Programmable DC Power Supply

User Manual

Part Number: 72-13350 and 72-13360

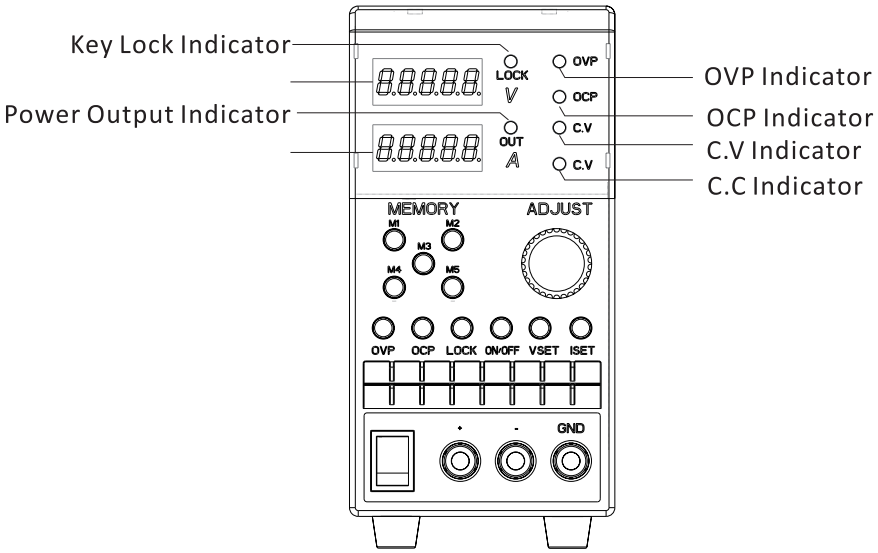
Product Features

- 0-30V/0-60V, 0-30A/0-15A, 300W wide range output
- 5-digit current and voltage display with high accuracy
- The voltage output slope can be set
- Convenient fast recall
- The OCP & OVP parameters can be set
- Various control interfaces: LAN, USB, RS232 and USB
- Supporting the stand-alone dynamic output mode

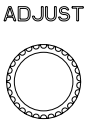
Product Series

72-13350: 0-30V 0-30A 300W
72-13360: 0-60V 0-15A 300W

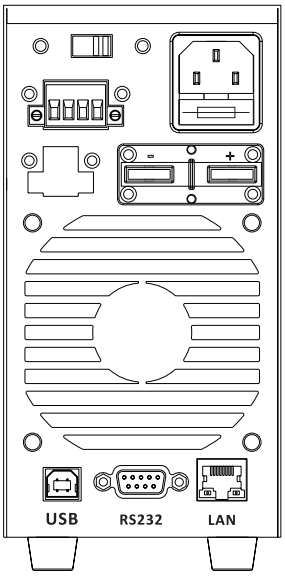
Front Panel Description

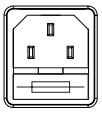
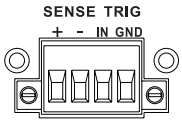
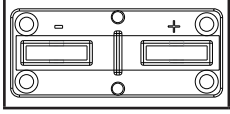


OVP	Press: set the OVP value and then press again to exit and save Press and hold: open the external trigger; meanwhile, there is a decimal point after the last number of the current display.
OCP	Press: set the OCP value and then press again to exit and save Press and hold: open the external compensation; meanwhile, there is a decimal point after the last number of the current display.
LOCK	Press: turn ON/OFF the touch tone Press and hold: lock the buttons
ON/OFF	Press and hold: set dynamic value and there will be 15 dynamic modes plus or minus M1-M5; 0: set the times of repetition and the dynamic numbers (1-15); 1-15: set the dynamic voltage and current value, and switch to set the dynamic slope and time by pressing the knob; press and hold to exit and save.

	Flashing the cursor while setting the voltage
	Flashing the cursor while setting the current
	Press: recall M1 - M5 Press and hold: save M1 - M5
	Press: turn off the flashing while setting Press and hold: set the slope and press again to exit the setting. And the unit is V/100μS.
	Front output terminal: the max output current of the secondary terminal is 12A. And the output of the power supply will be automatically cut off if the current exceeds 12A.

Rear Panel Description



	AC input
	AC input 115V / 230V switch
	SENSE: Remote Monitoring Port TRIG: Trigger port
	Output terminal, max output current 30A

USB	USB communication port
RS232	RS232 communication port
LAN	Ethernet communication port
	RS485 Communication Port

Characteristics of the Voltage Output

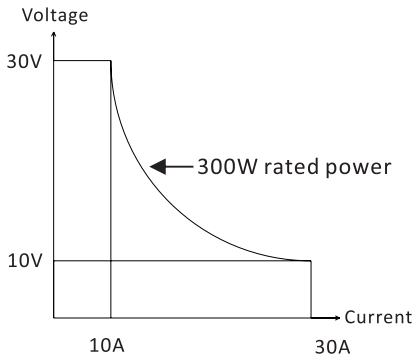
The power supplies are regulated DC power supplies with a high voltage and current output. These operate in CC or CV mode within a wide operating range limited only by the output power.

