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## Test & Measurement

- > sales
- > rentals
- > calibration
- > repair
- > disposal

## Complimentary Reference Material

This PDF has been made available as a complimentary service for you to assist in evaluating this model for your testing requirements.

TMG offers a wide range of test equipment solutions, from renting short to long term, buying refurbished and purchasing new. Financing options, such as Financial Rental, and Leasing are also available on application.

TMG will assist if you are unsure whether this model will suit your requirements.

Call TMG if you need to organise repair and/or calibrate your unit.

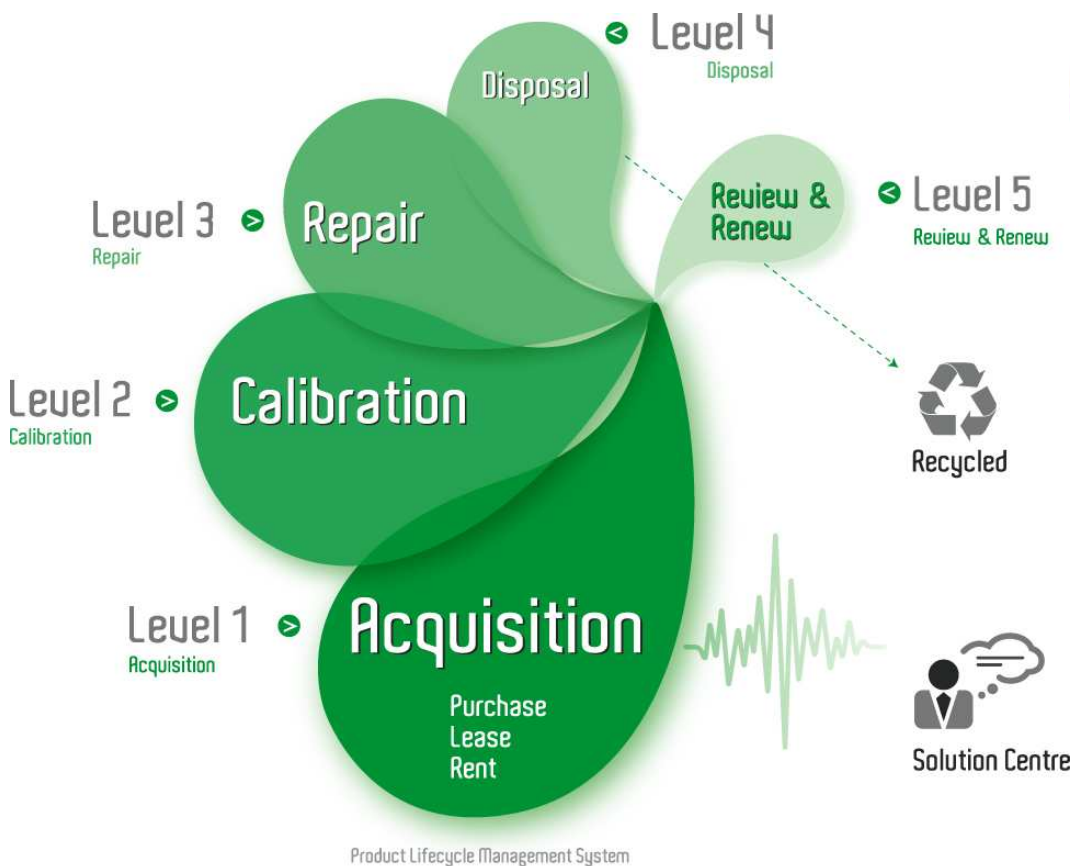
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# PIM 400 / PIM 410 / PCD 430

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

■ **There is** a requirement under **ANSI C62.41** for an impulse Surge generator capable of simulating lightning voltages and currents inside of a building. This is designated as **Location Categories A & B** and includes cabling and connections downstream from the service entry, outlet and long branch circuits, feeders and short branch cables. The major difference between categories A & B are the impulse current levels. 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 ANSI C62.41 standard requirements for waveform to test Transient Voltage Surge Suppressors (**TVSS**).

