

## MPPT CONTROLLER

# CEDRO

ICC-2048150 / ICC-4048150  
 ICC-304848150 / ICC- 5048150  
 ICC-4024150 / ICC-604848150



## LITHIUM GENERATION

The Cedro controller is a controller designed with a power unit integrated to different interface modules to meet a variety of functional requirements. The Cedro's optimized MPPT control algorithm ensures a minimum power loss rate and quickly tracks the maximum power point of the system to obtain the maximum solar energy from a PV array under any environment.

The Cedro controller adopts a 3-stage charging mode adapted to lithium, lead acid or user-defined batteries. It also features natural cooling and an electronic protection function that extends battery life by improving overall system performance.

The Cedro controller has optional communication through an external WIFI module to visualize the parameters of charging and discharging of the solar system.

### Features

- Ultra-fast MPPT tracking speed with high efficiency 99.5%.
- Accurate tracking and MPPT recognition.
- Peak conversion efficiency of 98%.
- Auto load limit function in power and current.
- Integrated RS485 communication.
- Automatically reduces the power function when charging in high temperatures.
- Battery temperature compensation.
- High-definition LCD screen.
- PV load control mode, time or dual.
- Degree of protection IP43.
- Parallel connection with centralized remote monitoring.
- Protections: input and output over voltage, low and high battery voltage protection, reverse polarity, high and low temperature, short circuit, photovoltaic over current.

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## LITHIUM GENERATION

	ICC-2048 150	ICC-3048 150	ICC-4024 150	ICC-4048 150	ICC-5048 150	ICC-6048 150	
MPPT Efficiency	≥ 99,5%						
Standby Consumption	0,5W - 1,2W						
Heat Disipation Mechanism	Natural Cooling						
System battery Voltage Range	12 V 24 V ion lithium	8VDC - 15VDC (acid lead) 8VDC - 15VDC (acid lead) 8VDC - 32VDC (default)					
Allowable PV voltage range	0VDC - 150VDC						
Minimum Voltage Vmpp	Battery Voltage +2V						
Load Start Voltage	Battery Voltage +3V						
Low Input Voltage Protection	Battery Voltage +2V						
Overvoltage Protection	150VDC						
Overvoltage Recovery	145VDC						
FV Nominal Power	12 V 24 V ion lithium	260W 520W 252W - 504W	390W 780W 378W - 756W	520W 1040W 504W - 1008W	520W 1040W 504W - 1008W	650W 1300W 630W - 1260W	780W 1680W 756W - 1680W
Lithium Battery Activation	Optional						
Battery Types (default GEL)	Sealed (SEL), Gel (GEL), Floated (FLD), User Defined (USE), Ion Lithium (Lit)						
Rated Load Current	20A		30A	40A	40A	50A	60A
Temperature Compensation	-3mV/°C/2V (default)						
Load Method	3 stages CC (Constant Current), CV (Constant Voltage), CF (Floated Load)						
Voltage Output Stability Precision	±0,2V						
Load Voltage	Same value as battery						
Rated Load Current	20A			30A			
Load Control Mode	On/Off mode, FV Voltage control mode, dual time control mode, FV + time control mode						
Low Voltage Protection	10,5V (default), 11V (restored), configured						
Configuration Method	PC Software / Application / Controller						
Screen	LCD High-Resolution screen with segment code and backlight						
Communication	RJ45 dual port / RS485 protocol / PC (via RS485-USB cable) and Application (via WiFi module) / Centralized monitoring (parallel conection and RS485-USB cable)						
Protection	Input and output over voltage, low and high battery voltage protection, reverse polarity protection, high and low temperature protection, short circuit protection, PV over current protection.						
Operation Ambient Temperature	-25°C - +55°C						
Storage Temperature	-20°C - +70°C						
IP Protection	IP43						
Operating Humidity 10%	- 90%						
Noise	≤10Db						
Altitude	0-300m						
Maximum Wiring Size	28mm <sup>2</sup>						
Breaker recommended	≥ 40A	≥63A≥63A≥100A≥100A					
Net weight/thick weight (kg)	1,7 / 2,03			2,4 / 2,83			
Packaging dimensions	289 * 212 * 105 mm			334 * 255 * 123 mm			
Product dimensions	220 * 148 * 58.8 mm			245 * 179 * 68.8 mm			
CertificatesCE	, RoHS, FCC						