Product Specification

Model	Date: September 16, 2003
BS06A-H24/2.5L	Created by: Engineering Headquarters, Research & Development group

This specification applies to battery package, BS06A-H24/2.5L. This unit is a battery package for backup use at blackout, and is to be used with a DC stabilized power supply sold separately.

General Specification (Items are provided at normal temperature and humidity unless otherwise specified.)

	Items	Specification/Standard	Measurement conditions, etc.
Electrical specification	Battery	1.2V 2500mA: 14 cells connected in series	Sealed Ni-MH battery
	Nominal battery voltage	DC16.8V	
	Rated capacity	2500 mAh	
	Max. output power	310W	
	Built-in booster Output voltage	DC23.0V typical	Output terminal voltage of the battery.
	Charge specification	0.25A typical (Max.15 hours)	
	Heater	The heater operates at or under the temperature of the battery of 20℃ typical. Since the battery is unable to meet the discharge properties at low temperature, the heater warms up the battery. Power consumption is 12W/DC5V typical when the heater is operating.	The heater shall operate only when the peripheral connector of the power supply body is connected to CN2 connector and the PS_ON or REMOTE_ON/OFF signal is turned ON.
	Embedded fuse rating	30A/ 32V	
Environment specification	Operating temperature/ humidity	0 to 50℃/10 to 90%	There shall be no condensation. However, if the temperature is 15℃ or lower, connect CN2 (heater) (Note 1). If CN2 is not connected, load derating is needed.
	Storage temperature/ humidity	Storage within one year: -20℃ to less than 35℃/10 to 95% Storage within six months: -20℃ to less than 45℃/10 to 95% Storage within a month: -20℃ to less than 55℃/10 to 95% Storage within a week: -20℃ to 65℃ or less/10 to 95%	There shall be no condensation.
	Vibration	To endure displacement amplitude of 0.15mm with vibration frequency of 10 to 55Hz for 10 sweep cycles in the X-, Y-, and Z-direction for 45 minutes.	To follow JIS-C-0040-1995
	Mechanical shock	To endure an acceleration of 150m/s^2 for 11ms once each in the X-, Y-, and Z-direction; there shall be no malfunction, damage, loosening, or coming-off.	To follow JIS-C-0041-1995.
	Dimensions	L181×W146×H38	
	Weight	1.8kg typical	
	Reliability grade	FA	To follow our standard.
	Short life expectancy components	Battery (Consult with us for cycle-use).	Regular maintenance and replacement are required.
	Storage condition	For a long-term storage of six months or longer, re-charge the battery at least once a year (once every six months if available). (Note 2)	If the battery is not charged within the period as described on the left, the battery may not recover enough capacity even with recharging.
Others	Warranty	One year after delivery; however, if any faults belong to us, the defective unit shall be repaired or replaced at our cost (except for defect caused by over discharge).	Except for defects caused by operations out of the specification.
	Materials attached	The general specification and outline drawing. Other technical documents shall not be released in principle.	
	Charge condition at shipment	The battery has been compulsively charged for 15 hours before shipment.	

(Note 1) The warm-up time from 0℃ is approximately one hour.

(Note 2) How to recharge: With auxiliary charging status of the battery package, short pin 1 and 3 of CN3 and turning on the AC power switch on the panel of the special Nonstop power supply connected to CN1 starts forcible recharging for about 15 hours. When using NSP3-150 or NSP2-250 series power supply, you need to make the power supply's REMOTE ON/OFF signal LOW, and also minimum load of the power supply is required. In order to prevent battery degradation due to unnecessary charging, make sure to remove the short between pin 1 and 3 of CN3 at the start of recharging or after the charge is completed. Also, when using DC power supply other than special Nonstop power supply to charge, the output voltage of the power supply shall be DC 27±1V and its current shall be 0.5A minimum.

