MISSION 3i-2020

SPECTRA

3i...

Inspire.

Innovate..

Initiate...

Pearson Electronics

- Pearson Electronics is the original and leading manufacturer of precision current-monitoring transformers used for accurate AC current measurements. Founded in 1955 by Dr. Paul Pearson, inventor and patent holder, of the precision wide-band current transformer. Pearson design plus careful workmanship and quality control, produce current monitors with excellent frequency response and amplitude accuracy. Originally developed for measuring pulse-currents, Pearson Current Monitors™ are now also widely used to measure more complicated transients and periodic signals from a few Hz to well into the MHz region

- Pearson Electronics has long been considered the market leader in the design and manufacturing of Wide-Band Current Transformers used for accurate AC current measurements. Pearson Current Transformers can measure transients, harmonics, pulse, sine-wave, RF and other complex current wave shapes. A frequency range from 0.7 Hz to 350 MHz is covered

- Pearson Electronics also specializes in the design of High Voltage Pulse Transformers that are used with high power microwave tubes and Capacitive Voltage Dividers. These transformers employ open construction and are intended to be used in high voltage insulating oil. Pulse output voltages range from 100kV to 500kV with pulse lengths from 0.25 to 50 ms

Pearson Electronics Products

- Wide-Band Current Monitors
- Clamp On Current Monitors
- Custom Current Monitors
- Capacitive Voltage Dividers
- High Voltage Pulse Transformers
- Accessories
  - Attenuators, Connector Adapters, Replacement Banana Plugs
- Services
  - Calibration & Testing

Pearson Electronics
Typical Applications

- ✓ Current wave-shape and amplitude in high and low voltage circuits, from µA to MegaA
- ✓ Circuits where the use of viewing resistors is unsuitable because of ground-loop noise, insertion resistance, or a lack of high voltage isolation
- ✓ Pulse currents at high voltage, as associated with microwave or x-ray tube modulators, particle accelerators and lasers
- ✓ Current transients and harmonics in power systems
- ✓ Lightning-strike currents
- ✓ Pulsed charged-particle beam current
- ✓ Current in electrolytes and plasmas
- ✓ EMI currents
- ✓ Video and RF currents
- ✓ Currents in spot and induction welders
- ✓ Antenna phasing
- ✓ Flash-tube current

Pearson Electronics Applications

- Beam Instrumentation
  - Custom Current Monitors for use in the beam tube, and large aperture clamp-on Current Monitors applied outside the beam tube

- Power Industry
  - Measure transients in switching gear and the observation of harmonics and phase relationships on power lines. The testing of circuit breakers for power protection is also a typical application

- Particle Accelerator
  - The Particle Accelerator community uses Pearson Current Monitor for a variety of applications in the area of high energy physics. These include measuring current in pulse power modulators, particle beams, and kicker magnets. Pearson Electronics has had a long and close relationships with all of the high energy physics laboratories throughout the world

Pearson Electronics Applications…Contd.

- EMI Testing
  - Pearson Clamp-on Current and Injection Probes are used to make accurate AC current measurements to meet many of the EMC standards. EMI, surge, lightning, and other complex current wave-shapes can also be viewed with a Pearson Current Probe

- Plasma Research
  - Pearson Current Probes are used by the Semiconductor and Semiconductor Equipment Industry to make measurements at frequencies, typically 13.56 MHz, required in plasma research

- Capacitive Discharge
  - Pearson Current Monitors are used to view faithful waveforms and make accurate current measurements from a capacitive discharge generator

Pearson Electronics Applications…Contd.

- Lightning Discharge
  - Wide-Band Current Transformers to characterize lightning strikes at the Kennedy Space Center and leading lightning laboratories around the world. The high peak currents and moderately fast rise times make this an ideal application for a Pearson Current Transformer

- Medical Applications
  - The medical equipment industry uses Pearson Current Transformers in several applications. These include medical accelerators used in radiation equipment for oncology applications, the testing and calibrating of electrical surgical analyzers and other AC current measurements supporting research, development, and manufacturing of medical equipment

- Surge Current Testing
  - Wide-Band Current Probes measure surge and in-rush currents for EMC and other industries

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