Overview

The PS100 and CH100 are charge controllers that control the current flowing to the battery and prevent the battery current from flowing to the charging source. These power supplies provide built-in temperature compensation to optimize battery performance.

Technical Description

**PS100**

The PS100 is often powers our CR800-series, CR1000, and CR3000 dataloggers, but can also be used as a separate auxiliary 12 Vdc power supply to power remotely located sensors or peripherals, such as a multiplexer located at a distance from the datalogger enclosure. However, to avoid errors in analog measurements and ground loops, the power supplies must share a common ground. The user can add an external rechargeable battery to the PS100.

**CH100**

The CH100 is commonly used when a rechargeable battery is required for the application and the PS100 power supply (7 A h) does not contain enough reserve amp-hours for the power supply budget. The rechargeable battery must be capable of accepting recharge from a trickle-charge source.

**Charging Sources**

Several wall chargers and solar panels are available for recharging the sealed rechargeable battery (see Ordering Information). Solar panels charge batteries by converting sunlight into direct current. Wall chargers use power from external ac power lines to recharge the batteries.

**Adapters**

Campbell Scientific offers two adapters that fasten onto our PS100 and CH100. The A100 allows the PS100 or CH100 to power peripherals and external devices at nondatalogger sites such as repeater stations. The A105 adapter increases the number of 12 V and ground terminals available on the PS100 or CH100. The A100 and A105 cannot be used at the same time.
Specifications

- Input Voltage (CHG terminals): 15 to 28 Vdc or 18 Vac RMS
- Dimensions:

<table>
<thead>
<tr>
<th></th>
<th>Height</th>
<th>Length</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS100</td>
<td>10.5 cm (4.1 in)</td>
<td>19 cm (7.6 in)</td>
<td>7 cm (2.8 in)</td>
</tr>
<tr>
<td>CH100</td>
<td>10.2 cm (4 in)</td>
<td>7.0 cm (2.8 in)</td>
<td>3.9 cm (1.5 in)</td>
</tr>
</tbody>
</table>

Battery Connections

- Charging Output Voltage: Temperature compensated float charge for battery
- Temperature Compensation Range: -40º to +60ºC
- Maximum Charging Current: 1.2 A (allows one 10 W or 20 W solar panel to be used)

Power Out (+12 terminals)

- Voltage: Unregulated 12 V from battery
- Current Limited with 3 A Thermal Fuse:
  - < 20°C: > 3 A
  - 20°C: 3 A
  - 50°C: 2.1 A
  - 60°C: 1.8 A

Weight

- CH100: 158 g (5.5 oz)
- PS100: 3.1 kg (6.9 lb)
- PS100 Battery: 2.7 kg (5.9 lb)