PV
BAT
DC
S
MPPT
SOLAR CONTROLLER
RoHS

MPPT

Solar Charge Controller

Lighting Proof

Rain Proof

Sand&dust Proof

ISO9001

ISO14001

RoHS CE

Explorer-M Series

- EM2460
- EM2450
- EM2440
- EM2430
- EM2420

- Suitable For Li-Ion Batteries
- Activation For Li-Ion Batteries
- Natural-cooling & IP43 Protection
- Suitable For 12V/24V Lead-acid Batteries
- Support Parallel Connection/Compatible With PC Software Or APP

Shenzhen I-Panda New Energy Technology & Science Co.,Ltd

Explorer-M Series

System Application Block Diagram

	Model		EM2420	EM2430	EM2440	EM2450	EM2460
Product Category	MPPT efficiency		≥ 99.5%				
	Standby consumption		0.5W~1.2W				
	Heat-dissipating method		Natural-Cooling				
	Battery system voltage range	12V system	9VDC~15VDC(Lead acid)				
		24V system	18VDC~30VDC(Lead acid)				
		Li-ion	8VDC~30VDC(Default), ≤30VDC(Optional activation function)				
Input Characteristics	Max. PV input voltage(Voc)		100VDC(Default), DC150V(Optional)				
	Min. Vmpp Voltage		Battery voltage + 2V				
	Start-up charging voltage		Battery voltage + 3V				
	Low input voltage protection		Battery voltage + 2V				
	Over voltage protection / Recovery		100VDC/95VDC(Default),150VDC/145VDC(Optional)				
	Rated PV Power	12V system	260W	390W	520W	650W	780W
		24V system	520W	780W	1040W	1300W	1560W
		Li-ion	252W~504W	378W~756W	504W~1008W	630W~1260W	756W~1512W
Charge Characteristics	Activation for lithium battery		Optional				
	Battery types(Default Gel battery)		Sealed(SEL), Gel(GEL), Flooded(FLD), User-defined(USE), Li-ion(Lit)				
	Rated charge current		20A	30A	40A	50A	60A
	Temperature compensation		-3mV/℃/2V (default)				
	Charge method		3-stages: CC(Constant Current), CV(Constant Voltage), CF(Floating Charge)				
	Output voltage stability accuracy		≤ ±0.2V				
LOAD Characteristics	Load voltage		Same as battery voltage.				
	Rated load current		20A		30A		
	Load control mode		On/Off mode, PV voltage control mode, Dual-time control mode, PV + Time control mode				
	Low voltage protection		10.5V(default), 11V(restored), settable				
	Setting method		PC software / APP / Controller				
Display & Communication	Display		High-definition LCD segment code backlight display				
	Communication		Dual RJ45 port / RS485 protocol / PC (via RS485-USB Cable) & APP (via Wi-Fi module) / Centralized monitoring (via parallel connection,and RS485-USB cable)				
Other Parameters	Protection		Input & output over-volt / low-voltage protection, reverse polarity protection, over-heating protection, battery shedding protection etc.				
	Operating ambient temperature		-20℃~+50℃				
	Storage temperature		-40℃~+75℃				
	IP(Ingress protection)		IP43				
	Noise		≤10dB				
	Altitude		0~3000m				
	Max. Wiring size		28mm²				
	Recommended breaker		≥40A	≥63A	≥63A	≥100A	≥100A
	N. weight (kg) / G. weight (kg)		1.65 / 1.98		2.35 / 2.78		
	Product size / Packing size(mm)		220×148×58.5/289×212×105		245×170×63.5/334×255×123		

Mission: To promote the new energy industry, optimize every the best value to customers, help partners win in one self