

LAB-HPP

COMPACT HIGH POWER DC SOURCES



POSITIVE PROBLEM SOLVING **+ =**

The LAB-HPP family can be used as a stand alone power supply or as component in a wider automated test system. The LAB-HPP consists of the 45kW and 60kW models.

Lower power models between 5kW and 30kW are detailed on the separate LAB-HP technical summary. This highly efficient modern design has a wealth of standard and optional features. Along with constant current and voltage operation the user may also select adjustable power limit or resistance modes from the front panel. A simple photo-voltaic simulation mode allows different maximum power points to be set for voltage and current.

- + CV, CC, CP, CR & PVsim Modes
- + Optional Computer Interfaces
- + Simple Front Panel Operation
- + Memory Card Slot Option
- + Worldwide Input Options
- + Fast Response Times

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FURTHER DETAILS

The connectivity options of the LAB-HPP help to ensure that the units can be utilised in a wide variety of applications. Both RS232 and isolated analogue 0-5Vdc/0-10Vdc interfaces are provided as standard.

Output voltage and current limit can be set proportionally and actual values read back during operation. It is also possible to force the analogue interface to become active via a high signal on the relevant pin. Computer interfaces are also optionally available. Any combination of GPIB, USB, LAN, RS485 & USB is possible on the same unit.

An integrated memory card reader is another useful option. This enables output waveforms to be programmed graphically on a PC using freely available software that supports the WAV format. Another simple method of controlling the output via an SD card is by text script.

Along with setting output variables the user can program time delays and loop operations. The memory card slot also offers a convenient datalogging function. Sample times of between 1 sec and 71 minutes can be set. When activated each logging event is indicated on the front panel display. LAB-HPPs are provided in standard 19" rackmounting cases. A cabinet integration service can be provided on request.

TECHNICAL DATA

GENERAL	
Input Voltage	3 × 400Vac ± 10%
Input Frequency	47 to 63Hz
Harmonics	EN61000-3-2 A14
Isolation [Between Input and Earth]	2150VDC
Isolation [Between Output and Earth]	800VDC (models ≤300V); 2000VDC (models ≥600V)
Isolation [Between Input and Output]	4250VDC
Isolation [Between Front Panel Control and Output]	3000VDC
Isolation Class	1
Resistance [Between Output and Earth]	400MΩ
Safety	EN60950
Emissions	EN61000-6-4
Immunity	EN61000-6-2
Voltage Regulation	± 0.05% + 2mV
Current Regulation	± 0.1% + 2mA
Measurement Accuracy	± 0.5% of V_{MAX} / I_{MAX} (front panel, digital & analogue interfaces)
Response Time (10%-90%)	<2ms (typ)
Ripple & Noise	<0.025% mVrms FS
Stability	0.05% V_{MAX}
Overvoltage Protection	105% - 110% V_{MAX}
PV Voltage Simulation Mode [V_{MPP}]	0.6 to 0.95 × V
PV Current Simulation Mode [I_{MPP}]	0.6 to 0.95 × I
Remote Sense Capability (<35V)	2V
Remote Sense Capability (>35V)	5V
Display	3½ digits for V & I
Protections	OC / OV / OT / OP
Standard Interfaces	Isolated analogue 0 - 5Vdc / 0 - 10Vdc & RS232
Optional Computer Interfaces	RS-485, USB, ethernet, IEEE488.2
Maximum Internal Resistance	$CR_{MAX} = V_{MAX} / I_{MAX}$
Minimum Internal Resistance	$CR_{MIN} = (V_{MAX} / I_{MAX}) / 10$
Operating Temperature	0 to +50°C
Storage Temperature	-45°C to +85°C
Operating / Storage Humidity	0 to 95% (non condensing)
Derating 50°C - 70°C	2% per °C
Cooling	Forced air
Air flow	Front to back
Weight (45kW / 60kW)	99kg / 132kg
Dimensions (45kW)	19" × 9U × 620mm
Dimensions (60kW)	19" × 12U × 620mm
Vibration	10-55Hz / 1min / 2G XYZ
Shock	Less than 20G

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SELECTION TABLE

Part Number	Maximum Power	Output Voltage	Output Current
LAB-HPP 4520	45kW	0 - 20V	0 - 2250A
LAB-HPP 4540	45kW	0 - 40V	0 - 1125A
LAB-HPP 4580	45kW	0 - 80V	0 - 562A
LAB-HPP 45100	45kW	0 - 100V	0 - 450A
LAB-HPP 45150	45kW	0 - 150V	0 - 300A
LAB-HPP 45300	45kW	0 - 300V	0 - 150A
LAB-HPP 45600	45kW	0 - 600V	0 - 75A
LAB-HPP 45800	45kW	0 - 800V	0 - 57A
LAB-HPP 451000	45kW	0 - 1000V	0 - 45A
LAB-HPP 451200	45kW	0 - 1200V	0 - 37A
LAB-HPP 451500	45kW	0 - 1500V	0 - 30A
LAB-HPP 6020	60kW	0 - 20V	0 - 70A
LAB-HPP 6040	60kW	0 - 40V	0 - 100A
LAB-HPP 6080	60kW	0 - 80V	0 - 133A
LAB-HPP 60100	60kW	0 - 100V	0 - 200A
LAB-HPP 60150	60kW	0 - 150V	0 - 8.5A
LAB-HPP 60300	60kW	0 - 300V	0 - 17A
LAB-HPP 60600	60kW	0 - 600V	0 - 25A
LAB-HPP 60800	60kW	0 - 800V	0 - 33A
LAB-HPP 601000	60kW	0 - 1000V	0 - 50A
LAB-HPP 601200	60kW	0 - 1200V	0 - 5A
LAB-HPP 601500	60kW	0 - 1500V	0 - 10A



OPTIONS

CODE	DESCRIPTION
/3P208	3 Phase Input of 3 × 208 (187 - 229Vac), 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 over a LAN
/KFZ12	Output follows a 12Vdc automotive cranking curve
/KFZ24	Output follows a 24Vdc automotive cranking curve
/KFZXX	Output follows a user specific curve
/SD	Integrated memory card slot on the front panel

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.

Every effort is made to ensure that the information provided within this technical summary is accurate. However, ETPS Ltd must reserve the right to make changes to the published specifications without prior notice. Where certain operating parameters are critical for your application we advise that they be confirmed at the time of order. ETPS Ltd specialises in modifying its proven platforms to suit your needs. Please contact our office if your requirement is non-standard. Please note that your actual unit may differ from those shown.



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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.



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