

KORAD



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Programmable DC Power Supply

KWR Series User Manual

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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 & USB
- Supporting the stand-alone dynamic output mode

Product Series

KWR102 0-30V 0-30A 300W
KWR103 0-60V 0-15A 300W

OVP1?

Query the OVP voltage value

VSLOPE1:31.5

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

VSLOPE1?

Query the output voltage slope

LIST100:25:6

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

LIST100?

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

LIST102:25.6,2.5:6.5:5.8

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

LIST102?

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

EXIT1:

EXIT1:0 turn off the external trigger, EXIT1:1 turn off the external trigger

EXIT1?

Query the status of the external trigger

COMP1:

COMP1:0 turn off the external compensation, COMP1:1 turn on the external compensation

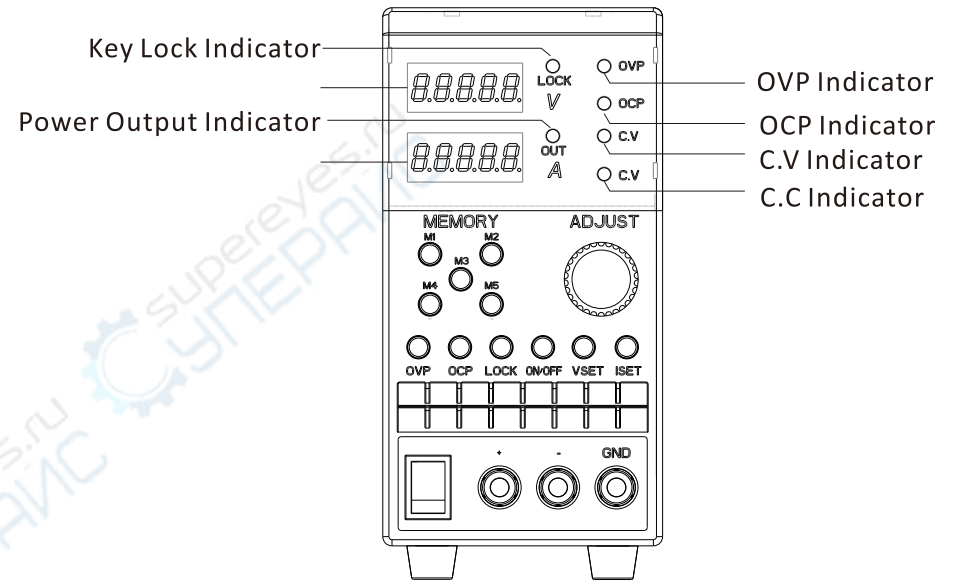
COMP1?







Query the status of the external compensation

LOCK:

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

Front Panel Description

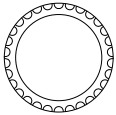


-  **OVP** Press: set the OVP value and then press again to exit and save
Press and hold: open the external trigger; meanwhile, there is a decimal point after the last
-  **OCP** Press: set the OCP value and then press again to exit and save
Press and hold: open the external compensation; meanwhile, 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.
-  **VSET** Flashing the cursor while setting the voltage
-  **ISET** Flashing the cursor while setting the current

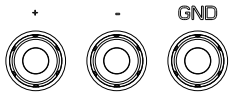


Press: recall M1 - M5
Press and hold: save M1 - M5

ADJUST

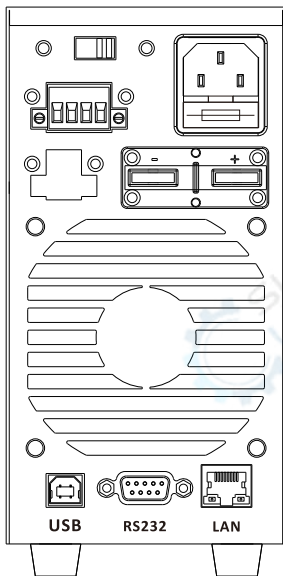


Press: turn off the flashing while setting
Press and hold: set the slope and press again to exit the setting. And the unit is V/100uS.



Front output terminal: the max output current of the secondary terminal is 10A. And the output of the power supply will be automatically cut off if the current exceeds 10A.

Rear Panel Description



Communications

IS_{ET}1:10.5

Set the current to 10.5A

IS_{ET}1?

Query the current setting value of the current

V_{SET}1:12.5

Set the voltage to 12.5V

V_{SET}1?

Query the current setting value of the voltage

I_{OUT}1?

Query the current output value of the current

V_{OUT}1?

Query the current output value of the voltage

BEEP:

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

OUT:

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

STATUS?

Query the device status BIT0:CV, BIT1:CC, BIT4:the buzzer, BIT5:LOCK, BIT6, the output status

*IDN?

Query the serial No. of the device

RCL5

Recall M5 as the current value (the value is 1 - 5)

