Cellpro POWERLAB 8 1000W

ALL PURPOSE MULTI-CHEMISTRY BATTERY WORKSTATION

FEATURES

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FMA Direct

For Battery types: Lithium Polymer (1s to 8s balanced, 1s to 2s unbalanced), Lithium Ion (1s to 8s balanced, 1s to 2s unbalanced), Lithium Manganese (1s to 8s balanced, 1s to 2s unbalanced), A123 (LiFePO4) (1s to 8s balanced, 1s to 9s unbalanced), NiCd (1s to 21s), NiMH (1s to 21s), 6v, 12v, 24v Lead Acid batteries (Flooded, Gel, AGM, SLA)

Pack capacity: 20 mAh to 360Ah
Input voltage: 10-32VDC, reverse polarity protected
Input current: 1A to 50A, software limited
Power conversion: Synchronous DC/DC converter, supports multiple switcher frequencies of 31.25 kHz, 62.5 kHz, 125 kHz; user selectable by preset, 85% to 93% efficiency depending on output current
Output battery charge current: Adjustable range 10mA to 30A, limited by 50A input current*
Output battery discharge current: Internal discharge 10mA to 10A, 100W max
Regenerative discharge 10mA to 30A, 1000W max**
Continuous max output power: 516W @ +12VDC input, 1008W @ +24VDC
Cell balancing: Resolution 78uV (16 bit) for 1s-8s Li or A123 (LiFePO4) balanced charging
Voltage calibration: Cell voltage measurements are factory calibrated to a standard traceable to NIST; calibration is to +/- 6 mV
Current calibration: Charge current is factory calibrated on a 4A standard; calibration is to +/- 1mA
Measurement accuracy:
Voltage resolution: 78uV (16 bit)
Voltage tolerance: +/- 6mV
Charge current: +/- 1%
Capacity added to pack: +/- 1%
Percent capacity ("Fuel"): +/- 5% (with accurate fuel table defined for battery being charged)
Serial data output: 19.2kbps, 8 bits, 1 start bit, 1 stop bit, no parity
Data integrity: Checksum, CRC checking
Cooling fans: Twin, 13 CFM, 50mm diameter
Heat sink: Internal 200W aluminum, thin finned
Output battery connector: "Cellpro" compatible, JST PA series, 9 position
LCD: 2 line, 16 character, light grey/blue backlit
Footnotes: * Please note, for safety reasons, available charger current may be limited for certain battery types and/or charging modes, e.g., non-balanced charge of Li
** Please check bullet number 8 in the section titled "Major Features" below for a detailed description of Regenerative Discharge

PowerLab 8 Feature Set

Major Features
• Selectable charge rates range 10mA to 30A
• Continuous maximum output power rating, 1008W @ +24VDC input voltage, 516W @ +12VDC input voltage
• Using +24VDC to +32VDC input, 1008W output will deliver full current rating (30A) over the full range of output voltage up to 33.6V
• Smart power management allows customer to select between programmable input power sources. Using the Charge Control Software (CCS), choose from several templates to get you in the ballpark, then fine tune the settings. Available settings include power supply input current limit, input low voltage limit, regenerative discharge rate and voltage limit. PowerLab 8 stores 1 set-up for Power Supply and 1 set-up for Battery and asks for verification one time on start-up
• PowerLab 8 supports charging through node wires only (automatic current limiting to 3A maximum) or node wires in combination with discharge wires (charge rate support up to 30A max)
• Initiate charge, discharge, monitor, and multiple cycles at the PL8 or via remote control from the CCS. Graph all major operations when using CCS.
• Open Architecture presets allow for customization of any User Preset including show/hide presets on unit, preset name editing, up to 100 parameters control how presets are displayed and charging/discharge/cycling parameters associated with particular batteries and/or charging strategies. Unit includes 25 user preset banks pre-loaded for most major battery type/chemistries, plus 50 library presets.
• Environmentally friendly, industry first, regenerative discharge capability of up to 1000w. Unlike traditional methods of discharge, which deplete the output battery's energy in the form of heat across a transistor, regenerative discharge takes most of that energy and puts it back into the input battery. In other words, when you discharge your LiPo for storage, you will be re-charging your Lead Acid input battery. The total amount of power that you can achieve is limited only by the amount of current that your input battery can accept, or 1000W, whichever is lower.
• PowerLab 8 is also equipped with a traditional, 100W internal discharge capability which is non-regenerative.
• Twin cooling fans
• Massive over-sized internal heat sink
• 10AWG silicon input power cable and heavy-duty, removable plier clips
• Massive sendust core toroid capable of 50A continuous input current requirement for maximum output specifications

Other Features
• Supports native Cellpro batteries automatically
• Adapters available for all popular R/C battery brands
• 2 line, 16 character backlit LCD
• Available opto-isolated PC interface and free Charge Control Software (CCS)
• Intuitive 4 button user interface
• Sleek and attractive high-impact ABS enclosure for maximum airflow efficiency
• Sturdy Aluminum top panel with reliable, recessed tactile buttons
• Quick "preset over-ride access" to common charging parameters like setting charge and discharge current and operational modes of charge/discharge/monitor/cycle(s)
• Additional advanced options menu for adjusting in-depth charging parameters and global options at the unit
• GUI PC software (CCS) allows access to 25 User Presets and 50 Library Presets stored in the unit or available in unlimited number on the P.C.
• Free and reliable firmware updates for the life of the product using the CCS
• Automatic Low voltage restore for recovering damaged or over-discharged packs
• Programmable options allow speaker ON/OFF or volume, LCD contrast, customized welcome screen, and much more
• Cold weather mode reduces end-charge voltage; parameters adjustable by customer including ON/OFF, end-charge voltage offset reduction, and temperature
• Multiple product cases can be interlocked
• Future provisions for master/slave mode whereby one PowerLab 8 master can control one or more slaves, send over preset information, control all aspects of charging and balancing. This feature is perfect for charging multiple packs of same chemistry and capacity using multiple devices such as split packs connected in series during operation all at unbelievable rates.
• Auto charge mode available utilizing advanced fuel gauging technology
• Customizable fuel table lookup values based on presets. Fuel tables can be created using a Fuel Table Wizard in the CCS and applied to individual battery brands by presets for improved accuracy
• COMING SOON! Industry's first Smart Parallel adapters available to maximize available power potential. Safely connect two packs (2a-6s) of equal cell count/capacity together in parallel; charge, discharge, cycle, or monitor on a single PowerLab 8 unit. These items will be peripheral products, available separately, not included as a part of the actual PowerLab 8 unit. Also will be backward compatible with the Cellpro 10s charger.

Please note: all specifications and features listed above subject to change prior to delivery.

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