

5V SERIES DC LOADS

5V SERIES DC LOADS

Key features:

- Models from 600W to 14400W
- High Voltage Range, 0 500 Vdc
- Current Ranges up to 500 Adc
- High-Speed 5 Digit Precision Metering Capability
- Parallel Operation for High Power Applications
- Synchronized Operation of Multiple Loads
- Operating Modes: CC, CP, CR and CV
- Static and Dynamic CC Modes
- Fast Current Slew Rates
- Built-in Short Circuit Test
- Built-in Power Supply Over Current Protection Test Mode
- Built-in Power Supply Over Power Protection Test Mode
- Go/NoGo Test Support
- Auto-Sequencing
- High Power Load Cabinets
- Available Interface Options are USB, RS232, GPIB and LAN



OVERVIEW

The ADAPTIVE POWER 5V Series Programmable DC Electronic Loads are ideally suited for testing high voltage, high current power supplies and batteries. With their ability to draw full current starting as low as 3.0 Vdc, the 5V Series loads can provide a wide dynamic range of load conditions.

Target applications for these loads are research & development, production test, incoming inspection, quality control and service.

The high power density of 1800W in a 4U high, single 19" wide rack-mount mainframe represents industry leading power density. The 5V Series consists of a total of seventeen different model configurations, providing a wide variation of possible current and power ranges. Starting at 600 Watt and ranging to 1800 Watt per chassis or 14400W for 5V Cabinet systems, all models offer dual voltage and current range capability for optimal accuracy and resolution.

HIGH POWER 5V SERIES CABINET SYSTEMS

For high power models in the 5V Series are supplied as integrated load cabinets that combine one master 5V unit with one or more slave 5V Series rack mount units. These systems contain all necessary input wiring and output bus bars to handle DC current up to 500 Adc. These systems are ideally suited for burn in and battery discharge test applications up to 500 Vdc.

The 5V Series offers high power, high voltage load performance and durability at an affordable price point.















ON TEST ALTERNATIVE ENER

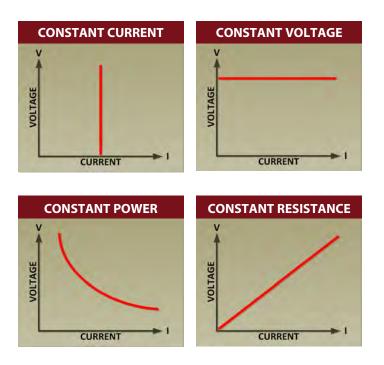
R&D

SUPPORT

OPERATING MODES

All 5V Series loads support several modes of operation to accommodate a wide range of test requirements. Voltage sources like AC/DC power supplies are best tested using Constant Current (CC) mode. Battery chargers on the other hand can be tested using an E-load in Constant Voltage (CV)mode.

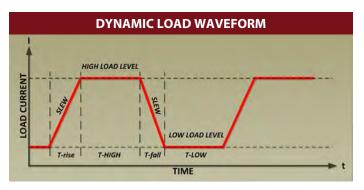
The available operating modes are Constant Current, Constant Voltage, Constant Power and Constant Resistance. A graphical representation of these modes of operation is shown here.



STATIC & DYNAMIC MODES

The demands put on power supplies to support increasingly complex electronics systems continue to escalate. It is no longer sufficient to test power supplies for static load conditions. Instead, dynamic load conditions requiring rapid changes in current demanded from the power supply need to be evaluated and tested. The 5V Series Loads serve this purpose by offering high speed programmable dynamic load control.

The diagram below illustrates the variable load current slew rates and dwell times that can be programmed on the 5V Series loads.



Sequences of variable slew rates and test levels can be stored in non-volatile memory for recall during dynamic transient load test execution. This makes it possible to simulate real-world demanding load conditions on power supplies driving modern electronics. With current slew rates ranging up to several Amps per microsecond and dwell times down to 50 microseconds, thorough transient stability testing of power supply designs is possible. Advanced remote sense and control feedback loops ensure stable and repeatable testing with little or no distortion during load transitions.

FLEXIBLE INPUT CAPABILITIES

5V Series loads are designed to accommodate a wide range of current input values within their maximum voltage and power capability. This allows the same loads to be used for higher voltage and low current requirements as well as low voltage higher current applications. A typical V-I operating curve is shown on the right for load model 5V108-07. Bounded by the maximum voltage of 500Vdc and maximum current of 72A, the input range follows an 10.8kW power curve as shown.

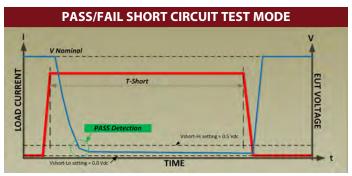
Each load continuously tracks its input voltage current and power and safeguards against any operation outside of its operating limits.

This flexible operating range allows the same load to be used for a wide range of EUTs and provides great flexibility.



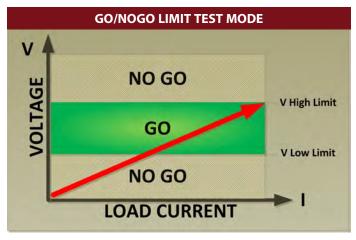
SHORT CIRCUIT TESTING

Power supplies and batteries must be able to handle short circuit conditions without failing. The 5V Series loads have a builtin short circuit test mode that allows easy PASS/FAIL detection as part of a test protocol. Programmable parameters short duration time (T-short) and Hi and Lo voltage limits for the EUT during short conditions. If the sensed voltage falls within the user-defined limits, a PASS is recorded.



GO/NOGO LIMIT TESTING

The GO/NG mode of operation is a convenient way to automatically check any measured parameter like voltage, current or power against predefined upper and lower limits. Once set, the load continuously compares readings against these limits and issues a GO or NoGo error output.



5V SERIES CABINET SYSTEMS

For applications where the 5V Series single chassis provides insufficient current and/or power, the 5V cabinet systems provides a fully integrated Master/Slave load test system solution.

These systems come in a movable cabinet with pre-installed AC input wiring and solid copper output bus bars that can handle large amounts of DC current.

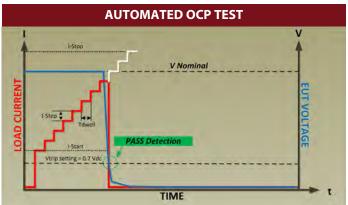
Cabinets range in size from 2400 Watt to 14400 Watt, with thirteen system configurations to choose from.



DC Load Model 5V054-18 shown

OCP MODE TESTING

Testing the Over Current Protection (OCP) function of a power supply is easy when using the APS DC load. A special OPC mode allows setting of start current, end current and step size versus time. A preset voltage threshold level is used to detect protection trip current and terminate the test with either a PASS or FAIL result.



OPP MODE TESTING

In addition to the OCP Test function, an Over Power Protection (OPP) test is provided as well. Conceptually, the test method is similar to the OCP test but instead of stepping the current, the power drawn by the load is stepped instead until the power supplies goes into protective shutdown or fold-back.

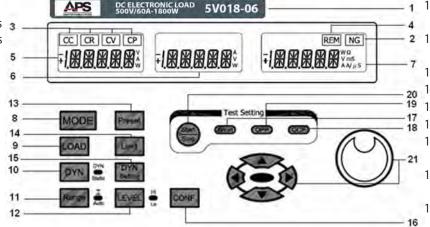


DC Load Model 5V144-50 shown

FRONT PANEL OPERATION

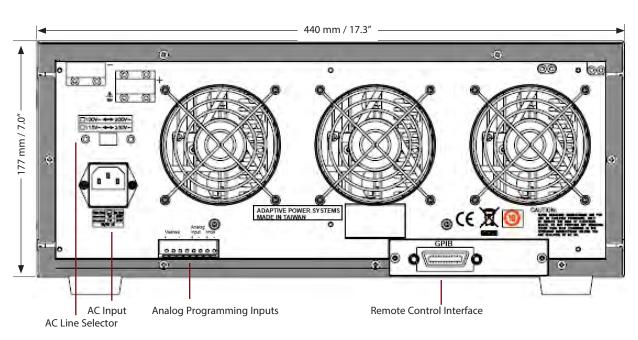
The 5V Series Load has an easy to use front panel layout consisting of large white LED back-lit LCD readouts and a keypad, shuttle combination for settings and parameter entry. Status indicator LED's accompany the various function and mode setting keys so the operational state of the DC load is easily observed by the operator. The digital rotary encoder makes slewing of parameters very intuitive.

