



HPSC104-SER - 160 Watt UPS High Power PC/104 Power Supply with Smart Charging

FEATURES

- UPS operation with battery pack
- High power smart charging
- Multistage charging SLA, NiCd, NiMh
- SMBus Level 3 compatible charger
- Charging voltage: 10V - 35V
- Both PC/104 and RS232 interfaces
- 6 - 40VDC input range
- Highly compact, PC/104 compliant
- 5V (25amp), 12V (5amp), V5SBY (7amp)



FUNCTIONAL DESCRIPTION

The HPSC104-SER is a high power, high performance DC to DC converter that supplies +5V, -5V, +12V, -12V and V5Sby (5V standby) outputs. The HPSC104-SER also includes a flash based microcontroller that supplies advanced power management, smart battery charger, PC/104 I/O memory mapped interface and an RS232 serial port. The HPSC104-SER is designed for low noise embedded computer systems, has a wide input range of 6-40V(>6:1) and is ideal for battery or unregulated input applications. The HPSC104-SER is specifically designed for vehicular applications and has heavy-duty transient suppressors (9000W) that clamp the input voltage to safe levels, while maintaining normal power supply operation.

The HPSC104-SER is a state-of-the-art Mosfet based design that provides outstanding line and load regulation with efficiencies up to 95 percent. Organic Semiconductor Capacitors provide filtering that reduces ripple noises below 20mV. The low noise design makes the HPSC104-SER ideal for use aboard aircraft or military applications or wherever EMI or RFI must be minimized.

The HPSC104-SER provides up to four stages of battery charging and can charge Lead-Acid, NiCd, and NiMh batteries and is also SMBus level 3 compatible. Charge currents are up to 4A, and battery charging voltages from 10 to 35V.

The HPSC104-SER has advanced power management functions that allows timed on/off control of the HPSC104-SER, notification of changes to main power and changes in the battery status. For example, the HPSC104-SER can be programmed to power off the outputs in 60 seconds, and then turn on again 12 hours later.

The HPSC104-SER size is 3.55 x 3.775 inches, and is a fully PC/104 compliant power supply. All generated voltages are provided to a removable "pluggable" header. A removable plug allows the HPSC104-SER to be easily installed. The RS232 serial port is provided on a standard DB9 connector.

The HPSC104-SER can be configured to meet almost any power supply and battery charging need for embedded applications, whether that be a simple +5V application, or providing power for back lighted LCD panels, or a full UPS (un-interruptible power supply configuration).



Specifications

Electrical Specifications

- 5V output* 25A
- 12V output 5A
- -5V output 400mA
- -12V output 500mA
- 5VSBY 7A
- Maximum battery charger current 4A
- Battery Charger output voltage range 10 to 35V
- Input voltage range 6-40VDC

Mechanical/Environmental

- Temp range** -40 to 85C
- PC/104 form factor compliant 3.55"W x 3.775"L x 0.6"H

Performance Characteristics

- Load regulation <60mV
- Line regulation +40mV
- Output temp drift <40mV
- Switching frequency (5V, 12V, -12V & 5VSBY) 310 to 320kHz
- Output ripple <20mV
- Conducted Susceptibility >57db
- Efficiency up to 95%

* Includes current supplied to 12V, -12V & -5V regulators

** Temperature range as measured on the product heat sink

Ordering Information

HPSC104-SER

High Power & Smart Charging
Vehicle Power Supply