



MPPT Solar Charge Controller VCM Series



Introduction

Models: VCM Series 40A/50A/60A/80A/100A/120A (12V/24V/48V or 48V/72V/96V Auto Detect)
VCM Series Solar MPPT Charge Controller is with advanced MPPT technology, which tracks the maximum power point of PV array exactly and quickly in any condition. Obtain Max power from solar panels anytime, increasing the charging efficiency of the solar panels. It is 25%-30% higher efficiency than the traditional controller. With intelligent functions and friendly to users.

Features

1. Using advanced MPPT technology, MPPT conversion efficiency up to 99%.
2. 12v/24v/36v/48v or 48V/72V/96V system automatic recognition, users can use it in different system conveniently
3. Compatible with sealed lead Acid/Gel/Nicd/Lifepo4 lithium battery (Others types of batteries also can be defined)
4. Range from 40A-120A(12V/24/36V/48V), 40A-120A(48V/72V/96V)
5. Wide range of PV input with max. Is DC170V(12V-48V) and DC230V(48V-96V)
6. Charge mode: three stages (fast charge, constant charge, floating charge). It prolongs the service life of the batteries.
7. Smart fans cooling, better to protect and longer lifetime
8. Memory function, Save function set, Date, time, Generating capacity, and so on.
9. Real-time energy statistics function. Most information could be provided by Intelligent LCD and LED like PV input voltage, battery type, battery voltage, charging current, charging power, working status, and so on.
10. Perfect wide protections including low voltage, over-voltage, short circuit, overload, and over-temperature, etc.
11. Monitoring your system on-line via RS485 communication (Optional)
12. Adopting imported well-known brand of new and original main components, meet EU standard, better and stable long-term performance
13. Compliance with the 2002/95/EC environment protecting demand, doesn't include the Cadmium, hydride and fluoride etc material
14. Easily to install and friendly to the users



Technical Details

Model (VCM-48** is 12-48V, VCM-96** is 48-96V)		VCM-4840/ VCM-9640	VCM-4850/ VCM-9650	VCM-4860/ VCM-9660	VCM-4880/ VCM-9680	VCM-48100/ VCM-96100	VCM-48120/ VCM-96120
Rated Current		40A	50A	60A	80A	100A	120A
System Voltage		Auto Detec: 12V/24V/36V/48V or 48V/72V/96V					
Charge Mode		Maximum Power Point Tracking					
Method		3 stages: fast charge(MPPT),constant voltage, floating charge					
Conversion Efficiency		≥96.5%					
PV Modules Utilization Rate		≥99.97%					
12V system recognize batteries Voltage Range		DC9V~15V					
24V system recognize batteries Voltage Range		DC18V~30V					
48V system recognize batteries Voltage Range		DC36V~60V					
96V system recognize batteries Voltage Range		DC72V~120V					
Input Characteristic							
Maximum PV Array Open Circuit Voltage		170V (12V/24V/36V/48V) 230V (48V/72V/96V)					
MPPT Range Operating Voltage	12V System	DC 18V-DC150V					
	24V System	DC34V-DC150V					
	48V System	DC65V-DC150V					
	96V System	DC130V-DC180V					
Maximum PV Array Power	12V System	570W	700W	900W	1140W	1400W	1800W
	24V System	1130W	1400W	1700W	2260W	2800W	3400W
	48V System	2270W	2800W	3400W	4540W	5600W	6800W
	96V System	4540W	5600W	6800W	9120W	11200W	14400W
Input Low Voltage Protection	12V System	DC 16V					
	24V System	DC 30V					
	48V System	DC 60V					
	96V System	DC 120V					
Input Low Voltage Recovery	12V System	DC 18V					
	24V System	DC 34V					
	48V System	DC 65V					
	96V System	DC 130V					
Input Voltage Limit		12V/24V/36V/48V-DC170V, 48V/96V-230V					
Input over-voltage Protection		12V/24V/36V/48V-DC175V, 48V/96V-235V					
Input over-voltage Recovery		12V/24V/36V/48V-DC170V, 48V/96V-230V					
Output Characteristic							
Connected BATTERY TYPE	SEALED LEAD ACID/GEL/NICAL/LIFEPO4 LITHIUM BATTERY (Others types of batteries also can be defined)						
Float Charging Voltage (lead acid battery)	12V System	13.8V (Can be customized))					
	24V System	27.6V (Can be customized)					
	48V System	55.2V (Can be customized)					
	96V System	110.4V (Can be customized)					
Equalizing Charging (lead acid battery)	12V System	14.5V (Can be customized))					
	24V System	29V (Can be customized)					
	48V System	58V (Can be customized)					
	96V System	116V (Can be customized)					
Rated Output Current	12V/24V/48V/96V System	40A	50A	60A	80A	100A	120A
Current Limit Protection	12V/24V/48V/96V System	42A	52A	62A	82A	102A	122A
Temperature Factor	12V/24V/48V/96V System	±0.02%/°C					
Temperature Compensation		14.2V-(The highest temperature-25°C)*0.3					



Technical Details

Output Characteristic						
Output Voltage Stability Precision	≤±1.5%					
Charger voltage accuracy	≤±1.5%					
Protection						
Input Low Voltage Protection	YES					
Input Overvoltage Protection	YES					
Input Polarity Reversal Protection	YES					
Output Overvoltage Protection	YES					
Output Polarity Reversal Protection	YES					
Short-circuit Protection	YES					
Temperature Protection	85°C					
HighTemperature protection	Above 85°C,decreasethe output power, decrease3A per degree.					
Other Parameters						
LCD Display	LCD panel indicating solar power, load level, battery voltage/capacity, charging current,faulty condition					
LED Display	Charging indication, DC load indication					
Soft start time	≤10S					
PC Host Computer (Communication Port)	RS485 (optional)					
Dynamic response recovery time	≤500us					
Soft start time	≤10s					
Static power	≤2W					
Altitude	0 to 3500 m					
Noise	≤40dB					
Cooling Methods	Forced air cooling, fan speedrate regulated by temperature,when inner temperature is too low, fan ran slowly or stop; when controller stop working, fan also stop ran					
Components	World brand raw materials. Compliance with EU standards.All rated temperature of electrolytic capacitors not less than 105°C					
Smell	No peculiar smell and toxic substances.					
Environment Protection	Meet the 2002/95/EC,no cadmium hydride and fluoride					
Operation temperature	-20°C ~ +40°C					
Storage Temperature	-40°C ~ +75°C					
Atmospheric Pressure	70~106kPa					
Humidity	0 to 90%RH(No Dew)					
Type of Mechanical Protection	IP21					
G.W.(kg)	2.8	3.3	3.7	6.8	7.5	7.8
CARTON SIZE(mm)	310*250*150	310*250*150	310*250*150	380*315*175	380*315*175	380*315*175
*PRODUCT SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT FURTHER NOTICE						