- 1. Model Number and ranges
- Go/NoGo indicator illuminates if upper or lower limit settings are exceeded.
- 3. Operating Mode Indicators
- 4. REMOTE state indicator
- 5. Multi-purpose 5 digit display - Voltage
- 6. Multi-purpose 5 digit display - Current
- 7. Multi-purpose 5 digit display - Power
- 8. MODE selection key
- 9. LOAD ON/OFF button and indicator
- 10. DYNAMIC mode button and indicator



- 11. High or Low Range Selection and indicator
- 12. High or Low Load Setting Selection and indicator
- 13. Preset Mode ON/OFF
- 14. Limit Setup Menu
- 15. DYNAMIC mode settings
- 16. Configuration Menu
- 17. Short Circuit Test key and indicator
- 18. OCP (Over Current Protection) Test key and indicator
- 19. OPP (Over Power Protection) Test key and indicator
- 20. SHORT, OCP & OPP Start/Stop
- 21. Shuttle Knob, parameter selection, slew and cursor keys

REAR PANEL



5V SERIES DC LOADS

SPECIFICATIONS - 5V SERIES DC LOADS

SPECIFICATIONS	JV JENIES					
MODEL	5V006-02	5V012-04	5V018-01	5V018-06	5V024-08	5V036-12
OPERATING RANGES						
Power Ranges	0-60 W/0-600 W	0-120 W/0-1200 W	0-180 W/0-1800 W	0-180 W/0-1800 W	0-240W/0-2400W	0-360W/0-3600W
Current Ranges	0-2.0 A / 0-20 A	0-4.0 A / 0-40 A	0-1.2 A / 0-12 A	0-6.0 A / 0-60 A	0-8.0 A / 0-80 A	0-12.0 A / 0-120 A
Voltage Range	0-60.0 V / 0-500 V	0-60.0 V / 0-500 V	0-60.0 V / 0-500 V	0-60.0 V / 0-500 V	0-60.0 V / 0-500 V	0-60.0 V / 0-500 V
Minimum Voltage	4.0 V @ 20 A	4.0 V @ 40 A	6.0 V @ 12 A	4.0 V @ 60 A	4.0 V @ 80 A	4.0 V @ 120 A
OPERATING MODES					,	
CC Mode Range	0-2.0A / 0-20 A	0-4.0A / 0-40 A	0-1.2 A / 0-12 A	0-6.0 A / 0-60 A	0-8.0 A / 0-80 A	0-12.0 A / 0-120 A
Resolution	0.033mA / 0.33mA	0.066mA / 0.66mA	0.02mA / 0.2mA	0.1mA / 1mA	0.133mA / 1.33mA	0.2mA / 2mA
Accuracy			± 0.1% OF (SET			
CR Mode Range	0.5 / 30 / 1800kΩ				0.125 / 7.5 / 450kΩ	0.833 / 5 / 300kΩ
Resolution	0.5mΩ / 0.55μS	0.25mΩ / 1.1µS	0.8333mΩ / 0.333μS	0.1666mΩ / 0.032mS	0.125mΩ / 0.0022mS	0.0833mΩ / 0.00033mS
Accuracy	0101111, 0100 μ0	012011127 11140	± 0.2% OF (SET			0.0000000000000000000000000000000000000
CV Mode Range	0-60.0 V / 0-500 V	0-60.0 V / 0-500 V	0-60.0 V / 0-500 V	0-60.0 V / 0-500 V	0-60.0 V / 0-500 V	0-60.0 V / 0-500 V
Resolution						
Accuracy		1mV / 10mV 1mV / 10m ± 0.05% OF (SETTING + RANGE)				
CP Mode Range	0-60W / 0-600W	0-120W / 0-1200W	0-180W / 0-1800W	0-180W / 0-1800W	0-240W / 0-2400W	0-360W / 0-3600W
Resolution	1mW / 10mW	2mW / 20mW	3mW / 30mW	3mW / 30mW	4mW / 40mW	6mW / 60mW
Accuracy			± 0.5% OF (SET	TING + RANGE)		
PROTECTION	(22)	101014	1000144	4000144	0500.11/	
Over Power (OP)	630 W	1260 W	1890 W	1890 W	2520 W	3780 W
Over Current (OC)	21.0 A	42.0 A	12.6 A	63.0 A	84.0 A 525.0 V	126.0 A
Over Voltage (OV)	525.0 V	525.0 V 525.0 V 525.0 V 525.0 V				525.0 V
Over Temperature (OT)			+85° C /	′ +185° F		
DYNAMIC OPERATION						
T high & T low		C	.050 - 9.999 / 99.99 / 9	999.9 / 9999ms (20 kH	z)	
Resolution			0.001 / 0.01	/ 0.1 / 1ms		
Accuracy	y 1μs / 10μs / 10μs / 1ms + 50ppm				1	
Slew Rate	1.6mA-100mA/µs	3.2mA-200mA/µs	0.96mA-60mA/µs	4.8mA-300mA/µs	6.4mA-400mA/µs	9.6mA-600mA/µs
Siew nate	16mA-1000mA/µs	32mA-2000mA/µs	9.6mA-600mA/µs	48mA-3000mA/µs	64mA-4000mA/µs	96mA-6000mA/µs
Accuracy	\pm 5% OF SETTING \pm 10 μ s					
Min. Rise Time			20µs 1	ГурісаІ		
METERING						
Voltage Range	0 - 60.0 V / 0 - 500 V					
Resolution	1.0 mV / 10 mV					
Accuracy	± 0.025% OF (READING + RANGE)					
Current Range	0-2.0A / 0-20 A	0-4.0A / 0-40 A	0-1.2 A / 0-12 A	0-6.0 A / 0-60 A	0-8.0 A / 0-80 A	0-12.0 A / 0-120 A
Resolution	0.033mA / 0.33mA	0.066mA / 0.66mA	0.02mA / 0.2mA	0.1mA / 1mA	0.133mA / 1.33mA	0.2mA / 2mA
Accuracy	± 0.1% OF (READING + RANGE)					
Power Range	0-60W / 0-600W	0-120W / 0-1200W	0-180W / 0-1800W	0-180W / 0-1800W	0-240W / 0-2400W	0-360W / 0-3600W
Resolution	0.03 W	0.03 W	0.03 W	0.03 W	0.04 W	0.06 W
Accuracy						1
SHORT CIRCUIT	1					
Max. Short Current	20 A	40 A	12 A	60 A	80 A	120 A
ANALOG I/O	2071	1071	127	0071	0011	12071
Analog Monitor Out			0 - 10 V out ES / 1K	2 Zout Non-isolated		
Analog Input (CC mode)	0 - 10 V out F.S. / 1KΩ Zout, Non-isolated 0 - 10V in for F.S. current @ 10V					
AC INPUT AND PHYSICAL SPECI		-	0-100111101 F	S. current @ 10V		-
	1	15/2201/22 100/ 50/		iable Cread Ferr Cool		2001/// may
Power & Cooling	115/230Vac ± 10%, 50/60 Hz, 100 W max., Variable Speed Fan Cooled 200 W max. 177 x 440 x 445 mm / 7.0" x 17.3" x 17.5" 839 x 600 x 600 mm / 33.0" x 23.6" x 23.6" x 23.6"					
Dimensions (H x W x D)	45.01 / 00.5 !!					
Weight (Net)	15.2kg / 33.5 lbs	19.4kg / 42.8 lbs	23.6kg / 52.0 lbs	23.6kg / 52.0 lbs	72.8kg / 160.5 lbs	81.2kg / 179.0 lbs
Operating Range				32 - 104° F		
EMC & Safety			CE N	Mark		

