

## PWM Solar Charge Controller

CL Series 10-60A



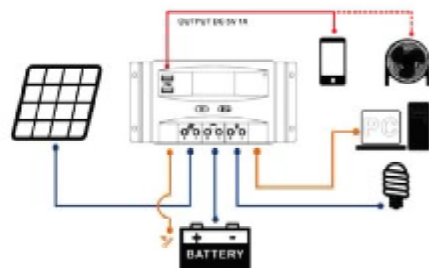
### CL series 10A/20A 12V24V



### Introduction:

Our CL series is an economical and traditional PWM solar controller. It can not only extend the service life of battery, but also provide necessary protection over the whole system. We own its outlook design patent. The double buttons and LCD screen show you the working parameters of the whole system, clear and understandable. This series is widely applied in solar home system, traffic signal, solar lighting system etc.

### Installation:



## Features

- Automatic identification system voltage, 12/24V auto recognition.
- Humanized LCD displaying and double button operation of man-machine interface.
- Completed technical data for setup and modify.
- High efficiency intelligent PWM 4 stage charging.
- The load control mode can be selected, the timer function can be reset for street light at night.
- Discharge counter of Ampere hour.
- Reliable over voltage protection, short circuit protection, over load protection, over charge protection, over-discharge protection.

## Technical Data

Model	CL12/24-10DU	CL12/24-20DU
Input		
PV input voltage	≤50V	
Rated charge current	10A	20A
Output		
System voltage	12V/24V Auto	
Battery over-voltage protection voltage	16.00V × 1/ × 2/ × 3/ × 4 (0.5V different)	
Rated discharge current	10A	20A
Self-consumption	10.5mA (12V), 12.5mA (24V)	≈13mA (12V) ≈16mA (24V)
Charge loop voltage drop	≤0.3V	≤0.21V
Discharge loop voltage drop	≤0.16V	≈0.1V
Charging mode	PWM 4 stages (bulk, absorption, float, equalized)	
Float Charge Voltage	13.8(13V-15V) × 1/ × 2/ × 3/ × 4	
Absorption charge voltage	14.4V(13V-15V) × 1/ × 2/ × 3/ × 4	
Duration of Absorption Charge	2h	
Voltage of equalized charging *	14.6V(13V-15.5V) × 1/ × 2/ × 3/ × 4	
Duration of equalized charging	2h	
Low voltage disconnection	10.7V(10V-14V) × 1/ × 2/ × 3/ × 4	
Low voltage reconnection	12.6V(10V-14V) × 1/ × 2/ × 3/ × 4	
Load working mode	Regular control mode, Light control with switch-off point at night and switch-on point before dawn, Light control mode	
Light control voltage	5V(1V-10V) × 1/ × 2/ × 3/ × 4	
Battery type	GEL,SLD,FLD USr (default)	
USB port	5V1A	
Other		
Interface	LCD, 2 buttons	
Wiring	PCB terminal, ≈10mm <sup>2</sup>	
Working temperature	-20 ~ +55 °C	
Storage temperature	-30 ~ +65 °C	
Working humidity	10% ~ 90%, no condensation	
Dimension	160*88*42.5mm	
Weight	290g	355g
IP code	IP30	
Optional function	Remote communication, TTL, standard ModBus protocol	

ISO9001:2015 RoHS CE E6