Example

CARW:ISO16750:LOAD:DUMP 1

Query syntax

CARWave:ISO16750:LOAD:DUMP?

Returns

0|1

CARWave:ISO16750:LOAD:DUMP:TEST[:MODe]

This command is used to select the test mode of load dump wave of car.

Command syntax

CARWave:ISO16750:LOAD:DUMP:TEST <AMODe|BMODe >

Arguments

AMODe|BMODe

Reset Value

AMODe

Example

CARW:ISO16750:LOAD:DUMP:TEST AMOD

Query syntax

CARWave:ISO16750:LOAD:DUMP:TEST?

Returns

<CRD>

CARWave:ISO16750:LOAD:DUMP[:VOLTage]:UN[:LEVel]

This command is used to set peak voltage of load dump wave of car.

Command syntax

CARWave:ISO16750:LOAD:DUMP:UN <value>

Arguments

MINimum|MAXimum|NR3

Reset Value

MINimum

Example

CARW:ISO16750:LOAD:DUMP:UN 50

Query syntax

CARW:ISO16750:LOAD:DUMP:UN? [MINimum|MAXimum]

Returns

NR3

CARWave:ISO16750:LOAD:DUMP[:VOLTage]:US[:LEVel]

This command is used to set the clamp voltage of load dump wave of car.

Command syntax

CARWave:ISO16750:LOAD:DUMP:US <value>

Arguments

MINimum|MAXimum|NR3

Reset Value

MINimum

Example

CARW:ISO16750:LOAD:DUMP:US 40

Query syntax

CARW:ISO16750:LOAD:DUMP:US? [MINimum|MAXimum]

Returns

NR3

CARWave:ISO16750:LOAD:DUMP[:TIMe]:TD[:LEVel]

This command is used to set pulse width of load dump.

Command syntax

CARWave:ISO16750:LOAD:DUMP:TD <value>

Arguments

MINimum|MAXimum|NR3

Reset Value

0.004

Example

CARW:ISO16750:LOAD:DUMP:TD 40

Query syntax

CARW:ISO16750:LOAD:DUMP:TD? [MINimum|MAXimum]

Returns

NR3

CARWave:ISO16750:LOAD:DUMP:VOLTage[:LEVel]

This command is used to set the voltage system of load dump.

Command syntax

CARWave:ISO16750:LOAD:DUMP:VOLT <12V|24V>

Arguments

12V|24V

Reset Value

12V

Example

CARW:ISO16750:LOAD:DUMP:VOLT 12V

Query syntax

CARW:ISO16750:LOAD:DUMP:VOLT?

Returns

<CRD>

CARWave:SAE[:TEST]:2B[:STATe]

This command is used to simulate the SAEJ1113-11 TEST 2B.

Command syntax

CARWave:SAE:2B <bool>

Arguments

ON|OFF|1|0

Reset Value

0

Example

CARWave:SAE:2B 1

Query syntax

CARWave:SAE:2B?

Returns

0|1

CARWave:SAE[:TEST]:2B:VOLTage[:LEVel]

This command is used to select voltage system of SAEJ1113-11 TEST 2B.

Command syntax

CARWave:SAE:2B:VOLT <12V|24V>

Arguments

12V|24V

Reset Value

12V

Example

CARWave:SAE:2B:VOLT 12V

Query syntax

CARWave:SAE:2B:VOLT?

Returns

<CRD>

CARWave:SAE[:TEST]:2B[:TIMe]:TD[:LEVel]

This command is used to set pulse width of SAEJ1113-11 TEST 2B

Command syntax

CARWave:SAE:2B:TD <value>

Arguments

MINimum|MAXimum|NR3

Reset Value

0.2

Example

CARWave:SAE:2B:TD 0.05

Query syntax

CARWave:SAE:2B:TD? [MINimum|MAXimum]

Returns

NR3

CARWave:SAE[:TEST]:4[:STATe]

This command is used to simulate SAEJ1113-11 TEST 4.

Command syntax

CARWave:SAE:4 <bool>

Arguments

ON|OFF|1|0

Reset Value

0

Example

CARWave:SAE:4 1

Query syntax

CARWave:SAE:4?