5V SERIES MODULAR DC LOADS

SPECIFICATIONS - 5V SERIES DC LOADS

OPERATING RANGES Power Range 0-360 W/ 0-3600 W 0-540 W / 0-5400 W 0-720 W / 0-720 W / 0-720 W 0-720 W / 0-720 W / 0-720 W 0-720 W / 0-720 W 0-720 W / 0-72	51/072 84		51/072-05						
Power Ranges 0-360 W / 0-3600 W 0-540 W / 0-5400 W 0-720 W / 0-720 W 0-720 W <td>5V072-24</td> <td>5V072-24 5V090-30</td> <td>5V072-05</td> <td>5V054-18</td> <td>5V054-04</td> <td>5V036-02</td> <td></td> <td></td>	5V072-24	5V072-24 5V090-30	5V072-05	5V054-18	5V054-04	5V036-02			
Current Ranges 0 - 2.4 A / 0 - 24 A 0 - 3.6 A / 0 - 36 A 0 - 18.0 A / 0 - 180 A 0 - 4.8 A / 0 - 48 A 0 - 24 Voltage Range 0 - 60.0 V / 0 - 500 V 0 - 60.0 V / 0 - 500 V 0 - 60.0 V / 0 - 500 V 0 - 60.0 V / 0 - 500 V 0 - 60.0 V / 0 - 500 V 0 - 60.0 V / 0 - 500 V 0 - 60.0 V / 0 - 500 V 0 - 60.0 V / 0 - 500 V 0 - 60.0 V / 0 - 500 V 0 - 60.0 V / 0 - 500 V 0 - 60.0 V / 0 - 500 V 0 - 60.0 V / 0 - 500 V 0 - 60.0 V / 0 - 500 V 0 - 60.0 V / 0 - 500 V 0 - 48.A / 0 - 48.A / 0 - 48.A 0 - 24.A / 0 - 24.A 0 - 24.A / 0 - 2									
Voltage Range 0-60.0 V/0-500V 0-74.8 A/0-48.A 0-24.8 A/0-									
Minimum Voltage 6.0 V @ 24 A 6.0 V @ 36 A 4.0 V @ 180 A 3.0 V @ 48 A 4.0 OPERATING MODES	0 - 24.0 A / 0 - 240 A								
OPERATING MODES Image 0 - 2.4 Å / 0 - 24 Å 0 - 3.6 Å / 0 - 36 Å 0 - 18.0 Å / 0 - 18.0 Å / 0 - 48 Å 0 - 48 Å / 0 - 48 Å	0-60.0 V / 0-500 V								
CC Mode Range 0 - 2.4 A / 0 - 24 A 0 - 3.6 A / 0 - 36 A 0 - 18.0 A / 0 - 180 A 0 - 48.A / 0 - 48 A 0 - 24 Resolution 0.02mA / 02mA 0.05mA / 05mA 0.3mA / 3mA 0.04mA / 0.4mA 0.04mA	4.0 V @ 240 A	4.0 V @ 240 A 4.0 V @ 300 A	3.0 V @ 48 A	4.0 V @ 180 A	6.0 V @ 36 A	6.0 V @ 24 A	-		
Resolution 0.02mA / 0.2mA 0.06mA / 0.6mA 0.3mA / 3mA 0.04mA / 0.4mA 0.0 Accuracy									
Accuracy ± 0.1% OF (SETTING + RANGE) CR Mode Range 0.416/25 / 1500k0 0.2775 / 16.66 / 100k0 0.0555 / 3333 / 200k0 0.0416/16 / 25 / 1500k0 0.045 Resolution 0.416/00 / 0.0006sm5 0.2775 m0 / 0.01m6 0.0555 / 3333 / 200k0 0.0416/16 / 25 / 1500k0 0.0416 / 25 / 1500k0 0.050 / 0.001 / 0.0	0 - 24.0 A / 0 - 240 A							CC Mode	
CR Mode Range 0.416/25/15004.0 0.2775/16.66/1004.0 0.0555ml / 0.0003 ms 0.0416/25/1504.0 0.04 Resolution 0.416ml / 0.0066mS 0.075ml / 0.0003 ms 0.0416/25/1504.0 0.0555ml / 0.0003 ms 0.0416/25/1504.0 0.04 CV Mode Range 0-60.0 V / 0-500 V 0-500 V/ 0-500 V 0-520 W/0-520 V 0-520 W/0-520 V 0-520 W/0-520 V 0-520 W/0-520 V 0.00 0-60.0 V / 0-500 V 0-500 V/0-500 V 0-500 V/0-500 V 0-500 V/0-500 V 0-520 V/0-520 V 525.0 V 525.	0.4mA / 4mA	0.4mA / 4mA 0.5mA / 5mA	I		0.06mA / 0.6mA	0.02mA / 0.2mA	Resolution		
Resolution 0.416m2/0.00066mS 0.2775m2/0.01mS 0.0355m2/0.00033mS 0.0416m2/0.00066mS 0.041 Accuracy	1								
Accuracy ± 0.2% OF (SETTING + RANGE) CV Mode Range 0-60.0 V / 0-500 V 0-720 W/0-7200 W 1 Accuracy ± 0.05% OF (SETTING + RANGE) 0-720 W/0-7200 W 0-720 W/0-720 W <td< td=""><td>0.0416 / 2.5 / 150kΩ</td><td></td><td>0.0416 / 2.5 / 150kΩ</td><td>0.0555 / 3.3333 / 200kΩ</td><td>0.2775 / 16.66 / 100kΩ</td><td>0.416 / 25 / 1500kΩ</td><td>5</td><td>CR Mode</td></td<>	0.0416 / 2.5 / 150kΩ		0.0416 / 2.5 / 150kΩ	0.0555 / 3.3333 / 200kΩ	0.2775 / 16.66 / 100kΩ	0.416 / 25 / 1500kΩ	5	CR Mode	
CV Mode Range 0-60.0 V / 0-500 V 0-500 V / 0-500 V 0-720 W / 0-720 V 0-72 Resolution 6mW / 60mW 9mW / 90mW 9mW / 90mW 9mW / 90mW 12mV / 12mW / 12mW / 12mW / 12mW 12r Resolution 6mW / 60mW 9mW / 90mW 9mW / 90mW 12mV / 12mW / 12mW / 12mW 12r Resolution 525.0 V	0.0416mΩ / 0.0066mS	0416mΩ / 0.0066mS 0.0333mΩ / 0.128n	I		0.2775mΩ/0.01mS	0.416mΩ / 0.00066mS	Resolution		
Resolution ImV / 10mV 0.72 CP Mode Range 0-360 W/0-3600 W 0-540 W/0-5400 W 0-540 W/0-5400 W 0-720 W/0-7200 W 0.72 PROTECTION ± 0.5% OF (SETTING + RANGE) E E E PROTECTION 0ver Power (OP) 630 W 1260 W 1890 W 1890 W 20.5% OF SETTING + RANGE) Over Current (OC) 21.0 A 42.0 A 12.6 A 63.0 A 20.01 /0.1 /0.1 /0.1 /0.1 /0.1 /0.1 /0.1			JING + RANGE)	± 0.2% OF (SET			Accuracy		
