

# **PORTABLE VARIABLE POWER SUPPLY UNITS**

## **CARRYVOLT**

### **INSTRUCTION MANUAL**

## **Purpose**

Carryvolt units are designed to offer the Test Engineer a compact variable power supply, easily transportable, complete with input and output connectivity and output monitoring of the test supply

## **General Operation**

The Carryvolt 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 front of the unit. This knob moves a rotor arm with a carbon brush over a silver plated commutator  
Equipment under test may be connected directly to the unit by either the existing BS1363 UK mains plug, IEC60320 mains plug or wiring by a set of test leads with 4mm round pin connectors  
Monitoring of the output may be by the built in analogue voltmeter and ammeter and there is also facility to monitor the voltage externally by connecting to 4mm round pin sockets with stackable 4mm pin connectors

## **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		BS1363 UK mains socket IEC60320 European mains socket 4mm Red Live 4mm Black Neutral 4mm Green Earth
Current Rating	CMCTV5 CMCTV10	5 Amps max 10 Amps max
Protection		Input mains fuse in plug Output fuse panel mounted

## **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 back plate of the enclosure and remove the transportation protection disc from under the carbon brush. Re-secure the back plate 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 back cover 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 back cover is properly re-secured after servicing to prevent the possibility of electric shock

**WHEN REMOVING THE BACK COVER 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.