

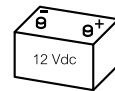
# SOLAR CHAMP

## CHARGE CONTROLLER FOR SOLAR PHOTOVOLTAIC SYSTEM

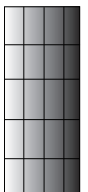


### FEATURES

- ➔ Wide input PV, tracking voltage with micro-processor controller.
- ➔ Maximum power point tracking ( MPPT ) technology.
- ➔ PWM battery charging.
- ➔ LED status display.
- ➔ Easy to install with light weight design.



Battery



Solar Panel Cell

### SPECIFICATION

|                       |  |                |
|-----------------------|--|----------------|
| Input                 | : MPPT Tracking Voltage Range ( $V_{mp}$ )     | 17 - 45Vdc     |
| Output                | : Nominal Battery Voltage                      | 12Vdc          |
|                       | : Float Charging Voltage                       | 13.7V +/- 0.2V |
|                       | : Low Battery Disconnect Voltage               | 10.6V +/- 0.2V |
| Protection            | : Short Circuit Protection                     |                |
|                       | : High Battery Voltage Protection              |                |
|                       | : Overdischarge Protection                     |                |
|                       | : Battery Reverse Polarity Protection ( FUSE ) |                |
|                       | : P.V. Reverse Polarity Protection             |                |
|                       | : Battery / P.V. Missing Connect Protection    |                |
| Construction          | : IP20 , Aluminium Housing                     |                |
| Operating Temperature | : 0 - 45°C                                     |                |
| Relative Humidity     | : 0 - 85% (non-condensing)                     |                |



### Seven Segment Status Display for Solar Champ 20A

#### Normal Mode



Full battery voltage



Low battery voltage

#### Alarm Mode



( blink ) PV Missing connet to battery terminals



( blink ) Low voltage disconnect



( blink ) Over load



( blink ) Fuse broken



( blink ) Very low battery voltage ( 11.6V )

#### Special Mode ( press micro switch )



Charging current ( A )



Load current ( A )



Battery voltage ( V )



PV voltage ( V )



Over current recorder



Fuse broken recorder



Low voltage disconnect recorder

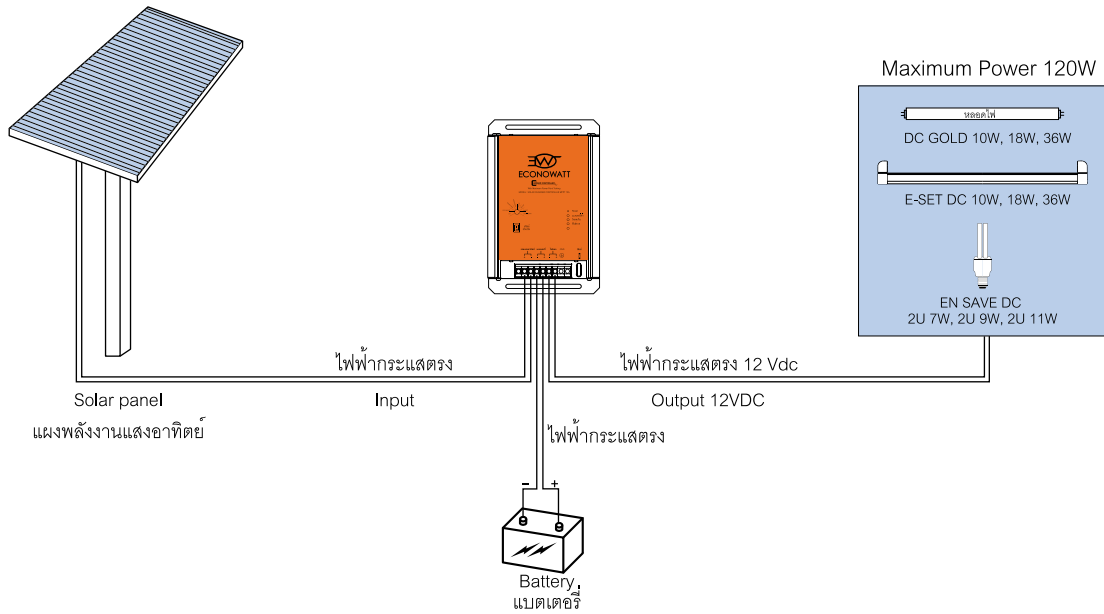
### Time Table for Solar Champ 10A

#### Option Lighting Control

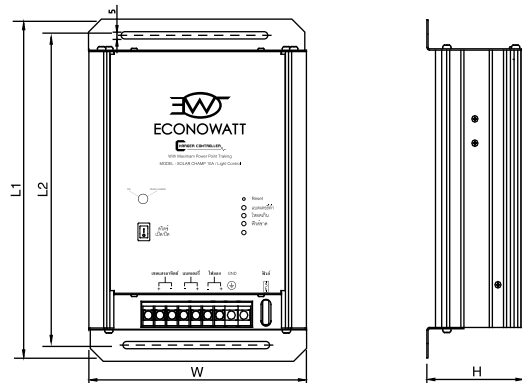
|                  | 12 Hr.     |   |   |   |   |   |         |   |   |   |   |   |
|------------------|------------|---|---|---|---|---|---------|---|---|---|---|---|
|                  | SUNSET     |   |   |   |   |   | SUNRISE |   |   |   |   |   |
| OFF              | ■          | ■ | ■ | ■ | ■ | ■ | ■       | ■ | ■ | ■ | ■ | ■ |
| OFF1 / ON5 / OFF | ■          | □ | □ | □ | □ | □ | ■       | ■ | ■ | ■ | ■ | ■ |
| ON3 / OFF7 / ON2 | □          | □ | ■ | ■ | ■ | ■ | ■       | ■ | ■ | ■ | □ | □ |
| ON2 / OFF8 / ON2 | □          | □ | ■ | ■ | ■ | ■ | ■       | ■ | ■ | ■ | □ | □ |
| ON9 / OFF        | □          | □ | □ | □ | □ | □ | ■       | ■ | ■ | ■ | ■ | ■ |
| ON7 / OFF        | □          | □ | □ | □ | □ | □ | ■       | ■ | ■ | ■ | ■ | ■ |
| ON5 / OFF        | □          | □ | □ | □ | □ | □ | ■       | ■ | ■ | ■ | ■ | ■ |
| DUSK-to-DAWN     | □          | □ | □ | □ | □ | □ | □       | □ | □ | □ | □ | □ |
| ON               | Allways on |   |   |   |   |   |         |   |   |   |   |   |



## INSTALLATION DIAGRAM



## DIMENSIONS



| Model                                   | Product Code             | Maximum Input Power | Maximum Charging Current | Over Load Charge Current Disconnect | L1 (mm) | L2 (mm) | W (mm) | H (mm) | Weight (Kg.) |
|---|--------------------------|---------------------|--------------------------|-------------------------------------|---------|---------|--------|--------|--------------|
| SOLAR CHAMP 10A<br>Option Standard      | SCIMPBS403C1210<br>00000 | 160W                | 10A                      | 12.5A +/- 2A                        | 260.0   | 239.0   | 180.0  | 80.0   | 1.50         |
| SOLAR CHAMP 10A<br>Option Light Control | SCIMPBS403C1210<br>00001 | 160W                | 10A                      | 12.5A +/- 2A                        | 260.0   | 239.0   | 180.0  | 80.0   | 1.50         |
| SOLAR CHAMP 20A                         | SCIMPBS406C1220<br>00000 | 280W                | 20A                      | 20.0A +/- 2A                        | 291.0   | 270.0   | 180.0  | 80.0   | 1.80         |