Accuracy ± 0.05% OF (SETTING + RANGE) CP Mode Range 0-360 W/0-3600 W 0-540 W/0-5400 W 0-720 W/0-7200 W 0-722 Resolution 6mW / 60mW 9mW / 90mW 9mW / 90mW 12mW / 120mW 12r PROTECTION ± 0.5% OF (SETTING + RANGE) ± 0.5% OF (SETTING + RANGE) 12mW / 120mW 12r PROTECTION ± 0.5% OF (SETTING + RANGE) 126 A 63.0 A 0 Over Power (OP) 630 W 1260 W 1890 W 1890 W 0 Over Voltage (OV) 525.0 V 525.0 V 525.0 V 525.0 V 525.0 V Over Temperature (OT) + 85° C / +185° F DYNAMIC OPERATION 0.001 / 0.01 / 0.1 / 0.1 / 1ms 0.001 / 0.01 / 0.1 / 1ms Resolution 1.92mA-120mA/µs 2.88mA-180mA/µs 14.4mA-900mA/µs 0.0192A-12A/µs 0.01 Accuracy ± 1.92mA-120mA/µs 2.88mA-180mA/µs 14.4mA-900mA/µs 0.192A-12A/µs 0.01 Min. Rise Time ± 2045 V/ 0-560 V ± 550 V 500 V 100 W </td <td>0-60.0 V / 0-500 V</td> <td>60.0 V / 0-500 V 0-60.0 V / 0-500</td> <td>0-60.0 V / 0-500 V</td> <td>e Range</td> <td>CV Mode</td>	0-60.0 V / 0-500 V	60.0 V / 0-500 V 0-60.0 V / 0-500	0-60.0 V / 0-500 V	0-60.0 V / 0-500 V	0-60.0 V / 0-500 V	0-60.0 V / 0-500 V	e Range	CV Mode	
CP Mode Range 0-360 W/0-3600 W 0-540 W/0-5400 W 0-720 W/0-7200 W 12rr W/120m W <	1mV / 10mV	1mV / 10mV 1mV / 10mV	1mV / 10mV	1mV / 10mV	1mV / 10mV	1mV / 10mV	Resolution		
Resolution 6mW / 60mW 9mW / 90mW 12mW / 120mW 12r Accuracy ± 0.5% OF (SETTING + RANGE) PROTECTION 0ver Power (OP) 630 W 1260 W 1890 W 1890 W Over Current (OC) 21.0 A 42.0 A 12.6 A 63.0 A Over Current (OC) 21.0 A 42.0 A 12.6 A 63.0 A Over Voltage (OV) 525.0 V 525.0 V 525.0 V 525.0 V 525.0 V Thigh & Tlow 0.050 - 9.999 / 99.9 / 99.99 / 99.9 / 99.99 / 99.9 / 99.9 / 99.9 / 99.99 / 99.99 / 9			TING + RANGE)	± 0.05% OF (SET			Accuracy		
Accuracy ± 0.5% OF (SETTING + RANGE) PROTECTION 0ver Power (OP) 630 W 1260 W 1890 W 1890 W Over Current (OC) 21.0 A 42.0 A 12.6 A 63.0 A 0.000 W Over Voltage (OV) 525.0 V 525.0 V 525.0 V 525.0 V 525.0 V Over Temperature (OT) +85° C / +185° F DYNAMIC OPERATION 0.001 / 0.01 / 0.1 / 1ms Thigh & Tiow 0.050 - 9.999 / 99.0 / 01.01 / 0.1 / 1ms METERING 19.2mA-120mA/µs 2.88mA-180mA/µs 144mA-90mA/µs 0.012A/µs 0.1 METERING 10.0 mV / 10 mV ± 5% OF SETTINS ± 10 µs 10 mV / 10 mV 20.025% OF (READING + RANGE) Current Range 0 - 2.4 A / 0 - 24 A<	0-720 W/0-7200 W	720 W/0-7200 W 0-900 W/0-9000	0-720 W/0-7200 W	0-540 W/0-5400 W	0-540 W/0-5400 W	0-360 W/0-3600 W	e Range	CP Mode	
PROTECTION Over Power (OP) 630 W 1260 W 1890 W 1890 W Over Qurrent (OC) 21.0 A 42.0 A 12.6 A 63.0 A 0 Over Voltage (OV) 525.0 V	12mW / 120mW	2mW / 120mW 15mW / 150m ¹	12mW / 120mW	9mW / 90mW	9mW / 90mW	6mW / 60mW	Resolution		
Over Power (OP) 630 W 1260 W 1890 W 1890 W Over Contrant (OC) 21.0 A 42.0 A 12.6 A 63.0 A 0 Over Voltage (OV) 525.0 V 525.0 V 525.0 V 525.0 V 525.0 V 525.0 V Over Voltage (OV) 525.0 V 525.0 V 525.0 V 525.0 V 525.0 V Over Contage (OV) 525.0 V 525.0 V 525.0 V 525.0 V 525.0 V PNAMIC OPERATION			TING + RANGE)	± 0.5% OF (SET			Accuracy		
Over Current (OC) 21.0 A 42.0 A 12.6 A 63.0 A Over Voltage (OV) 525.0 V 525.0 V 525.0 V 525.0 V Over Temperature (OT) -+85° C / +185° F - DYNAMIC OPERATION 0.001 / 0.0 / / 0.1 / 0.1 / 1ms - Resolution 0.001 / 0.0 / 0.1 / 0.1 / 0.1 / 1ms - Accuracy 0.001 / 0.0 / 0.1 / 0.1 / 0.1 / 1ms - 0.001 / 0.0 / 0.1 / 0.1 / 0.1 / 1ms Accuracy 0.001 / 0.0 / 0.1 / 0.1 / 0.1 / 1ms - 0.001 / 0.0 / 0.0 / 0.1 / 0.1 / 0.1 / 1ms Accuracy 0.001 / 0.0								PROTECTION	
Over Voltage (OV) 525.0 V 525.0 V 525.0 V 525.0 V Over Temperature (OT) +85° C / +185° F DYNAMIC OPERATION 0.050 - 9.999 / 99.9 99.9 99.9 99.9 99.9 99.9	2520 W	2520 W 3780 W	1890 W	1890 W	1260 W	630 W	er Power (OP)	Over	
Over Temperature (OT) +85° C / +185° F DYNAMIC OPERATION 0.050 - 9.999 / 99.99 / 99.99 / 999.9 / 999.9 / 999.9 / 999.9 / 999.99 / 999.9 / 90.9 / 0.01 / 0.11 / 1ms Accuracy ± 0.100 / 0.00 / 0.20	84.0 A	84.0 A 126.0 A	63.0 A	12.6 A	42.0 A	21.0 A	Current (OC)	Over C	
DYNAMIC OPERATION 0.050 - 9.999 / 99.99 / 999.9 / 9999ms (20 kHz) Resolution 0.001 / 0.01 / 0.1 / 1ms Accuracy 1µs / 10µs / 10µs / 10µs / 10µs / 10µs / 10µs / 0.01 Slew Rate 1.92mA-120mA/µs 2.88mA-180mA/µs 14.4mA-9000mA/µs 0.0192A-1.2A/µs 0.01 Accuracy 1.92mA-120mA/µs 2.88mA-180mA/µs 144mA-9000mA/µs 0.0192A-12A/µs 0.01 Accuracy ± 5% OF SETTING ± 10 µs 0.02ms / 12A/µs 0.1 Min. Rise Time 20µs Typical 20µs Typical METERING 0.02mA / 0.2mA 0.36A / 0 - 36A 0 - 18.0 A / 0 - 180 A 0 - 24 A / 0 - 24 A Current Range 0 - 2.4 A / 0 - 24 A 0 - 3.6 A / 0 - 36A 0 - 18.0 A / 0 - 180 A 0 - 24 A / 0 - 48 A 0 - 24 Current Range 0 - 2.4 A / 0 - 24 A 0 - 3.6 A / 0 - 36 A 0 - 18.0 A / 0 - 180 A 0 - 24 A / 0 - 24 A Accuracy ± 0.025% OF (READING + RANGE) ± 0.1% OF (READING + RANGE) 0 - 20 W / 0 - 720 W 0 - 22 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720	525.0 V	525.0 V 525.0 V	525.0 V	525.0 V	525.0 V	525.0 V	Voltage (OV)	Over V	
