



Model ER825 C⁴D Detector

Multi-Channel Contactless Conductivity Detector



Multi-Channel Contactless Conductivity Detector shown with eight channels fitted



C⁴D Headstage (ET120)
(Not included)

Applications

- Capillary electrophoresis (CE)
- Ion chromatography (IC)
- Salt gradient chromatography
- Packing consistency for monolithic columns

Description

Capacitively-coupled contactless conductivity detection (C⁴D) systems apply an AC waveform to a transmitter electrode around a tube (or adjacent to a microfluidic channel) in which electrophoretic or chromatographic flow is occurring. The AC signal capacitively couples into the sample, which conducts the signal to a nearby receiver electrode. This, much attenuated, AC signal is demodulated to provide a DC signal which is dependent on the conductivity of the sample between the electrodes. This process occurs inside a headstage module, which outputs a signal to the C⁴D Detector. The Detector removes signal offset, amplifies and filters the signal, and also generates the excitation waveform that is sent to the headstage.

The CE or chromatography tubing is passed through the C⁴D Headstage where the AC signal is applied and received.

Compatibility

This Detector has a virtual serial interface (which that runs over its USB connection to the computer). Settings can be optimized with supplied C⁴D Profiler V2 software. The signal can be collected from the analog signal output, or via the USB/virtual serial interface. Many commercial data acquisition systems and chromatography recording systems will be compatible.

The ER815 is compatible with most CE and IC systems, including Agilent, Beckman Coulter and PrinCE instruments.

Compatible with all eDAQ headstage and platforms including:

- ET120 C⁴D Headstage for 360 – 365 μ m OD capillary
- ET125 C⁴D Headstage for chromatography tubing (1/16 inch OD or less)
- ET121 Microfluidic Platform for microchip electrophoresis.

Specifications

Channels:	2 – 8 (specify when ordering)
Input connectors:	10 pin LEMO compatible socket
Signal gain:	x1, x10, x100
Analog signal resolution:	16 bits (Chart software) 24 bits (PowerChrom software)
Virtual serial port resolution	24 bit
Input gain ranges:	\pm 20, 50, 100, 200, 500 mV \pm 1, 2, 5 V
Excitation frequency:	20 – 2000 kHz
Excitation amplitude:	2 – 40 V AC p-p, sinusoidal, @ <50 mA
Offset:	\pm 5.5 V on \pm 10 V output range

Low pass filters:	1000 (off), 10, 1 Hz
Output signals:	\pm 5 V max, or USB with virtual serial interface
Back panel connectors:	BNC (analog voltage) USB (virtual RS232 serial)
Power requirements: (mains adaptor supplied)	12 V DC, ~10 W
Dimensions (h x w x d):	65 x 200 mm x 250mm (2.6 x 7.9 x 9.8")
Weight:	1.8 kg (4.3 lb) maximum
Operating temperature:	0 to 35 °C 0 to 90% humidity (non-condensing)
<i>eDAQ reserves the right to alter these specifications at any time.</i>	

WARRANTY: eDAQ Hardware units are supported by a three year warranty

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