



CIS-DR Series

Industrial LED Driver



CIS-DR Series (0.35 – 2.8 A)

Will drive all standard industry LED blocks

Perfect for

- Solar streetlights and traffic lights
- Message boards and billboards
- Solar airfield lighting
- Navigation buoys and nautical lanterns
- Security systems



Product Introduction



- The CIS-DR is available in three models: low current (LC), medium current (MC), and high current (HC); each model has three selectable current capacities (in 350 mA steps) to choose from, allowing LED strings in a wide range of currents and voltages (3 - 54 V) to be powered.
- Integrated analog and PWM dimming inputs are valuable functions of the CIS-DR driver, allowing controlled linear LED or PWM dimming in order to experience true color.
- An external temperature sensor limits the maximum operating temperature of the LED block, thereby extending its lifetime.
- Suitable for installation and use in almost all environments due to the water-resistant, encapsulated housing (IP67).

Low Current

CIS-DR-LC
350 / 550 / 700 mA



Medium Current

CIS-DR-MC
1050 / 1400 / 1750 mA



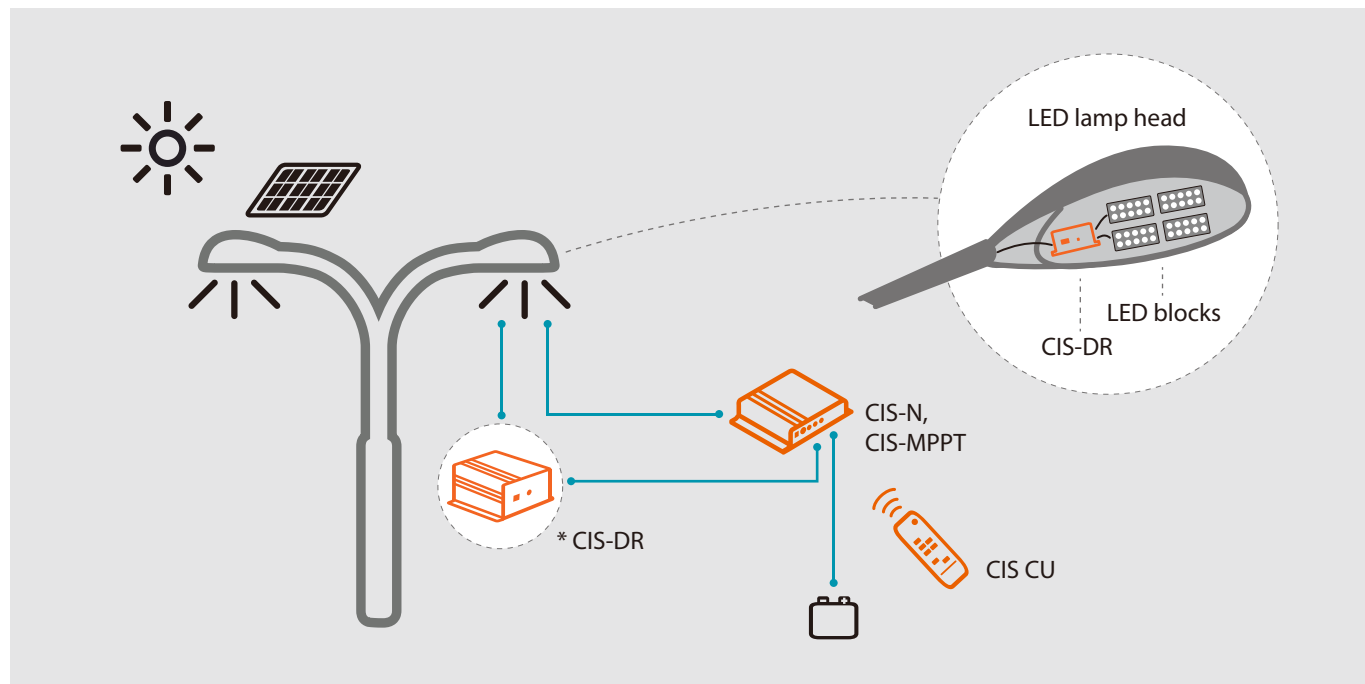
High Current

CIS-DR-HC
2100 / 2450 / 2800 mA



System Drawing

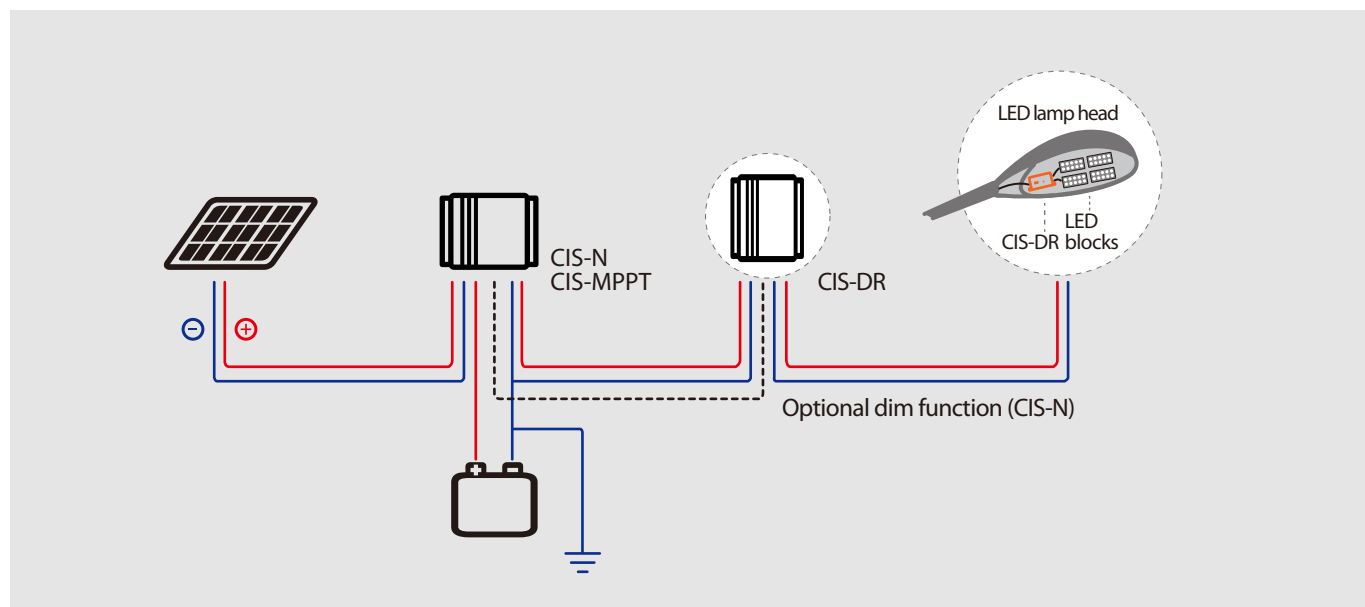
LED Driver in Solar Street Light Applications



* The CIS-DR drives LED strings over a wide voltage range (3-54 V).