T high & T low 0.050 - 9.999 / 99.99 / 999.9 / 999.99 / 9999ms (20 kHz) Resolution 0.001 / 0.1 / 0.1 / 1ms Accuracy 1µs / 10µs / 100µs / 1ms + 50ppm Slew Rate 1.92mA-120mA/µs 2.88mA-180mA/µs 1.44mA-900mA/µs 0.01 / 0.1 / 0.1 / 1ms Accuracy 2.88mA-180mA/µs 1.44mA-9000mA/µs 0.012A-12A/µs 0.01 Accuracy 2.88mA-1800mA/µs 1.44mA-9000mA/µs 0.01 / 0.1 / 0.1 METERING 20µs Typical METERING 0 - 60.0 V / 0 - 500 V Resolution 0.2.4 A / 0 - 24 A 0 - 3.6 A / 0 - 36 A 0 - 10.0 mV / 10 mV Accuracy ± 0.025% OF (READING + RANGE) Current Range 0 - 2.4 A / 0 - 24 A 0 - 3.6 A / 0 - 36 A 0 - 18.0 A / 0 - 48 A 0 - 2.4 A / 0 - 24 A 0 - 3.6 A / 0 - 36 A 0 - 18.0 A / 0 - 48 A 0 - 2.4 A / 0 - 24 A 0 - 3.6 A / 0 - 36 A 0 - 18.0 A / 0 - 180 A / 0 - 48 A 0 - 2.4 A / 0 - 24 A <th cols<="" td=""><td></td><td>`</td><td>+185° F</td><td>+85° C /</td><td></td><td></td><td>perature (OT)</td><td>Over Tempe</td></th>	<td></td> <td>`</td> <td>+185° F</td> <td>+85° C /</td> <td></td> <td></td> <td>perature (OT)</td> <td>Over Tempe</td>		`	+185° F	+85° C /			perature (OT)	Over Tempe
Resolution 0.001 / 0.01 / 0.1 / 1 ms Accuracy 1µs / 10µs / 10µs / 10µs / 10µs / 1ms + 50ppm Instruction 192mA-120mA/µs 2.88mA-180mA/µs 144mA-900mA/µs 0.0192A-12A/µs 0.01 Accuracy ± 5% OF SETTING ± 10 µs 0.0192A-12A/µs 0.01 Accuracy ± 5% OF SETTING ± 10 µs 0.01 0.01 0.01 Min. Rise Time 20µs Typical 0.192A-12A/µs 0.1 METERING 0 - 66.0 V / 0 - 500 V 0 - 60.0 V / 0 - 500 V 0 - 60.0 V / 0 - 500 V Resolution 0 - 2.4 A / 0 - 24 A 0 - 3.6 A / 0 - 36 A 0 - 18.0 A / 0 - 180 A 0 - 4.8 A / 0 - 48 A 0 - 24 Current Range 0 - 2.4 A / 0 - 24 A 0 - 3.6 A / 0 - 36 A 0 - 18.0 A / 0 - 180 A 0 - 4.8 A / 0 - 48 A 0 - 24 Current Range 0 - 360 W / 0 - 3600 W 0.06mA / 0.6mA 0.3mA / 3mA 0 4.4mA / 4mA 0.720 W / 0 - 7200 W 0 - 720 W </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>ION</td> <td>DYNAMIC OPERATIO</td>							ION	DYNAMIC OPERATIO	
Accuracy Image Imag	0.050 - 9.999 / 99.99 / 999.9 / 9999ms (20 kHz)						high & T low	Th	
Slew Rate 1.92mA-120mA/μs 2.88mA-180mA/μs 14.4mA-900mA/μs 0.0192A-1.2A/μs 0.01 Accuracy ± 5% OF SETTING ± 10 μs 0.192A-12A/μs 0.1 Min. Rise Time ± 5% OF SETTING ± 10 μs 0.192A-12A/μs 0.1 METERING 20μs Typical 144mA-9000mA/μs 144mA-9000mA/μs 0.192A-12A/μs 0.1 METERING 20μs Typical 144mA-9000mA/μs 0.192A-12A/μs 0.1 METERING 0.0 + 0.0 V / 0 - 500 V ± 0.00 V / 0 - 500 V 10 mV / 10 mV Accuracy ± 0.204% OF (READING + RANGE) 0 - 4.8 A / 0 - 48 A 0 - 24 Current Range 0 - 2.4 A / 0 - 24 A 0 - 3.6 A / 0 - 36 A 0 - 18.0 A / 0 - 180 A 0 - 4.8 A / 0 - 48 A 0 - 24 Resolution 0.02mA / 0.2mA 0.06mA / 0.6mA 0.3mA / 3mA 0.4mA / 4mA 0. Power Range 0 - 36 OW / 0 - 5400 W 0 - 540 W / 0 - 5400 W 0 - 720 W / 0 - 7200 W 0 - 720 Power Range 0.360 W 0.90 W 0.09 W 0.09 W 0.12 W 0 - 720 SHORT CIRCUIT			/ 0.1 / 1ms	0.001 / 0.01			Resolution		
Slew Rate 19.2mA-1200mA/µs 28.8mA-1800mA/µs 144mA-9000mA/µs 0.192A-12A/µs 0.1 Accuracy ± 5% OF SETTING ± 10 µs 0.192A-12A/µs 0.1 Min. Rise Time 20µs Typical 20µs Typical METERING 0.60.0 V / 0 - 500 V </td <td colspan="6"></td> <td>Accuracy</td> <td></td>							Accuracy		
19.2mA-1200mA/μs 28.8mA-1800mA/μs 144mA-9000mA/μs 0.192A-12A/μs 0.1 Accuracy ± 5% OF SETTING ± 10 μs 0.1 Min. Rise Time 20μs Typical 20μs Typical METERING 0.60.0 V / 0 - 500 V 0.60.0 V / 0 - 500 V Resolution 1.0 mV / 10 mV 0.700 V/ 0 mV 0.700 V/ 0 mV Accuracy ± 0.025% OF (READING + RANGE) 0.24 A / 0 - 24 A 0 - 3.6 A / 0 - 36 A 0 - 18.0 A / 0 - 180 A 0 - 4.8 A / 0 - 48 A 0 - 24 Current Range 0 - 2.4 A / 0 - 24 A 0.06mA / 0.6mA 0.3mA / 3mA 0.4mA / 4mA 0.0 Current Range 0 - 360 W / 0 - 360 W 0.540 W / 0 - 5400 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W /	0.0192A-1.2A/µs	.0192A-1.2A/µs 0.024A-1.5A/µ	0.0192A-1.2A/µs	14.4mA-900mA/µs	2.88mA-180mA/µs	1.92mA-120mA/µs			
Min. Rise Time 20μs Typical METERING METERING Voltage Range 0-60.0 V / 0-500 V Resolution 1.0 mV / 10 mV Accuracy ± 0.025% OF (RE-DING + RANGE) 0-4.8 A / 0-48 A 0-24 Current Range 0-2.4 A / 0-24 A 0-3.6 A / 0-36 A 0-18.0 A / 0-180 A 0-4.8 A / 0-48 A 0-24 Current Range 0-2.4 A / 0-24 A 0.06mA / 0.6mA 0.3mA / 3mA 0.4mA / 4mA 0.2 Current Range 0-360 W / 0.3600 W 0.540 W / 0-5400 W 0.720 W / 0-7200 W 0.720 Power Range 0.360 W / 0.3600 W 0.09 W 0.09 W 0.12 W 0 SHORT CIRCUIT 4ccuracy ± ± 0.125% OF (RE-DING + RANGE) 5 5 SHORT CIRCUIT 24 A 36 A 180 A 48 A 6 Analog Monitor Out 24 A 36 A 180 A 48 A 6 Analog Input (CC mode) 0 - 10V out F.S. / 1KC Zout, Non-isolated 6 6 6 6 Power & Coolin	0.192A-12A/µs	0.192A-12A/µs 0.24A-15A/µs	0.192A-12A/µs	144mA-9000mA/µs	28.8mA-1800mA/µs	19.2mA-1200mA/µs	Slew Rate		
