

# KV10-120

# High Voltage AC Test Systems

# KV15-80 KV30-40

# Systems



## Features

- 0-10kV (KV10-120)  
0-15kV (KV15-80)  
0-30kV (KV30-40) output voltage
- 1.2kVA output capability
- Key operated supply switch to prevent unauthorised operation
- Dual overload protection
- Variable electronic trip - 10-110% of rated output
- Voltage and current metering
- Zero-volt interlock
- Visual indication of test piece failure

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

The KV10-120, KV15-80 and KV30-40 high voltage test sets are general purpose test instruments designed for testing insulation systems and the measurement of breakdown voltage on electrical plant and components.

The units have an output voltage variable from zero to 10kV (KV10-120), 15kV (KV15-80) or 30kV (KV30-40) 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 marked 0-12kV, 0-20kV and 0-40kV on the three units. All units have a x0.5 range on the voltmeter giving a full scale of 6kV, 10kV or 20kV respectively. Load current is metered by a second analogue instrument with a full scale of 140mA (KV10-120), 100mA (KV15-80) or 50mA (KV30-40). A ÷10 range is provided on both units, allowing the full scale on the current metering to be reduced by a factor of 10.

The test object and output are protected by an adjustable current trip. The trip level may be set to 10-110% of the rated output in 10% steps. Breakdown of the test object is visibly indicated. The unit must be manually reset after a trip condition before testing can be resumed.

The unit is supplied in a compact, portable case with a permanently connected 2 metre long HV output lead.

The KV10-120, KV15-80 and KV30-40 are part of a range of high voltage test systems available from T&R Test Equipment. Ratings of other units are shown in the table.

Unit type	Voltage	Current
KV5-100	5kV	100mA
KV10-120	10kV	120mA
KV15-80	15kV	80mA
KV30-40	30kV	40mA
KV30-100	30kV	100mA
KV50-100	50kV	100mA
KV50-200	50kV	200mA
KV100-100	100kV	100mA



KV100-100



T&R Test Equipment Ltd



## KV10-120/KV15-80/KV30-40 Specification

### Output

The output of the KV series units is by a permanently connected partially screened high voltage cable.

Unit type	Voltage	Continuous	5 minutes
KV10-120	0-10kV	60mA	120mA
KV15-80	0-15kV	40mA	80mA
KV30-40	0-30kV	20mA	40mA

The above intermittent on times must be followed by an off time of 15 minutes, and are based on an ambient temperature of 25°C.

If you require a different output voltage test system, please contact us with your specification and we will quote for a custom design.

### Metering

The output voltage on both units is metered by a dual range analogue instrument.

Unit	Range	Accuracy
KV10-120	0-6kV	±2% of FS
KV10-120	0-12kV	±2% of FS
KV15-80	0-10kV	±2% of FS
KV15-80	0-20kV	±2% of FS
KV30-40	0-20kV	±2% of FS
KV30-40	0-40kV	±2% of FS

The output current on the KV15-80 and KV30-40 is metered by a dual range analogue instrument.

Unit	Range	Accuracy
KV10-120	14mA	±2% of FS
KV10-120	140mA	±2% of FS
KV15-80	10mA	±2% of FS
KV15-80	100mA	±2% of FS
KV30-40	5mA	±2% of FS
KV30-40	50mA	±2% of FS

### Supply Requirements

115V±10% 50/60Hz 1ph 1200VA max  
220V±10% 50/60Hz 1ph 1200VA max  
240V±10% 50/60Hz 1ph 1200VA max

### Overload Protection

Two overload protection circuits are provided on the KV10,120, KV15-80 and KV30-40. The first is user selectable, and allows trip currents between 10% and 110% of the rated output to be set.

The second trip circuit monitors the primary of the HV transformer, and operates at approximately 130% of rated output current. An overload/trip condition is indicated by an illuminated push button and an audible alarm.

### 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 KV10-120, KV15-80 and KV30-40 are designed to meet the requirements of BS EN61010.

An earth terminal is provided on the transformer which must be connected to a low impedance local earth.

### Temperature Range

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

### Dimensions

KV10-120	300x400x470mm
KV15-80	300x400x470mm
KV30-40	300x400x470mm

### Weight

42kg
42kg
42kg

### Accessories

Supply lead, spare fuse set, operating manual, earth lead, DS30 earthing stick.



ES30 Earthing stick

*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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