

# VITREK

## V10X Series Future-Ready Electrical Safety Hipot Testing



Advanced touchscreen, multi-test capability and automation architecture ensure a better user experience for the most demanding testing challenges.

### High-Voltage Performance + Intelligence

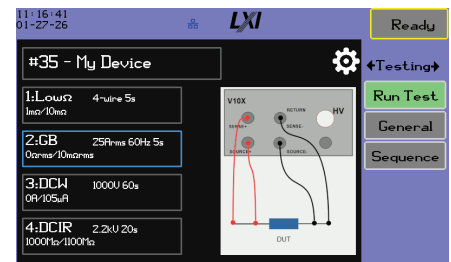
V10X models, built on Vitrek's proven high-power hipot platform, deliver up to 10 kV DC and 15 kV AC, high-current AC and DC sourcing, and an optional 30 kV AC output to meet the most demanding insulation stress applications. At the same time, they introduce a modern touchscreen interface and advanced automation architecture tailored for today's connected production environments.

High-power DC models provide the current needed to rapidly charge and discharge high-capacitance DUTs, while configurable AC source options allow output currents up to 200mA for heavy AC loads. For precision measurement, the V10X maintains Vitrek's industry-leading leakage current resolution down to 100 picoamps, enabling built-in insulation resistance testing into the

teraohm range. Add integrated 4-wire low-ohms measurement and optional 40-amp ground bond capability, and the V10X becomes a single-platform solution for complete electrical safety verification.

### Designed for Automation and Scalable Test Environments

Beyond testing performance, the V10X introduces a software-driven, touchscreen workflow, built-in networking, and multi-interface connectivity that simplify test setup and support higher levels of automation. The V10X directly controls up to 1,600 switch matrix channels, enabling large multi-point test configurations without external controllers. Standard with all popular SCPI interface options for addition of bar code readers and easy integration with automated production lines and IT networks.



Modern, full graphic touchscreen includes graphical sequence editing, numeric editing and real-time charts.

Engineers can build multi-step test sequences visually vs. nested button menus and adjust parameters and review charts directly onscreen, reducing set up errors. Complex test profiles (ramps, pulses, breakdown tests) become easier to deploy at scale. Reduce manual data handling while improving traceability and compliance.

CAPABILITIES	V101	V102	V103	V104	V105	V106	V107	V108	V109
<b>AC Hipot</b>									
<b>Voltage Range</b>	20V–6KV	20V–6KV	20V–6KV	20V–6KV	50V–10KV	50V–10KV	50V–10KV	50V–10KV	–
<b>Max Std Current</b>	50mA	50mA	50mA	50mA	30mA	30mA	30mA	30mA	–
<b>500VA Option</b>	100mA	100mA	100mA	100mA	–	–	–	–	–
<b>2KV Max Option (AC-2)</b>	200mA	200mA	200mA	200mA	–	–	–	–	–
<b>30KVAC External Option</b>	10mA	10mA	10mA	10mA	10mA	10mA	10mA	10mA	–
<b>DC Hipot/IR</b>									
<b>Voltage Range</b>	20V–6KV	20V–6KV	50V–11KV	50V–11KV	50V–11KV	50V–11KV	50V–15KV	50V–15KV	–
<b>Max DC Current</b>	50mA	50mA	30mA	30mA	30mA	30mA	10mA	10mA	–
<b>40A Ground Bond</b>	–	Yes	–	Yes	–	Yes	–	Yes	Yes

**4 Wire Ohmmeter** Available with each model; 5-digit resistance measurements with resolution to 100µΩ and range up to 100K ohms.

## FEATURES AND BENEFITS

### Graphical Touchscreen and Integrated Reporting

Intuitive test sequence creation, real-time chart review, and direct access to built-in PDF report generation and CSV data export. Configure tests, review results, and generate audit-ready documentation directly at the instrument.

### Network-Ready Architecture with Web Interface

Integrated Ethernet, WiFi functionality, and embedded web browser interface enable remote monitoring, configuration access, and network-based test management. Supports modern Industry 4.0 workflows.

### SCPI-Compliant Automation Interfaces

Native LAN, USB, RS232, Digital I/O and optional GPIB interfaces with full SCPI command support allow easy integration into automated production lines and custom test software platforms.

### Software-Upgradeable Platform

Built-in firmware update capability enables feature expansion, performance enhancements, and future compliance support without requiring hardware replacement.

### Highest Level of Operator Safety

GFI high-speed shut down for earth ground leakage faults, SFI™ Safety Fault Interlock with high speed shut down and TLSS™ Test Lead Safety Sense. Clamps DUT chassis near ground by continuously verifying proper connection of test leads.

### High Power Output

Up to 50mA DC sourcing current accelerates high-capacitance testing. Optional high-power AC drive modes deliver up to 100mA and 200mA output.

### Wide Range of Built-In Voltage Capabilities

From 6.5KVDC, 11KVDC or 15KVDC and 6KVAC, 10KVAC or up to 30KV RMS AC with external option

### Fastest Hipot Speed—High Output Power

Combines with multi-processor DSP architecture and real-time safety monitoring for high-speed test execution with optimized ramp profiles and sequence chaining for reduced cycle time.

### Expansive Test Sequence Memory

Massive onboard memory supporting tens of thousands of steps and hundreds of sequences.

### Ground Bond Test Capability

Selectable output currents from 100mA to 40Amps RMS.

### Built-In Phase Angle Measurement

Measurement and display of both resistive (in-phase) leakage current and reactive (out-of-phase) leakage current caused by capacitive coupling.

### Multi-Dwell Functionality

Permits dwells at different voltage levels without returning to zero between test steps, dramatically simplifying advanced analysis of dielectric properties.

### Ramp High/Dwell Low Current Limits

Set separate limits for the ramp and dwell for faster ramp times and lower leakage test limits.

### Advanced Arc Detection

Configurable broadband arc detection applies test-specific time and amplitude limits to improve breakdown sensitivity and reduce nuisance failures.

### Pico-Amp Leakage Measurement

Ensures that even the lowest leakage current levels are accurately detected, and tera-ohm range IR readings are stable and precise.

### Fixture & Cable Compensation

Automatically calibrate out offset errors caused by lead resistance, fixture capacitance and leakage.

### Multi-Mode Insulation Resistance (IR) Testing

IR values up to one tera-ohm can be obtained with precision in choice of 3 IR test modes; end on time, end on pass or end on fail.

### Continuously Variable IR Voltage

Selectable DC output from 20V up to 6kV, 11kV, or 15kV (model dependent) provides precise control for insulation resistance testing.

### 400Hz AC Voltage Withstand Testing

Provides aviation frequency specific test results.