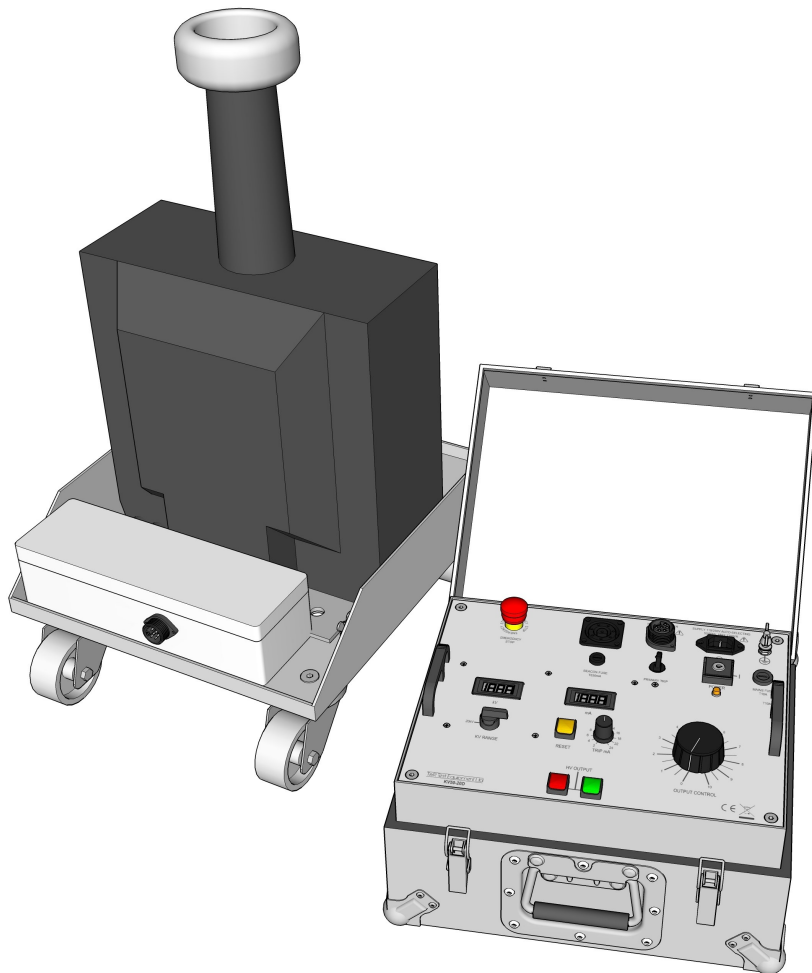


# KV50-20D Mk3

## High Voltage AC Test System



### Features

- 0-50kV output voltage
- 20mA maximum output current
- Auto-selecting 115/230V supply voltage
- Key operated supply switch to prevent unauthorised operation
- Dual overload protection
- Variable electronic trip
- Voltage and current metering
- External interlock circuit
- Zero-volt interlock
- Visual indication of test piece failure
- Cast resin HV transformer

The KV50-20D is a low power portable high voltage AC test system designed for insulation testing. This system is equally suited to both development and routine testing of electrical insulation systems and plant.

The equipment consists of a control unit and a separate resin cast high voltage transformer linked by a 5 metre control cable. The control unit is housed in a rugged aluminium case with a hinged, removable lid for protection. The high voltage transformer is mounted on a base with swivel castors for mobility.

The control unit is fitted with a comprehensive range of facilities for control, metering and protection, including an emergency off switch. The output RMS voltage and current are displayed on digital meters. A variable electronic trip is provided, allowing the trip current to be set to 10-110% of rated output.

The unit is designed to be operated with the HV transformer inside an interlocked test enclosure. A connector is supplied on the control unit to connect interlock switches, extra emergency stop switches and external 24V beacons.

## KV50-20D Specification

### Output

The output of the KV50-20D is via a high voltage bushing. The bushing is designed to be connected to the object under test by an air insulated connection such as copper tubing or tinned copper wire (not supplied with the system). The earthy end of the HV winding is connected to earth via the current metering circuit.

**Output voltage** 0-50kVac

**Output current** 12mA continuous  
20mA 5 min on/15min off

### Metering

The output voltage is metered by a true RMS digital instrument.

	20kV range	50kV range
Full scale	19.99kV	50.00
Resolution	0.01kV	0.1kV
Accuracy (no load)	±2% of rdg + 5d	±2% of rdg + 5d
Accuracy (@12mA)	±5% of rdg + 5d	±5% of rdg + 5d

Load current is metered by a true RMS digital instrument.

	20mA range
Full scale	19.99mA
Resolution	0.01mA
Accuracy (no load)	±2% of rdg + 5d
Accuracy (@12mA)	±5% of rdg + 5d

### Control

The output voltage is set by a continuously variable output control with a zero volt interlock - the output may only be switched on with the control in the zero position. The output voltage is switched on and off by illuminated push button switches.

The mains supply switch for the unit is a key operated switch. The key is trapped in the switch in the 'on' position.

### Supply requirements

115/230V±10% auto-selecting 50/60Hz 1ph 1.5kVA.

### Protection and safety

The output of the units are protected by variable electronic trips monitoring the output current, and a fixed over-current trip on the primary of the output transformer. The variable trip is adjustable in 10% steps between 10% and 110% of the rated output current.

The input and control supplies are protected by fuses.

The KV50-20D is designed to meet the requirements of BS EN61010. The unit must be installed in a high voltage test area complying with the requirements of BS EN50191.

Earth terminals are provided on the control unit and HV transformer that must be connected to a low impedance local earth.

### Interlock circuits

Two interlock circuits are provided on the KV50-20D. A zero voltage interlock is fitted which prevents the HV output being energised unless the output voltage control is in the zero position. An external interlock circuit is also provided, allowing the fitting of external emergency off buttons and test cage door interlocks.

### Beacon output

A beacon output is provided on the control unit to control 24V beacons (max 0.5A). The beacons mimic the state of the HV on and off indicators on the unit—green for HV off and red for HV on.

### Temperature Range

**Storage** 20°C to 60°C      **Operating** 0°C to 45°C

	Dimensions	Weight
Control Unit	380 x 314 x 221mm	17kg
Transformer	490 x 520 x 795mm	75kg

### Accessories

- 1 x 2m power supply lead
- 1 x 5m interconnecting lead
- 1 x 3m test object earth lead
- 1 x 5m earth lead
- Spare fuse set
- Operating manual