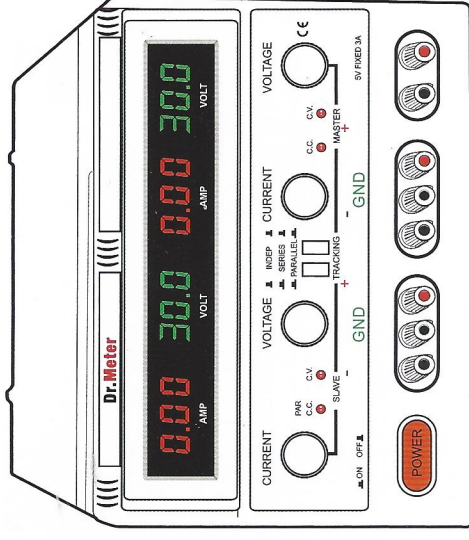


Dr. Meter

DC REGULATED POWER SUPPLY

User Manual



HY3005F-3 / HY3003D-3

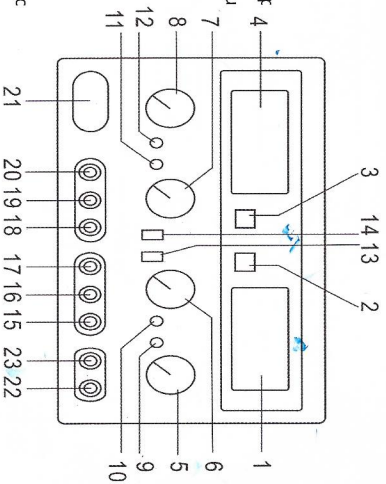
● **TECHNICAL PARAMETER**

- 1.1 Input voltage: 104~127V AC (60Hz), or 207~253V AC (50Hz)
- 1.2 Dual adjustable power supply
 - 1.2.1 Line regulation: $CV \leq 0.01\% + 2\text{mv}$ $CC \leq 0.2\% + 2\text{mA}$
 - 1.2.2 Load regulation: $CV \leq 0.01\% + 3\text{mv}$ ($I \leq 3\text{A}$) $CC \leq 0.2\% + 3\text{mA}$ ($I \leq 3\text{A}$)
 - $CV \leq 0.01\% + 5\text{mv}$ ($I > 3\text{A}$) $CC \leq 0.2\% + 5\text{mA}$ ($I > 3\text{A}$)
- 1.2.3 Ripple and noise: $CV \leq 0.5\text{mV}$.m.s ($I \leq 3\text{A}$) $CC \leq 3\text{mAr}$.m.s ($I \leq 3\text{A}$)
- $CV \leq 1.0\text{mV}$.m.s ($I > 3\text{A}$) $CC \leq 6\text{mAr}$.m.s ($I > 3\text{A}$)
- 1.2.4 Protection: constant current or short-circuit protection
- 1.2.5 Voltage indication accuracy: LED/LCD $\pm 1\% + 2\text{digits}$ analogue display 2.5%
- 1.2.6 Current indication accuracy: LED/LCD $\pm 2\% + 2\text{digits}$ analogue display 2.5%
- 1.3 Fixed output
 - 1.3.1 Output voltage: $5\text{V} \pm 2.5\%$
 - 1.3.2 Output current: 3A
 - 1.3.3 Line regulation: $CV \leq 0.01\% + 1\text{mv}$
 - 1.3.4 Load regulation: $\leq 0.1\%$
 - 1.3.5 Ripple and noise: $\leq 0.5\text{mV}$.m.s
 - 1.3.6 Protection: current restricted and short-circuit protection
- 1.4 Environment: 0 ~ +40°C Relative humidity: <90%

● **OPERATION**

2.1 Front panel controls

- (1) Voltage and current indication for master output.
- (2) Voltage or current display selector for master outif.
- (3) Voltage or current display selector for slave output
- (4) Voltage and current indication for slave output.
- (5) Voltage adjustment of master output.
- (6) Current adjustment of master output.
- (7) Voltage adjustment of slave output.
- (8) Current adjustment of slave output.
- (9) Constant voltage mode indicator light for master c
- (10) Constant current mode indicator light for master output.
- (11) Constant voltage mode indicator light for slave output.
- (12) Constant current mode indicator light for slave output and & twice current output indicator light in parallel mode.



