

# ***USER'S MANUAL***



**DC REGULATED POWER SUPPLY**



## DC POWER SUPPLY

### BRIEF INTRODUCTION:

The HY3000 and HY5000 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 HY3000 and HY5000 series have LED displays, the HY3000C and HY5000C have analogue displays and the HY3000D and HY5000D series have LCD displays.

### MODELS:

|                          |         |         |         |         |         |         |         |
|--------------------------|---------|---------|---------|---------|---------|---------|---------|
| MODEL                    | HY3002  | HY3003  | HY3005  | HY3006  | HY5002  | HY5003  | HY6003E |
|                          | HY3002C | HY3003C | HY3005C | HY3006C | HY5002C | HY5003C | HY6003C |
|                          | HY3002D | HY3003D | HY3005D | HY3006D | HY5002D | HY5003D | HY6003D |
| REGULATED OUTPUT VOLTAGE | 0-30V   | 0-30V   | 0-30V   | 0-30V   | 0-50V   | 0-50V   | 0-60V   |
| REGULATED OUTPUT CURRENT | 0-2A    | 0-3A    | 0-5A    | 0-6A    | 0-2A    | 0-3A    | 0-3A    |

### 1. TECHNICAL PARAMETERS

1.1 Input voltage : 104~127V AC (60Hz), or 207~253V AC (50Hz)

1.2 Line regulation: CV $\leq$ 0.01%+1mV                      CC $\leq$ 0.2%+1mA

1.3 Load regulation: CV $\leq$ 0.01%+3mV(I $\leq$ 3A)    CC $\leq$ 0.2%+3mA(I $\leq$ 3A)

CV $\leq$ 0.01%+5mV(I>3A)    CC $\leq$ 0.2%+5mA(I>3A)

1.4 Ripple and noise:  $CV \leq 0.5mVr.m.s (I \leq 3A)$      $CC \leq 3mAr.m.s (I \leq 3A)$   
 $CV \leq 1.0mVr.m.s (I > 3A)$      $CC \leq 6mAr.m.s (I > 3A)$

1.5 Protection: constant current or short-circuit protection

1.6 Voltage indication accuracy: LED/LCD  $\pm 1\%+2$ digits, analogue display 2.5%

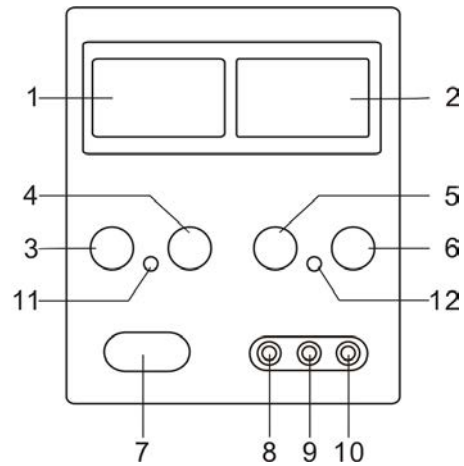
1.7 Current indication accuracy: LED/LCD  $\pm 2\%+2$ digits, analogue display 2.5%

1.8 Environment: 0 ~+40 °C    Relative humidity: <90%

## 2. OPERATION

2.1 Front panel controls.

- (1) Current indication.
- (2) Voltage indication
- (3) Fine adjustment of current
- (4) Coarse adjustment of current.
- (5) Fine adjustment of output voltage.
- (6) Coarse adjustment of output voltage.
- (7) Power ON/OFF switch
- (8) Negative output terminal.
- (9) Ground connection.
- (10) Positive output terminal.
- (11) Constant current mode indicator
- (12) Constant voltage mode indicator



## 2.2 Operating procedure

2.2.1 For constant voltage mode adjust controls 3 & 4 clockwise to the maximum position. Switch on the power ON/OFF switch 7 and adjust controls 5 & 6 to set the desired output voltage.

Connect the load to the output terminals 8 & 10.

2.2.2 For constant current mode adjust controls 5 & 6 clockwise to the maximum position. Adjust controls 3 & 4 anti-clockwise to the minimum position. Switch on the power ON/OFF switch 7 and connect the load to the output terminals 8 & 10. Adjust controls 3 & 4 to set the desired output current.

2.2.3 For restricted current protection mode switch on the power ON/OFF switch 7, adjust controls 3 & 4 anti-clockwise to the minimum position, adjust controls 5 & 6 clockwise to set the desired output voltage level and then connect the load to the output terminals 8 & 10. Adjust controls 3 & 4 clockwise to set the output current at the desired level for restricted current protection.



### **3. ATTENTION:**

3.1 In the event of a short circuit at the output the current will limit at the value set by the current controls, however the unit should be turned off and the short circuit removed before continuing use.

3.2 The mains power must be switched off before servicing and servicing should be referred to a qualified person.

3.3 The unit should be stored in a dry and well ventilated place and the power cord removed if storing for long periods.

**4. ACCESSORIES**

4.1 Power cord-----one piece

4.2 Instruction manual-----one piece