

# ECO-N-T (10 - 20 A)

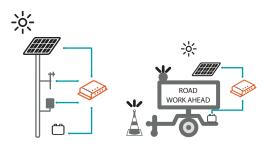
Solar Charge Controller



## 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)

### **Built Tough for Harsh Environments**



## **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)



UL1741/CSA C122.2 No. 107.1-01

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 flexibilty of operating with 12 or 24 V systems. It will also protect your batteries from overcharging and over discharging.

#### **Application Examples**

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







## **Technical Data**

Туре	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 < 12.3/2 <mark>4.6 V</mark>		
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 mm²)		
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 (cont <mark>acts)</mark>		

## **Installation Diagram**

