



# MPPT Solar Charge Controller



## 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



	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	12V system	9VDC-15VDC(Lead acid)				
	24V system	18VDC-30VDC(Lead acid)				
voltage range	Li-ion	8VDC-30VDC(Default), ≤30VDC(Optional activation function)				
	Max. PV input voltage(Voc)	100VDC(Default), DC150V(Optional)				
Input Characteristics	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
24V system		520W	780W	1040W	1300W	1560W
Li-ion		252W-504W	378W-756W	504W-1008W	630W-1260W	756W-1512W
	Activation for lithium battery	Optional				
Charge Characteristics	Battery types(Default Gel battery)	Sealed(SEL), Gel(GEL), Flooded(FLD), User-defined(USE), Li-ion(LiI)				
	Rated charge current	20A	30A	40A	50A	60A
	Temperature compensation	-3mV/C/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				
Display & Communication	Setting method	PC software / APP / Controller				
	Display	High-definition LCD segment code backlight display				
	Communication	Dual RS485 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 shielding 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 / 2.76			
Product size / Packing size(mm)	220*148*68.5 / 289*212*105		245*170*63.5 / 934*255*123			

Mission: To promote the new energy power equipment, provide the best value for customers, and improve the industry's self