BUCKLEYS

MANUFACTURERS OF SPECIALIST TEST EQUIPMENT

DCCT PRO2

High-voltage DC Test Instruments

Introducing the DCCT Pro2

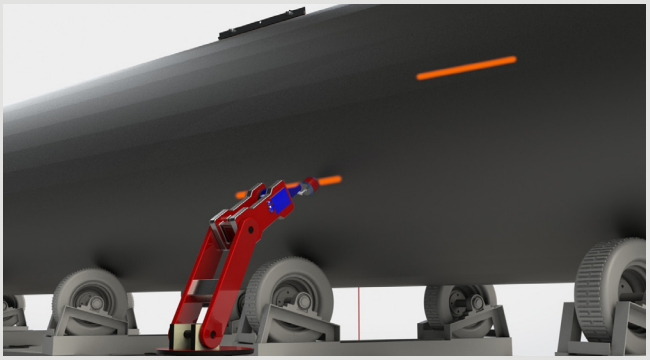
A mains-powered, high voltage pinhole detector, with ample auxiliary inputs and a resettable high-speed counter - specifically designed for integration into an automated factory environment.

This is not an off-the-shelf product, but rather a custom-built solution - incorporating the DCCT Pro2 into your existing automated set-up, specifically designed to find pinholes in coatings, insulations or films.

The instrument is built into a 19" rack mountable case, has visual and audible alarms and its multicolour back-light, displays the alarm status.

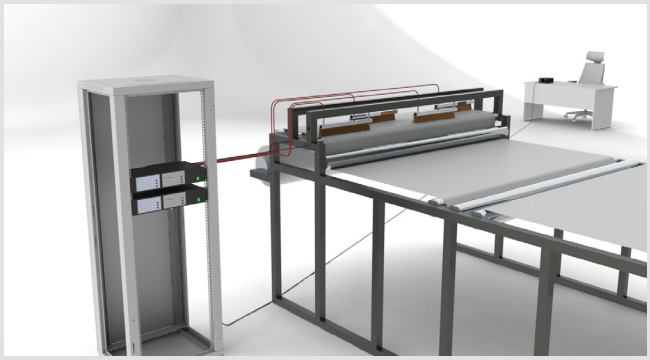
To meet the needs of different industrial users, a selection of DCCT instruments has been created in the Pro2 range.

Process Integration



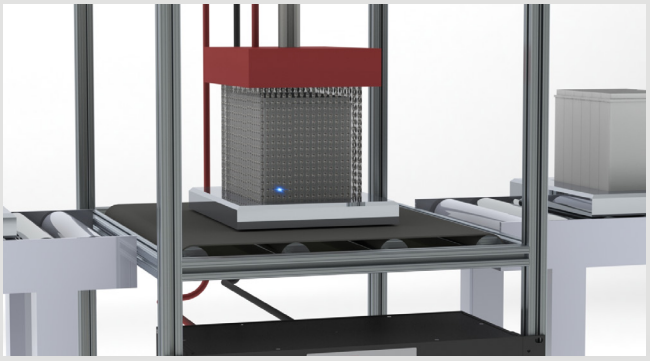
DCCT Pro2 instruments are fitted with software-controlled zero-volt relay connections which operate in synchronisation with the alarm, allowing interconnection with PLC controllers, or a variety of other devices, such as a paint spray for marking.

Networking



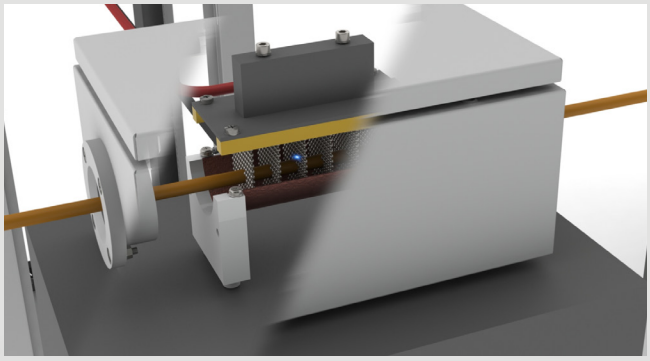
All DCCT Pro2 instruments are capable of networking, allowing up to four output units to be connected to a single command station as shown.

