ELECTRONIC TEST & POWER SYSTEMS

LAB-SMP

COMPACT 1U SWITCH MODE POWER SUPPLY

POSITIVE PROBLEM SOLVING

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.

- 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

FURTHER DETAILS

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 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.

TECHNICAL DATA

GENERAL	
Input Voltage Range (1.2kW)	90 - 264VAC / PFC
Input Frequency Range (2.4kW)	230VAC ± 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_{MAX}
Ripple	<0.2% (typical)
Stability	± 0.05%
Programming Accuracy (V_{OUT})	± 0.05% + 2mV
Measurement Accuracy	± 0.5% of V_{MAX} /I_{MAX} (front panel, digital & analogue interfaces)
Isolation (Between Input and Earth)	2100VDC
Isolation (Between Output and Earth)	800VDC (models ≤300V); 1.4kVDC (600V models); 3kVDC (1200V models)
Isolation (Between Input and Output)	4250VDC
Isolation (Between Front Panel Control and Output)	3kVDC
Resistance (Between Output and Earth)	400MΩ
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 (Standard)	Front panel, isolated analogue 0 to +5V / +10V & RS-232
Output, Control & Monitoring (Optional)	RS-485, IEEE488, LAN, USB, SD card

LAB-SMP

COMPACT 1U SWITCH MODE POWER SUPPLY

SELECTION TABLE

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

OPTIONS

CODE	DESCRIPTION
/3P208	3 Phase Input of 3 × 208 (187 - 229Vac), 50/60Hz
/3P400	3 Phase Input of 3 × 400 (360 - 440Vac), 50/60Hz
/3P440	3 Phase Input of 3 × 440 (396 - 484Vac), 50/60Hz
/3P480	3 Phase Input of 3 × 480 (432 - 528Vac), 50/60Hz
/400HZ	400Hz input frequency
/DC	Any nominal in the input range 250 - 750VDC ± 10% (eg. 500VDC ± 10% = 450 - 550VDC input)
/ATE	No front panel control or display, analogue interface provided as standard
/USB	USB interface
/LT	IEEE 488.2 (GPIB) interface
/LTRS485	RS-485 interface
/LAN	Ethernet interface
/KFZ12	Output follows a 12Vdc automotive cranking curve
/KFZ24	Output follows a 24Vdc automotive cranking curve
/SD	Integrated memory card slot on the front panel with data logging facility

HIGHLIGHTED FEATURES

SD MEMORY CARD

An integrated SD card provides a convenient low cost method of recording and editing complex waveforms, using simple WAV or script files via a PC.

MODIFICATIONS

Existing platforms can be modified by ETPS's design specialists to meet unusual test needs. Voltage or current outputs can be tailored to suit your requirements.

MASTER / SLAVE

Operation of several PSUs in series or parallel is possible. This allows users to retrospectively expand systems to meet ever changing power requirements.

INTERFACES

A variety of interfaces are available providing unrivalled flexibility for users. Each system can be configured with multiple interfaces.

“WE ARE POSITIVE PEOPLE”

ETPS engineer electronic power supply and testing systems. Our problem solving skills provide the spark of innovation to some of the world’s leading technology brands.

ETPS
ELECTRONIC TEST & POWER SYSTEMS

Tel: +44 (0) 1246 452909
Sales: 0800 612 95 75
sales@etps.co.uk
www.etps.co.uk

ETPS Ltd
Unit 14, The Bridge
Beresford Way, Chesterfield
S41 9FG

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