



## POWER SUPPLY - dual mode

Cat: LB2643-001 2, 4, 6, 8, 10, 12V.AC/DC. 8Amp. 1.3-20V.DC.reg. 5Amp max.

### DESCRIPTION:

The famous IEC 'Dual Mode' power supply combines unfiltered and high power AC and DC together with smooth, regulated and metered DC at up to 5 amps. It is designed for general laboratory use but, in addition, it provides a regulated voltage output necessary for work in electronics. The meter is switchable between regulated DC volts and amps.

### LB2643-001 regulated 'dual mode'



Physical size: 325x180x110mm LxWxH

Weight: 4.6 kg

**THE MEANING of REGULATION:** An **unregulated** power supply is simple and inexpensive and can be completely satisfactory, but it has the following disadvantages:

- The output voltage will rise and fall as the mains voltage rises and falls.
- If the load current changes, the output voltage changes also.
- If the DC output is filtered by capacitance, the output voltage will contain more and more ripple as the output current (load) increases.

A **regulated** power supply is far more complex and is normally more expensive than a simple unregulated unit, but it has the following advantages:

- The output voltage does not alter as mains voltage fluctuates.
- The output voltage does not alter as the load current changes from zero to full load.
- The output voltage is smooth (ripple free) at no load through to full load.
- When the output voltage is set by the control knob there is no need to monitor it during experiments because it remains exactly constant regardless of fluctuations in load current. The voltmeter can be switched over to become an Ammeter.



**SPECIFICATIONS:**      **INPUT:** 220/240V.AC. 50/60Hz.

This power supply has two different modes of operation.

**MODE #1:** Left side of front panel. For general purpose, unmetred and **unregulated**.

- **AC output:** Switch selected 2, 4, 6, 8, 10, 12 V.AC. (nominal voltages) at 8 Amps output continuous - OR - at 10 Amps output intermittant at 50% duty cycle (10min.ON / 10min.OFF)
- **DC. output:** Switch selected 2, 4, 6, 8, 10, 12 V.DC. (nominal voltages) at 8 Amps output full wave rectified, unfiltered.
- **Protection:** Both AC and DC outputs are protected by internal automatically resetting thermal overload, with audible 'click'.

**MODE #2:** Right side of front panel. Metered and Regulated output. For electronic experiments and other purposes where a ripple-free DC output is required.

Provides a fully adjustable and electronically **regulated** DC output, electronically filtered to better than 10millivolt peak to peak ripple, at full load.

**Output Voltage:** 1.3 to 20 V.DC. fully and smoothly adjustable.

**Regulation:** Better than 1% voltage fluctuation from no load to full load.

**Output Current:** from 1.3 - 4V.DC 2 amps max

4 - 8V.DC 3 amps max

8 - 12V.DC 4 amps max.

12 - 20V.DC 5 amps max.

**Protection:** As electronic regulators drop more voltage to provide a lower output voltage, the power they need to dissipate increases and they become very hot. So, at the lower output voltages there is a limitation on the maximum current available. This is clearly marked on the front panel. If more current is drawn, the regulator chip will heat and will shut itself down to self-protect. The output will then fall to a very low voltage. When the load is removed, the regulator chip will cool and normal operation will return.

**Metering:** The moving coil meter on the front panel can be switched to monitor either the regulated DC output voltage or the load current.

**Switching:** The regulated DC output can be switched ON and OFF without affecting the set voltage value.

**Physical:** 325 x 180 x 110mm length x depth x height.

**Weight:** 4.6kg.

**Designed and manufactured in Australia**