



VOLT X P70 DATA SHEET

7000A Primary Injection Tester



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KEY FEATURES

- Output current up to 7000 A (true RMS).
- Stand-alone operation – no PC required.
- 7" color touch screen HMI with intuitive menus.
- Digital metering: current, voltage, time measurement.
- Automatic and manual test modes.
- Output current synchronized with zero-crossing for stable operation.
- Built-in timer & trip detection (for protection relays, circuit breakers).
- CT Secondary Testing: CT Ratio & CT Polarity.
- CT Secondary Injection: 0-5A.
- Safety interlock system – outputs fully isolated from mains.
- Portable, rugged design with transit case for field use.
- Suitable for:
 - o Circuit breaker primary injection & tripping test
 - o CT (current transformer) ratio, polarity & saturation test
 - o Switchgear and disconnector rating test
 - o Grounding system & contact resistance test
 - o Busbar and cable testing

DESCRIPTION

The VOLTX P70 Primary Injection Tester is a high-performance, programmable current injection system engineered for primary testing in electrical substations, power plants, industrial facilities, and manufacturing environments. It provides an adjustable and stable current source up to 7000 A that makes it ideally suited for verifying the correct installation and operation of protection devices and high-current equipment. The P70 ensures reliable commissioning, maintenance, and troubleshooting of critical power infrastructure.

This versatile system is specifically designed for primary injection testing of protective relays, circuit breakers, disconnectors, busbars, and grounding systems, as well as for performing current transformer (CT) ratio, and saturation tests. With its wide application range, the VOLTX P70 enables utilities, OEMs, and service companies to meet international testing standards while maintaining a compact and easy-to-deploy solution in the field.

At the heart of the P70 is a microprocessor-controlled output stage that delivers smooth, zero-crossing synchronized current initiation. This eliminates unwanted transients and DC offset, ensuring both high accuracy and repeatability. The integrated measurement module provides true RMS current and voltage monitoring, combined with a digital trip timing system that can capture operating times of protective devices / circuit breakers down to milliseconds. These capabilities make the tester a complete tool for both functional and performance validation.

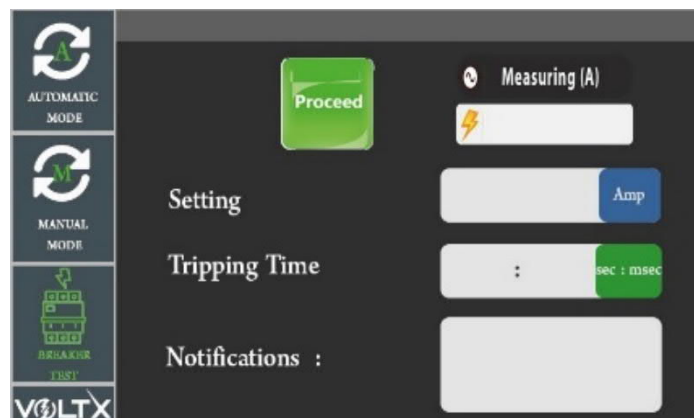
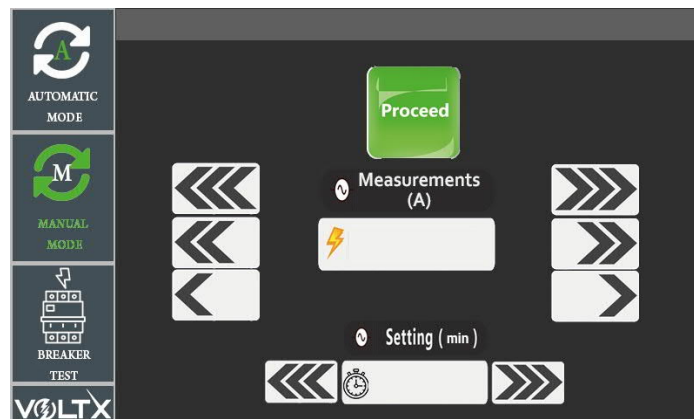
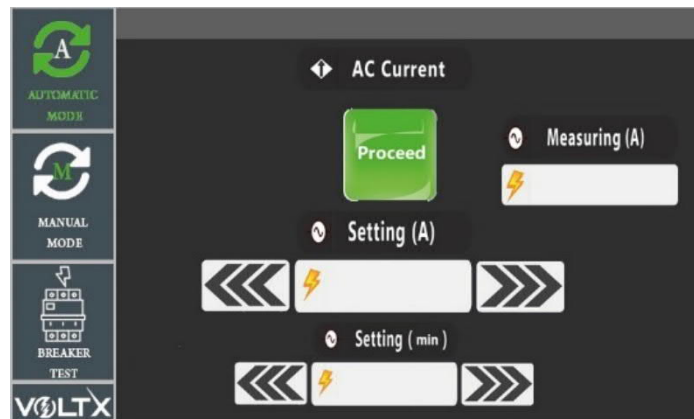
The VOLTX P70 has been built with safety and durability in mind. Its outputs are galvanically isolated from the mains supply to protect both the operator and the equipment under test. Additional safety features include emergency stop, thermal overload protection, and robust MCB input protection. Housed in a rugged dual-unit design (Control & Loading), the tester is engineered to withstand the rigors of site environments while still being portable enough for field engineers.

Ease of use is a central design philosophy of the VOLTX P70. A 7-inch color touch screen interface provides intuitive control, clear visualization of test parameters, and step-by-step menus that eliminate the need for an external PC. Users can quickly configure test routines, view live measurements, and record results. For advanced reporting, test results can be stored locally and exported via USB. With its balance of power, accuracy, and portability, the VOLTX P70 represents a cost-effective yet high-quality alternative to imported primary injection systems.

PANEL DESCRIPTION

The Panel is quiet easy access and powerful operation tool with complete safety integrity features.

The front HMI eliminates the need for a computer when testing equipment in a substation. Intuitive menu screens and touch screen buttons are provided to quickly and easy operation.



LAYOUT

Consists of Qty (2) Units including the Control and Loading Units



SPECIFICATIONS of VOLT X P70

Specifications are valid at nominal input voltage and an ambient temperature up to 45°C.

General specifications:

- **Mains input:** 220VAC $\pm 10\%$, 50Hz
- **Maximum power output:** 10kVA
- **No. of units:** 2 (Control & Loading)
- **Protection:** MCB, emergency stop, thermal protection

Output Current

- **Continuous current:** 2000 A
- **Maximum current 2 min:** 5000 A
- **Maximum current 1 min:** 7000 A
- **Current range:** 100 A – 7000 A, adjustable
- **Duty cycle:** 1 min ON / 2 min OFF at maximum output

Measurement & Control

- **Ammeter:** True RMS, accuracy $\pm 1\%$
- **Voltmeter:** 0–250 V AC, accuracy $\pm 1\%$
- **Timer:** 0–99 s, automatic start/stop via dry contact or current flow
- **Display:** 7" color touch screen

Dimensions & Weight

- **Control Unit:** 320 × 580 × 290 mm, 25 kg
- **Loading Unit:** 350 × 600 × 340 mm, 95 kg

Environmental

- **Operating temperature:** 0 – 45 °C
- **Storage temperature:** 0 – 60 °C
- **Humidity:** <90% non-condensing

Options (not included)

- Current clamps (1000 A / 3000 A / 5000 A / 7000 A)
- Extended output cables (8 m)

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