

# High Voltage DC Cable Test System



## Features

- 0 to -15kVdc output voltage
- 10mA output capability
- Both voltage and current metered on HV output
- Automatic earth system for dumping capacitive loads
- HV output plug & socket
- Key operated supply switch to prevent unauthorised operation
- Zero-volt interlock
- Visual indication of test piece failure
- Compact unit with lightweight insulated case

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 PT15-10S high voltage dc test set is designed to perform tests on installed cable and jointing systems. The unit has a zero to -15kVdc variable output with a maximum charging capability of 10mA. A zero-volt interlock is fitted that prevents the output being switched on unless the output control is at zero.

The unit includes an automatic load discharge system that discharges the cable under test when the output is switched off or a breakdown occurs. The internal dumping system can discharge a maximum of 1.25kJ, corresponding to 7.5µF at 15kV. A DP20 discharge probe is also supplied as standard with the PT15-10S, allowing cables with a capacitance of up to 12µF to be discharged at 15kV.

In the event of a test object failure, the overload circuit will automatically switch off the output voltage and earth the output via the internal discharge circuit.

The output voltage is metered by a large, linear, analogue instrument marked 0-15kV. The current in the test object is

metered by a second analogue instrument with 0-10 scale marking. The meter reads 0-10mA directly, or 0-1mA when the ÷10 push button is operated.

The HV output from the unit uses a high quality plug and socket system, allowing for easy cable replacement.

The PT15-10S is one of a range of high voltage test systems available from T&R. DC systems are available up to ±30kV and ac systems up to 100kV.



KV30-40



KV50-100

Unit type	Voltage	Current
PT15-10S	-15kVdc	10mA
PT18-10	±18kVdc	10mA
PT30-10	±30kVdc	10mA
KV5-100	5kVac	100mA
KV15-80	15kVac	80mA
KV30-40	30kVac	40mA
KV30-100	30kVac	100mA
KV50-100	50kVac	100mA
KV50-200	50kVac	200mA
KV100-100	100kVac	100mA

## PT15-10S Specification

### Output

The output of the PT15-10S is by a partially screened high voltage cable connected to the set by a high voltage connector.

Unit type	Voltage	Continuous	5 minutes
PT15-10S	0 to -15kV	5mA	10mA

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

### Metering

The output voltage on the PT15-10S is metered on the HV output by an analogue instrument.

Unit	Range	Accuracy
PT15-10S	0-15kV	±1.5% of full scale

The output current on the PT15-10S is metered by a dual range analogue instrument. The 1mA range is selected by the +10 pushbutton adjacent to the mA meter.

Unit	Range	Accuracy
PT15-10S	10mA	±2.5% of full scale
	1mA	±2.5% of full scale

### Overload Protection

The PT15-10S is protected by an overload trip on the output that operates at 12mA.

### Load Discharge System

The PT15-10S is fitted with an automatic internal load discharge system that grounds the load via a 10kΩ resistor when the

output is switched off. The discharge system is rated to dissipate 1.25kJ every 15 minutes. A maximum load capacitance of 7.5μF may be discharged from 15kV.

The PT15-10S is also supplied with a DP20 manual discharge probe, rated to dissipate 3.6kJ every 15 minutes. The probe has a resistance of 30kΩ, and can discharge up to 12μF at 15kV.

### Supply Requirements

115V±10% 50/60Hz 1ph 250VA max
240V±10% 50/60Hz 1ph 250VA max

### Protection and Safety

The output of the unit is protected by an overload trip, and the input and control supplies are protected by fuses.

The PT15-10S is designed to meet the requirements of BS EN61010.

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

### Temperature Range

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

340x230x330mm

### Weight

11kg

### Accessories

Supply lead, spare fuse, operating manual, output lead, DP20 discharge probe, earth lead, shoulder strap.