METERING 0			ΓING ± 10 μs	± 5% OF SET			Accuracy		
Voltage Range 0 - 60.0 V / 0 - 500 V Resolution 1.0 mV / 10 mV Accuracy ± 0.025% OF (READING + RANGE) Current Range 0 - 2.4 A / 0 - 24 A 0 - 3.6 A / 0 - 36 A 0 - 18.0 A / 0 - 180 A 0 - 4.8 A / 0 - 48 A 0 - 2.4 RANGE) Current Range 0 - 2.4 A / 0 - 24 A 0 - 3.6 A / 0 - 36 A 0 - 18.0 A / 0 - 180 A 0 - 4.8 A / 0 - 48 A 0 - 24 Resolution 0.02mA / 0.2mA 0.06mA / 0.6mA 0.3mA / 3mA 0.4mA / 4mA 0. Accuracy ± 0.1% OF (READING + RANGE) ± 0.1% OF (READING + RANGE) 0 - 720 W / 0 - 720 W 0 - 720 W </td <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td>lin. Rise Time</td> <td>Mi</td>			-				lin. Rise Time	Mi	
Resolution 1.0 mV / 10 mV Accuracy ± 0.025% OF (READING + RANGE) Current Range 0 - 2.4 A / 0 - 24 A 0 - 3.6 A / 0 - 36 A 0 - 18.0 A / 0 - 180 A 0 - 4.8 A / 0 - 48 A 0 - 2.4 Resolution 0.02mA / 0.2mA 0.06mA / 0.6mA 0.3mA / 3mA 0.4mA / 4mA 0.2 Resolution 0.02mA / 0.2mA 0.06mA / 0.6mA 0.3mA / 3mA 0.4mA / 4mA 0.2 Power Range 0 -360 W / 0 -3600 W 0.540 W / 0 -5400 W 0.720 W / 0 -7200 W 0.720 W / 0 -720 W 0 -720 W / 0 -720 W				· · ·				METERING	
Resolution 1.0 mV / 10 mV Accuracy ± 0.025% OF (READING + RANGE) Current Range 0 - 2.4 A / 0 - 24 A 0 - 3.6 A / 0 - 36 A 0 - 18.0 A / 0 - 180 A 0 - 4.8 A / 0 - 48 A 0 - 2.4 Resolution 0.02mA / 0.2mA 0.06mA / 0.6mA 0.3mA / 3mA 0.4mA / 4mA 0.2 Resolution 0.02mA / 0.2mA 0.06mA / 0.6mA 0.3mA / 3mA 0.4mA / 4mA 0.2 Power Range 0 - 360 W / 0 - 3600 W 0.540 W / 0 - 5400 W 0 - 540 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 7			' 0 - 500 V	0 - 60.0 V			Range	Voltage	
Current Range 0 - 2.4 A / 0 - 24 A 0 - 3.6 A / 0 - 36 A 0 - 18.0 A / 0 - 180 A 0 - 4.8 A / 0 - 48 A 0 - 24 Resolution 0.02mA / 0.2mA 0.06mA / 0.6mA 0.3mA / 3mA 0.4mA / 4mA 0. Accuracy ± 0.1% OF (READING + RANGE) ± 0.1% OF (READING + RANGE) 0.720 W / 0.7200 W 0.720 W / 0.720 W 0.720 W									
Current Range 0 - 2.4 A / 0 - 24 A 0 - 3.6 A / 0 - 36 A 0 - 18.0 A / 0 - 180 A 0 - 4.8 A / 0 - 48 A 0 - 24 Resolution 0.02mA / 0.2mA 0.06mA / 0.6mA 0.3mA / 3mA 0.4mA / 4mA 0. Accuracy ± 0.1% OF (READING + RANGE) ± 0.1% OF (READING + RANGE) 0 - 720 W / 0 - 7200 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0 - 720 W / 0 - 720 W 0	± 0.025% OF (READING + RANGE)					Accuracy			
Resolution 0.02mA / 0.2mA 0.06mA / 0.6mA 0.3mA / 3mA 0.4mA / 4mA 0. Accuracy ± 0.1% OF (READING + RANGE) ± 0.1% OF (READING + RANGE) 0.720 W / 0.720 W 0.720 W Power Range 0.360 W / 0.3600 W 0.540 W / 0.5400 W 0.540 W / 0.5400 W 0.720 W / 0.7200 W 0.720 W Resolution 0.06 W 0.09 W 0.09 W 0.12 W 0.720 W / 0.7200 W 0.720 W SHORT CIRCUIT ± 0.125% OF (READING + RANGE) ± 0.125% OF (READING + RANGE) SHORT CIRCUIT ± 0.125% OF (READING + RANGE) V Analog Monitor Out 24 A 36 A 180 A 48 A 0 Analog Input (CC mode) 0 - 10 V out F.S. / 1KΩ Zout, Non-isolated 0 - 10V out F.S. / 1KΩ Zout, Non-isolated 0 Analog Input (CC mode) 0 - 10V out F.S. / 1KΩ Zout, Non-isolated 0 - 10V in for F.S. current @ 10V AC INPUT AND PHYSICAL SPECIFICATIONS AC INPUT AND PHYSICAL SPECIFICATIONS 115/230Vac ± 10%, 50/60 Hz, Variable Speed Fan Cooled 400 W max. 4 Power Consumption 200 W max. 300 W max. 300 W max. 400 W max. 4	0 - 24.0 A / 0 - 240 A	24.0 A / 0 - 240 A 0 - 30.0 A / 0 - 30	0 - 4.8 A / 0 - 48 A	0 - 18.0 A / 0 - 180 A	0 - 3.6 A / 0 - 36 A	0 - 2.4 A / 0 - 24 A		Current	
Power Range 0-360 W / 0-3600 W 0-540 W / 0-5400 W 0-540 W / 0-5400 W 0-720 W / 0-720 W 0-720 W Resolution 0.06 W 0.09 W 0.09 W 0.12 W 0 Accuracy ± 0.125% OF (READING + RANGE) 5 5 5 SHORT CIRCUIT 24 A 36 A 180 A 48 A 0 Analog Monitor Out 24 A 36 A 180 A 48 A 0 Analog Input (CC mode) 0 - 10 V out F.S. / 1KΩ Zout, Non-isolated 0	0.4mA / 4mA								
Power Range 0-360 W / 0-3600 W 0-540 W / 0-5400 W 0-720 W / 0-7200 W 0-720 W Resolution 0.06 W 0.09 W 0.09 W 0.09 W 0.12 W 0 Accuracy ± 0.125% OF (READING + RANGE) ± 0.12 W 0<									
