

## 900-EX

### Advanced High Power Test System



#### Powering up to 1MW

The 900 EX is ideal for testing and emulating energy storage and drive train components. The increased performance (rise time/slew rate) and increased accuracy make the 900 EX ideal for applications like Heavy Industrial (ships, trains, trucks, and aircraft), Military (hybrid drives and aircraft launch systems), Power Electronics (solar panels, inverters), and Hardware in the loop testing. Digital controls protect critical systems and components, and the system can self-adjust to external environmental events like unstable power sources. The bi-directional system can operate at  $\pm 250\text{kW}$ , or combined, it can scale to  $\pm 1\text{MW}$ . The 900 EX, with new LCD touchscreen display, is an intelligent system that will give you the accuracy, speed, and control to add value to your tests.

#### Key Features:

- Industry standard for high performance testing
- Flexibly test virtually any DC source, load, or battery storage system
- Enhanced error detection & fault correction
- Test faster and more efficiently > Save time & money
- Regenerative to the grid > Save energy and money
- More accurately represent real world conditions > More predictive results
- Two channels for flexibility in testing/simulating multiple devices with a single machine
- Open communication protocol allowing easy integration into any test set-up
- Self-contained cooling system requiring no external cooling system
- Control Modes: Voltage, Current, Power, Resistance, Voltage with Internal Resistance

## Technical Specifications

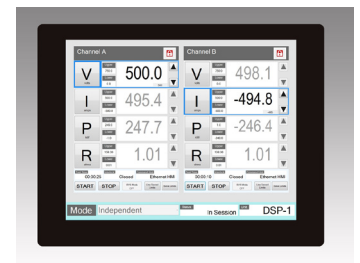
	Independent	Parallel	Multi-unit
Voltage	900V	900V	900V
Current	500A	1000A	4000A
Power	250kW	250kW	1000kW
Command latency	250µs (Ethernet)		
Energy recovery efficiency	93%		
Measurement error-voltage	±0.05V or ±0.05% of reading		
Measurement error-current	±160mA or ±0.05% of reading		
Rise time voltage - step (0-500v)	3ms*	7ms*	7ms*
Rise time current - step (0-300a)	0.5ms*	0.6ms*	0.9ms*
Rise time power - step	0.4ms* (0-100kW)	0.6ms* (0-250kW)	0.7ms* (0-500kW)
Slew rate voltage	171V/ms	89V/ms	76V/ms
Slew rate current	769A/ms	1282A/ms	1935A/ms
Slew rate power	274kW/ms	500kW/ms	833kW/ms
Tracking bandwidth voltage	50Hz (500V) 75Hz (250V)	50Hz (500V)	50Hz (500V)
Tracking bandwidth current	175Hz (500A)	150Hz (700A)	50Hz (700A)
Tracking bandwidth power	100Hz (150kW)	150Hz (250kW)	50Hz (250kW)
Output data sampling	Fiber to Ethernet 10ms CAN 10ms RS-232 50ms		
Input voltage options (+10%/-15%)	3 Phase, 380, 400 and 480 VAC		
Current draw	410, 389 and 324 Amps respectively		
Weight	6063 lb (2750 kg)		
Dimensions	72" W x 76.5" H x 39" D (183cm W x 194cm H x 99cm D)		

## Operating Range

Configuration	Voltage (Vdc)	Current (Adc)	Power (kW)
Independent	+8 to +750	-500 to +500	-250 to +250
	+751 to +825	-400 to +400	-225 to +225
	+826 to +900	-300 to +300	-200 to +200
Parallel	+8 to +750	-1000 to +1000	-250 to +250
	+751 to +825	-800 to +800	-225 to +225
	+826 to +900	-600 to +600	-200 to +200



The 900 EX can run all standard drive cycle simulations, including FUDS, SFUDS, GSFUDS, DST, ECE-ISL, etc.



Touchscreen HMI for local control & easy identification of operating state.