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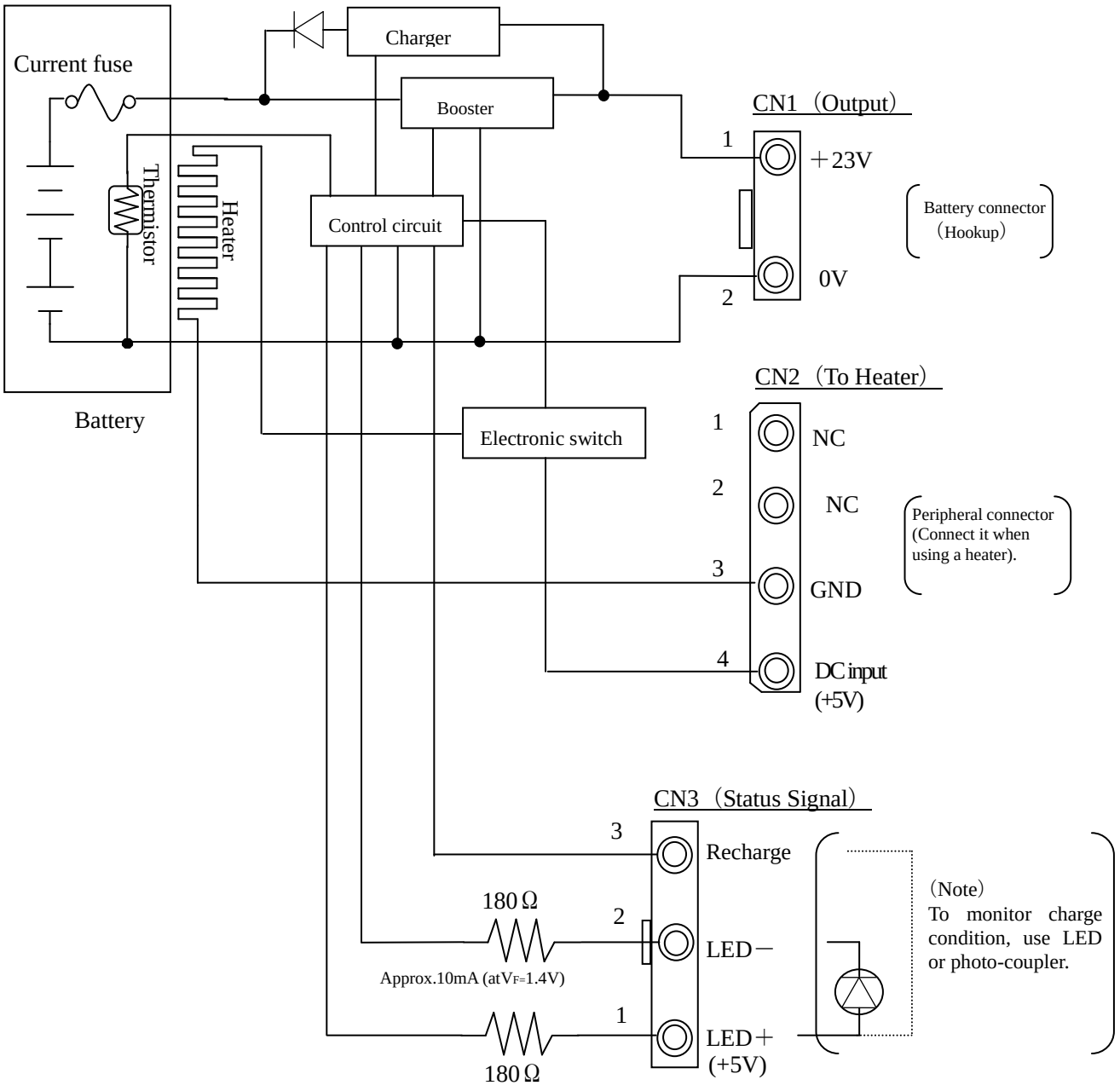
Circuit Block Diagram



LED display (when LED is connected between pin 1 and 2 of CN3)

- Charging……LED ON
- Discharging……LED blinking (ON and OFF every 0.25sec)
- Auxiliary charging…LED flashing (ON for 0.1sec every 10sec)

(Auxiliary charging compensates battery self-discharging.)