Resolution 0.06 W 0.09 W 0.09 W 0.12 W Accuracy ± 0.125% OF (READING + RANGE) SHORT CIRCUIT ± 0.125% OF (READING + RANGE) Max. Short Current 24 A 36 A 180 A 48 A ANALOG I/O O - 10 V out F.S. / 1KΩ Zout, Non-isolated O - 10V out F.S. / 1KΩ Zout, Non-isolated O - 10V out F.S. / 1KΩ Zout, Non-isolated Analog Input (CC mode) O - 10V out F.S. / 1KΩ Zout, Non-isolated O - 10V out F.S. / 1KΩ Zout, Non-isolated O - 10V out F.S. / 1KΩ Zout, Non-isolated AC INPUT AND PHYSICAL SPECIFICATIONS O - 10V out for F.S. current @ 10V AC INPUT AND PHYSICAL SPECIFICATIONS Power Consumption 200 W max. 300 W max. 300 W max. 400 W max. 4 Dimensions (H x W x D) 839 x 600 x 600 mm / 33.0" x 23.6" x 23.6" 1601x600x600 mm / 41.8 4	0-720 W / 0-7200 W	720 W / 0-7200 W 0-900 W / 0-900	,		0-540 W / 0-5400 W	0-360 W / 0-3600 W	,	Power	
Accuracy ± 0.125% OF (READING + RANGE) SHORT CIRCUIT ± 0.125% OF (READING + RANGE) Max. Short Current 24 A 36 A 180 A 48 A ANALOG I/O 0 - 10 V out F.S. / 1KΩ Zout, Non-isolated 0 0 Analog Monitor Out 0 - 10 V out F.S. / 1KΩ Zout, Non-isolated 0 0 Analog Input (CC mode) 0 - 10V out F.S. / 1KΩ Zout, Non-isolated 0 10V AC INPUT AND PHYSICAL SPECIFICATIONS 115/230Vac ± 10%, 50/60 Hz, Variable Speed Fan Coled Coled Power & Cooling 200 W max. 300 W max. 300 W max. 400 W max. 4 Dimensions (H x W x D) 839 x 600 x 600 mm / 33.0" x 23.6" 1601x600x600 mm / 41.8 4	0.12 W						-		
SHORT CIRCUITMax. Short Current24 A36 A180 A48 AANALOG I/O0 - 10 V out F.S. / 1K Ω Zout, Non-isolatedAnalog Monitor Out0 - 10 V out F.S. / 1K Ω Zout, Non-isolatedAnalog Input (CC mode)0 - 10 V out F.S. / 1K Ω Zout, Non-isolatedAnalog Input (CC mode)0 - 10V out F.S. / 1K Ω Zout, Non-isolatedAC INPUT AND PHYSICAL SPECIFICATIONS115/230Vac ± 10%, 50/60 Hz, Variable Speed Fan CooledPower & Cooling115/230Vac ± 10%, 50/60 Hz, Variable Speed Fan CooledPower Consumption200 W max.300 W max.400 W max.4Dimensions (H x W x D)839 x 600 x 600 mm / 33.0" x 23.6" x 23.6"1601x600x600 mm / 41.8									
Max. Short Current 24 A 36 A 180 A 48 A ANALOG I/O							/ lecal acy	SHORT CIRCUIT	
ANALOG I/O 0 - 10 V out F.S. / 1KΩ Zout, Non-isolated Analog Monitor Out 0 - 10 V out F.S. / 1KΩ Zout, Non-isolated Analog Input (CC mode) 0 - 10V in for F.S. current @ 10V AC INPUT AND PHYSICAL SPECIFICATIONS 115/230Vac ± 10%, 50/60 Hz, Variable Speed Fan Cooled Power & Cooling 200 W max. 300 W max. 300 W max. 400 W max. 4 Dimensions (H x W x D) 839 x 600 x 600 mm / 33.0" x 23.6" x 23.6" 1601x600x600 mm / 41.8	240 A	240 A 300 A	48 A	180 A	36 A	24 A	hort Current		
Analog Monitor Out 0 - 10 V out F.S. / 1KΩ Zout, Non-isolated Analog Input (CC mode) 0 - 10V in for F.S. current @ 10V AC INPUT AND PHYSICAL SPECIFICATIONS 115/230Vac ± 10%, 50/60 Hz, Variable Speed Fan Cooled Power & Cooling 200 W max. 300 W max. 300 W max. 400 W max. 4 Dimensions (H x W x D) 839 x 600 x 600 mm / 33.0" x 23.6" x 23.6" 1601x600x600 mm / 41.8	21071			100 / 1	5071	217			
Analog Input (CC mode) 0 - 10V in for F.S. current @ 10V AC INPUT AND PHYSICAL SPECIFICATIONS 115/230Vac ± 10%, 50/60 Hz, Variable Speed Fan Cooled Power & Cooling 200 W max. 300 W max. 300 W max. 400 W max. 4 Dimensions (H x W x D) 839 x 600 x 600 mm / 33.0" x 23.6" x 23.6" 1601x600x600 mm / 41.8			Zout Non-isolated	0 - 10 V out ES / 1KC			Monitor Out		
AC INPUT AND PHYSICAL SPECIFICATIONS Power & Cooling 115/230Vac ± 10%, 50/60 Hz, Variable Speed Fan Cooled Power Consumption 200 W max. 300 W max. 300 W max. 400 W max. 4 Dimensions (H x W x D) 839 x 600 x 600 mm / 33.0" x 23.6" x 23.6" 1601x600x600 mm / 41.8									
Power & Cooling 115/230Vac ± 10%, 50/60 Hz, Variable Speed Fan Cooled Power Consumption 200 W max. 300 W max. 300 W max. 400 W max. 4 Dimensions (H x W x D) 839 x 600 x 600 mm / 33.0" x 23.6" x 23.6" 1601x600x600 mm / 41.8			. curient @ 10v	0 - 100 11101 F.3					
Power Consumption 200 W max. 300 W max. 300 W max. 400 W max. 4 Dimensions (H x W x D) 839 x 600 x 600 mm / 33.0" x 23.6" x 23.6" 1601x600x600 mm / 41.8	Coolod	ad	Variable Speed Fan G		115/2				
Dimensions (H x W x D) 839 x 600 x 600 mm / 33.0" x 23.6" x 23.6" 1601x600x600 mm / 41.8						200 W/			
Dimensions (H x W x D)	400 W max.						onsumption	Power Co	
Weight (Net) 81.2kg / 179.0 lbs 104.8kg / 231.0 lbs 104.8kg / 231.0 lbs 161.4kg / 355.8 lbs 161.4kg	T	50.5″x23.6″x23			839 x 600 x 600 mm / 33.0" x 23.6" x 23.6"				
	161.4kg / 355.8 lbs	1.4kg / 355.8 lbs 185.0kg / 407.9	•	5	104.8kg / 231.0 lbs	81.2kg / 179.0 lbs	Weight (Net)	V	
Operating Range 0 - 40° C / 32 - 104° F	0 - 40° C / 32 - 104° F					rating Range	Opera		

