

LAB-SMP Compact 1U Switch Mode Power Supply

Description

The LAB-SMP series of laboratory DC Sources provides power outputs up to 2.4kW. A wide array of voltage and current ranges are available at each power rating. Constant voltage, power, resistance and current operating modes are provided as standard. The LAB-SMP also allows the voltage and current outputs to be preset and read before applying them to the load. To enable remote control a number of optional analogue and/or computer interfaces can be specified. The optional SD card can further provide a low cost method of recording and implementing complex waveforms. These PSUs are found in a wide variety of fields from automotive applications and general lab work to battery charging and automatic test systems. The PV mode allows for basic simulation of a solar cell array via adjustable I and V values. Your chosen unit is built with a systems interface for master/slave operation. This enables setting values to be equally shared amongst units that are configured in parallel. A soft interlock circuit allows users to connect the unit to an external safety device such as an emergency stop. This feature requires a high signal (+10V) to be present between two pins, otherwise the output will be shutdown. The LAB-SMP design is exceptionally flexible and allows CP Power to offer variety of solutions to your particular application requirements. Please contact our office if you require any changes from the standard specification or any specific modifications.



- Analogue and computer interfaces
- CV, CC, CP & CR operating modes
- Both current and voltage presets
- User programmable waveforms
- Extremely compact 1U design
- Up to 94% Efficiency

Selection Table

Part Number	Output Power	Output Voltage	Output Current	Weight (kg)	Dimensions (Width x Height x Depth)
LAB-SMP 115	1.2kW	0 - 15V	0 - 80A	7kg	19" x 1U x 440mm
LAB-SMP 135	1.2kW	0 - 35V	0 - 35A	7kg	19" x 1U x 440mm
LAB-SMP 145	1.2kW	0 - 45V	0 - 30A	7kg	19" x 1U x 440mm
LAB-SMP 170	1.2kW	0 - 70V	0 - 20A	7kg	19" x 1U x 440mm
LAB-SMP 1150	1.2kW	0 - 150V	0 - 8A	7kg	19" x 1U x 440mm
LAB-SMP 1300	1.2kW	0 - 300V	0 - 4A	7kg	19" x 1U x 440mm
LAB-SMP 1600	1.2kW	0 - 600V	0 - 2A	7kg	19" x 1U x 440mm
LAB-SMP 11200	1.2kW	0 - 1200V	0 - 1A	7kg	19" x 1U x 440mm
LAB-SMP 235	2.4kW	0 - 35V	0 - 68A	7.6kg	19" x 1U x 440mm
LAB-SMP 245	2.4kW	0 - 45V	0 - 53A	7.6kg	19" x 1U x 440mm
LAB-SMP 270	2.4kW	0 - 70V	0 - 34A	7.6kg	19" x 1U x 440mm
LAB-SMP 2150	2.4kW	0 - 150V	0 - 16A	7.6kg	19" x 1U x 440mm
LAB-SMP 2300	2.4kW	0 - 300V	0 - 8A	7.6kg	19" x 1U x 440mm
LAB-SMP 2600	2.4kW	0 - 600V	0 - 4A	7.6kg	19" x 1U x 440mm



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Technical Data

Input Voltage Range (1.2kW).....	90 - 264V _{AC} /PFC
Input Voltage Range (2.4kW).....	230V _{AC} ± 10% /PFC
Input Frequency.....	47 - 63Hz
Static Voltage Regulation.....	±0.05% + 2mV
Static Current Regulation.....	±0.1% + 2mA
Dynamic Load Regulation.....	<1 - 3ms (typically)
Over Voltage Protection.....	0 to 120% V _{MAX}
Ripple.....	<0.2% (typical)
Stability.....	±0.05%
Accuracy (V _{OUT}).....	±0.2% of full scale
Accuracy (I _{OUT}).....	±0.5% of full scale
Isolation (Between Input and Output).....	3000VDC
Protection.....	OC / OV / OT / OP
Line Regulation.....	<±0.1% + 2mV
Safety Standard.....	EN 60950
Emission.....	EN 61000-6-4:2007
Immunity.....	EN 61000-6-2:2005
Measurement, Control and Lab Equipment.....	EN61010-1:2006
Cooling.....	Fans
Operating Temperature.....	0 to 50 °C
Storage Temperature.....	-20 to 70 °C
Humidity.....	<80%
Operating Height.....	<2000m
Vibration.....	10-55Hz/1min/2G XYZ
Shock.....	Less than 20G
Output, Control & Monitoring.....	Front panel, isolated analogue 0 to +5V/+10V & RS232 as standard. Optional: RS485, IEEE488, LAN, USB, SD card

Options Table

Code	Description
/3P208.....	Input Voltage is 3 x 208 (187 - 229) VAC
/3P400.....	Input Voltage is 3 x 400 (360 - 440) VAC
/3P440.....	Input Voltage is 3 x 440 (396 - 484) VAC
/3P480.....	Input Voltage is 3 x 480 (432 - 528) VAC
/400HZ.....	400Hz input frequency
/DC.....	Any nominal in the DC input range 250-750VDC ±10% (eg. 500VDC±10% = 450 - 550VDC input)
/ATE.....	No front panel control or display. Analogue interface provided as standard
/KFZ12.....	Output follows a 12Vdc automotive cranking curve
/KFZ24.....	Output follows a 24Vdc automotive cranking curve
/LAN.....	Ethernet interface
/LT.....	IEEE 488.2 interface
/LTRS485.....	RS485 interface
/SD.....	Integrated SD memory card slot with data-logging facility
/USB.....	USB interface