

ECO-N-T (10 - 20 A)

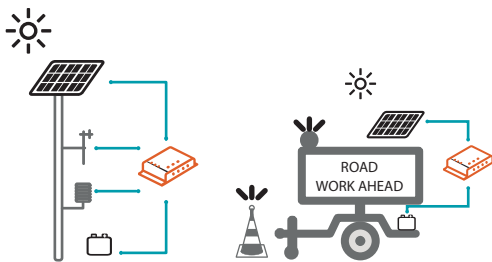
Solar Charge Controller



Tough. Simple. Flexible.

- Perfect for small PV systems
- Low voltage disconnect
- Charges 12 or 24 V batteries (Auto-Detection)
- Screw terminals
- IP68 (housing) IP21 (contacts)
- UL1741/Class 1 Div. 2 Certified

Built Tough for Harsh Environments



Phocos' ECO-N-T is the answer to all of your tough solar projects. Its small size makes it perfect to fit well in tricky places. ECO-N-T is fully encapsulated with IP68 standard casing which means it can handle harsh environments.

The ECO-N-T charge controller is versatile and offers the flexibility of operating with 12 or 24 V systems. It will also protect your batteries from overcharging and over discharging.

Robust Design

- Fully potted PCB
- Rugged housing with corrosion-resistant screw terminals

High-Efficiency Charging

- Series switching design reduces thermal stress on PV panel
- 3-Stage charging ensures charging of all battery cells and prevents sulfation

Intuitive User Interface

- Easy-to-understand 3-LED system status interface
- Install only requires a flat-head screwdriver

Flexible

- Ideal for almost any off-grid PV application
- Same model can be used in 12 or 24 V systems (fewer components to stock)

CSA C22.2 No. 213



UL1741/CSA C122.2 No. 107.1-01
Ordinary Locations



ANSI 12.12.01-2010 CSA C22.2 No. 213
Class I Div.2 Hazardous Locations

Application Examples

- SCADA Systems
- RVs
- Solar Message Boards
- Chemical Injection Pumps
- Transportation



Technical Data

| Type | ECO-N-10-T | ECO-N-20-T |
|--|--|------------|
| System voltage | 12 / 24 V (Auto Detection) | |
| Max. charge/load current | 10 A | 20 A |
| Float charge | 13.8/27.6 V (77°F/25 °C) | |
| Main charge | 14.4/28.8 V (77°F/25 °C), 0.5 h (daily) | |
| Boost charge | 14.4/28.8 V (77°F/25 °C), 2 h Activation: battery voltage < 12.3/24.6 V | |
| Deep discharge protection, Cut-off voltage | 11.0/22.0 V | |
| Load reconnect level | 12.8/25.6 V | |
| Overvoltage protection | 15.5/31 V | |
| Undervoltage protection | 10.5/21 V | |
| Max. PV panel voltage | 30/50 V | |
| Temperature compensation | -4.2 mV/K per 2V cell | |
| Idle self consumption | 4 mA | |
| Grounding | Negative Ground | |
| Ambient temperature | -40 to +140°F (-40 to +60 °C) | |
| Max. elevation | 13,000 ft (4,000 m above sea level) | |
| Battery type | Lead acid (GEL, AGM, flooded) | |
| Max. wire cross section | 8 AWG (10 mm ²) | |
| Dimensions (W x H x D) | 3.94 x 2.4 x 0.79 in (100 x 61 x 20 mm) | |
| Weight | 5.6 oz (160 g) | |
| Type of protection | IP68 (casing), IP21 (contacts) | |

Installation Diagram