Bespoke Electrodes



DCCT Pro2 instruments can detect flaws and pinholes in a wide variety of applications. We specialise is designing and manufacturing specialist bespoke electrodes to exactly suit your application, such as the battery box electrode illustrated here.

Cable Testing



Our Ball Chain Electrode has been specifically designed to efficiently and precisely detecting faults and flaws in electrical cable insulation.

- All instruments are installed in a robust powder-coated aluminium housing
- Mains (90 – 250V AC) powered and can output from 900V to 40kV
- User-settable software controls enable selection from a range of responses to alarms to suit the installation requirements
- Alarm threshold range is from 10 to 450µA
- All units are fitted with an interlock loop facility and an internal alarm sounder, coupled with an alarm triggered DPDT relay which allows interconnection with PLC or other parts of the installation
- All instruments are capable of networking, allowing up to four output units to be connected to a single command station

Call us for an obligation free consultation, where we can discuss your factory set-up, requirements, constraints, and desired integration. We will walk you through the best option to suit your needs.

The DCCT Pro2 Range

DCCT Pro2 Integral Single Channel (6002-0098)

DCCT Pro2 Integral Dual Channel (6002-0099)

The DCCT Pro2 Integral is the basic instrument which replaces the previous generation of DCCT. In addition to offering a greater, and more stable, output over the whole range with visual alerts provided on-screen, faults are counted on a resettable digital counter, and a remote button connection is provided for HV on-off control. The instrument is installed in a rack-mountable (19" 2U) case and provided with rack mounting accessories. Available in single and dual channel output assemblies.

DCCT Pro2 Command + Module (6002-0100)

This DCCT Pro2 Command+ Module provides the same command, control and reporting capabilities as the Integral instruments, but without an output assembly. The instrument provides a means of remotely operating Output Modules. Visual alerts are provided on-screen along with an audible alarm. Faults are counted on a resettable digital counter, and the relay outputs are also provided. The Command+ unit connects to other units via a 4-core network cable.

DCCT Pro2 Output Module Single Channel (6002-0101)

DCCT Pro2 Output Module Dual Channel (6002-0102)

This DCCT Pro2 Output Module comprises a mains-powered output unit, mounted in a 19" 2U powder-coated housing. The specifications & capabilities are identical to the Integral unit, but there is no command interface within the instrument – it must be networked with one of either an Integral instrument or a Command+ Module.

Feature	Integral	Command+	Output
Robust metal case	✓	✓	✓
Accessory kit to allow mounting in standard 19"rack if required	✓	×	✓
Digital control of output voltage, sensitivity, and timing parameters	✓	✓	✓
Clear legible display indicates output voltage and current	✓	✓	×
Front panel LED indicators for power, network, HV and Alarm status	×	×	✓
Multicolour backlight displays HV live and alarm status	✓	✓	×
Resettable high-speed counters	✓	✓	×
Visual and audible alarms	✓	✓	✓
Suitable for in-process testing at a wide range of speeds	✓	✓	✓
Can be integrated into automated testing for discrete items	✓	✓	✓
Conforms with BS EN 62230 (formerly BS 5099)	✓	✓	✓
Calibration Certificate	✓	×	✓
UKCA & CE Approved	✓	✓	✓

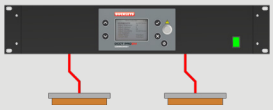
Specifications

- Mains supply voltage: 90-250VAC (via IEC C13 "kettle plug" lead)
- Output voltage range: 0.9kV – 40kV
- Max. output current: <1mA (cont.)
- Alarm sensitivity range: 10µA to 450µA (factory-set to 200µA)
- Meter accuracy: <10kV: +/- 10V. >=10kV +/- 100V
- Current meter FSD: 450µA
- Maximum relative humidity: 80% non-condensing
- Working altitude: <2000m
- Temperature range: 0°C - +40°C

