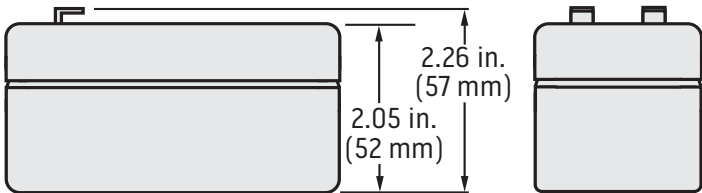
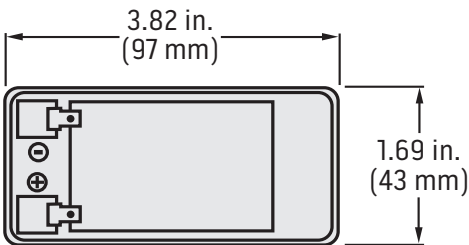




Maintenance-Free
Rechargeable Battery

Sealed Lead Acid



Specifications	
Part Number	CF-12V1.3
Weight (not to exceed)	0.57 kg (1.25 lbs)
Maximum Dimensions	Length: 97 mm (3.82 in.)
	Width: 43 mm (1.69 in.)
	Height excluding terminals: 52 mm (2.05 in.)
	Height including terminals: 57 mm (2.26 in.)
Nominal Capacity at 25°C (77°F) Voltage Readings Per Cell	20 hour rate: 0.06 A to 1.75 V, 1.2 Ah
	10 hour rate: 0.11 A to 1.75 V, 1.1 Ah
	5 hour rate: 0.21 A to 1.75 V, 1.05 Ah
	1 hour rate: 0.82 A to 1.60 V, 0.82 Ah
	0.5 hour rate: 1.5 A to 160 V, 0.75 Ah
Energy Density 20 Hour Rate	1.07 Wh/in ³
	12.48 Wh/lbs
Operating Temperature	Discharge: -51 to 60°C (-60 to 140°F)
	Charge: -18 to 49°C (0 to 120°F)
Recharging Methods	Float Charging: constant potential source of 13.5 to 13.8 V continuously
	Routine Charging: constant potential source of 14.4 to 15.0 V with charging current of 0.43 A maximum
Terminal	Standard is tin plated brass, terminals 0.030 stock x 0.187 wide, mates with Amp Faston series or equal
Case Material	ABS
Above data are average values which can be obtained within three charge/discharge cycles. These are not minimum values.	

Charging versus Temperature

The charging of Carefree batteries is best accomplished in a temperature range of 16 to 32°C (60 to 90°F). Charging within this temperature range requires no temperature compensation. For applications over a wider temperature range, charging voltage must be changed as a function of temperature. (see chart)

Capacity versus Temperature

The efficiency of the lead-acid system decreases as the temperature decreases and increases from room temperature, 25°C (77°F), as illustrated in the chart. The four curves shown are based on discharges at the 20, 5, 1½ and 1 hour rates.

Self-Discharge Characteristics

High temperature increases the rate of self-discharge of all battery systems but lead-calcium batteries are less affected. In general, the rate of self-discharge can be expected to double for each 11°C (20°F) rise in temperature above 21°C (70°F).

Battery Operating Conditions and Cautions

- Battery contains toxic material (lead) and corrosive fluid (sulfuric acid)
- Charging can produce explosive gases
- Do not charge in gas tight enclosures
- Charge battery in a well-ventilated area away from sparks, flames and smoking
- Use approved voltage controlled charger
- Do not short-circuit battery terminals, as this can cause an explosion or fire
- Keep batteries and chargers away from children
- Charge battery as soon as possible after use
- Do not store battery in discharged state
- Do not puncture, disassemble, mutilate or incinerate
- MUST BE RECYCLED OR DISPOSED OF PROPERLY

Instillation and Care

All Carefree batteries are carefully assembled and with proper charging will provide excellent service. When placing the battery into service it must be inspected to make sure that the battery has not been damaged by rough handling. If the unit has been damaged, there is a possibility of a loss of sulfuric acid electrolyte and possible corrosion of adjacent components. Any sulfuric acid can cause severe burns to the skin and eyes. If contact is made with a damaged battery, immediately wash the contacted area with water for at least five minutes. When installing the battery in equipment, ventilation must be provided. Toward the end of charge and under overcharge conditions, hydrogen and oxygen gas can be generated. If this gas is allowed to accumulate in the enclosure and a spark is introduced, an explosion could result.