Returns

0|1

CARWave:SAE[:TEST]:4:VOLTage[:LEVel]

This command is used to select voltage system of SAEJ1113-11 TEST 4

Command syntax

CARWave:SAE:4:VOLT <12V|24V>

Arguments

12V|24V

Reset Value

12V

Example

CARWave:SAE:4:VOLT 12V

Query syntax

CARWave:SAE:4:VOLT?

Returns

<CRD>

CARWave:SAE[:TEST]:4[:VOLTage]:VS[:LEVel]

This command is used to set Vs of SAEJ1113-11 TEST 4.

Command syntax

CARWave:SAE:4:VS < value >

Arguments

MINimum|MAXimum|NR3

Reset Value

MINimum

Example

CARWave:SAE:4:VS 10

Query syntax

CARWave:SAE:4:VS?

Returns

NR3

CARWave:SAE[:TEST]:4[:VOLTage]:VA[:LEVel]

This command is used to set Va of SAEJ1113-11 TEST 4.

Command syntax

CARWave:SAE:4:VA < value >

Arguments

MINimum|MAXimum|NR3

Reset Value

MINimum

Example

CARWave:SAE:4:VA 10

Query syntax

CARWave:SAE:4:VA?

Returns

NR3

CARWave:SAE[:TEST]:4[:TIMe]:T7[:LEVel]

This command is used to set T7 of SAEJ1113-11 TEST 4

Command syntax

CARWave:SAE:4:T7 < value >

Arguments

MINimum|MAXimum|NR3

Reset Value

MINimum

Example

CARWave:SAE:4:T7 0.1

Query syntax

CARWave:SAE:4:T7?

Returns

NR3

CARWave:SAE[:TEST]:4[:TIMe]:T9[:LEVel]

This command is used to set T9 SAEJ1113-11 TEST 4.

Command syntax

CARWave:SAE:4:T9 < value >

Arguments

MINimum|MAXimum|NR3

Reset Value

MINimum

Example

CARWave:SAE:4:T9 0.1

Query syntax

CARWave:SAE:4:T9?

Returns

NR3

CARWave:SAE[:TEST]:4[:TIMe]:T11[:LEVel]

This command is used to set T11 of SAEJ1113-11 TEST 4

Command syntax

CARWave:SAE:4:T11 < value >

Arguments

MINimum|MAXimum|NR3

Reset Value

MINimum

Example

CARWave:SAE:4:T11 0.1

Query syntax

CARWave:SAE:4:T11?

Returns

NR3

CARWave:SAE[:TEST]:5[:STATe]

This command is used to simulate SAEJ1113-11 TEST 5.

Command syntax

CARWave:SAE:5 <bool>

Arguments

ON|OFF|1|0

Reset Value

0

Example

CARWave:SAE:5 1

Query syntax

CARWave:SAE:5?

Returns

0|1

CARWave:SAE[:TEST]:5:TEST[:MODe]

This command is used to select test mode of SAEJ1113-11 TEST 5.

Command syntax

CARWave:SAE:5:TEST <AMODe|BMODe>

Arguments

AMODe|BMODe

Reset Value

AMODe

Example

CARWave:SAE:5:TEST AMODe

Query syntax

CARWave:SAE:5:TEST?

Returns

<CRD>

CARWave:SAE[:TEST]:5[:VOLTage]:UN[:LEVel]

This command is used to set Un of SAEJ1113-11 TEST 5.

Command syntax

CARWave:SAE:5:UN < value >

Arguments

MINimum|MAXimum|NR3

Reset Value

MINimum

Example

CARWave:SAE:5:UN 70

Query syntax

CARWave:SAE:5:UN?

Returns

NR3

CARWave:SAE[:TEST]:5[:VOLTage]:US[:LEVel]

This command is used to set Us of SAEJ1113-11 TEST 5

Command syntax

CARWave:SAE:5:US < value >

Arguments

MINimum|MAXimum|NR3

Reset Value

MINimum

Example

CARWave:SAE:5:US 50

Query syntax

CARWave:SAE:5:US?

Returns

NR3

CARWave:SAE[:TEST]:5[:TIMe]:TD[:LEVel]

This command is used to set Td of SAEJ1113-11 TEST 5

Command syntax

CARWave:SAE:5:TD < value >

Arguments

MINimum|MAXimum|NR3

Reset Value

MINimum

Example

CARWave:SAE:5:TD 0.2

Query syntax

CARWave:SAE:5:TD?