- What's in the Box**
- 1 X DC Power Supply
 - 1 X AC Power Cable
 - 1 X Banana to Alligator Test Cable
 - 1 X Manual Book

- (13) Independent, Series and Parallel selector switch.
- (14) Independent, Series and Parallel selector switch.
- (15) Positive output terminal of master output.
- (16) Ground connection terminal of case.
- (17) Negative output terminal of master output.
- (18) Positive output terminal of slave output.
- (19) Ground connection terminal of case.
- (20) Negative output terminal of slave output.
- (21) Mains power on/off switch.
- (22) Fixed 5V positive output terminal.
- (23) Fixed 5V negative output terminal.

Chapter I

How to use the DC Power Supply

Setting the Output Voltage and Output Current

To set the output voltage and current, follow these steps:

1. Check that the total load to be connected does not exceed the maximum output voltage and current of this power supply.
2. Open the circuit between the + and the — output terminals. Turn the voltage adjustment knob clockwise until you get the desired output voltage rating.
3. Turn the current adjustment knob counterclockwise until you get the minimum value.
4. Short the circuit between the + and the — output terminals. Note that the current rating of the shorting wire should be greater than or equal to the required current.
5. Turn the current adjustment knob clockwise until the current indicator on the front panel displays the required current rating.
6. Remove the shorting wire from the + and the — output terminals. The power supply returns to the constant voltage mode and is ready to use.

Chapter II

Know about the 3 modes of the DC Power Supply Operation Modes

2.1.1 Independent Mode

The master and the slave power can be used independently to generate voltage and current. To operate in the independent

mode, follow these steps:

1. Set the TRACKING MODE switches on the front panel to IND.
2. Turn on the POWER switch.
3. Set the master output voltage and current as described in Chapter I
4. Set the slave output voltage and current as described in Chapter I

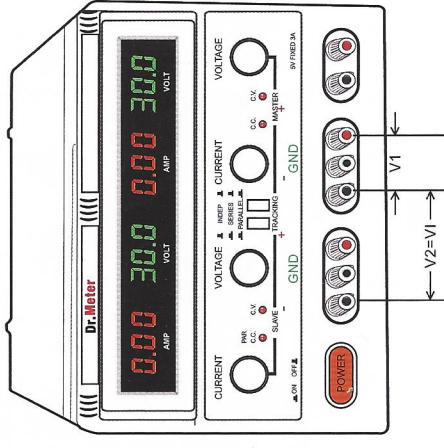
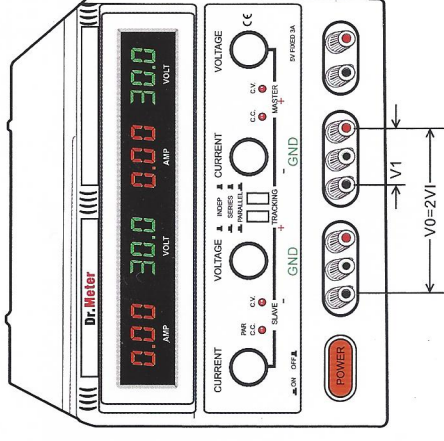
2.1.2 Serial Tracking Mode

Under this mode, the — Master Output Terminal is automatically shorted with the + Slave Output Terminal. the set master output voltage while the output current is the same as the master setting value.

