



The 485 lock-in amplifier/ integrating ADC is a key component of spectroradiometer systems operating in conditions of where discrimination of a probe signal from a background radiation, whether by design or not.

phasing intervention as is custom with traditional lock-in amplifier-based systems.

The 485 module is housed within the 417/T mother unit.

### Core Features

- Dual Input for use with multiple detectors
- Square Wave demodulation for best signal-to-noise ratio
- High input impedance
- Dual 14 1/2 bit ADCs
- USB interface through 417 electronics

Specification	
<b>Inputs:</b>	2, remotely/manually selected
<b>Frequency Range:</b>	2Hz to 10kHz
<b>Sensitivity (10V output)</b>	1mV to 1V in decade steps
<b>Input Impedance:</b>	100MΩ/25pf, pseudo differential
<b>Dynamic Reserve:</b>	20 to 80 dB depending on sensitivity settings
<b>Gain Accuracy:</b>	+1%
<b>Gain Stability</b>	200ppm/°C
<b>Phase Control:</b>	0.025° increments plus 90° increments
<b>Output Stability:</b>	5ppm/°C to 500ppm/°C depending on sensitivity
<b>Time Constant:</b>	10ms to 10s. Digital signal averaging via ADC. Integrating period 100ms to infinity.
<b>Interface:</b>	USB (via 417/417T mother unit)
<b>Phase Display:</b>	3 digit LC display shows current phase setting
<b>Resolution</b>	4 1/2 digit BCD (0 to 19999) i.e. > 14 bit resolution
<b>Conversion</b>	100ms
<b>Input Range</b>	-0.2V to 9.8V
<b>Linearity</b>	< 0.025% departure from linearity from zero to full scale