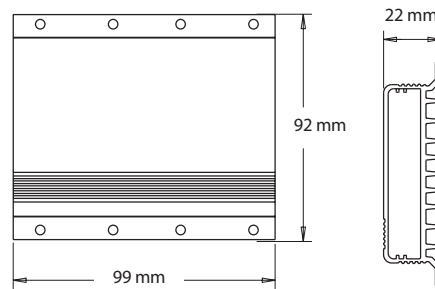


PHOCOS CIS-N-LED (10-20 A)

Solar Charge Controller w/ integrated LED Driver



Technical Drawing



Product Introduction

The CIS-N-LED is a 3-in-1 solution that increases lifetime, reliability, efficiency and cost effectiveness. It is the perfect charge controller for solar lighting applications such as streetlights or bus shelters, and its motion sensor interface capabilities regulate LED brightness to conserve energy.

To further conserve energy and extend the system's lifetime, the CIS-N-LED has two low voltage disconnect levels. The levels can be programmed using one of Phocos' handheld remote control accessories; the CIS-CU or the MXI-IR and our free CISCOM PC software.

Product Features

- Combines 3 functions in one: charge controller + flexible timer + LED driver
- Developed especially for rough environments, solar LED lamps, and solar LED streetlights
- Flexible dimming functions
- Input for motion detector (PIR)
- Small size: fits everywhere
- LiFePO4 available through CISCOM software
- True color PWM dimming
- Fully protected by the encapsulated case, which increases lifetime and reliability and reduces costs
- Auto-protection function: two low-voltage disconnects extend system operation time and reliability
- Infrared-programmable load timing feature + dimming is ideal for lighting systems
- IP68

LED Driver Data

Type	1050 mA	1400 mA	2800 mA
Output Voltage	15-49 V for 12 V system (5-15 LEDs in series), 30-49 V for 24 V system (10-15 LEDs in series)		
Nominal Output Current Per String	1050 mA	1400 mA	2800 mA
Max. Load Power	45 W	60 W	60 W (12 V)/120 W (24 V)
Dimming Level	0 – 100% (adjust step 10%)		
PIR Input	4 – 30 V with respect to battery negative, >= 0.7 mA; limited protection up to 50 V		

Optional Accessories

MXI-IR

- Infrared to USB programming accessory and interface to CISCOM software

CIS-CU

- Infrared remote control programming accessory

Technical Data

Type	CIS-N-LED-1050	CIS-N-LED-1400	CIS-N-LED-2800
System Voltage	12/24 V auto recognition		
Max. Charge Current	20 A (30 A, ≤ 50 °C*)		
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	11.00-12.02/22.00-24.04 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		
Max. Panel Voltage	30/50 V		
Temperature Compensation	-25 mV/K (12 V); -50 mV/K (24 V)		
Idle Self-Consumption	5-8 mA		
Grounding	Negative grounded		
Ambient Temperature	-40 to +60 °C		
Max. Altitude	4,000 m above sea level		
Battery Type	Lead acid (gel, AGM, flooded), LiFePO4 adjustable		
Wire Cross Section	2.5 mm ² (AWG 13)		
Dimensions (WxHxD)	92 x 99 x 22 mm / 3.6 x 4 x 1 in		
Weight	0.25 kg / 0.55 lbs		
Ingress Protection	IP68 (1.5 m, 72 h)		
Certificates	CE compliant, RoHS compliant		
Warranty	5 years		

* Without simultaneous LED output current at a maximum ambient temperature of 50 °C. Please note: The CIS-N-LED features an integrated over-temperature protection that will reduce the average charge current in case of too high temperatures.