

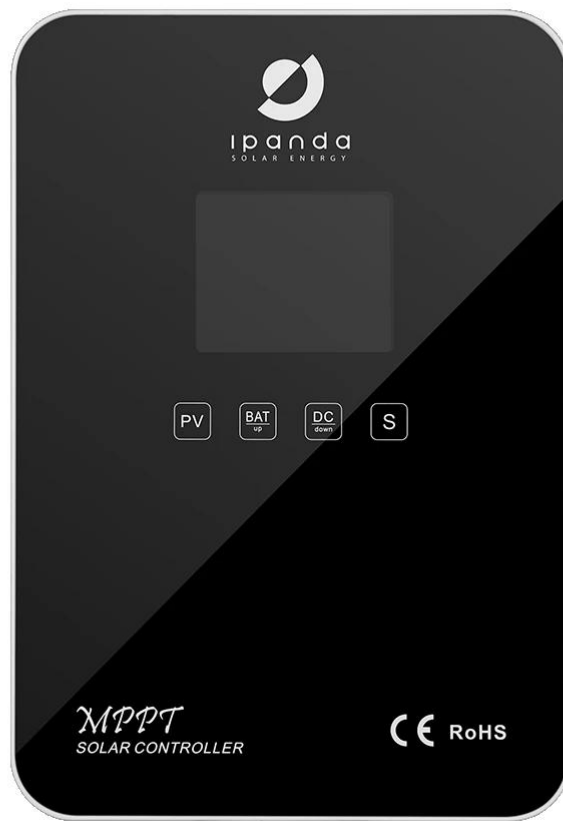
# I-Panda MPPT Solar Smart Digital Controller voltage 12V/24V 20A/30A/40A/50A/60A



[Explorer-M](#) develops solar field vision, making nature more beautiful and more efficient

A new generation of MPPT solar intelligent digital controller

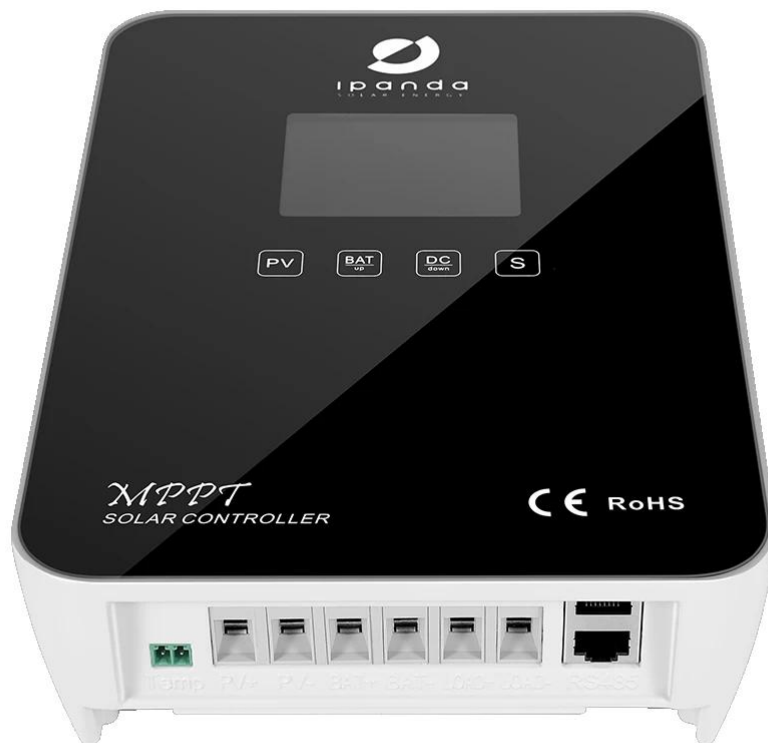
- 1, self-heating, waterproof rating IP43
- 2, beautiful design, touch buttons, internal and external repair
- 3, four-stage charging to extend battery life
- 4, tracking efficiency as high as 99.8%
- 5, perfect protection function
- 6, can expand APP, host computer, and unlimited parallel
- 7, can monitor the entire system status, determine system matching, etc.











