

KV5-100

High Voltage AC Test System



Features

- Continuously variable output voltage 0-5kVac
- Variable trip circuit 2-12mA and 20-120mA
- Output voltage and current metering
- Visual and audible indication of test piece failure
- Compact lightweight instrument
- Burn feature giving 100mA maximum current on short circuit
- Key operated switch preventing unauthorised operation

T&R Test Equipment is a market leader in the field of protection test equipment. The range includes primary and secondary current injection equipment up to 6000A, voltage sources, micro-ohmmeters and high voltage test systems up to 100kV.

The KV5-100 high voltage test set is a general purpose test instrument designed for testing insulation systems and the measurement of breakdown voltage on electrical plant and components.

The unit has an output voltage adjustable from zero to 5kV with accurate metering on both the output voltage and current. A zero-voltage interlock is provided, ensuring that the output may only be energised with the voltage control at zero.

The output voltage is metered by a large, linear analogue instrument with a dual-scale marking of 0-3kV and 0-6kV. Load current is metered by a second analogue instrument with 0-10 scale marking. Two current ranges are selectable: 0-10mA and 0-100mA.

The test object and output are protected by an adjustable current trip linked to the current metering range. The trip level may be set to 20-120% of the current metering range on 20% steps.

Breakdown of the test object is both audibly and visibly indicated. The alarm must be manually reset after a trip condition before testing can be resumed.

The instrument is supplied in a compact and portable case with permanently connected test leads. The test leads are terminated in high voltage probes with retractable tips.

The KV5-100 is one of a range of high voltage test systems available from T&R Test Equipment. The ratings of other units available are shown below.

Unit type	Voltage	Current
KV5-100	5kV	100mA
KV15-80	15kV	80mA
KV30-40	30kV	40mA
KV30-100	30-kV	100mA
KV50-100	50kV	100mA
KV50-200	50kV	200mA
KV100-100	100kV	100mA



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KV5-100 Specification

Output

The main output on the unit is variable between 0 and 5kVac. The output is rated at 50mA continuously and 100mA for 5 minutes followed by an off time of 15 minutes.

Metering

The output voltage is metered by an analogue instrument with 0-3kV and 0-6kV scaling.

Range	Accuracy
3kV	±1.5% of FS
6kV	±1.5% of FS

The output current is metered by a dual range analogue instrument with 0-10mA and 0-100mA ranges. The current trip may be set to 20-120% of the selected range in 20% steps.

Range	Trip Current	Accuracy
10mA	2-12mA	±3% of FS
100mA	20-120mA	±3% of FS

Overload Protection

Two overload protection circuits are provided on the KV5-100. The first is user selectable, and allows trip currents between 2mA and 120mA to be set. The second trip circuit monitors the primary of the HV transformer, and operates at approximately 130% or rated output current. An overload/trip condition is indicated by an illuminated push button and an audible alarm.

Burn Out Circuit

When in circuit, the maximum short circuit current is limited to 100mA. When out of circuit, the maximum short circuit current is approximately 2A.

Interlock Circuits

The unit has a zero volt interlock that prevents the output being energised unless the output control is in the zero position. An external interlock connection is also provided, allowing the fitting of external emergency off buttons and test cage door interlocks.

Supply Requirements

115V±10% 50/60Hz 1ph 600VA max
240V±10% 50/60Hz 1ph 600VA max

Protection and Safety

The unit is protected by electronic over current and duty cycle trips on the outputs and a fuse on the mains. An earth terminal is provided for connection to a local earth.

The unit is designed to comply with BSEN61010, and is CE marked.

Temperature Range

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

Dimensions

364mm x 147mm x 262mm

Weight

16.5kg

Accessories

Operating manual, mains lead, spare fuse.

Note: Due to the company's continuous research programme, the information above may change at any time without prior notification. Please check that you have the most recent data on the product.

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