



SURGE TESTERS / IEEE 1613 Surge Tester

MegaPulse 1.2x50-5 500Ω 0.5J



➤ IEEE 1613 Surge Tester to test Communications Network Devices

➤ FEATURES

The MegaPulse 1.2x50-5 500Ω 0.5J waveform is designed in accordance with IEEE 1613, Figure 1 to test Communications Networking Devices in Electric Power Substations. Specifically, it is used to test autodialers, bridges, ethernet hubs, firewalls, modems, power apparatus, routers and switches for this use. The test is to be conducted once by the user on new devices, and can also be conducted at 3750V peak (75%) at the point of use to determine usability during the life of the equipment.

The waveform is in tolerance with the requirements of IEEE 1613, Figure 1 at 5000V peak output and has an output impedance of 500 ohms (before connection of the DUT). The energy delivered to the source is 0.5J. The MegaPulse's front panel meter reads the peak output voltage.

Optionally equipped with a 1000:1 reference BNC for reading peak voltage only.

Optionally equipped with TestMinder, allowing computer control. (3U enclosure).



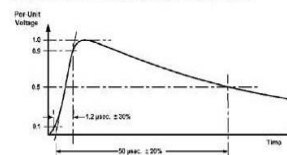
The blue box that tests. And tests.

MegaPulse 1.2x50-5 500Ω 0.5J



6.3.1 impulse test voltage and waveform

The impulse test wave form shall be in accordance with Figure 1 and its explanatory notes.



NOTES

- a) Waveform polarity: Positive and negative
- b) Rise time: 1.2 μsec ± 10%
- c) Magnitude: 5 kV ± 10%
- d) Time to half value: 50 μsec ± 10%
- e) Source impedance: 500 Ω ± 10%
- f) Output energy: 0.5 J ± 10%



ELECTRICAL

Output:

Up to 5000 Volts peak open circuit; controlled by front panel knob. Peak output voltage is displayed on the front panel meter. Positive or negative polarity is chosen via front-panel button.

Output Impedance: 500 ohms.

Voltage Waveform:

1.2x50us @ 5kV at output (no DUT connected): Per IEEE 1613 Figure 1.

Peak Value: 5kV +0 - 10% (independent of meter tolerance).

Front time: 1.2uSec ±30% [Trise= 1.67 (T90%-T30%)] per IEC 1180.

Duration: 50uSec ±20% (Time to half-value) per IEC 1180.

Source Impedance: 500 Ω ±10%

Output Energy: 0.5J ±10%.

Charge Time:

<5 seconds.

Meter Accuracy:

±3% 1000-5kV.

Test Adjustments:

Amplitude via front panel knob and shown on front panel digital meter.
Polarity adjustment via front panel button.



ENVIRONMENTAL

Operating Temperature::

15-40°C.

Relative Humidity Range:

0-90% non-condensing.



GENERAL

Input Power Requirements:

114-128V, 50/60Hz, 2A.

Weight:

20 lbs. approx. Shipping weight 30 lbs.

Dimensions:

11-1/2 in. (W) x 13 in (H) x 5 in (D), 3U x 17" x 17" (240V in, 6U x 17" x 17" (IEC switch).



OPTIONS AND OPERATION

Manual operation:

Operator connects the provided output and return cables to the MegaPulse and the DUT. Operator selects waveform polarity, pushes the CHARGE button on the front panel and waits until the front panel meter indicates test voltage. Operator conducts the test by pushing the TRIGGER button on the front panel.

Options:

RI: Relay isolated relays for connection to customer PLC.

TMM: TestMinder allows test to be timed using computer clock and run from a PC.

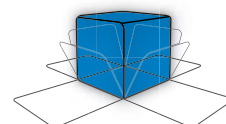
240: 240V mains operation.

230: 230V mains operation.

220: 220V mains operation.

BNCV: Voltage BNC 1000:1 (Reference only).

IER: IEC 65 Figure 7b switch.



The blue box that tests. And tests.