**UL 1449** specifies a **6kV CWG** impulse having 2  $\Omega$  and 12  $\Omega$  output impedances to test cord connected, direct plug type and permanently connected EUT types.

Coupling requirements for both ANSI C62.41 and UL 1449 are included in a three phase CDN with automatic coupling path switching. 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.

The PSURGE 8000 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.

The integration in the WinFEAT&R **control and reporting software** package enhances an efficient set-up and operation of this test. Most importantly, the test load can be transferred to a computer freeing valuable resources.

## ■ Features

- ☑ **Combination wave** 1.2/50us - 8/20us
- ☑ **500A** and **3000A** current amplitude
- ☑ Integrated **32Amp CDN** three phase
- ☑ allowable fault current > **200A**
- ☑ Automatic coupling path switching
- ☑ synchronization with each phase
- ☑ Impulse parameters guaranteed at CDN output
- ☑ Remote control using **WinFEAT&R**

## ■ Benefits

**Purpose Built** – Specifically designed to meet the needs for impulse testing of **TVSS** devices.

**ANSI compatible CDN** – the CDN can be programmed to perform all the coupling paths required by UL 1449 & 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 system will continue to operate during prolonged test periods. The use of a special semiconductor switch reduces maintenance and servicing to a minimum.

**Remote Control** – PIM 400 / 410 are fully integrated into the Haefely WinFEAT&R control and reporting software package. A test report is available in Microsoft Word format.

## ■ Applications

- ☑ Three phase AC power systems
- ☑ ANSI C62.41 Location Category A & B
- ☑ UL 1449 AC Power Load tests
- ☑ Measured Limiting Voltage Tests
- ☑ UL 1449 cord connected and direct plug in type EUTs



## ■ Technical Specifications

Impulse Voltage	0.5 – 7kV – 5% +10%	Impulse front time	V = 1.2us ±0.36us I = 8us –2.5/+1us
Impulse Current	0.25 – 3.5kA – 0% + 10%	Impulse duration	V = 50us ±10us I = 20us –4/+8us
Source Impedance	20ohm (PIM 400) 120ohm (PIM 410)	Impulse Polarity	Positive and Negative
Repetition @ U <sub>max</sub>	10 seconds / 6 per minute	PCD 430 CDN	32A per phase @ 600V (60Hz)
Peak measurement	Voltage & current	Fault Current	> 200A according to UL 1449

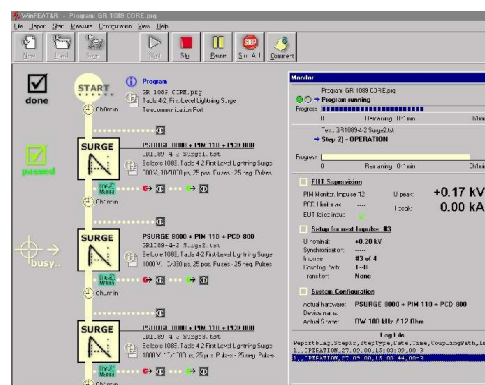
Weights and Dimensions (W x H x D, net weight)

PIM 400 / 410 / PCD 430 60 x 190 x 90 cm (24" x 75" x 35") approx.150 kg

## ■ UL 1449 Test system Scope of Supply

- Qty. 1 PIM 400 Impulse Module  
*Art. No. 249946*
- Qty. 1 PIM 410 Impulse Module  
*Art. No. 249947*
- Qty. 1 PCD 430 3 Phase CDN  
*Art. No. 249955*

## WinFEAT&R software - Test Environment



## ■ Options and Accessories

- PIM 110** Ring wave impulse module according to IEC 61000-4-12 and ANSI C62 up to 7.8kV  
*Art. No. 24903*
- WinFEAT&R** Control and reporting software. Runs under windows 98, NT, ME, 2000, XP  
*Art. No. 249970*
- Rack Mounting** Modules can be rack mounted for greater mechanical stability and mobility.  
*Art. No. 4 Units high: 249692*  
*Art. No. 6 Units high: 249693*  
*Art. No. 7 Units high: 249910*

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