

# Power Processing Systems

## AV-900

### Heavy Duty Cycling Station

- Test Heavy Duty Drivetrains & Components
- Cycle Large Hybrids (Buses, Trucks & Military Vehicles)
- Powerful Computer Control
- Bi-Directional Load Capability



#### Product Features:

- Voltage Range 8 to 900VDC
- Current Range  $\pm 1000$ ADC
- Power Range  $\pm 250$ kW
- Easy Front Panel Connections
- Dual Independent Channels

#### AV-900 . . . The Heavy Duty Test Solution!

The AV-900 is AeroVironment's heavy duty test solution. The increased voltage, current and power capability of this system make it ideal for testing and emulating energy storage and drivetrain components of large EV's and HEV's, such as buses, trucks and military vehicles. The AV-900 is being used worldwide to help develop fuel cell buses, hybrid locomotives and other HEV's.

INPUT RATING	3 Phase, 480Vrms,
CURRENT	335Arms
FREQUENCY	60Hz (50Hz optional)
ISOLATION TRANSFORMER	Internal Transformer
POWER FACTOR	> 99%
HARMONIC DISTORTION	< 3% THD
MULTIPLE USER INTERFACES	Manual; Remote Operation System (ROS); DCOM Driver for LabVIEW, C++ and Visual Basic; CAN

#### 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 +749	-1000 to +1000	-250 to +250
	+750 to +824	-800 to +800	-225 to +225
	+825 to +900	-600 to +600	-200 to +200
WEIGHT	3800 lbs (1727 kg)		
DIMENSIONS	72"W x 76.5"H x 36"D (183 cm W x 194 cm H x 92 cm D)		

# AV-900 Technical Specification

## Utility Requirement

Voltage	3 Phase, 480Vrms, +10%/-15%, <5% imbalance
Current	335Arms
Frequency	60 ± 2Hz (50 ± 1Hz optional)
Isolation Transformer	Internal Transformer

## AC Power Quality at Rated Power

Power Factor	0.99
Harmonic Distortion	< 3% THD, IEEE 519 Compliant

## DC Output, Operating Range

Mode	Voltage (Vdc)	Current (Adc)	Power (kW)
Independent (2 Channels)	+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
External Parallel (1 Channel)	+8 to +749	-1000 to +1000	-250 to +250
	+750 to +824	-800 to +800	-225 to +225
	+825 to +900	-600 to +600	-200 to +200

*The above ranges are the maximum allowed by the system; none may be exceeded. Voltage, current and power limits within the ranges can be set by the user based on the load and the test requirements.*

Accuracy & Resolution	Accuracy (±)	Resolution
Voltage	250mV or 0.15% of the output voltage	20mV

Current	Accuracy (±)	Resolution
Independent (2 Channels)	250mA or 0.25% of the reading	20mA
External Parallel (1 Channel)	350mA or 0.35% of the reading	30mA

## Current Ripple on DC Output

Independent & Parallel Mode	< 65mArms and 130mArms, respectively
Max Ripple from Load	< 15Arms

## Operating Environment

Temperature	0-35°C
Humidity	5-90% non-condensing

## Additional Features

- Remote Voltage Sense
- Independent Mode Control for Each Output Channel
- Analog Control Signal
- Reverse Voltage Protection
- Independent Output Enabled
- Multiple User Interfaces: Manual; AV Remote Operation System (ROS); Windows DCOM Driver for LabView, Visual Basic, C++, Studio.NET; CAN (for use with existing CAN bus)

## Safety

- Remote Emergency Switch Available
- Automatic Shutdown on Loss of Power
- Load Disconnect Protection
- Independent Channel Shutdown
- Emergency Cutoff Switch

## Physical Specification

Dimensions	72"W x 76.5"H x 36"D (183cm W x 194cm H x 92cm D)
Weight	3800 lbs (1727 kg)

*\* All specifications are subject to change without notice.*