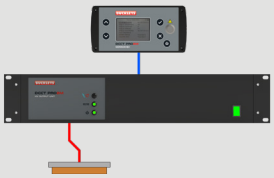
Instrument	Unit weight	Packed weight	Unit dimensions	Packed dimensions
DCCT Pro2 Single Channel Integral	3.4Kg	9.2Kg	421 x 203 x 88mm	580 x 440 x 240mm
DCCT Pro2 Dual Channel Integral	4.3Kg	10.1Kg	421 x 203 x 88mm	580 x 440 x 240mm
DCCT Pro2 Command+ Module	1.8Kg	9.7Kg	175 x 221 x 85mm	580 x 440 x 240mm
DCCT Pro2 Single Channel Output Module	3.0Kg	9.3Kg	421 x 203 x 88mm	580 x 440 x 240mm
DCCT Pro2 Dual Channel Output Module	3.9Kg	7.5Kg	421 x 203 x 88mm	580 x 440 x 240mm

Multi-instrument Configuration

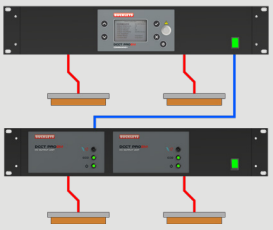
This simple arrangement of the Integral Single Channel (6002-0098) replaces previous generation units, but offers significantly greater output power, and enhanced control and interface options. The unit is provided with two zero-volt relay outputs to control external alarms, paint markers or other peripherals.



This Integral Dual Channel (6002-0099) instrument provides two output modules within the same housing, meeting the demand for higher currents, or where it is necessary or convenient to use two separate electrodes. The output voltage and alarm threshold are identical for both channels, but the fault counter and output control functions of each channel are independent.



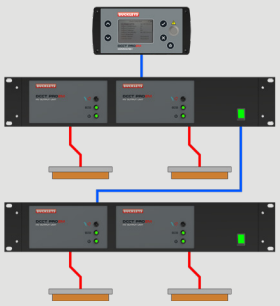
Use of a Command+ module, (6002-0100) permits the remote management of a DCCT output stage, in this example a Single Channel Output Unit (6002-0101) is used, and this offers the same capabilities as the Integral Single Channel unit described above. The controller and the output stage(s) have interlock inputs, and the interface capability to drive alarms / paint markers / etc. The network cable may be up to 100m long.



Where multiple DCCT output stages are required without remote control, the integral unit can be connected to single or dual output stages.

This example comprises an Integral Dual Channel (6002-0099) and a Dual Channel Output module (6002-0102), and this arrangement allows the system to be extended to provide three or four outputs.

The controller and the output stages are each provided with independent interface capability to drive alarms / paint markers / etc.



In this final example, the network arrangement permits the remote control of two Dual Channel Output Modules (6002-0102) It is possible to construct a remotely managed network with one, two, three or four output channels.

Whilst the output voltage and alarm threshold are identical for all channels, the controller and the output stages are provided with independent fault counters, and individual interface capability to drive alarms / paint markers / etc.

Accessories and Electrodes

A wide range of rollers, metallic or carbon fibre brushes, conductive rubber, metallic gauze or mesh can be used to form electrodes.

In cable-testing applications, the ground electrode is normally formed by the core (or cores) of the cable itself, and arrangements must be made to ensure a low resistance path from the cable core to the instrument, either in the supply, or take-up reel. Similarly in pipe insulation testing, a ground connection to the metal tube itself will be necessary. This may be arranged by means of a travelling contact, or a static brush, which is able to make contact with the tube as it passes through the HV electrode assembly.

Buckleys has considerable experience in the design and manufacture of HV and Grounding electrodes and we are happy to advise, and to quote for custom installations including extrusion of films and membranes, and a wide range of coated components including wires, cables and flexible and rigid pipes. Please contact us to discuss your specific application.

25m Earth Extension Lead
6005-0075

100m Earth Extension Lead
6005-0432

450mm Cassette Assembly
6005-0526

Pipe electrode arm
6005-0565

Ball chain electrode
6005-1020

Rolling spring electrodes - for external pipe inspection

Silicone rubber internal electrodes

For more information on Buckleys products, call our sales team on +44 (0)1303 278888, email sales@buckleys.co.uk or visit: www.buckleysinternational.com

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