RCL6

Recall LIST dynamic value

SAV5

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

OCP1:12.5

Set the OCP current value to be 12.5A

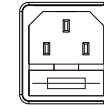
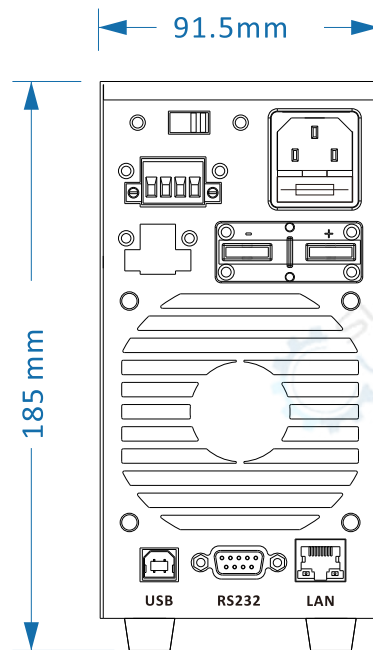
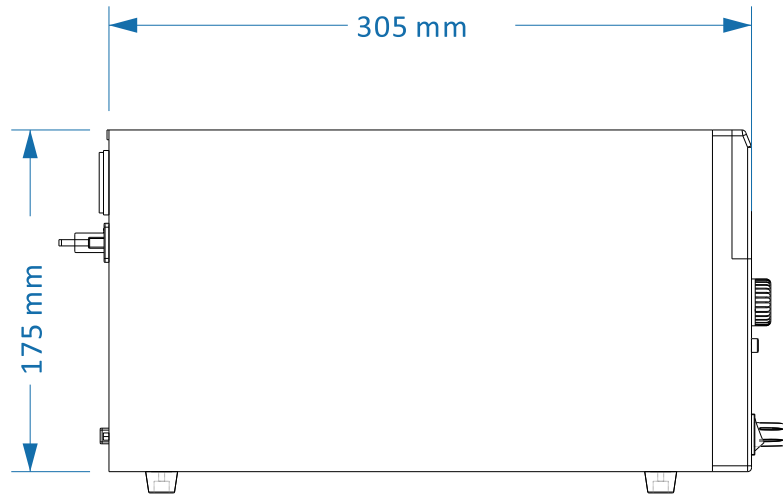
OCP1?

Query the OCP current value

OVP1:15.5

Set the OVP voltage value to be 12.5A

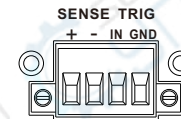
The External Size of the Power Supply



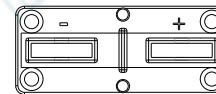
AC input



AC input 115V/230V switch



SENSE: Remote Monitoring Port
TRIG: trigger port

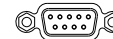


Output terminal, max output current 30A



USB

USB communication port



RS232

RS232 communication port



LAN

Ethernet communication port

Characteristics of the Voltage Output

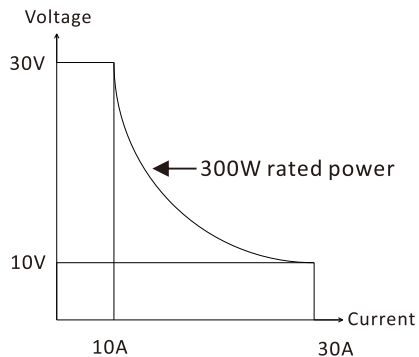
The KWR power supplies are regulated DC power supplies with a high voltage and current output. These operate in CC or CV mode within a wide operating range limited only by the output power.

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

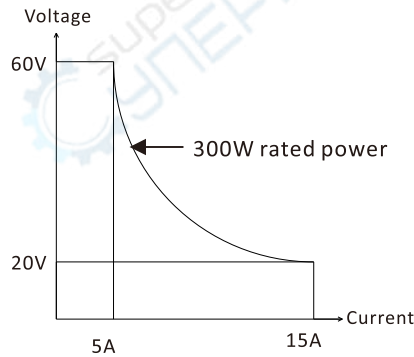
When the power supply is configured so that the total output (current x voltage output) is less than the rated power output, the power supply functions as a typical constant current, constant voltage power supply.

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.



KWR102



KWR103

Note: the specifications below are tested under the conditions of temperature $25^{\circ}\text{C} \pm 5^{\circ}\text{C}$ and the warm-up for 5 minutes.

Models	KWR102	KWR103
POWER	300W	300W
Voltage	0-30V	0-60V
Current	0-30A	0-15A
Load Regulation		
Voltage	$\leq 0.01\% + 3\text{mv}$	$\leq 0.01\% + 2\text{mv}$
Current	$\leq 0.1\% + 5\text{mA}$	$\leq 0.1\% + 5\text{mA}$
Line Regulation		
Voltage	$\leq 0.01\% + 3\text{mv}$	$\leq 0.01\% + 3\text{mv}$
Current	$\leq 0.1\% + 3\text{mA}$	$\leq 0.1\% + 3\text{mA}$
Setup Resolution		
Voltage	1mV	1mV
Current	1mA	1mA
Read Back Resolution		
Voltage	1mV	1mV
Current	1mA	1mA
Setup Accuracy(25°C+5°C)		
Voltage	$\leq 0.5\% + 3\text{mV}$	$\leq 0.5\% + 5\text{mV}$
Current	$\leq 0.5\% + 5\text{mA}$	$\leq 0.5\% + 3\text{mA}$
Voltage Rise Time		
Rise Time	$\leq 50\text{ms}$	$\leq 65\text{ms}$
Fall time	$\leq 50\text{ms}$	$\leq 50\text{ms}$
Ripple(20-20M)		
Voltage	$\leq 1\text{mVrms}$	$\leq 2\text{mVrms}$
Current	$\leq 3\text{Arms}$	$\leq 3\text{Arms}$
Temp. Coefficient		
Voltage	$\leq 150\text{ppm}$	$\leq 150\text{ppm}$
Current	$\leq 150\text{ppm}$	$\leq 150\text{ppm}$
Read Back Temp. Coefficient		
Voltage	$\leq 150\text{ppm}$	$\leq 150\text{ppm}$
Current	$\leq 150\text{ppm}$	$\leq 150\text{ppm}$
Accessories		
User manual *1, Power cord*1, USB*1		
Weight and Dimension		
KWR102, KWR103: 91.5mm(W)*175mm(H)*305(D) KWR102x3.9Kg, KWR103x3.9Kg		

Note: Specifications are subject to change without notice.