

TPC0014 Laboratory Power Supply

Maridyne Instruments Co.

<http://www.dcdimmer.com>

The TPC0014 Laboratory Power Supply is a bench-bottom power supply, that is, you bolt it to the under side of your bench and interface with it via an IR or RF link. With four 500 Watt outputs and a plethora of on/off switches, this device has enough articulation to run a modest experiment. The Hewlett Packard hp48 is your remote front panel to this full featured switch-mode power converter. The remote front panel can read the chassis and ambient temperatures, input and output voltages and currents and fan rpm, with room for more as the creative bug bites.

Settings that can be adjusted from the remote front panel include chassis overtemperature threshold, ambient temperature regulation setpoint, remote temperature sensor setpoint, input and output voltage and current setpoints, input and output power limit set points, under-voltage lockout threshold, ambient light and noise thresholds and whatever else we can think of between now and ship time.

The TPC0014 produces negligible conducted and radiated EMI/RFI and is unaffected by other equipment or power supplies nearby.

Included in every delivery is an hp48 loaded with routines and applications for the power supply, including photovoltaic load optimizer, battery amp-hour and watt-hour measurement, converter efficiency and real-time power dissipation measurement and season simulator. Descriptive names like "Experiment 1" and "Main Battery Charger" can be entered for each channel, making the interface intuitive and easy to use.

All the data acquired by the TPC0014 can be operated on by the hp48's powerful set of analytical functions and used to then make automated adjustments to the power supplies operation. Data Logging allows the experimenter to know the device's history, current condition and what it is doing at any given time. In fact, the unit is set up so that an experimenter can take a measurement, perform some calculations on that measurement, make an adjustment to one of the many operational parameters and check the effect, all without taking his or her eyes or attention off of the hp48.

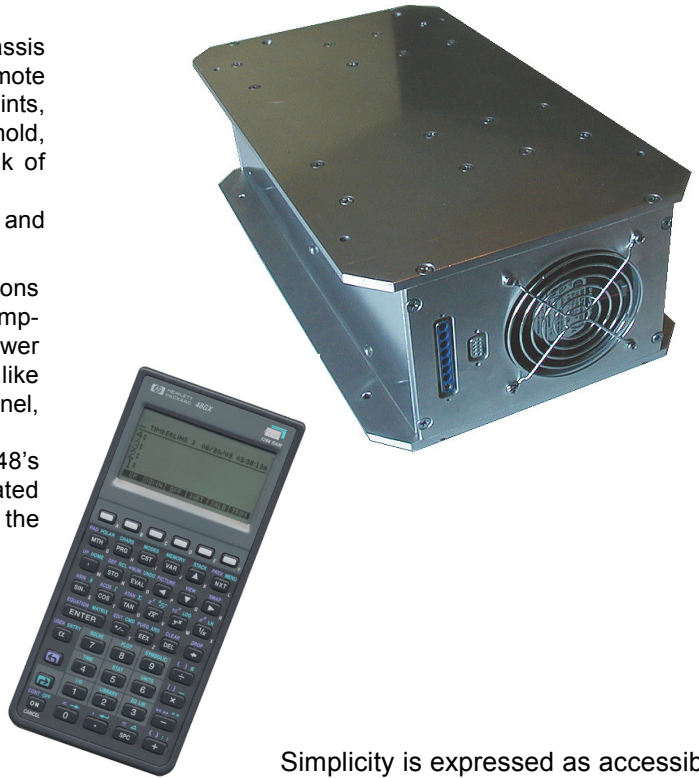
- Output range from 0V to 25.5V in 0.1V increments
- Other output ranges and spare functions can be created by the user
- Advanced switch-mode design
- Output over-current protection/short circuit protection
- Over-temperature protection
- hp48 remote front panel
- Simple no-tools installation, or operate free-standing
- Data report-back includes:
 - Chassis temperature
 - Input and output voltage and current settings
 - Actual input and output voltages and currents
 - Date the unit was made and the units Serial Number
- Brushless DC cooling fan
- Parallellable, any unit can be a master & no third wire

The ability to measure its own input and output voltages and currents affords the TPC0014 the opportunity to calculate input and output power, and the units current operating efficiency.

AmpHours (or Coulombs) can be counted at the input or the output as well as KiloWatt Hours (or Joules). This is convenient for programmed battery cycling and segregating.

The motion sensor input is a general purpose input that can be configured via firmware to initiate any programmable action. The hp48 can read any data from within the power supply. Complicated schedules of adjustments and measurements can be maintained with advanced data analyses all in the hp.

Solid Aluminum Chassis is virtually indestructable. 5052 Alloy is corrosion resistant even in marine environments. 40 Amp gold plated pins insure a low impedance connection. Simple D-sub connection for optional wall switch plate. Brushless DC fan included for lonjevity.



Simplicity is expressed as accessibility: User accessible chassis and user upgradeable PCB assemblies, upgradeable firmware (via D-sub connector), and no-tools installation make this a choice you can live with.

2000 watts under the lid and wireless expandability makes for enough horsepower in a single chassis to handle a large experiment, or expand to meet any purpose.

Ordering Information

Phone Numbers: Toll Free 800-618-3467
Local (209)724-0840

Part Number Pattern: XXXX mm/dd/yyyy B

XXXX	=	Serial Number
mm/dd/yyyy	=	Date Built
B	=	Temperature Range
C	=	0°C to +70°C
I	=	-25°C to +85°C
M	=	-55°C to +105°C