ECM POWER CONTROL SYSTEMS

Power Line Ripple Generator

(Model A Shown)

ECM's Ripple Generator Model 2550 is designed to go between a DC power supply and a powered device. The Ripple Generator modifies the supply line voltage by adding voltage waveforms of programmable type, magnitude, and frequency. By adding waveforms to the line voltage, you can study the sensitivity of your powered devices (e.g. power electronics, motor) *and* power supply (e.g. battery) to supply line noise. Unexpected behaviors of powered devices (e.g. inverter voltage regulation drift) and power supplies (e.g. battery impedance changes) have been observed as a result of power line ripple.

Specifications

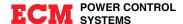|	
Maximum Input Voltage	500 VDC
Maximum Current	40 A RMS
Programmable Voltage Added*	0 to 50 V or one-half of input voltage (peak-to-peak)
Programmable Waveform	Sinusoidal (others in development)
Programmable Frequency	1KHz to 25 KHz (Model A), 100Hz to 25KHz (Model B)
Programmable Via	Front Panel, CAN (CANopen), RS232
Dimensions	19" rackmount, 3 ¾" tall, 20 lbm (Model A)
	19" rackmount, 5 ¾" tall, 23 lbm (Model B)
Power	24 VDC, 4 A to power control electronics

* This voltage is added onto the power supply voltage, which itself can be as high as 500V.

(Model A Shown)

Test Immunity of Powered Devices and Batteries to Voltage Ripple
(500V, 40A max.)

500V

Up to 50V AC Amplitude

500V

Up to 25kHz

ECM
Ripple Generator 2550

0-500V DC, 0-40 A

Ground

Ground

Supply
(Regulated Supply or Battery)

24V DC

Load
e.g. Power electronics, battery, RLC generic load, electronic load, etc.

AC Wall Power

Notes:
1. Maximum AC voltage amplitude is limited to 50V, or ¼ of input voltage, whichever is less.
2. Output voltage may be further limited by input capacitance of load causing supply current to zero at minimum of applied voltage.