

BENCHTOP VARIABLE POWER SUPPLY UNITS

INSTRUCTION MANUAL

Purpose

Benchtop units are designed to offer the Test and Development Engineer a compact variable power supply, with rapid and safe connection facility to electrical equipment by lead wires

General Operation

The Benchtop units consist of a variac autotransformer enclosed in an IP22 steel box designed to operate from 230/240V single phase mains supplies. The output is continuously variable from 0 Volts to 112% of the supply voltage by means of a manual adjusting knob on the top of the unit. This knob moves a rotor arm with a carbon brush over a silver plated commutator. Equipment under test may be connected by wires to a "Safeblock" mains connector. The Safeblock has been designed to automatically disconnect the output of the variac from the spring loaded connection terminals when it is open allowing the operator to safely attach the equipment wiring, then connect the equipment under test to the variac output when it is closed.

General Specification

Input Voltage Range		230V to 240V
Output Voltage		0V to 112% of input voltage
Input Connection		2m lead with BS1363 UK mains Plug
Output Connection		Safeblock
Current Rating	CMSE3	3 Amps max
	CMSE5	5 Amps max
	CMSE10	10 Amps
Protection		Input mains fuse in plug Output fuse in the safeblock

Installation

The unit is a stand alone product requiring no electrical installation procedure.

Check the unit case, mains lead and plug for signs of damage. Do not use if any damage is discovered

On receipt of the unit unscrew the base of the enclosure and remove the transportation protection disc from under the carbon brush. Re-secure the base into position before use

Operation

When testing equipment that is subject to large starting current surges e.g. electric motors and transformers, the surge currents may over a period of time cause damage to the commutator track. Where possible therefore switch on at 0 volts output and ramp the voltage up to the required operating level

In applications where it is required to switch on with the full working voltage it is recommended to avoid leaving the rotor arm in a set position for repetitive switching actions to prevent causing local damage to the commutator track

Service

Remove the base of the unit at regular intervals and inspect the surface of the commutator for dirt and pitting of the track. Clean the track by lightly rubbing with fine emery paper

Inspect the condition of the carbon brush for cracks and chips. If damaged replace the brush, a spare has been supplied with the unit and further spares can be purchased from the retailer who sold the unit

Ensure the base is properly re-secured after servicing to prevent the possibility of electric shock

WHEN REMOVING THE BASE FOR ANY SERVICING OPERATION ENSURE THE UNIT IS DISCONNECTED FROM THE MAINS SUPPLY

All servicing work should be conducted by suitably qualified personnel

Disposal

At the end of the service life of the unit ensure it is properly disposed of in keeping with the environmental legislation current at the time for the recovery and recycling of materials.