

PSURGE 20430

1.2/50us & 8/20us Combination Wave Test System for ANSI C62.41, UL 1449 & 943

There is a requirement under **ANSI/IEEE C62.41** for an impulse Surge generator capable of simulating lightning voltages and currents outside of a building. This is designated as **Location Category C** and includes outside & service entrance points, service lines between a pole and building, cables between the service entry point and an energy meter, overhead lines and underground cables. The incidence of lightning events is well documented and research shows that the Location Category C really does warrant the proposed test levels (**20kV**). ANSI C62.41 is applied through C62.45 and many other standards related to Surge testing of AC power lines.

UL 1449 refers to the C62.41 standard requirements for waveform to test Transient Voltage Surge Suppressors (**TVSS**).

UL 1449 specifies a **10kA 8/20us** impulse to test permanently connected EUT types.. Coupling requirements for both ANSI C62.41 and UL 1449 are included in a single or three phase CDN with automatic coupling path switching. There are two principal difference between ANSI and UL CDNs. ANSI requires coupling into multiple AC lines simultaneously whereas UL selects coupling paths sequentially. A special CDN is required for UL 1449 which must be capable of carrying a 200Aac follow current should the EUT fail in a short circuit condition

PSURGE 20430 Test System can perform all the programming functions required to perform **ANSI C62.41 and UL 1449** testing without the need of a control computer.

UL 943 standard for **Ground Fault Interrupter Circuits**, mirrors the requirements of UL 1449 in terms of the 10kA 8/20us impulse.

PSURGE 20430s integration in the WinFEAT&R control and reporting software package, further enhances efficient set-up and operation of this test system also enabling seamless integration with other Haefely Test instruments into a single cohesive test environment.



Features

- 1.2/50us (8/20us)** HYBRID pulse 2Ω
- Impulse Voltage to **22kV**
- Impulse current to **11kA**
- Integrated **32Amp CDN**
- Automatic coupling path switching
- Meets UL 1449 & ANSI C62.41 requirements

Benefits

Purpose Built – Specifically designed to meet the needs of high voltage impulse testing on AC power lines.

ANSI compatible CDN – the CDN can be programmed to perform all the coupling paths required by ANSI C62.41 including basic and diagnostic tests.

Safe and Easy - The interlocked HV section and the integrated controller allow your operators to test safely

Sturdy and Reliable – Careful component selection ensures that the PSURGE 20430 will continue to operate during prolonged test periods. The use of a special semiconductor switch reduces maintenance and servicing to a minimum.

Remote Control – PSURGE 20430 is fully integrated into the Haefely WinFEAT&R control and reporting software package. An optical connection between the computer and Surge generator eliminates disturbances of the control system.

Faster completion of Surge testing – The PSURGE 20430 can be programmed to perform all coupling path requirements for IEC & ANSI testing for both positive and negative polarities.

Applications

Single & three phase AC power systems

ANSI C62.41 Location Category C

UL 1449 AC Power Load tests

UL 1449 permanently connected cord type EUTs

UL 943 Ground Fault Interrupter Circuits

Technical Specifications

Impulse Voltage	5 – 22kV – 5% +10%
Impulse Current	2.5 – 11kA – 0% + 10%
Source Impedance	2 Ohms
Repetition @ U _{max}	30 seconds / 2 per minute
Peak measurement	Voltage & current

Impulse Rise time	V= 1.2μs ±0.36 & I=8μs –2.5/+1
Impulse duration	V= 50μs ±10 & I= 20μs –4/+8
Impulse Polarity	Positive and Negative
Integrated CDN	32A per phase @ 600V (60Hz)
Fault Current	> 200A according to UL 1449

Weights and Dimensions (W x H x D, net weight)

PSURGE 20430 60 x 190 x 90 cm (24" x 75" x 35") approx.400 kg (182 lbs)

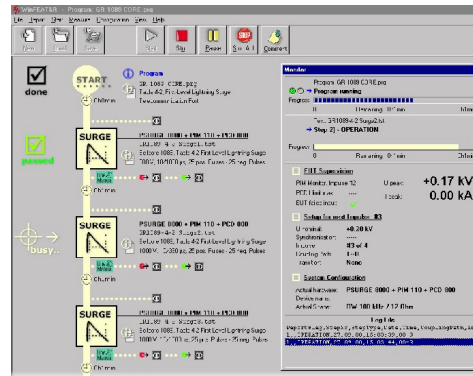
Scope of Supply

- Qty. 1 PSURGE 20430 Test System
- Qty. 1 Emergency Stop Switch
- Qty. 1 High visibility Warning Lamp
- Qty. 1 RS232 optical decoupling interface & cable

Options & Accessories

- Single phase 32A integrated CDN instead of the three phase version.
- Test Cabinet Safety EUT cabinet in place of a CDN
- PIM 110 8kV ANSI C62.41 ring wave module. 12 & 30 ohm source impedance. Part of the PSURGE 8000 Surge Platform.
- PIM 400 6kV UL 1449 combination wave module. 2 ohm source impedance. Part of the PSURGE 8000 Surge Platform.
- PIM 410 6kV UL 1449 combination wave module. 12 ohm source impedance. Part of the PSURGE 8000 Surge Platform.
- WinFEAT&R Control and reporting software. Runs under windows 98, NT, ME, 2000, XP

WinFEAT&R software - Test Environment



UL 1449 PSURGE 8000 System



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Because Haefely has a policy of continuous product improvement, it reserves the right to change design and specification without notice.

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