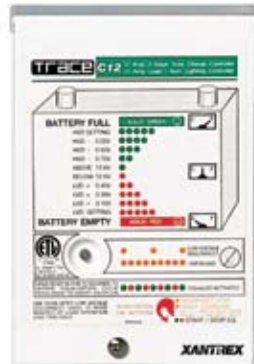


# C12 Controller

Small System Charge or Lighting or Load Controller



## Reliable Controller Technology

The C12 is the most advanced small-system solar charge, lighting, or DC load controller available on the market today. Intelligent microprocessor control and feature packed design brings unsurpassed reliability to even the smallest PV systems.

### Product Features

- ▶ The circuitry comes standard with field-adjustable low voltage disconnect and reconnect points, and a low battery disconnect warning.
- ▶ Silent, pulse width modulated (PWM), high efficiency operation.
- ▶ Easy to read, front panel status LED.
- ▶ Automatic overload protection (in both active and passive modes).
- ▶ PV array short circuit and reverse polarity protection.
- ▶ Backed by a two-year warranty.
- ▶ Optional plug-in remote temperature sensor for increased battery performance

### Solar Charge Controller Features

- ▶ Three-stage battery charging, user-definable voltage parameters, and automatic equalization.
- ▶ Selectable settings for flooded lead acid, gel, or absorbed glass mat batteries.
- ▶ 12 VDC array operation.

### As a DC Load Controller

- ▶ Low voltage disconnect warning system.
- ▶ Field adjustable set points (automatic low and high voltage disconnect).

### As an Automatic Lighting Controller

- ▶ Automatic day and night detection circuitry.
- ▶ Adjustable run duration from 2 to 8 hours or "dusk to dawn" operation.

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## Small System Charge or Lighting or Load Controller

### Electrical Specifications

<b>Maximum PV Amps</b>	12 amps at 12 VDC only
<b>Maximum DC Load</b>	12 amps with auto reset
<b>Minimum Operating Voltage</b>	6 volts
<b>Maximum Voltage Drop - PV to Battery</b>	0.3 volts
<b>Maximum Voltage Drop - Battery to DC Load</b>	0.15 volts
<b>Regulation Setting</b>	13 to 15 VDC
<b>Equalize Setting</b>	Bulk plus 1 volt for two hours
<b>Typical Consumption while Charging</b>	0.007 amps
<b>Typical Consumption at Night</b>	0.003 amps
<b>Typical Consumption with Load Disconnected</b>	0.003 amps
<b>Maximum Stranded Wire Size</b>	#10 AWG stranded (5.2 mm <sup>2</sup> )

### General Specifications

<b>Allowed Temperature Range</b>	32 °F to 104 °F (0 °C to 40 °C)
<b>Enclosure Type</b>	Powder coated steel with strain relief for wiring and knockouts for up to three ½" conduits
<b>Unit Weight</b>	2 lb (0.9 kg)
<b>Shipping Weight</b>	2.5 lb (1.13 kg)
<b>Dimensions</b>	6.25" H x 4.3" W x 1.5" D (16.5 cm H x 11 cm W x 4 cm D)
<b>Shipping Dimensions</b>	8" H x 4.6" W x 1.6" D (20.3 cm H x 11.7 cm W x 4 cm D)
<b>Mounting</b>	Vertical wall mount - indoor
<b>Warranty</b>	2 years
<b>Part Numbers</b>	C12 - charge controller BTS - optional battery temperature sensor

### Features & Options

<b>Regulation Method</b>	Standard - three-stage (bulk, absorption, and float), solid state, pulse width modulation
<b>Field Adjustable Control Setpoints</b>	Standard - removable knobs and calibrated scales
<b>Setting Protection</b>	Standard - knobs can be removed to prevent tampering
<b>Testpoints</b>	Standard - provided for each setting
<b>Automatic Equalization</b>	Standard - every 30 days or after voltage reaches low voltage disconnect - can be disabled
<b>External Battery Temperature Compensation</b>	Optional - battery temperature sensor (BTS)
<b>Short Circuit Protection</b>	Standard - fully electronically protected with auto reset and manual reset switch, protects both the loads and PV array from damage from short circuits - a fuse for the battery is still advised to protect the battery wires if located separately
<b>Reverse Polarity Protection</b>	Standard - fully protected
<b>Low Voltage Disconnect</b>	Standard - adjustable automatic or manual operation, manual reconnection includes warning flash of loads five minutes before and a ten minute grace period

### Regulatory Approvals

ETL Listed to UL 1741 No. 2 and CSA C22.2 No 14