Returns

NR3

CARWave:SAE[:TEST]:5:VOLTage[:LEVel]

This command is used to set voltage system of SAEJ1113-11 TEST 5

Command syntax

CARWave:SAE:5:VOLT < 12V|24V >

Arguments

12V|24V

Reset Value

12V

Example

CARWave:SAE:5:VOLT 12V

Query syntax

CARWave:SAE:5:VOLT?

Returns

<CRD>

CARWave:LV124:E02[:STATe]

This command is used to simulate LV124 E02 wave.

Command syntax

CARWave:LV124:E02 <bool>

Arguments

ON|OFF|1|0

Reset Value

0

Example

CARWave:LV124:E02 1

Query syntax

CARWave:LV124:E02?

Returns

0|1

CARWave:LV124:E04[:STATe]

This command is used to simulate LV124 E04.

Command syntax

CARWave:LV124:E04 <bool>

Arguments

ON|OFF|1|0

Reset Value

0

Example

CARWave:LV124:E04 1

Query syntax

CARWave:LV124:E04?

Returns

0|1

CARWave:LV124:E05[:STATe]

This command is used to simulate LV124 E05.

Command syntax

CARWave:LV124:E05 <bool>

Arguments

ON|OFF|1|0

Reset Value

0

Example

CARWave:LV124:E05 1

Query syntax

CARWave:LV124:E05?

Returns

0|1

CARWave:LV124:E07[:STATe]

This command is used to simulate LV124 E07.

Command syntax

CARWave:LV124:E07 <bool>

Arguments

ON|OFF|1|0

Reset Value

0

Example

CARWave:LV124:E07 1

Query syntax

CARWave:LV124:E07?

Returns

0|1

CARWave:LV124:E07:UBMAX[:LEVel]

This command is used to set starting voltage Ubmax of LV124 E07.

Command syntax

CARWave:LV124:E07:UBMAX < value >

Arguments

MINimum|MAXimum|NR3

Reset Value

0.0

Example

CARWave:LV124:E07:UBMAX 50

Query syntax

CARWave:LV124:E07:UBMAX?

Returns

NR3

CARWave:LV124:E07:UBMIN[:LEVel]

This command is used to set keeping voltage Ubmin of LV124 E07.

Command syntax

CARWave:LV124:E07:UBMIN < value >

Arguments

MINimum|MAXimum|NR3

Reset Value

MINimum

Example

```
CARWave:LV124:E07:UBMIN 20
```

Query syntax

```
CARWave:LV124:E07:UBMIN?
```

Returns

NR3

CARWave:LV124:E07[:UBMIN]:TIMe

This command is used to set keeping voltage duration of LV124 E07

Command syntax

```
CARWave:LV124:E07:TIM < value >
```

Arguments

MINimum|MAXimum|NR3

Reset Value

0.0

Example

```
CARWave:LV124:E07:TIM 1
```

Query syntax

```
CARWave:LV124:E07:TIM?
```

Returns

NR3

CARWave:LV124:E08[:STATe]

This command is used to simulate LV124 E08.

Command syntax

```
CARWave:LV124:E08 <bool>
```

Arguments

ON|OFF|1|0

Reset Value

0

Example

```
CARWave:LV124:E08 1
```

Query syntax

```
CARWave:LV124:E08?
```

Returns

0|1

CARWave:LV124:E08:UBMAX[:LEVel]

This command is used to set starting voltage Ubmax of LV124 E08.

Command syntax

```
CARWave:LV124:E08:UBMAX < value >
```

Arguments

MINimum|MAXimum|NR3

Reset Value

0.0

Example

```
CARWave:LV124:E08:UBMAX 50
```

Query syntax

```
CARWave:LV124:E08:UBMAX?
```

Returns

NR3

CARWave:LV124:E08:UBMIN[:LEVel]

This command is used to set keeping voltage Ubmin of LV124 E08.

Command syntax

```
CARWave:LV124:E08:UBMIN < value >
```

Arguments

MINimum|MAXimum|NR3

Reset Value

0.0

Example

```
CARWave:LV124:E08:UBMIN 20
```

Query syntax

CARWave:LV124:E08:UBMIN?

Returns

NR3

CARWave:LV124:E08[:UBMIN]:TIMe

This command is used to set keeping voltage duration of LV124 E08.

