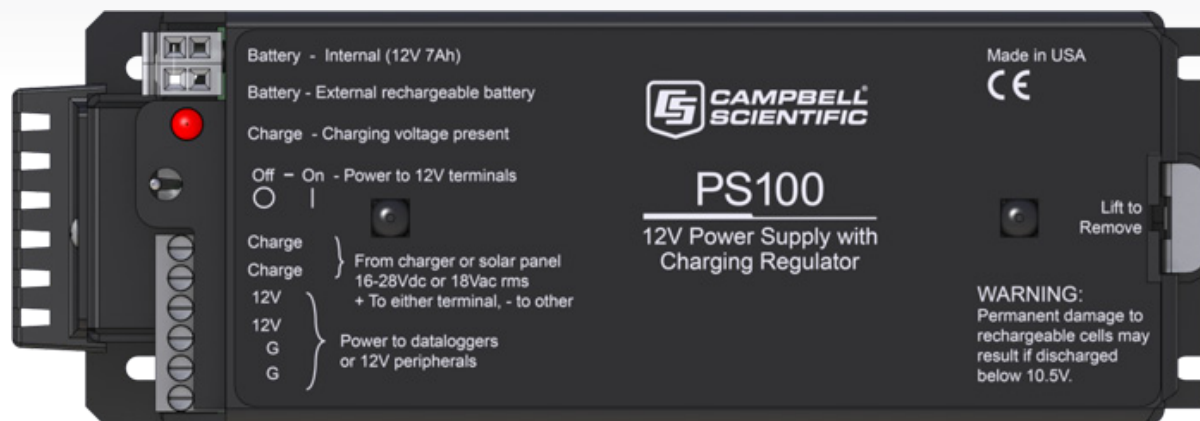




PS100 and CH100

Power Supply and Charge Controller



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.

The PS100 includes a 12 Vdc, 7 A h valve-regulated lead-acid (VRLA) battery, while the CH100 is for use with a user-supplied battery (typically the BP12 or BP24).

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

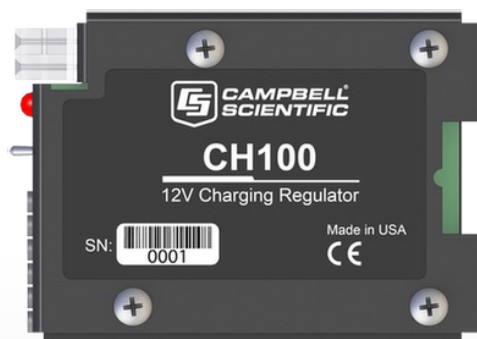
The CH100 is commonly used when a rechargeable battery is required for the application and the PS100 power supply (7 A h) does not contain enough reserve amp-hours for the power supply budget. The rechargeable battery must be capable of accepting recharge from a trickle-charge source.

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.



The circuitry of the CH100 is similar to the PS100, but the CH100 does not include a rechargeable battery.



Ordering Information

Power Supplies

- CH100** 12 V Charging Regulator
- PS100** 12 V Power Supply with Charging Regulator and 7 A h Sealed Rechargeable Battery

12 Vdc Battery Packs for CH100

- BP12** 12 A h Sealed Rechargeable Battery with Mounts
- BP24** 24 A h Sealed Rechargeable Battery with Mounts

Adapters

Only one adapter can be used at a time.

- A100** Null Modem Adapter for powering peripherals and external devices at non-datalogger sites such as repeater stations.
- A105** 12 V Terminal Expansion Adapter that increases the number of 12 V and ground terminals available on the PS100 or CH100.

Wall Chargers

- 29796** Wall Charger 24 Vdc 1.67 A Output, 100 to 240 Vac, 1A Input, 5 ft Cable. Must choose a power plug option (see below).
- 22110** Wall Charger 24 Vdc 1.67 A Output, 100 to 240 Vac, 1A Input for prewired enclosure. Must choose a power plug option (see below).

Power Plug Options (choose one)

- US** US/Canada Plug
- IP** 7 International Plugs

Unregulated Solar Panels

Regulated solar panels such as the SP10R are not recommended.

- SP10** 10 W Solar Panel with 20 ft cable
- SP10-PW** 10 W Solar Panel with 20 ft cable for prewired enclosure
- SP20** 20 W Solar Panel with 15 ft cable
- SP20-PW** 20 W Solar Panel with 15 ft cable for prewired enclosure

Specifications

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

	Height	Length	Width
PS100	10.5 cm (4.1 in)	19 cm (7.6 in)	7 cm (2.8 in)
CH100	10.2 cm (4 in)	7.0 cm (2.8 in)	3.9 cm (1.5 in)

Battery Connections

- Charging Output Voltage: Temperature compensated float charge for battery
- Temperature Compensation Range: -40° to +60°C
- 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: 1.8A

Weight

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

