

# C12 PWM charge controller

## PV charge, lighting and load controller

The C12 charge, lighting, or load controller is uniquely sophisticated. As a charge controller, it features three-stage charging, user definable voltage parameters, and automatic equalization. Standard in the C12's load control circuitry are field adjustable low voltage disconnect and reconnect points, along with a five minute low battery disconnect signal. The C12 also functions as a lighting controller. Lighting run time is adjustable from two to eight hours or can be set from dusk to dawn operation. It is used worldwide in a variety of applications, including remote village lighting systems and automatic outdoor lighting. An optional battery temperature sensor manages battery charging based on battery temperature.

### Why choose C12 PWM?



#### Higher return on investment

- Improve battery life with pulse width modulated (PWM) multi-stage temperature compensated charging
- Two-year standard warranty



#### Flexible

- PV charge and load controller
- Automatic lighting controller



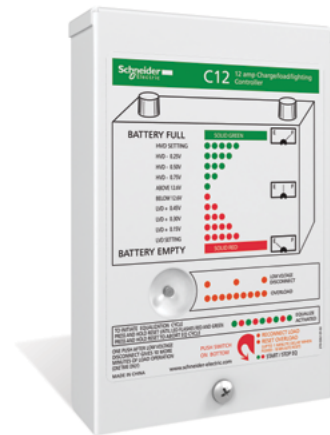
#### Easy to service

- Electronic detection of short-circuit, overload, over- temperature and reverse polarity conditions
- Tolerance to hostile environments with conformal-coated boards and powder-coated enclosure



#### Easy to install

- Field adjustable voltage and battery set points
- Automatically disconnects from the battery at night
- Compatible with negative ground and ungrounded systems



### Product applications



Residential off-grid solar

<b>Device short name</b>	<b>C12</b>
<b>Electrical specifications</b>	
Rated PV current	12 A at 12 V only
Max. DC load	12 A with auto reset
Min. operating voltage	6 V
Max. PV open circuit array voltage	25 V
Max. voltage drop (PV to battery)	0.3 V
Max. voltage drop (battery to DC load)	0.5 V
Regulation setting	13 to 15 V
Equalize setting	Bulk plus 1 volt for two hours
Max. stranded wire size	#10 AWG stranded (5.2 mm <sup>2</sup> )
Typical consumption while charging	0.007 A
Typical consumption with load disconnected	0.003 A
<b>General specifications</b>	
Power consumption, night time	0.003 A
Enclosure material	Powder coated steel with strain relief for wiring and knockouts for up to 3.5 in conduits
Product weight	0.9 kg (2.0 lb)
Shipping weight	1.1 kg (2.5 lb)
Product dimensions (H x W x D)	16.5 x 11.0 x 4.0 cm (6.5 x 4.3 x 1.6 in)
Shipping dimensions (H x W x D)	20.3 x 11.7 x 4.0 cm (8.0 x 4.6 x 1.6 in)
Device mounting	Vertical wall mount – indoor only
Ambient air temperature for operation	0°C to 40°C (32°F to 104°F)
Warranty	Two-year standard
Part number	C12
<b>Features</b>	
Regulation method	Three-stage (bulk, absorption, and float), solid state, pulse width modulation
Field adjustable control setpoints	Removable knobs and calibrated scales
Testpoints	Provided for each setting
Automatic equalization	Every 30 days or after voltage reaches low voltage disconnect – can be disabled
Short circuit detection	Auto reset and manual reset switch
Low voltage disconnect	Adjustable automatic or manual operation
<b>Options</b>	
130-0004-02-01	BTS – battery temperature sensor for increased charging precision, 7.62 m (25 ft) cable
<b>Regulatory approval</b>	
CE marked for the Low Voltage Directive and EMC Directive	

Specifications are subject to change without notice.