Command syntax

CARWave:LV124:E08:TIM < value >

Arguments

MINimum|MAXimum|NR3

Reset Value

0.0

Example

CARWave:LV124:E08:TIM 1

Query syntax

CARWave:LV124:E08:TIM?

Returns

NR3

CARWave:LV124:E09[:STATe]

This command is used to simulation LV124 E09.

Command syntax

CARWave:LV124:E09 <bool>

Arguments

ON|OFF|1|0

Reset Value

0

Example

CARWave:LV124:E09 1

Query syntax

CARWave:LV124:E09?

Returns

0|1

CARWave:LV124:E09:UBMIN[:LEVel]

This command is used to set keeping voltage Ubmin of LV124 E09.

Command syntax

```
CARWave:LV124:E09:UBMIN < value >
```

Arguments

MINimum|MAXimum|NR3

Reset Value

6.0

Example

```
CARWave:LV124:E09:UBMIN 20
```

Query syntax

```
CARWave:LV124:E09:UBMIN?
```

Returns

NR3

CARWave:LV124:E11[:STATe]

This command is used to simulate LV124 E11.

Command syntax

```
CARWave:LV124:E11 <bool>
```

Arguments

ON|OFF|1|0

Reset Value

0

Example

```
CARWave:LV124:E11 1
```

Query syntax

```
CARWave:LV124:E11?
```

Returns

0|1

CARWave:LV124:E11:TEST:MODE

This command is used to select test mode of LV124 E11.

Command syntax

CARWave:LV124:E11:TEST:MODE <COLD|WARM >

Arguments

COLD|WARM

Reset Value

COLD

Example

CARWave:LV124:E11:TEST:MODE COLD

Query syntax

CARWave:LV124:E11:TEST:MODE?

Returns

<CRD>

CARWave:LV124:E11:PULSe:MODE

This command is used to select pulse mode of LV124 E11.

Command syntax

CARWave:LV124:E11:PULS:MODE <NORMal|SEVEre >

Arguments

NORMal | SEVEre

Reset Value

NORMal

Example

CARWave:LV124:E1:PULS:MODE NORMal

Query syntax

CARWave:LV124:E1:PULS:MODE?

Returns

<CRD>

CARWave:LV124:E12[:STATe]

This command is simulate LV124 E12.

Command syntax

CARWave:LV124:E12 <bool>

Arguments

ON|OFF|1|0

Reset Value

0

Example

CARWave:LV124:E12 1

Query syntax

CARWave:LV124:E12?

Returns

0|1

CARWave:LV124:E12:DELTAU[:LEVel]

This command is used to set voltage drop ΔU value of LV124 E12.

Command syntax

CARWave:LV124:E12:DELTAU < value >

Arguments

MINimum|MAXimum|NR3

Reset Value

0.0

Example

CARWave:LV124:E12:DELTAU 2

Query syntax

CARWave:LV124:E12:DELTAU?

Returns

NR3

Chapter13 Battery Charge and Discharge Statistic Command

BATTery:CAPacity:CLEar

This command is used to clear battery charge and discharge capacity.

Command syntax

BATTery:CAPacity:CLEar

Arguments

NONE

Example

BATT:CAP:CLE

FETCh:BATTery:CAPacity[:CHARge]?

This command is used to obtain battery charge capacity.

Command syntax

FETCh:BATTery:CAPacity[:CHARge]?

ReturnsUnit

AH

Returns:

NRf

Example

FETC:BATT:CAP? ->3.00

FETCh:BATTery:CAPacity:DISCharge?

This command is used to obtain battery discharge capacity.

Command syntax

FETCh:BATTery:CAPacity:DISCharge?

ReturnsArguments

AH

Returns

NRf

Example

```
FETC:BATT:CAP:DISC? ->4.0
```

Chapter14 Calibration Command

CALibrate:SECure[:STATe]

This command is used to set the calibration state.

Command syntax

CALibrate:SECure[:STATe] <bool>,<string>

Arguments

0|1|OFF|ON,<string>

Example

CAL:SEC 0, “ 6522 “

Query syntax

CALibrate:SECure[:STATe]?

Returns

0|1

CALibrate:VOLTage:LEVel

This command is used to define the voltage calibration point.