To operate in the serial mode:

1. Set the TRACKING MODE switches on the front panel to SER.
2. Turn on the POWER switch.
3. Turn the SLAVE Current Adjustment Knob clockwise to maximum.
4. Set the master output voltage and current as described in Chapter I

The following figures show two different serial operations:



2.1.3 Parallel Tracking Mode

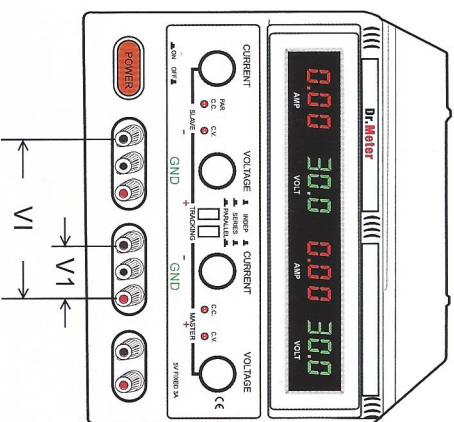
Under this mode, the - Master Output Terminal is shorted with the - Slave Output Terminal while the + Master Output Terminal is

shorted with the + Slave Output Terminal automatically.

This parallel output is generated from the + Master Output Terminal and the - Master Output Terminal (or - Slave Output Terminal). The output current is twice the set master current while the output voltage is the same as the master setting value.

To operate in the parallel mode:

1. Set the TRACKING MODE switches on the front panel to PAR.
2. Turn on the POWER switch.
3. Turn the SLAVE Current and Voltage Adjustment Knobs clockwise to maximum.
4. Set the master output voltage and current as described in Chapter 1

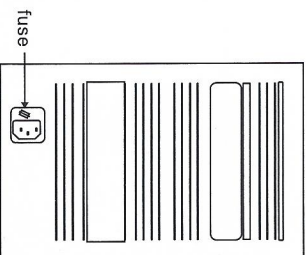


Changing the Fuse

The fuse is located inside the input power fuse holder (refer to Figure xxxx). You need to change the fuse when:

- the fuse is blown out
 - you change the voltage rating
- In any case, replace the fuse with one of the same rating.

Note: Unplug the power cord before you change the fuse. The fuse must be rated at the exactly current as the original one.



Warning:

Use of this product is limited to North America. Input voltage should range from 104V~127V. Input voltage exceeding the rated voltage may cause permanent damage to this product.

The operating principle of this device

If you operate it normally:

You can only change the voltage.

The current output depends on the device you hooked up, in other words, you can not change the current manually, for safety's sake.

There's no current in idle load condition.

It is a smart design to protect your device from burning down.

So, what you need to do is to locate the voltage your device required and adjust the Voltage on the DC Power Supply to make them match exactly.

The current showing on the power supply is what your device drawing from it. The current changes depending on what device you hooked up with the Power Supply.

DC POWER SUPPLY BRIEF INTRODUCTION

The Dr.Meter HYxxxx series variable DC power supplies are very stable, regulated DC power supplies allowing continuous adjustment of both the output voltage and output current levels.

The HYXXXXE are switching power supply.

MODELS:

MODEL	HY3002-2	HY3003-2	HY3005-2	HY3002-3	HY3003-3	HY3005-3
OUTPUT VOLTAGE	2×0-30V	2×0-30V	2×0-30V	2×0-30V	2×0-30V	2×0-30V
OUTPUT CURRENT	2×0-2A	2×0-3A	2×0-5A	2×0-2A	2×0-3A	2×0-5A
FIXED OUTPUT	NO	NO	NO	5V, 3A	5V, 3A	5V, 3A
MODEL	HY5002-2	HY5003-2	HY5005-2	HY6002-2	HY6003-2	HY6005-2
OUTPUT VOLTAGE	2×0-50V	2×0-50V	2×0-50V	2×0-60V	2×0-60V	2×0-60V
OUTPUT CURRENT	2×0-2A	2×0-3A	2×0-5A	2×0-2A	2×0-3A	2×0-5A
MODEL	HY3010E-2	HY3010E-3	HY3010E-5	HY3010E-2	HY3010E-3	HY3010E-5
OUTPUT VOLTAGE	2×0-100V	2×0-100V	2×0-100V	2×0-100V	2×0-100V	2×0-100V
OUTPUT CURRENT	2×0-10A	2×0-10A	2×0-10A	2×0-10A	2×0-10A	2×0-10A