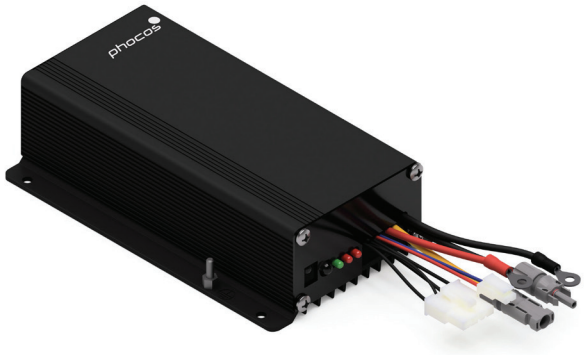
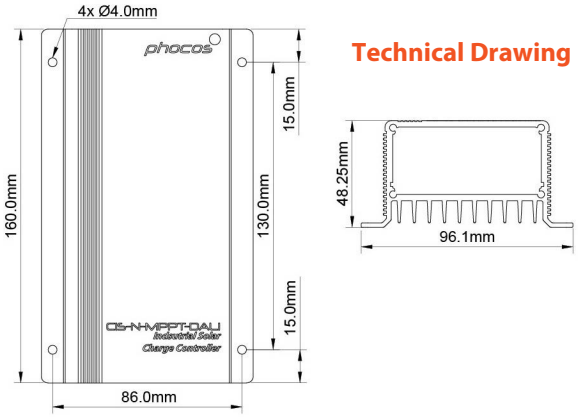
CIS-N-MPPT-DALI

Industrial MPPT Charge Controller w/DALI Lighting Control



Technical Drawing



Product Introduction

The CIS-N-MPPT-DALI is a multi-functional solar charge controller with built-in LED boost driver for solar outdoor lighting systems. Like all CIS family products, CIS-N-MPPT-DALI has been designed for the harshest industrial environments and features a rugged, fully potted (IP68) enclosure that prevents damage from dust, insect and water ingress.

The CIS-N-MPPT-DALI integrates two power converters: a Buck MPPT to charge the battery from PV panels and a Boost LED driver to power the LED engine from the battery.

Integrating DALI D4i compliance offers key advantages such as interoperability with other DALI compatible devices, precise dimming control over a wide range of dimming levels, support of extensive and scalable lighting networks.

Product Features

- LFP wake-up
- Power turn-on options from PV and Battery
- Multi-stage charge algorithm for different chemistries
- Intuitive LED user interface
- External temperature sensor
- Hybrid charge control (SSR for external AC to DC)
- Compatibility with DALI lighting control systems
- RS-485 communication interface (PhocosLink PC)
- 2 years internal datalogger
- IP68 Ingress Protection

Driver Data

Type	CIS-N-MPPT-DALI 85/20
Output Voltage	15-55 V (12 V), 30-55 V (24 V)
Nominal Output Current per String	350 - 3,500 mA
Max. Load Power	120 W (12 V) / 180 W (24 V)
Dimming Level	0-100 % (1.7 % steps), PWM

Technical Data

Type	CIS-N-MPPT-DALI 85/15
System Voltage	12 / 24 V auto recognition
Max. Charge Current	15A
Max. Load Current	5 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: 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	11.5-12.0 / 23.0-24.0 V (by SOC) 11.0-12.0 / 22.0-24.0 V (by voltage)
Reconnect Level	12.8 / 25.6 V
Overvoltage Protection	15.5 / 31.0 V
Undervoltage Protection	10.5 / 21.0 V
Max. PV Panel Voltage	85 V
Max. Usable PV Power	225 W / 450 W
Max. PV Array Power	250 Wp / 500 Wp
Temperature Compensation	-25 mV/K (12 V); -50 mV/K (24 V)
Idle Self-Consumption	<30 mA
Grounding	Common Negative
Ambient Temperature	-40 to +60 °C
Battery Type	Lead acid (gel, AGM, flooded) adjustable, Lithium, LFP
Datalogger	2 years
Wire Cross Section	2.5 mm² (AWG 13)
Dimensions (WxHxD)	160 x 96.1 x 48.25 mm / 6.3 x 3.78 x 1.9 in
Weight	<2 kg / <4.4 lbs
Ingress Protection	IP68 (1.5 m, 72 h)
Certificates	CE compliant, RoHS compliant, DALI D4i compliant
Warranty	5 years