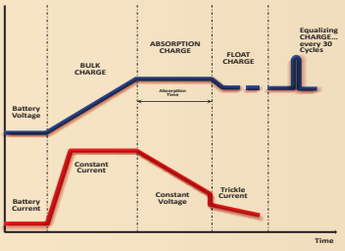
QUANTUM Power Conversions

SCC-1B75-M/ SCC-1B100M
MPPT Solar Street Light Charger

75/100Wp MPPT Charge Controller - Ideal for Solar Street Light:

This charge controller is used to charge a battery from a PV power source.
The Maximum Power Point Tracking (MPPT) algorithm is used in advanced solar charge controllers to track the peak power delivered by a solar panel and maximize the energy harvested by the panels. MPPT varies the electrical operating point of the modules and enables them to deliver maximum available power. The voltage at which PV module can produce maximum power is called 'maximum power point' (or peak power voltage).

Advantages:



QPC's Smart **MPPT Algorithm** tracks the peak power point of a solar panel, irrespective of operating conditions. This ensures power gain when compared to conventional PWM based charge controllers and thus raises the bar for high performance solar controllers. MPPT charge controllers offer a potential increase in charging efficiency up to approximately 30%.

Advance 16 Bit Microprocessor control: **QPC's Charging Technique** charges a lead acid battery using an optimized charging method that improves battery life span.

Equalize Charging: Equalizing is an controlled overcharge performed on flooded lead acid batteries periodically. It reverses the buildup of negative chemical effects like stratification. Equalizing also helps to remove sulfate crystals that might have built up on the plates. If left unchecked, this condition, called sulfation, will reduce the overall capacity and life of the battery.

Conventional PWM street light chargers do not offer the above features hence need period maintenance by external source charging.

SCC-1B75-M/ SCC-1B100-M Charger **Implements a Low Battery Disconnect** feature to prevent the battery from deep discharging below a certain charge state. It prevents the battery from deep discharge in case of long shelf life or with poor solar in monsoon seasons. The battery remains disconnected (like a floating battery) when there is no solar & no load connect.

Protection Systems:
- o Electronic protection for reverse connection of Panel or Batteryz.
- o Electronic protection for output Overload or Short circuit.
- o Battery Low protection.
- o Battery deep discharge protection.

Specifications:

- o Automatic MPPT tracking.
- o Can track multiple peak power points.
- o Diming control signal (for LED Lamps) for energy saving during non peak hours.
- o Dusk to dawn or continuous output.
- o Suitable for Lead Acid, SMF or VRLA batteries.
- o Automatic periodic equalize charging.
- o Temperature compensated charging.

Parameter	Range	
Max PV Panel Power	75Wp	100Wp
Voc	21-23V	21-23V
Conversion Algorithm	MPPT	MPPT
Charging Current @ Peak Power	5.0 Amps	7.0 Amps
Efficiency at Peak Power	94%	94%
Battery Voltage	12V	12V
Load Reconnect Voltage	12.5V	12.5V
Max Load Current During Dawn Operation	5A (25W)	5A (25W)
Charging Algorithm	CC-CV-Trickle	CC-CV-Trickle

Parameter	Range
Temperature Compensation	-4 mV/cell.K
Idle Current	- Battery Cutoff < 0.25mA (Deep Discharge)
	- No Load < 10mA (No Load, No Solar)
Indication Using LED Combination	- PV Charging, Full Charge
	- Load ON, Overload Trip, Load OFF
	- Battery Low
Protection	- Battery Low Trip
	- PV & Battery Reverse Protection
	- Overload & Short Circuit
	- Battery Deep Discharge

*Note: Specification may change as result of continuous improvement of the product. Contact factory for latest update. Picture shown may have some variation in the actual product depending on model.

Go Green!

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