

ECO-N-MPPT (15 A)

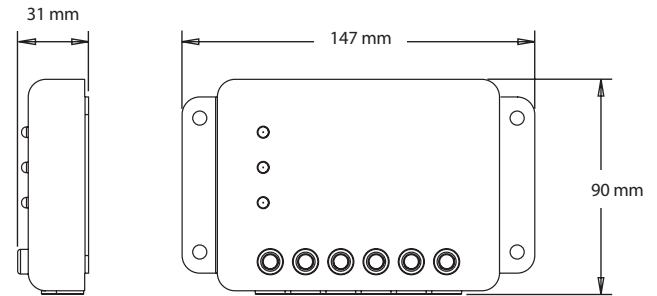
MPPT Solar Charge Controller



phocos



Technical Drawing



Product Introduction

ECO-N-MPPT is the intelligent, cost-effective choice for low-power applications that require maximum charging efficiency. Phocos' high-performance maximum power point tracking (MPPT) algorithm ensures optimal charging current from your panel/array in all conditions. This results in up to 30% higher power yield than conventional PWM charge controllers. This added efficiency paired with Phocos' precision 4-stage, temperature-compensated charge regime significantly extends battery lifespan, reducing number of battery replacements over the useable life of the system.

The encapsulated housing and corrosion-resistant wire terminals protect the ECO-N-MPPT from the harshest environments. An intuitive, 3-LED interface displays basic system status data including: charge on/off, low battery warning, high/low-voltage disconnect, and load over current/short circuit.

Product Features

- Works in 12 or 24 V battery systems (auto recognition)
- Up to 98% power-conversion efficiency
- Compact footprint fits in tight spaces
- Rugged, potted design withstands vibration, dust, insects and water ingress
- Install requires only a flathead screwdriver
- Built-in low-voltage disconnect feature
- Four-stage charging ensures maximum battery lifespan
- User-selectable battery type

Technical Data

Type	ECO-N-MPPT-15
System Voltage	12/24 V auto recognition
Max Charge/Load Current	15 A
Max. Panel Input Voltage	50/85 V
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: battery voltage <12.3/24.6 V
Equalization Charge	14.8/29.6 V (25 °C), 2 h; activation: battery voltage <12.1/24.2 V (at least every 30 days)
Deep-Discharge Protection	11.00-12.00/22.00-24.04 V (by SOC) 11.0-11.9/22.0-23.8 V (by voltage)
Reconnect Level	12.8/25.6 V
Overvoltage Protection	15.5/31.0 V
Undervoltage Protection	10.5/21.0 V
Temperature Compensation	-25 mV/K (12V); -50 mV/K (24 V)
Idle Self-Consumption	10 mA/8 mA
Grounding	Negative grounding
Ambient Temperature	-40 to +60 °C
Max. PV Input Power	250 W/500 W
Max Altitude	4,000 m above sea level
Battery Type	Lead acid (gel, AGM, flooded) LiFePO4 (selectable)
Max Wire Cross Section	16 mm ² (AWG 6)
Dimensions (WxHxD)	147 x 90 x 31 mm / 5.8 x 3.5 x 1.2 in
Weight	1.10 kg / 2.43 lbs
Ingress Protection	IP68 casing / IP21 terminals
Certificates	CE compliant, RoHS compliant
Warranty	5 years