

CIS

Industrial Solar Charge Controller



- Robust Aluminum Housing
- Epoxy Encapsulated PCB to Prevent Corrosion (IP68)
- Compact Size
- Infrared Remote Control Programming Accessory (CU)
- Intelligent Timer Functions
- Widely Programmable
- External Temperature Sensor (Optional)
- 4 Stage Battery Charging (Main, Float, Boost, Equalization)
- Dual load or Dimmable Load Output
- Automatic System Voltage Recognition (12 V/24 V)

PV-Systems exposed to extreme weather/environmental conditions (street lights, navigation buoys, etc.) have increased risk for damage in the power electronics. In order to assure reliable battery charge control under such conditions, Phocos developed an encapsulated charge controller (IP68) to prevent corrosion: CIS.

CIS is an industrial-grade charge controller that is suitable for all practical PV applications. High-quality, 4-stage PWM-charging is combined with amazing features such as: low-voltage disconnect, flexible load timer functions, and a multi-LED system status display. CIS is available in two versions:

- Dual load to independently control two loads
- Output Dimming to save energy in lighting applications

The CIS has no moving parts, switches or buttons. Settings such as battery type, deep discharge thresholds, timers, etc. are made quickly and easily via infrared remote control accessory.

All devices are connected to the controller by supplied lead wires rather than wire terminals. This feature eliminates the risk of damage from external influences (corrosion, dust, water, bugs, chemicals, physical shock) where components make electrical contact to the controller.

The extremely compact aluminum housing even allows for mounting CIS inside street light poles. CIS was developed in accordance with well-established Phocos standards incorporating the latest technology, highest-quality and best possible cost/performance ratio.



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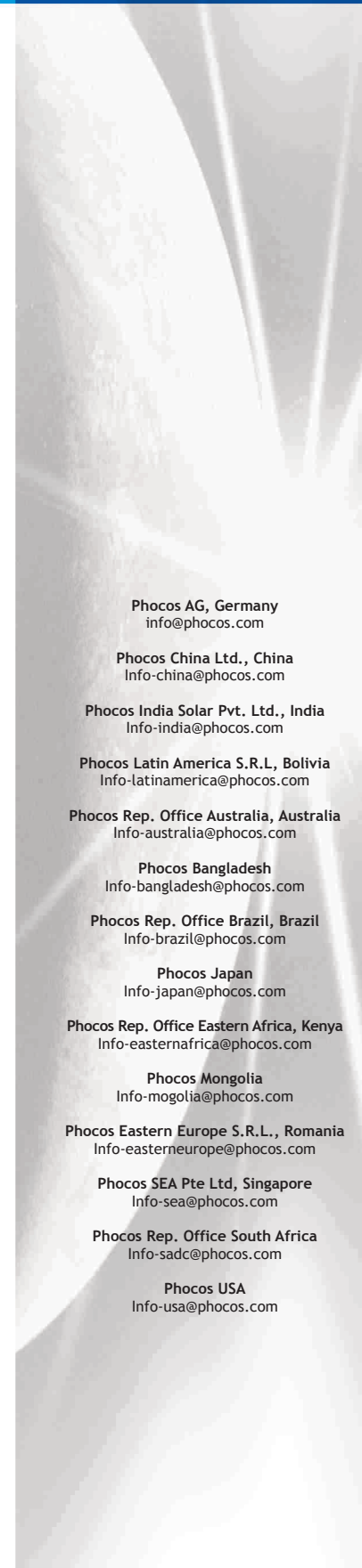
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TYPE	CIS XX	CIS XX 2L
Nominal voltage	12 V/24 V automatic recognition	12 V/24 V automatic recognition
Max. Charge / Load Current	5 A , 10 A , 20 A	5 A , 10 A , 20 A
Float Voltage	13,8/27,6 V (25 °C)	13,8/27,6 V (25 °C)
Boost Voltage	14,4/28,8 V (25 °C), 2h	14,4/28,8 V (25 °C), 2h
Boost Cycle Activation	If battery voltage goes below 12.3 V / 24.6 V	If battery voltage goes below 12.3 V / 24.6 V
Equalization Voltage	14,8/29,6 V (25 °C), 2h	14,8/29,6 V (25 °C), 2h
Equalization Cycle Activation	If battery voltage goes below 12.1 V / 24.2 V	If battery voltage goes below 12.1 V / 24.2 V
Additional Equalization	Every 30 days	Every 30 days
Load Disconnect Voltage	11,00 - 12,02 V/22,00 - 24,04 V	11,00 - 12,02 V/22,00 - 24,04 V
Load Reconnect Voltage	12,8V / 25,6 V	12,8V / 25,6 V
High Voltage Disconnect	15,5 V / 31,0 V	15,5 V / 31,0 V
Emergency Switch Off	< 10,5V / 21 V	< 10,5V / 21 V
Max. Solar Voltage	55 V, by varistor	55 V, by varistor
Temperature Compensation	-4,2 mV/K per cell	-4,2 mV/K per cell
Max. Self Consumption	5 mA - 8 mA / 6 mA - 10 mA	5 mA - 8 mA / 6 mA - 10 mA
Ambient Temperature range	-40 °C to + 60 °C	-40 °C to + 60 °C
Max Altitude	4000 m	4000 m
Battery Type	Sealed, Flooded	Sealed, Flooded
Evening/Morning Hours range	0 - 15 Hours / 0 - 14 Hours	0 - 15 Hours / 0 - 14 Hours
Night/Day Detect range	2,5 - 10 V	2,5 - 10 V
Dimensions	82 mm X 58 mm X 20 mm	82 mm X 58 mm X 20 mm
Weight	150 gr.	150 gr.
Wire size	1.5 mm ² for 5 A/10 A 2.5 mm ² for 20 A	1.5 mm ² for 5 A/10 A 2.5 mm ² for 20 A
Type of protection	IP68 (1,5 m, 72 h)	IP68 (1,5 m, 72 h)
Dim Output Specifications		
Dimming Value	0 -- 100% output power	N/A
Dimming Terminal Output Voltage	0 - 5 V	N/A
Dimming Terminal Output Current	< 1 mA	N/A



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