Command syntax

CALibrate:VOLTage:LEVel <P0|P1>

Arguments

P0|P1

Example

CAL:VOLT:LEV P0

CALibrate:VOLTage[:DATA]

This command is used to read the actual voltage of the present calibration point.

Command syntax

CALibrate:VOLTage[:DATA] <NRf>

Arguments

NRf

Unit

V

Example

CAL:VOLT 12.0V

CALibrate:CURRent:LEVel

This command is used to define the current calibration points.

Command syntax

CALibrate:CURRent:LEVel <P0|P1>

Arguments

P0|P1

Example

CAL:CURR:LEV P0

CALibrate:CURRent[:DATA]

This command is used to read the actual current of the present calibration point.

Command syntax

CALibrate:CURRent[:DATA] <NRf>

Arguments

NRf

Unit

A

Example

CAL:CURR 20.0

CALibrate:MONitor:VOLTage:LEVel

This command is used to set monitoring the voltage calibration point.

Command syntax

CALibrate:MONitor:VOLTage:LEVel <P0|P1>

Arguments

P0|P1

Example

CAL:MON:VOLT:LEV P0

CALibrate:MONitor:VOLTage[:DATA]

This command is used to set the voltage calibration point data for monitoring.

Command syntax

CALibrate:MONitor:VOLTage[:DATA] <NRf>

Arguments

NRf

Unit

V

Example

CAL:MON:VOLT 30.0V

CALibrate:MONitor:CURRent:LEVel

This command is used to set monitoring the current calibration point.

Command syntax

CALibrate:MONitor:CURRent:LEVel <P0|P1>

Arguments

P0|P1

Example

CAL:MON:CURR:LEV P0

CALibrate:MONitor:CURRent[:DATA]

This command is used to current calibration point data for monitoring.

Command syntax

CALibrate:MONitor:CURRent[:DATA] <NRf>

Arguments

NRf

Unit

A

Example

CAL:MON:CURR 15.0

CALibrate:PROGram:VOLTage:LEVel

This command is used to set voltage calibration point for programming.

Command syntax

CALibrate:PROGram:VOLTage:LEVel <P0|P1>

Arguments

P0|P1

Example

CAL:PROG:VOLT:LEV P0

CALibrate:PROGram:VOLTage[:DATA]

This command is used to set calibration data of program voltage.

Command syntax

CALibrate:PROGram:VOLTage[:DATA] <NRf>

Arguments

NRf

Unit

V

Example

CAL:PROG:VOLT 24.0V

CALibrate:PROGram:CURRent:LEVel

This command is used to set calibration point of program current.

Command syntax

CALibrate:PROGram:CURRent:LEVel <P0|P1>

Arguments

P0|P1

Example

CAL:PROG:CURR:LEV P0

CALibrate:PROGram:CURRent[:DATA]

This command is used to set calibration data of program current.

Command syntax

CALibrate:PROGram:CURRent[:DATA] <NRf>

Arguments

NRf

Unit

A

Example

CAL:PROG:CURR 15.0

CALibrate:EQUal:INPut:CURRent:LEVel

This command is used to set calibration point of current sharing input current.

Command syntax

CALibrate:EQUal:INPut:CURRent:LEVel <P0|P1>

Arguments

P0|P1

Example

CAL:EQU:INP:CURR P0

CALibrate:EQUal:INPut:CURRent[:DATA]

This command is used to set calibration data of current sharing input current.

Command syntax

CALibrate:EQUal:INPut:CURRent[:DATA

Arguments

NRf

Unit

A

Example

CAL:EQU:INP:CURR 12.0A

CALibrate:EQUal:OUTPut:CURRent:LEVel

This command is used to set calibration point of current sharing output current.

Command syntax

CALibrate:EQUal:OUTPut:CURRent:LEVel <P0|P1>

Arguments

P0|P1

Example

CAL:EQU:OUTP:CURR:LEV P0

CALibrate:EQUal:OUTPut:CURRent[:DATA]

This command is used to set calibration data of current sharing output current.

Command syntax

CALibrate:EQUal:OUTPut:CURRent[:DATA] <NRf>

Arguments

NRf

Unit

A

Example

CAL:EQU:OUTP:CURR 12.0

CALibrate:SUMMary:OUTPut:CURRent:LEVel

This command is used to set calibration point of summary current.

