

CIS-MPPT (10 - 20 A)

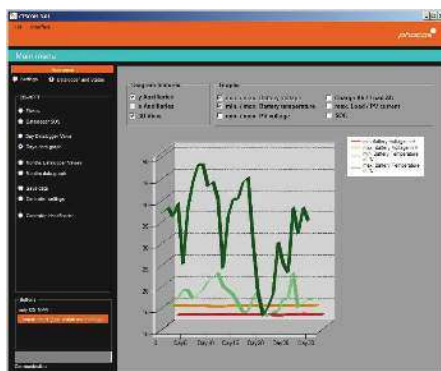
Industrial Solar Charge Controller with Maximum Power Point Tracking Technology



Tough. Powerful. Intelligent.

- Smallest size in its power class
- Water, dust & insect proof design
- Optional light timer and dimming functions
- 2 year datalogging memory
- Compatible with 60-cell modules

Optimize your PV system with CISCOM



Phocos' innovative MPPT technology yields up to 30% more energy than PWM controllers. In addition, our signature **Power+**™ current limiter allows for oversizing PV power by up to 50% for winter months without damage in summer months.

The CIS-MPPT controllers are optimized to work with 60-cell modules. They ensure maximum performance and yield from all types of PV systems year-round and in any environment.

Phocos' CIS-MPPT controllers are equipped with 2 year datalogging memory.

Innovative Design

- Infrared-programmable load timing feature with dimming ideal for lighting systems
- 2-Year log of system performance data accessible via MXI-IR accessory, PC software (CISCOM)

Maximum Efficiency Charging

- Up to 98% power conversion efficiency
- 3-stage I/U curve sweep algorithm increases battery lifespan

Rugged Construction

- Anodized aluminum extrusion with built-in heat dissipation
- Fully encapsulated design prevents damage from corrosion, insects and/or dust.

Flexible

- Works in 12 or 24V battery systems (automatic battery voltage detection)
- Compatible with 60-cell modules

Application Examples

- SCADA Systems
- RVs
- Solar Message Boards
- Solar Lighting
- Security/Surveillance
- Wifi/Repeater Stations
- Transportation



Technical Data

Type	CIS-MPPT 85/20		CIS-MPPT 50/10	
System voltage	12/24 V (Auto detection)			
Max. charge current/load current	20 A		10 A	
Max. PV input power	250 W at 12 V, 500 W at 24 V		150 W at 12 V, 300 W at 24 V	
Float charge	13.8/27.6 V (77 °F/25 °C)			
Main charge	14.4/28.8 V (77 °F/25 °C), 30 min. (daily)			
Boost charge	14.4/28.8 V (77 °F/25 °C), 2 h Activation: battery voltage < 12.3/24.6 V			
Equalization	14.8/29.6 V (77 °F/25 °C), 2 h Activation: battery voltage < 12.1/24.2 V (at least every 30 days)			
Deep discharge protection:				
Cut-off voltage	11 – 12 V/22 – 24 V			
Reconnect level	12.8/25.6 V			
Overvoltage protection	15.5/31.0 V			
Undervoltage protection	10.5/21.0 V			
Max. PV voltage	85 V		50 V	
Min. PV voltage	17/34 V			
Temperature compensation (Charge voltage)	–4.2 mV/K per 2 V cell		–4.2 mV/K per 2 V cell	
Idle self consumption	15 mA at 12 V 8 mA at 24 V		< 10 mA	
Grounding	Negative grounding		Positive grounding	
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), adjustable			
Load Adjustment range:				
Evening and Morning hours	0-15h (Evening), 0-14h (Morning)			
Night detection	2.5 – 10 V / 5.0 – 20.0 V (adjust step 0.5/1.0 V)			
Day detection	Night detection + 1.5 V/3.0 V			
Data logger	2 years			
Connection wire length	20 cm			
Dimensions (W x H x D)	5.1 x 5.9 x 1.8 in/130 x 150 x 45 mm		3.5 x 4.4 x 1.6 in/88.5 x 112 x 41.4 mm	
Weight	2 lbs 5 oz/1,050 g		1 lbs 6 oz/625 g	
Wire cross section	14 AWG/2.5 mm ²			
Type of protection	IP68 (1.5 m water depth, 72 h)			

Technical data dimming output	CIS-MPPT 85/20		CIS-MPPT 50/10	
Dimming value	0 – 100% output power (adjust step 10%)			
Dimming output voltage	0 – 10 V relative to battery minus			
Impedance	1,000 Ohm			

Available Accessories



CIS-CU
Infrared programming
remote for CIS series
controllers



MIXI-IR
Infrared to USB
programming accessory
for CIS series controllers
Interface to CISCOM
software



CIS-CU-LCD
Infrared programming
remote for CIS series
controllers



CIS-DR
12/24 V
Buck/Boost LED Driver
350-2800 mA versions
Max LED Vf: 54 V