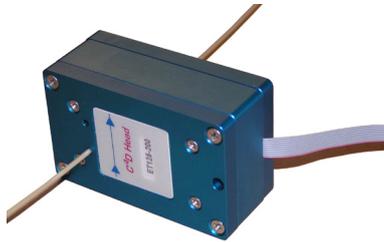




Configurable C4D Detector-Monitor Headstage (ET131)



ET131 with 1/16 inch tubing

- Factory-configurable: tubing outer diameter, electrode gap
- Use with a wide range of tubing sizes and materials
- Conductivity range: 200 $\mu\text{S}/\text{cm}$ to 200 mS/cm
- Internal electrodes never require maintenance or cleaning

Description

The ET131 headstage can be connected to any eDAQ C4D unit to make a contactless conductivity detector (C4D) for a wide range of applications. It is fully factory-configurable and can be tailored to the customer's application. This includes tubing outer diameter (between between 360 and 3200 μm), electrode gap, as well as the internal gain resistor, headstage gain and transformer to set the desired conductivity range and spacial resolution.

The tubing is simply slid into the headstage where a pair of internal ring electrodes are positioned. A high frequency AC signal is passed between the electrodes, and the conductivity of the solution in the capillary affects the received AC amplitude.

The ET131 can be configured to record conductivities between 200 $\mu\text{S}/\text{cm}$ and 200 mS/cm .

The sample doesn't come into contact with the detector electrodes so it is easy to analyse hazardous, corrosive or radioactive liquids. There is no carryover or memory effect from the previous sample. There is no electrode deterioration or polarization.

Specifications

Mechanical	
Electrode Aperture:	Factory-configurable: 360 - 3200 μm
Electrode length:	5mm
Electrode separation:	Factory-configurable: 3 or 10 mm
Size:	63 mm x 39 mm x 27 mm
Weight:	125 grams
Electrical	
Output voltage:	-0.100 to +5.00 volts
Linear Range:	+0.100 to 2.500 volts
Excitation Level:	1 to 100 volts peak to peak

Compatibility

The ET131 headstage can be used with any eDAQ C4D unit. It can be used with many tubing materials, including PEEK and PTFE (Teflon) etc.

The headstage adapter cable is included with the C4D unit, not with the ET131. The correct adapter depends on which C4D unit is being used: the EC1210 adapter is used with the ER815 and ER825, while the EC1208 adapter is used with the ER225, EA120 and ER125.

Applications

The ET131 has been used for:

- Recording the very low conductivity of polar ice meltwater by Continuous Flow Analysis.
- Measuring liquid-liquid slug flow properties in tubing.
- Measuring total dissolved inorganic carbon concentration at different depths in the sea with an autonomous ocean profiling vehicle.
- As a contactless conductivity meter.

Other applications may be covered using the ET125 or ET130 headstages.

Excitation Frequency:	50kHz to 200kHz +/-1db
Gain x1 =	100 mV/ μA
Gain x5 =	500 mV/ μA
Frequency response:	0-10 Hz (3dB point)
Noise:	< 3 μV RMS 0-10Hz measured over 1 sec (shielded environment)
Drift:	< 3 $\mu\text{V}/^\circ\text{C}$ measured with no capillary
Power supply:	+/-5 volts +/-5% @50 mA
Conductivity ranges:	200 $\mu\text{S}/\text{cm}$ to 200 mS/cm
<i>eDAQ Pty Ltd reserves the right to alter these specifications at any time.</i>	

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