Command syntax:

CAL:SUMM:OUTPut:CURRent:LEVel <P0|P1>

Arguments

P0|P1

Example

CAL:SUMM:OUTP:CURR:LEV P0

CALibrate:SUMMary:OUTPut:CURRent[:DATA]

This command is used to set calibration data of summary current.

Command syntax

CALibrate:SUMMary:OUTPut:CURRent[:DATA] <NRf>

Arguments

NRf

Unit

A

Example

CAL:SUMM:OUTP:CURR 20.0

CALibrate:SAVe

This command is used to save the calibration parameters in a nonvolatile memory.

Command syntax

CALibrate:SAVe

Example

CAL:SAV

CALibrate:INITialize

This command is used to initialize the calibration parameters.

Command syntax

CALibrate:INITialize

Example

CAL:INIT

Chapter15 Parallel Related Command

LINK[:STATe]

This command is used to set link state.

Command syntax

LINK[:STATe] <bool>

Arguments

0|1|OFF|ON

Example

LINK:STAT 1

Query syntax

LINK[:STATe]?

Returns

0|1

LINK:ROLE

This command is used to set link role.

Command syntax

LINK:ROLE <SLAVe|MASTer>

Arguments

SLAVe|MASTer

Example

LINK:ROLE slav

Query syntax

LINK:ROLE？

Returns

<CRD>

LINK:NUMBer

This command is used to set link number.

Command syntax

LINK:NUMBer <MINimum|MAXimum|NR1 >

Arguments

MINimum|MAXimum|<2-32>

Example

LINK:NUMB 1

Query syntax

LINK:NUMBer?

Returns

NR1

Chapter16 TraceRelated Command(IT6500 C)

In the sub-system, this command is used to configure and control data save in cache.

TRACe:CLEar

This command is used to clear reading cache. If cache is not cleared, subsequent saving will overwrite the previous data.

Command syntax

TRACe:CLEar

Arguments

NONE

Example

TRAC:CLE

TRACe:POINts

This command is used to specify cache size.

Command syntax

TRACe:POINts <2 to 2500|MINimum|MAXimum|DEFault>

Arguments

2 to 2500|MINimum|MAXimum|DEFault

Returns

NR1

Example

TRAC:POIN 10

Query syntax

TRACe:POINts? [MINimum|MAXimum|DEFault]

Returns

<NR1>

TRACe:FEED:CONTrol

This command is used to select cache control. Select NEVer, Save to Cache is disabled; select NEXT, save process starts and will stop when the cache is filled in. Select ALWays. After cache is filled in, circulate the cache.

Command syntax

TRACe:FEED:CONTrol <CRD>

Command Arguments

NEXT|ALWays|NEVer

Query syntax

TRACe:FEED:CONTrol?

Returns

<CRD>

TRACe:FEED:SELected

This command is used to select the reading source saved in the cache. If VOLTage is selected, the voltage reading is saved in cache; if CURRent is selected, the current reading is saved in cache. If VOLTage and CURRent are simultaneously selected, both voltage and current are saved in cache when saving is executed.

Command syntax

TRACe:FEED:SELected <CRD>

Command Arguments

VOLTage|CURRent|BOTH

Example

TRAC:FEED:SEL VOLT

Query syntax

TRACe:FEED:SELected?

Returns

<CRD>

TRACe:DELay

This command is used to select cache delay time.

Command syntax

TRACe:DELay<NRf>

Command Arguments

0 to3600s|MINimum|MAXimum|Default

Unit

s

Query syntax

TRACe:DELay? [MINimum|MAXimum|DEFault]

Returns

<NR3>

TRACe:TIMer

This command is used to select cache time interval.

Command syntax

TRACe:TIMer < NRf>

Arguments

0.00002 to 3600s|MINimum|MAXimum|DEFault

Unit

s

Example

TRAC:TIM 0.1

Query syntax

TRACe:TIMer? [MINimum|MAXimum|DEFault]

Returns

<NR3>

TRACe:POINts:ACTual?

This command is used to select number of actual readings in the cache.

Command syntax

TRACe:POINts:ACTual?

Returns

<NR1>

TRACe:CLEar:AUTO[:STATe]

This command is used to select whether to automatically clear cache data.

When Auto Clear is enabled, when saving starts, buffer will be automatically cleared; when it is disabled, the new reading will be saved to the buffer area following the previous data till the buffer is full or when saving stops.

