

# LAB-SM

# Compact DC Power Supply

## Description

The LAB-SM series of Laboratory DC Sources provides power outputs up to 2kW. A wide array of voltage and current ranges are available at each power rating. Constant voltage, constant resistance and constant current operating modes are provided as standard. The LAB-SM 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 PSU's 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 an V values. Your chosen units can be built with a systems interface for master/slave operation. This enables setting values to be equally shared amongst units that are configured in series or parallel. The LAB-SM design is exceptionally flexible and allows ETPS 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
- Both current and voltage presets
- User programmable waveforms
- Extremely compact 1U design
- CV, CC & CR operating modes
- Up to 94% Efficiency

## Selection Table

Part Number	Output Power	Output Voltage	Output Current	Weight (kg)	Dimensions (Width x Height x Depth)
LAB-SM 115	1.2kW	0 - 15V	0 - 80A	7kg	19" x 1U x 440mm
LAB-SM 135	1.2kW	0 - 35V	0 - 35A	7kg	19" x 1U x 440mm
LAB-SM 145	1.2kW	0 - 45V	0 - 30A	7kg	19" x 1U x 440mm
LAB-SM 170	1.2kW	0 - 70V	0 - 20A	7kg	19" x 1U x 440mm
LAB-SM 1150	1.2kW	0 - 150V	0 - 8A	7kg	19" x 1U x 440mm
LAB-SM 1300	1.2kW	0 - 300V	0 - 4A	7kg	19" x 1U x 440mm
LAB-SM 1600	1.2kW	0 - 600V	0 - 2A	7kg	19" x 1U x 440mm
LAB-SM 220	2kW	0 - 20V	0 - 100A	7.6kg	19" x 1U x 440mm
LAB-SM 235	2kW	0 - 35V	0 - 60A	7.6kg	19" x 1U x 440mm
LAB-SM 245	2kW	0 - 45V	0 - 45A	7.6kg	19" x 1U x 440mm
LAB-SM 270	2kW	0 - 70V	0 - 30A	7.6kg	19" x 1U x 440mm
LAB-SM 2150	2kW	0 - 150V	0 - 15A	7.6kg	19" x 1U x 440mm
LAB-SM 2300	2kW	0 - 300V	0 - 7A	7.6kg	19" x 1U x 440mm
LAB-SM 2600	2kW	0 - 600V	0 - 4A	7.6kg	19" x 1U x 440mm



# LAB-SM

# Compact DC Power Supply

## Technical Data

Input Voltage Range (1.2kW).....	90 - 264V <sub>AC</sub> /PFC
Input Voltage Range (2kW).....	230V <sub>AC</sub> ± 10% /PFC
Input Frequency.....	47 - 63Hz
Static Voltage Regulation.....	±0.05% + 2mV
Static Current Regulation.....	±0.1% + 2mA
Dynamic Load Regulation.....	<2ms (typically)
Over Voltage Protection.....	0 to 120% V <sub>MAX</sub>
Ripple.....	<0.2% (typical)
Stability.....	±0.05%
Programming Accuracy (V <sub>out</sub> ).....	±0.05% + 2mV
Isolation.....	3000V
Protection.....	OC / OV / OT / OP
Line Regulation.....	<±0.1% + 2mV
Static Load 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 and/or optional analogue 0 to +5V/+10V isolated/ Digital 12 bit: RS232, RS485, IEEE488, LAN, USB, SD card

## Options Table

Code	Description
/ATE.....	No front panel control or display. Analogue Interface provided as standard
/ATI.....	Isolated 0-5V/0-10V Analogue Interface for all control and measurement functions
/KFZ12.....	Output follows a 12Vdc automotive cranking curve
/KFZ24.....	Output follows a 24Vdc automotive cranking curve
/LAN.....	Ethernet interface with listener and talker functions via LAN
/LT.....	IEEE 488.2 Interface with listener and talker functions
/LTRS232.....	RS232 Interface with listener and talker functions
/LTRS485.....	RS485 Interface with listener and talker functions
/MS.....	Built with master/slave interface for series or parallel operation
/SD.....	Integrated SDmemory card slot with data-logging facility
/USB.....	USB Interface with listener and talker functions
/IL.....	Interlock circuit for connection to an external safety device (e.g. emergency stop button) to shutdown output