The operating area of each power supply is determined by the rated output power as well as the voltage and current rating.

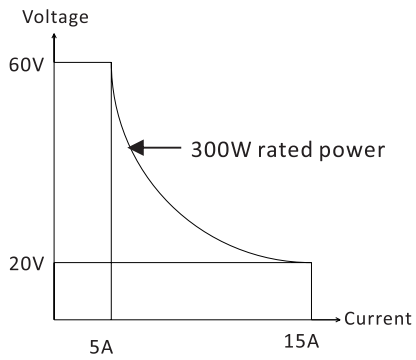
When the power supply is configured so that the total output (current x voltage output) is less than the rated power output, the power supply functions as a typical constant current, constant voltage power supply.

If however, the power supply is configured such that the total output (current x voltage output) exceeds the rated power output, the effective output is actually limited to the power limit of the unit. In this case the output current and voltage then depend purely on the load value.

Below is a comparison of the operating areas of each power supply.



72-13350



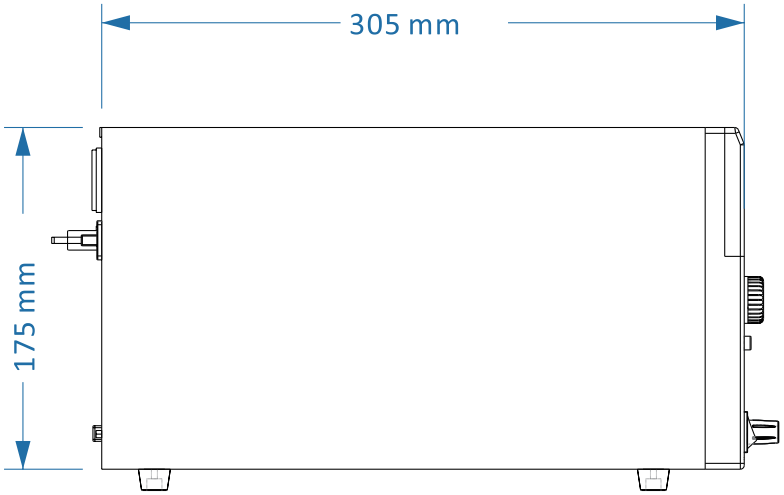
72-13360

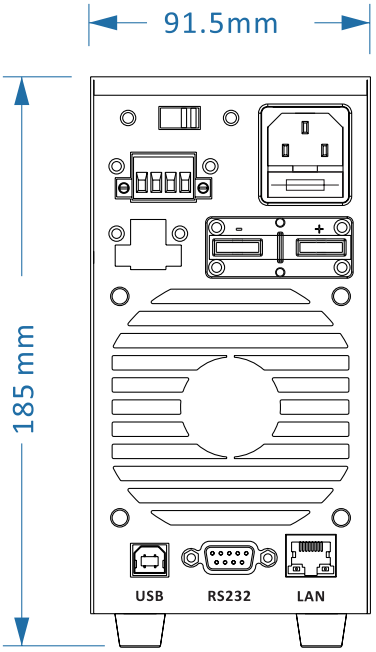
Note: the specifications below are tested under the conditions of temperature 25°C ±5°C and the warm-up for 5 minutes

Models	72-13350	72-13360
POWER Voltage Current	300W 0-30V 0-30A	300W 0-60V 0-15A
Load Regulation		
Voltage Current	≤0.01% +3mV ≤0.1% +5mA	≤0.01% +2mV ≤0.1% +5mA
Line Regulation		
Voltage Current	≤0.01% +3mV ≤0.1% +3mA	≤0.01% +3mV ≤0.1% +3mA
Setup Resolution		
Voltage	1mV	1mV
Current	1mA	1mA
Read Back Resolution		
Voltage	1mV	1mV
Current	1mA	1mA
Setup Accuracy (25°C ±5°C)		
Voltage	≤0.5% +3mV	≤0.5% +5mV
Current	≤0.5% +5mA	≤0.5% +3mA
Voltage Rise Time		
Rise Time	≤50ms	≤65ms
Fall Time	≤50ms	≤50ms
Ripple (20-20M)		
Voltage	≤1mVrms	≤2mVrms
Current	≤3mArms	≤3mArms
Temp. Coefficient		
Voltage	≤150ppm	≤150ppm
Current	≤150ppm	≤150ppm
Read Back Temp. Coefficient		
Voltage	≤150ppm	≤150ppm
Current	≤150ppm	≤150ppm
Accessories		
User manual × 1, Power Cord × 1, USB × 1		
Weight and Dimension		
72-13350 and 72-13360: 91.5mm(W) × 175mm(H) × 305mm(D)		
72-13350 and 72-13360: 3.9kgs		

Note: Specifications are subject to change without notice.

