PIM 210
8/20µs and 10/1000µs Current Impulse Module

- **The PIM 210** is used for component testing with current impulses.

For testing overvoltage protection elements such as varistors and avalanche breakdown diodes with clamping voltages up to 3kV. Both impulse shapes 8/20µs and 10/1000µs are used in tests according to the IEC and the ANSI standards. These tests include the measurement of the clamping voltage and life span tests with high energies and/or currents. The focus of the PIM 210 is the measurement of the clamping voltage.

For testing components which are exposed to impulse currents such as resistors and electrical contacts.

Resistibility tests for telecom equipment exposed to overvoltage and overcurrent can also be performed with the PIM 210.

PSURGE 8000 Surge Platform provides all the programming functions required to perform IEC, ANSI, UL and ITU testing also 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 system. Most importantly, the test load can be transferred to a computer freeing valuable resources.

- **Features**
  - 8/20µs current impulse from 1A up to 1.2kA
  - 10/1000µs current impulse from 1A up to 11A
  - Integrated test cabinet
  - Clamping voltage and peak current display
  - WinFEAT&R software integrated

- **Benefits**
  - **International application** – Specifically designed to meet and exceed the requirements of:
    - IEC 61051, 61643
    - ANSI C62.33, C62.35
    - ITU K.20, K.21, K.44, K.45 (single wire only)
  - **Safe and Easy** - The HV terminals in the test cabinet are visibly short circuited when the test cabinet is opened. The interlocked HV section and the integrated controller allow operators to handle the EUTs and test them safely and easily.
  - **Sturdy and Reliable** – Careful component selection ensures that the PIM 210 will continue to operate under the most strenuous testing regimen. The semiconductor switch delivers the best reproducibility of the impulses and an extremely long life span.
  - **Supervision** - The clamping voltage and peak current into the EUT can be monitored. If the user set limits are exceeded, an alarm is given.
  - **Report Generation** - The unit controller can automatically generate test reports without a computer. Add WinFEAT&R control and reporting software on a host PC in order to collect and collate data in any format you like.

- **Applications**
  - Protection elements
  - Telecom equipment
  - Measuring the surge impedance of earth systems
  - Many IEC, ANSI, UL & EN Product standards
  - Other international requirements for current impulses
## Technical Specifications

<table>
<thead>
<tr>
<th>Impulse Shape 8/20µs</th>
<th>Impulse Shape 10/1000µs</th>
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<tbody>
<tr>
<td>Impulse front time</td>
<td>Impulse front time</td>
</tr>
<tr>
<td>I= 8µs ±10%</td>
<td>I= 10µs +20/-10%</td>
</tr>
<tr>
<td>Impulse duration</td>
<td>Impulse duration</td>
</tr>
<tr>
<td>I= 20µs ±10%</td>
<td>I= 1000µs ±20%</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Current Amplitudes</th>
<th>Current Amplitudes</th>
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<tbody>
<tr>
<td>1A – 1.2kA; U\textsubscript{CL}=0V</td>
<td>1A – 11A; U\textsubscript{CL}=0V</td>
</tr>
<tr>
<td>1A – 1kA; U\textsubscript{CL}=1000V</td>
<td>1A – 9A; U\textsubscript{CL}=1000V</td>
</tr>
<tr>
<td>1A – 800A; U\textsubscript{CL}=2000V</td>
<td>1A – 7A; U\textsubscript{CL}=2000V</td>
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<tr>
<td>8A – 650A; U\textsubscript{CL}=3000V</td>
<td></td>
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<table>
<thead>
<tr>
<th>Repetition @ U\textsubscript{max}</th>
<th>Impulse Polarity</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 seconds / 12 per minute</td>
<td>Positive and Negative</td>
</tr>
<tr>
<td>Impulse Output</td>
<td>Impulse Output HV terminals inside the test cabinet</td>
</tr>
<tr>
<td></td>
<td>U\textsubscript{CL} = clamping voltage of the EUT</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>PIM 210</th>
<th>Test Cabinet</th>
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</thead>
<tbody>
<tr>
<td>45 x 43 x 57 cm</td>
<td>36 x 20 x 32 cm (inside)</td>
</tr>
<tr>
<td>approx. 35 kg (54 lbs)</td>
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</tbody>
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## PIM 210 Art. No. 249821 Scope of Supply

- Qty. 1 PIM 210 Impulse Module
- Qty. 1 Warning Lamp
- Qty. 1 HV DC Bus cable 1m
- Qty. 1 Haefely Bus cable 1.5m
- Qty. 1 Earth bonding cable 1m
- Qty. 1 Earth bonding cable 0.25m
- Qty. 1 User Manual

## Options and Accessories

- Test fixture for surface mounted components
- Test fixture for leaded components
- PIM 200 Impulse module 8/20µs 12kA and 10/1000µs 110A
- PDP 8000 Differential HV Probe up to 8kV
- Pearson 101 Current Probe 0.01V/A
- Pearson 411 Current Probe 0.1V/A
- EUTOPT.1 Optical fibre connection for the PSURGE 8000 EUT failed input
- WinFEAT&R Control and reporting software. Runs under Windows 98, NT, ME, 2000, XP

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U\textsubscript{CL} = clamping voltage of the EUT