5V SERIES DC LOADS

SPECIFICATIONS - 5V SERIES DC LOADS

MODEL	5V090-06	5V108-07	5V108-36	5V126-42	5V144-50
	57090-00	50108-07	54108-50	57120-42	57144-50
OPERATING RANGES					
Power Ranges	0-900 W / 0-9000 W	0 - 1080 W / 0-10800W	0 - 1080 W / 0-10800W	0 - 1260 W / 0-12600W	0 - 1440 W / 0-14400W
Current Ranges	0 - 6.0 A / 0 - 60 A	0 - 7.2 A / 0 - 72 A	0 - 36 A / 0 - 360 A	0 - 42 A / 0 - 420 A	0 - 50 A /0 - 500 A
Voltage Range	0-60.0 V / 0-500 V	0-60.0 V / 0-500 V	0-60.0 V / 0-500 V	0-60.0 V / 0-500 V	0-60.0 V / 0-500 V
Minimum Voltage	6.0 V @ 60 A	6.0 V @ 72 A	4.0 V @ 360 A	4.0 V @ 420 A	4.0 V @ 500 A
OPERATING MODES		1	1		1
CC Mode Range	0 - 6.0 A / 0 - 60 A	0 - 7.2 A / 0 - 72 A	0 - 36 A / 0 - 360 A	0 - 42 A / 0 - 420 A	0 - 50 A /0 - 500 A
Resolution	0.1mA / 1mA	0.12mA / 1.2mA	0.6mA / 6mA	0.7mA / 7mA	0.84mA / 8.4mA
Accuracy			0.1% OF (SETTING + RANG	,	1
CR Mode Range	0.1666 / 10 / 600kΩ	0.8333 / 8.333 / 500kΩ	0.0277 / 1.6666 / 100kΩ	0.0238 / 1.4285 / 85.71kΩ	0.02 / 1.2 / 72kΩ
Resolution	0.1666mΩ / 0.0016mS	0.138mΩ / 0.0166mS	0.0277mΩ / 0.00033mS	0.0238mΩ / 0.00033mS	0.02mΩ / 0.0138mS
Accuracy		±	0.2% OF (SETTING + RANC	iE)	
CV Mode Range	0-60.0 V / 0-500 V	0-60.0 V / 0-500 V	0-60.0 V / 0-500 V	0-60.0 V / 0-500 V	0-60.0 V / 0-500 V
Resolution	1mV / 10mV	1mV / 10mV	1mV / 10mV	1mV / 10mV	1mV / 10mV
Accuracy		± (0.05% OF (SETTING + RAN	GE)	
CP Mode Range	0-900 W / 0-9000 W	0 - 1080 W / 0-10800W	0 - 1080 W / 0-10800W	0 - 1260 W / 0-12600W	0 - 1440 W / 0-14400W
Resolution	15mW / 150mW	18mW / 180mW	18mW / 180mW	21mW / 210mW	24mW / 240mW
Accuracy		±	0.5% OF (SETTING + RANG	iΕ)	
PROTECTION					
Over Power (OP)	9450 W	11340 W	11340 W	13230 W	15120 W
Over Current (OC)	63.0 A	75.6 A	378.0 A	441.0 A	525.0 A
Over Voltage (OV)	525.0 V	525.0 V	525.0 V	525.0 V	525.0 V
Over Temperature (OT)			+85° C / +185° F	1	
DYNAMIC OPERATION					
T high & T low		0.050 - 9.9	999 / 99.99 / 999.9 / 9999m	ns (20 kHz)	
Resolution			0.001 / 0.01 / 0.1 / 1ms	, , , , , , , , , , , , , , , , , , ,	
Accuracy		1µs	/ 10µs / 100µs / 1ms + 50µ	ppm	
	4.8mA-300mA/µs	5.76mA-360mA/µs	0.0288A-1.8A/µs	0.0336A-2.1A/µs	0.04A-2.5A/µs
Slew Rate	48mA-3000mA/µs	57.6mA-3600mA/µs	0.288A-18A/µs	0.336A-21A/µs	0.4A-25A/µs
Accuracy	• •		± 5% OF SETTING ± 10 μs	•	
Min. Rise Time			20µs Typical		
METERING				<u>.</u>	
Voltage Range			0 - 60.0 V / 0 - 500 V		
Resolution			1.0 mV / 10 mV		
Accuracy		+ 0	.025% OF (READING + RAN	(GE)	
Current Range	0 - 6.0 A / 0 - 60 A	0 - 7.2 A / 0 - 72 A	0 - 36 A / 0 - 360 A	0 - 42 A / 0 - 420 A	0 - 50 A /0 - 500 A
Resolution	0.1mA / 1mA	0.12mA / 1.2mA	0.6mA / 6mA	0.7mA / 7mA	0.84mA / 8.4mA
Accuracy			0.1% OF (READING + RAN		0.04111A / 0.4111A
Power Range	0-900 W / 0-9000 W	0 - 1080 W / 0-10800W	0 - 1080 W / 0-10800W	0 - 1260 W / 0-12600W	0 - 1440 W / 0-14400W
Resolution	0.15W	0.18W	0.18W	0.21W	0.24W
	0.15W		125% OF (READING + RAN		0.2400
Accuracy SHORT CIRCUIT		± 0.	125% OF (READING + RAI		
	(0 A	72.4	260.4	420.4	504.4
Max. Short Current	60 A	72 A	360 A	420 A	504 A
ANALOG I/O		0.10)		- late d	
Analog Monitor Out	0 - 10 V out F.S. / 1KΩ Zout, Non-isolated				
Analog Input (CC mode)		0	- 10V in for F.S. current @ 1	UV	
AC INPUT AND PHYSICAL SPECIF	ICATIONS	115/2201/5 - 1		and Fam Caralad	
Power & Cooling Power Consumption	500 W max.	600 W max.	10%, 50/60 Hz, Variable Sp 600 W max.	700 W max.	800 W max.
•		600 x 600 mm / 50.5" x 23.6	ļ	1506 x 600 x 600 mm	1728 x 600 x 600 mm
Dimensions (H x W x D)					68" x 23.6" x 23.6"
Weight (Net)	185.0kg / 407.9 lbs				161.4kg / 355.8 lbs
Operating Range			0 - 40° C / 32 - 104° F		
EMC & Safety	CE Mark				

ORDERING INFORMATION:

Line 1: Specify DC Load Model: 5Vxx-xx Chassis or 5Vxxx-xx Cabinet System

Line 2: Specify Remote Control Option: None, Opt GPIB, Opt RS232. Opt USB or Opt LAN

Line 3: Specify Load Cable Option. (See Table)

Available Load Cable Options:

Option P/N	Description	MOQ
OPT-C1KA1	Load Cable, 1000A rated, 1 meter	2
OPT-C1KA2	Load Cable, 1000A rated, 2 meter	2
OPT-C1KA3	Load Cable, 1000A rated, 3 meter	2
OPT-C1KA4	Load Cable, 1000A rated, 4 meter	2
OPT-C1KA5	Load Cable, 1000A rated, 5 meter	2

AC Input Voltage

Please specify AC Line input voltage at the ship-to location on the order as either 120Vac or 230Vac.

Included in Mainframe Ship kit:

- User Manuals in PDF Format on CD ROM.
- AC Line Cord.
- Rack Handles (detached).
- Analog Input BNC Cable (1 meter/39.4").
- Voltage Sense alligator clip lead, Red (1 meter, 39.4")
- Voltage Sense alligator clip lead, Black (1 meter, 39.4")
- LAN/USB Driver CD ROM (with Opt USB or Opt LAN).
- Certificate of Conformance.



Service and Support

Adaptive Power Systems' customer support is second to none. Our Customer Support Program provides the training, repair, calibration, and technical support services that our customers value. So, in addition to receiving the right test equipment, our customers can also count on excellent support before, during and after the sale. With company owned support and service centers around the world, support is never far away.

Complete calibration and repair services are offered at our US, European and Chinese manufacturing facilities (see contact info below). Calibrations are to original factory specifications and are traceable to NIST (National Institute of Standards and Technology).

NORTH AMERICA

Adaptive Power Systems Irvine, USA Phone: +1(949) 752-8400 Fax: +1 (949) 756-0838 Email: support@adaptivepower.com EUROPE Caltest Instruments Ltd. Guildford, United Kingdom Phone: +44(0)1483 302 700 Fax: +44(0)1483 300 562 Email: support@adaptivepower.com

CHINA

PPST Shanghai Co. Ltd. Shanghai, China Phone: +86-21-6763-9223 Fax: +86-21-5763-8240 Email: support@adaptivepower.com



Proudly Represented by:



ADAPTIVE POWER SYSTEMS 17711 Mitchell North Irvine, CA 92614 United States Toll Free: 1.866.517-8400 Tel: +1.949.752-8400 Fax: +1.949.756-0838