The External Size of the Power Supply





Communications

This instrument command is divided into queries and settings.

? indicates queries while : indicates settings. And all the commands are applicable to RS232 and RS485. The command format is as follows: RS232 command such as VSET:12.5 while RS485 command is VSET01:12.5. Furthermore, 01 refers to RS485 address. And the following command is preceded by the RS232 command, followed by the RS485 command with address 01.

ISET:10.5 **ISET01:10.5**
Set the current to 10.5A

I SET? **ISET01?**
Query the current setting value of the current

VSET:12.5 **VSET01:12.5**
Set the voltage to 12.5V

VSET? **VSET01?**
Query the current setting value of the voltage

IOUT? **IOUT01?**
Query the current output value of the current

VOUT? **VOUT01?**
Query the current output value of the voltage

BEEP: **BEEP01:**
BEEP: 1 turn on the buzzer, BEEP: 0 turn off the buzzer

OUT: **OUT01:**
OUT: 1 turn on the output, OUT: 0 turn off the output

STATUS? **STATUS01?**

Query the device status BIT0:CV, BIT1:CC, BIT4:the buzzer, BITS:LOCK, BIT6, the output status

***IDN?** ***IDN01?**

Query the serial No. of the device

RCL:S **RCL01:S**

Recall MS as the current value (the value is 1 - 5)

RCL:6 **RCL01:6**

Recall LIST dynamic value

SAV:5 **SAV01:5**

The current value is stored in M5 (the value is 1-5)

OCP:12.5 **OCP01:12.5**

Set the OCP current value to be 12.5A

OCP? **OCP01?**

Query the OCP current value

OVP:15.5 **OVP01:15.5**

Set the OVP voltage value to be 15.5V

OVP? **OVP01?**

Query the OVP voltage value

VSLOPE:31.5 **VSLOPE01:31.5**

Set the output voltage slope to be 31.5V/100μS

VSLOPE? **VSLOPE01?**

Query the output voltage slope

List00:25,6 **List0100:25,6**

Set the times of repetitions of LIST to be 25 and LIST sets 6 dynamic values

LIST00? **LIST0100?**

Query the times of repetitions of LIST and the number of dynamic values

LIST02:25.6,2.5,6.5,5.8 **LIST0102:25.6,2.5,6.5,5.8**

Set the second dynamic value of LIST: voltage to be 25.6V, current 2.5A, slope 6.5V/100μS and time 5.8s

LIST02? **LIST0102?**

Query the voltage, current, slope and time of the second dynamic value of LIST

EXIT: **EXIT01:**

EXIT 0 turn off the external trigger, EXIT:1 turn on the external trigger

EXIT? **EXIT01?**

Query the status of the external trigger

COMP: **COMP01:**

COMP:0 turn off the external compensation, COMP:1 turn on the external compensation

COMP1?

Query the status of the external compensation

LOCK: **LOCK01:**

LOCK:0 unlock the buttons, LOCK:1 lock the buttons

VASTEP:1,10,0.1,0.2 **VASTEP01:1,10,0.1,0.2**

Set the automatic voltage mode, starting from 1V to 10V with the stepping voltage 0.1V every 0.2s. If the starting voltage is less than the ending one, it changes upward; vice versa

IASTEP:1,5,0.1,0.2 **IASTEP01:1,5,0.1,0.2**

Set the automatic current mode, starting from 1A to 5A with the stepping current 0.1A every 0.2s. If the starting current is less than the ending one, it changes upward; vice versa

VSTEP:0.5 **VSTEP01:0.5**

Set the manual step voltage value to be 0.5V for use with the following VUP or VDOWN

VUP **VUP01**

Manually increase the voltage step value. To use this command, you need to set the manual voltage value first

VDOWN **VDown01**

Manually reduce the voltage step value. To use this command, you need to set the manual voltage value first

ISTEP:0.5 **ISTEP01:0.5**

Set the manual step current value to be 0.5A for use with the following IUP or IDOWN

IUP **IUP01**

Manually increase the current step value. To use this command, you need to set the manual current value first

IDOWN **IDOWN01**

Manually reduce the current step value. To use this command, you need to set the manual current value first