

MCV10 / 20 (10A / 20A)

MPPT Solar Charge Controller + IRDA Remote Control



Features:

- ▲ MPPT efficiency $\geq 99.9\%$.
- ▲ Parameter could be set and viewed through Wireless infrared communication.
- ▲ 3 stage charge: MPPT charge, Equalization charge and float charge.
- ▲ Battery charge efficiency is up to 96% by Synchronous rectification.
- ▲ Self Consumption $\leq 4\text{mA}$
- ▲ Protect function: reverse polarity (battery or solar panel), over-charge, over-discharge, over load, short circuit, TVS lightening
- ▲ Waterproof Degree: IP68.
- ▲ Use Non-aluminum electrolytic capacitor, extend life time to 25years.
- ▲ Battery type: Lead-acid battery, Lithium battery.

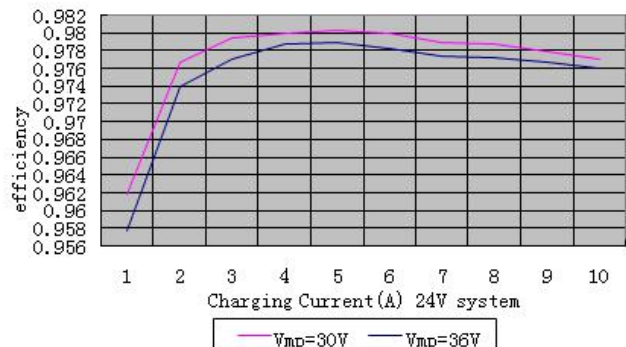
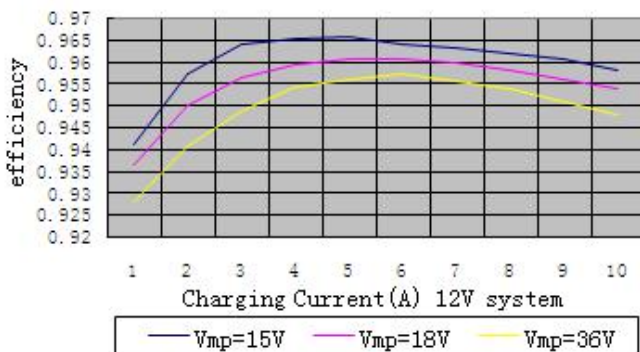
This controller design for solar LED lamp system, solar street light system, solar monitoring system etc.

- MPPT efficiency $\geq 99.9\%$, system efficiency is up to 98%, Maximizes solar panel power output & reduces system costs.
- Infrared wireless communications connect with a hand-held remote control easy for installation.
- Intelligent energy management of battery ensures that the battery charge & discharge in shallow state which significantly extend the battery life.

Technical Parameters:

Model NO.	MCV10	MCV20
System Voltage	12/24 V auto recognition	
Max. Charge/Load Current	10A	20A
Max. PV Power	150/300W	300/600W
Max. PV Voltage	55V	100V
Float Charge	13.8V/27.6V(25°C)	
MPPT Charge	≤14.4(12V), ≤28.8(24V)	
Max. Tracking Range	15≤Vp≤45(12V); 30≤Vp≤45(24V)	15≤Vp≤75(12V); 30≤Vp≤75(24V)
Equalization Charge	14.4/28.8 V (25°C), 2 h	
Discharge Protection: Cut-off voltage	11V/22V	
Discharge Protection: Reconnect voltage	12V/24V	
Over-voltage Protection	16V/32V	
Temperature compensation	-4mV/°C·2V	
Max. Self-consumption	≤ 18mA(12V); ≤ 10mA(24V)	
Night/day Detection Delay Time	1min	
Overload and Short-circuit Protection	Overload: ≥1.2 times rated current and last 20 seconds; ≥1.5 times rated current and last 3 seconds; Short-circuit: ≥2.5 times rated current.	
Grounding	Positive grounding possible	
Working Temperature	-40 ~ +55°C	
Maximum above sea level	4,000 m above sea level	
Dimension (L*W*H)	130*82*20 mm	182*94*48 mm
Wire Cross Section	2.5mm ²	
Weight	0.35KG	1.2KG
Protection Grade	IP68 (1.5 m, 72 h)	

MPPT Efficiency:



Monitor display:

MPPT Solar charger & constant current driver

Total Generation : 17 Wh
Total Run time : 0D00H06M40S

PV Voltage : 17.5V

Status : MPPT Charge
Alarm : NULL
Fault : NULL

Driving voltage : 0.0V
Driving current : 0.0mA
Driving power : 0.0W

Battery voltage : 12.94V
Charging current : 7.8 A
Charging power : 98.7 W
Ambient temp. : 33.1 °C

Buttons: Power Generation, Parameter Setting

Historical Generation

Real-time power(W) Last 30 days(Wh) Last 12 months(kWh)

Power Curve

Version : M102D906P100G101C102 Device ID : FFFFFFFF Loading power success.

MPPT Solar charger & constant current driver

Total Generation : 18 Wh
Total Run time : 0D00H06M55S

Parameter Setting

Name	Setting	Current	Unit
PV Vol@LED On :	10.0		V
PV Vol@LED Off :	12.0		V
Irradiancy :	100	100	%

Name	Setting	Current	Unit
Battery type :	0:Lead-acid		0:Lead-acid -
Equalizing charge :	14.40	14.40	V
Floating charge :	13.60	13.60	V
Under voltage :	11.00	11.00	V
Recovery voltage :	12.00	12.00	V
Energy management :	0:Disable		0:Disable -
Temp. compensation :	4.00	4.00	-mV/2V/°C

Name	Setting	Current	Unit
Driving current :	600	600	mA
Time interval 1 :	3.00	3.00	h
Current 1 percentage :	100	100	%
Time interval 2 :	3.00	3.00	h
Current 2 percentage :	50	50	%
Time interval 3 :	3.00	3.00	h
Current 3 percentage :	30	30	%

Buttons: Save, Load, EasySetup

Version : M102D906P100G101C102 Device ID : FFFFFFFF Loading power success.

MPPT Solar charger & constant current driver

Total Generation : 19 Wh
Total Run time : 0D00H09M28S

PV Voltage : 0.2V

Status : Const Current Driver
Alarm : NULL
Fault : NULL

Driving voltage : 26.3V
Driving current : 593.8mA
Driving power : 15.6W

Battery voltage : 12.33V
Charging current : 0.0 A
Charging power : 0.0 W
Ambient temp. : 33.3 °C

Buttons: Power Generation, Parameter Setting

Version : M102D906P100G101C102 Device ID : FFFFFFFF Loading power success.