## Characteristics

- \* High-efficient MPPT algorithm, MPPT efficiency  $\geq 99.5\%$ .
- \* Support Seal/Gel/Flooded battery and customized batteries.
- \* Four types of load mode selection: ON/OFF, PV voltage control, Dual Time control, PV+Time control.
- \* All-in-one integrated design, high stability and reliability.
- \* Current-limited charging function.
- \* IP43 protection, natural-cooling.
- \* High definition LCD segment display.
- \* Intelligent interaction experience.
- \* Dual RS485 communication ports, support for parallel communication.
- \* Support PC and APP (Android & iOS) monitoring.
- \* CE, RoHS, FCC certifications approved.

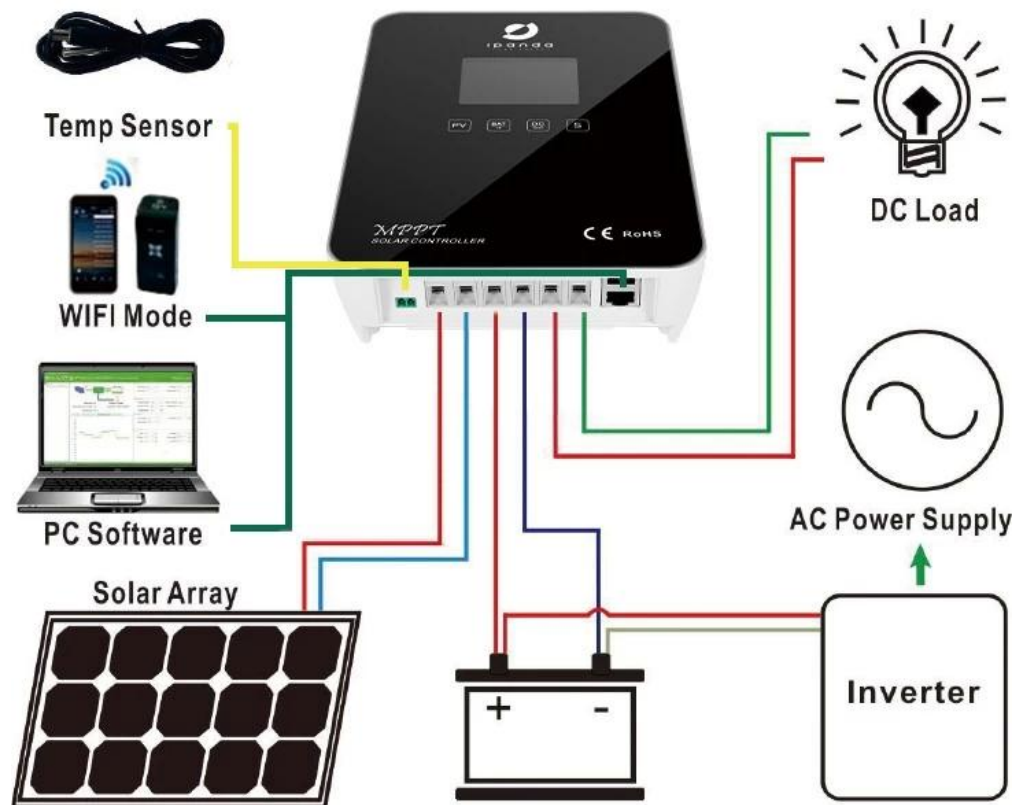
## parameter





	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/°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				
	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			

## System connection diagram



### Remarks:

1. The above is the standard parameters of the company. If there are any changes, please check our official website;
2. Our company can customize non-conventional MPPT controllers for customers and provide OEM and ODM services;
3. [[Click to download the specification](#)]