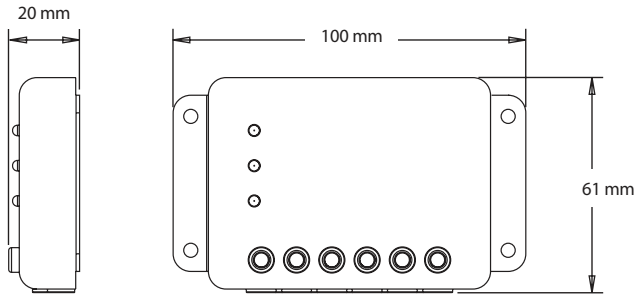
ECO-N-T Series (10-20 A)

Solar Charge Controller

Technical Drawing



Product Introduction

Phocos' ECO-N-T is a cost effective solution for many challenging solar applications. Its compact size allows it to fit well in small spaces. The industrial grade ECO-N-T is fully encapsulated, which protects the circuit board from corrosion. This unit also features UL and other certifications, proving it is a robust charge controller that will perform well in a variety of harsh environments.

The ECO-N-T is versatile and offers the flexibility of operating with 12 or 24 V systems. This reliable charge controller is simple to use, as it requires no user programming and has easy to interpret LEDs. The ECO-N-T will protect your batteries from overcharging and over discharging, making for a strong return on investment.

Product Features

- Ideal for almost any off-grid PV application
- Same model can be used in 12 or 24 V systems (fewer components to stock)
- Fully potted PCB
- Rugged housing with corrosion-resistant screw terminals
- Simple 3-LED system status interface
- Install only requires a flathead screwdriver
- UL1741/Class I Div. 2 certified

The ECO-N-T is NRTL certified
UL listed to UL1741 and CSA C22.2 No. 107.1-16.
UL listed to ANSI/ISA 12.12.01 and C22.2 No. 213-15.

E497008 Photovoltaic Charge Controller
E490503 Photovoltaic Charge Controller for use in Hazardous Locations
Class 1, Div. 2 Groups A-D

Technical Data

Type	ECO-N-10-T	ECO-N-20-T
System Voltage	12 / 24 V auto recognition	
Max. Charge/Load Current	10 A	20 A
Float Charge	13.8 / 27.6 V (25 °C)	
Main Charge	14.4 / 28.8 V (25 °C), 0.5 h daily	
Boost Charge	14.4 / 28.8 V (25 °C), 2 h activation: < 12.3 / 24.6 V	
Deep-Discharge Protection	11.0 / 22.0 V	
Overvoltage Protection	15.5 / 31.0 V	
Undervoltage Protection	10.5 / 21.0 V	
Range of Battery Voltage for Operation	9.0 to 15.5 V / 18.0 to 31.0 Vdc	
Load Output Voltage Range	11.0 to 15.5 / 22.0 to 31.0 Vdc	
Max. PV Panel Voltage	30 / 50 V	
Temperature Compensation	-25 mV/K (12 V); -50 mV/K (24 V)	
Idle Self-Consumption	4 mA	
Grounding	Common Negative	
Ambient Temperature	-40 to +60 °C	
Max. Altitude	4,000 m above sea level	
Battery Type	Lead acid (gel, AGM, flooded)	
Max. Wire Cross Section	10 mm^2 (AWG 8)	
Dimensions (WxHxD)	100 x 61 x 20 mm / 4 x 2.4 x 0.80 in	
Weight	0.16 kg / 0.35 lbs	
Ingress Protection	IP68 (case), IP21 (terminals)	
Certificates	CE compliant, RoHS compliant, UL1741 listed, ANSI/ISA 12.12.01 listed	
Warranty	5 years	