

# Direct Current Potential Difference (DCPD) System



Bulletin 100-01

The FTA reversing DCPD system produces highly accurate crack length measurements for fatigue crack growth and fracture toughness tests.

## Advantages of an FTA DCPD Hardware System

- ▲ Custom-designed and optimized for use with FTA's leading-edge FCGR and NLFT testing software
- ▲ Provides the precision constant-current supply and signal amplification required for crack-propagation and crack-initiation studies
- ▲ Supports polarity reversing for increased voltage difference and enhanced durability over pulsed current-control systems
- ▲ Offers true differential input, excellent temperature stability and immunity to EMI/RFI noise
- ▲ Suitable for use with most test-frame controllers
- ▲ Backed by over thirty years' experience of DCPD testing for the aerospace, nuclear, energy, power and transportation industries

## System Details

The DCPD instrumentation is manufactured by the FTA division of Laboratory Testing Inc. Major components are supplied by AMETEK Inc. and Ectron Corp. The system is designed to be run in conjunction with a Jäger ADwin Gold digital signal processor and FTA DCPD testing software.

### PD5-20 Reversing DCPD Constant Current Power Supply

- ▲ Current rating: 20 amps
- ▲ Voltage rating: 5 volts
- ▲ Stability:  $\pm 0.05\%$  of set point at fixed line, load, and temperature.

### 428-O Single-Channel Differential Amplifier

- ▲ Gains up to 2,500\*
- ▲ 0.5uV/°C inherent temperature stability
- ▲ Autozero with front-panel manual control
- ▲ 90% relative humidity operation
- ▲ All required cabling
- \* 8x analog gain available on ADwin



PD5-20 Reversing DCPD Power Supply



428-O Amplifier Enclosure with Amplifiers  
(Supports up to 6 amplifiers)

## Warranty

All hardware items ship with a 1-year warranty from FTA.

## Find Out More

Contact us at [FTASales@labtesting.com](mailto:FTASales@labtesting.com) to find out more about the DCPD System and our software solutions.