Command syntax

TRACe:CLEar:AUTO[:STATe] <bool>

Arguments

0|1|OFF|ON

Query syntax

TRACe:CLEar:AUTO[:STATe]?

Returns

0|1

TRACe:DATA?

This command is used to read all values saved in the cache.

Command syntax

TRACe:DATA?

Returns

{ <NR3>,<NR3>,<NR3>…}

Chapter17 IEEE-488 Commands

This chapter introduced often-used IEEE-488 commands.

*CLS

This command clears the following registers:

- Standard event register
- Query event register
- Operation event register
- Status byte register

Command syntax

*CLS

Arguments

None

*ESE

This command can set the parameter of standard event enable register. Setting parameter can determine which bit of standard event register is 1 and the byte will enable ESB of status byte register is 1.

Command syntax

*ESE <NR1>

Arguments

0～255

Default set

Refer to *PSC command

Example

*ESE 128

Query syntax

*ESE?

Returns

<NR1>

Related Command

*ESR? *PSC *STB?

*ESR?

This command can read the value of standard event status register. After executing this command, standard event status register is reset. Bit definition of standard event status register is as the same as the standard event status enable register.

Query syntax

*ESR?

Arguments

None

Returns

<NR1>

Related Command

*CLS *ESE *ESE? *OPC

*IDN?

This command can read information about power supply. The returns parameter contains 4 segments divided by comma.

Query syntax

*IDN?

Arguments

None

Returns

<AARD> segment description

Example

ITECH,IT6522C,601234567890123456,1.03-1.02

*OPC

When all commands before this command are executed, bit OPC in standard event register will be set to 1.

Command syntax

*OPC

Arguments

None

Query syntax

*OPC?

Returns

<NR1>

*PSC

This command is used to control whether the power supply will generate a service request when power on again.

- 1 OR ON: When the power supply power on, status byte enable register, operater event enable register, query event enable register and standard event enable register will be cleared.
- 0 OR OFF: When the power supply power on, The value of status byte enable register, operater event enable register, query event enable register and standard event enable register will be stored in the none-volatile storage, which will be recalled when power on.

Command Syntax

*PSC <bool>

Parameters

0|1|ON|OFF

Query Syntax

*PSC？

Returned Parameters

0|1

*RST

This command reset the power supply to default settings.

Command syntax

*RST

Arguments

None

*SRE <n>

This command can set the parameter of state byte enable register. Setting parameter can determine which byte value of state byte register is 1 and the byte will set RQS of state byte register to 1. Bit definition of state byte enable register is as the same as the state byte register.

Command syntax

*SRE <NRf>

Arguments

0～255

Default set

Refer to *PSC command

Example

*SRE 128

Query syntax

*SRE?

Returns

<NR1>

Related Command

*ESE *ESR? *PSC *STB?

*STB

This command can read the data from status byte register. After execute this command, the value of bit6 in status byte register will be clean.

Bit Position	7	6	5	4	3	2	1	0
Condition	OPER	RQS	ESB	MAV	QUES	EAV	Not used	Not Used

The Arguments description in table as follow:

- OPER: Operation status summary
- RQS: Request service
- ESB: Event status summary
- MAV: Message is enabled
- QUES: EQuery status register position.
- EAV: Error message is enabled.

Query syntax

*STB?

Arguments

None

Returns

<NR1>

Related Command

*CLS *ESE *ESR

*SAV

This command can save the current setups of power supply to specified memory. These setups contains current setups, voltage setups, max voltage set, min voltage set, OVP set, OVP timer, OPP set, voltage rise and fall time, analog interface and series and parallel set.

The memory can divided into 10 groups, each contains 0~9 setups. So IT6512 can save 100 Setups in all.

Command syntax

*SAV<NRf>〉

Arguments

0~99

Example

*SAV 99

*RCL:

This command can recall the setups you saved before from the specified memory.

Command syntax

***RCL<NRf>**

Arguments

0～99

Example

*RCL 80

*TST?

This command is used to query the self-test by the instrument. 0 indicates that self-test succeeds; other Arguments indicate self-test fails. In addition, in case of failure, an error information will be generated to describe failure reason.

Command syntax

*TST?

Arguments

None

Returns

<NR1>

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