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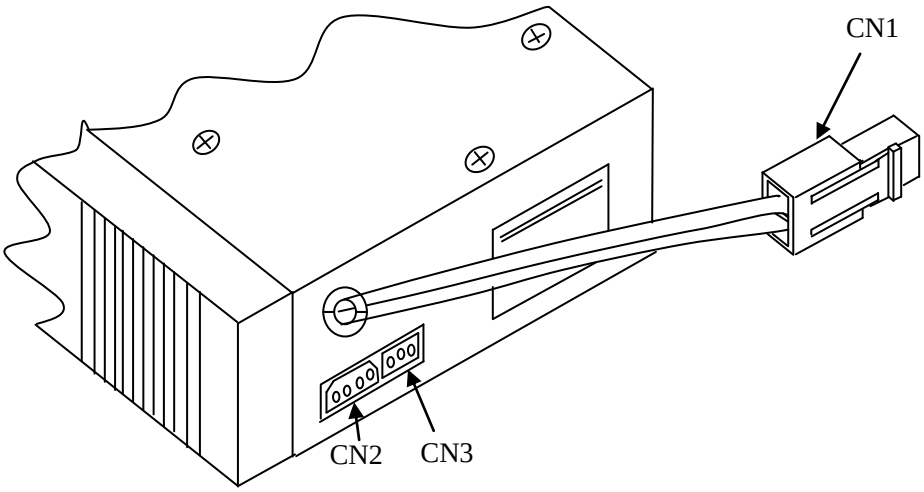
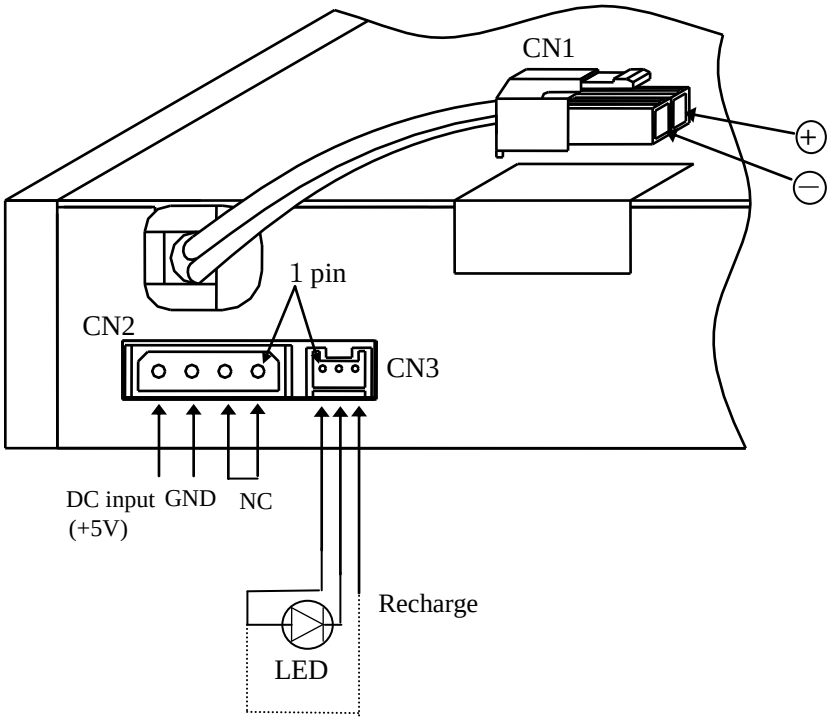
Connector pin assignment





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Precaution before use

1. Disassembling ※ Danger

   Never disassemble the battery package. The electrolyte inside is strong alkaline and it may damage your skin and clothes. Particularly, if the electrolyte is caught in your eyes, you may lose your sight. Should the electrolyte come into contact with your eyes accidentally while disassembling, wash immediately with clean water and go to your doctor. Do not rub your eyes. Also, if disassembled, its electrodes inside may catch fire reacting to oxygen in the atmosphere. NEVER DISASSEMBLE THE BATTERY PACKAGE.

2. Short circuit ※ Danger

   Do not touch the terminal area of the battery package or PCB portion with metal pieces or metal bars. It may damage the equipment or generate heat from the battery, resulting in burn injury.

3. Throwing into flame and heating ※ Danger

   Do not throw the battery package into flame or heat it up. The battery may explode as a result.

4. Charging in the reversed position ※ Danger

   When recharging the battery with a different charger other than the designated one, do not charge the battery in the reversed position. It may generate gas rapidly inside to increase gas pressure, resulting in electrolyte leakage, swell, or explosion

5. Installation in equipment ※ Danger

   When installing the battery into equipment, never seal it. In some cases, hydrogen and oxygen gas may be produced, which is likely to cause burst or explosion ignited by sparks from the switch and motor, etc. Even if the installation space is an open structure, remaining gas and positioning of an ignition spot may lead to the same danger. Therefore, provide degassing holes or block off the ignition sources, such as motors and switches, in a proper way.

6. Diversion to other applications ※ Danger

   Do not use the battery package for other applications. It may damage the batteries or equipments due to different specifications.

7. Soaking in water and water leakage ※ Warning

   Do not soak the battery in water/seawater as it may generate heat and rust, resulting in malfunction.

8. Others ※ Caution

   For items that are not specified in this specification too, follow the ‘Precautions before use' for general sealed Ni-MH battery to use properly on your own responsibility. Be aware that wrongful use of the battery causes leaking, heating, and exploding, which will lead to a serious accident to personnel.