

# The VersaSTAT Series

## Low Current Interface

The VersaSTAT LC Low Current Interface is a plug-in, research grade option for the VersaSTAT Series of potentiostats/galvanostat, designed for the measurement of ultra-low currents with greater accuracy and resolution than the base system. With the addition of a VersaSTAT LC option, any VersaSTAT Series system will acquire a lowest current range of 4pA and current resolution as small as 122 aA.

The VersaSTAT LC is ideal for applications requiring low current accuracy and resolution. Applications such as ultra micro electrodes, coatings research, corrosion testing of bio-implants, and sensor research are all areas where greater current sensitivity may be needed.

The VersaSTAT LC option can be purchased at any time as a plug-in option. It consists of an interface cable to connect to the VersaSTAT, a main body containing the high input impedance electrometer and additional current ranges, and the cell leads. Once attached to the VersaSTAT system and calibrated with the built-in DC Calibration routine, additional bandwidth stabilization filters are provided with the VersaSTAT LC option to provide maximum stability over a wide range of experimental conditions and applications.

- Femtoampere accuracy and attoampere resolution for both DC and AC (EIS) measurements
- Expands E and I filter selection for VersaSTAT 3 and VersaSTAT MC Systems
- Plug-in add-on for VersaSTAT Series potentiostats/galvanostats
- Auto-current ranging capability from 200mA - 4pA

# VersaSTAT LC

## Low Current Interface

### Specifications



System Performance	
Minimum Current Range	4pA ( $4 \times 10^{-12}$ A)
Minimum Current Resolution	122 aA ( $122 \times 10^{-18}$ A)

Power Amplifier	
Maximum Current	$\pm 200$ mA

Differential Electrometer	
Input Bias Current	<200 fA at 25°C
Maximum Voltage Range	$\pm 10$ V maximum
Input Voltage Differential	$\pm 10$ V
Bandwidth	700 kHz (-3dB)
Common Mode Rejection	>60dB @ 100Hz, >50dB @ 100kHz
Input Impedance	> $10^{14}$ $\Omega$ in parallel with <200 fF, typical

Current Measurement	
Ranges	12 decades, 200mA to 4pA
Accuracy (dc)	2 $\mu$ to 200mA < 0.2% full scale
	20nA and 200nA ranges < 0.5% full scale
	200pA - 4pA ranges < 1.0% full scale $\pm 500$ fA full scale

Current Control	
Applied Current Range	$\pm$ full scale per range
Applied Current Resolution	$\pm 1/32,000$ x full scale
Applied Current Accuracy	$\pm 0.5\%$ of range, $\pm 0.5\%$ of reading
Max. Current Range/Resolution	$\pm 200$ mA / 10 $\mu$ A
Min. Current Range/Resolution	$\pm 4$ pA / 122aA

All other specifications not listed default to the connected potentiostat. Specifications subject to change.