System Drawing

Wiring



Technical Data

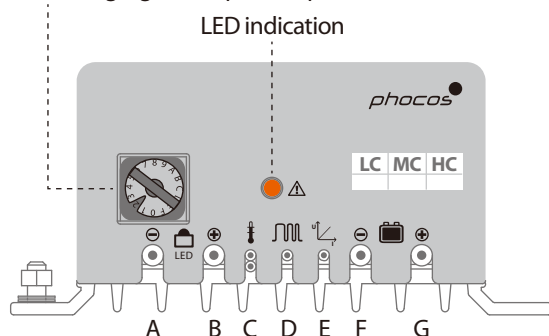
Type	CIS-DR-LC	CIS-DR-MC	CIS-DR-HC
System voltage	12 / 24 V auto recognition		
Max. input current	6.5 A (internal limited)		
Max. output current	350, 550, 700 mA	1050, 1400, 1750 mA	2100, 2450, 2800 mA
Max. output voltage	54 V		
Deep discharge protection:			
LVD level	10 V for 12 V systems; 20 V for 24 V system		
Reconnect voltage level	12.8 V for 12 V system; 25.6 V for 24 V system		
Max. input supply voltage	35 V (12 or 24 V systems)		
Self consumption	9 mA at 12 V / 9 mA at 24 V		
Grounding	Negative grounding		
Temperature range:			
Storage temperature	-40 to +60 °C		
Operating temperature	-40 to +50 °C		
Max. altitude	4,000 m above sea level		
Battery type	Lead acid (GEL, AGM, flooded)		
Length of conductors	50 cm		
Dimensions (W x H x D)	41.4 x 88.5 x 112 mm		
Weight	625 g		
Wire cross section	LED string: 1.5 mm ² , dimm control: 0.6 mm ² , power supply: 2.5 mm ²		
Type of protection	IP67		
Technical data dimming input	CIS-DR-LC	CIS-DR-MC	CIS-DR-HC
Dimming options	Linear, PWM		
PWM dimming input control voltage	Voltage range: 2 – 5 V; PWM frequency range: 100 – 600 Hz		
Linear input voltage range	0 - 10 V		
Input current	0 - 100 µA		
Technical data dimming output	CIS-DR-LC	CIS-DR-MC	CIS-DR-HC
Dimming options	Linear (high efficient), PWM (true-color-dimming) 400 Hz		

LED temperature compensation:

External temperature sensor enables CIS-DR to measure LED temperature. At temperatures over 80°C, CIS-DR reduces LED current by 10% per 1°C.

Connection

Rotary switch:
For changing dim input/output.



Cable	Function	Diameter / Cross section	Colour
A	Negative wire LED-output	1.5 mm ²	blue
B	Positive wire LED-output	1.5 mm ²	yellow
C	Temperature sensor for LED	Twin wire with sheet metal attachment fixtures	black
D	PWM-dim input	0.6 mm	white
E	Analog-dim input	0.6 mm	red
F	Negative terminal battery / load output charge controller	2.5 mm ²	black
G	Positive terminal battery / load output charge controller	2.5 mm ²	red

CIS Series

The CIS-DR Series Fits Perfect to the Charge Controller Series CIS-N (5-20 A) and CIS-MPPT (20 A)

CIS-N Series



Due to its superior performance, the latest member of the Phocos CIS charge controller family, the CIS-N, has proven to be a successful product. With its fully encapsulated housing and high protection class (IP68), it is ideal for applications in demanding environments such as in the oil and gas industry (e.g. remote monitoring, weather stations, valve control, SCADA) and for installations that require negative grounding.

Type	CIS-N 05 / CIS-N 05 2L	CIS-N 10 / CIS-N 10 2L	CIS-N 20 / CIS-N 20 2L
System voltage	12 / 24 V auto recognition		
Max. charge current	5 A	10 A	20 A
Float charge	13.8 / 27.6 V (25 °C)		
Main charge	14.4 / 28.8 V (25 °C), 30 min. (daily)		
Boost charge	14.4 / 28.8 V (25 °C), 2 h Activation: battery voltage < 12.3 / 24.6 V		
Equalization	14.8 / 29.6 V (25 °C), 2 h Activation: battery voltage < 12.1 / 24.2 V (at least every 30 days)		

CIS-MPPT Series



The outstanding performance of the CIS-MPPT is ensured by its integrated Maximum Power Point Tracking technology, which improves yield from all solar systems in all environments. The use of MPPT technology can provide up to a 30% energy boost from PV modules while, at the same time, extending battery lifespan via a temperature-compensated, three-stage I-U curve charge control algorithm.

Type	CIS-MPPT
System voltage	12 / 24 V auto recognition
Max. charge current	20 A
Max. PV input power	250 W@12 V, 500 W@24 V
Float charge	13.8 / 27.6 V (25 °C)
Main charge	14.4 / 28.8 V (25 °C), 30 min. (daily)
Boost charge	14.4 / 28.8 V (25 °C), 2 h Activation: battery voltage < 12.3 / 24.6 V
Equalization	14.8 / 29.6 V (25 °C), 2 h Activation: battery voltage < 12.1 / 24.2 V (at least every 30 days)



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