

CONTROLLER

CEDRO+

LITHIUM GENERATION

ICC-4024150 +

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 rate of power loss and quickly tracks the system's maximum power point to obtain the maximum solar energy from a PV arrangement under any environment.

The Cedro+ controller adopts a 4-stage charging mode suited to lithium or lead acid batteries. It also features automatic temperature compensation function with an integrated external sensor that allows the charging current to be decrease when approaching the set temperature limits, leading to a general temperature decrease in the equipment.

The controller has a load current limiting mode: when the power of the solar panel is at 20% of the set oversized and the load current exceeds the nominal one, the controller will automatically lower the load current, which will allow the equipment to work within its normal limits

This Cedro controller has an optional communication through an external Bluetooth module for visualization of charge and discharge parameters of the solar system.



MPPT maximum efficiency	>99,9%
Standby consumption	8mA
Heat dissipation method	Natural cooling
Conversion efficiency	98,7%
Admissible photovoltaic voltage range	0-150V
Boost voltage	28,0-29,6V/56,0-59,2V @25°C
Equalization voltage	28,0-30,0V/56,0-60,0V @25°C
Floating voltage	26,0-29,0V/52,0-58,0V @25°C
Low voltage disconnection	21,6-23,6V/43,2-47,2V, SOC1-5
Low voltage reconnection	22,8-25,6V/45,6-51,2V
Overload protection	31,3-62,3V
Rated PV power	1000W @24V; 2000W@48V
Lithium battery activation	Opcional
Battery type(Gel default)	Gel, AGM, lithium
Rated load currentI	40A
Temperature compensation	-3,33mV/K/cell
Charging method	4 stages MPPT, boost, equalization and floating.
Charging voltage range	20,0-64,0V (Default lithium: 29,4V)
Charging voltage recuperation	18,2-63,8V (Default lithium: 28,7V)
Load output current	30A
Load control mode	Always on, solar lamp, user defined
Communication	RS485 through RJ11, Bluetooth (optional)
Environmental operating temperature	-25°C - +60°C
Storage temperature	-25°C - +80°C
IP Protection	IP32
operating humidity	0% a 100%RH
Noise	≤10dB
Altitude	4000m
Terminal size	6AWG, 16mm2
Recommended breaker	≥100A
Weight	2,5kg
Dimensions (H * W* D)	255 * 189 * 89mm
Ground	common negative

Features

- Ultra-fast MPPT tracking speed with high efficiency $\geq 99.9\%$.
- Accurate MPPT tracking and recognition.
- Peak conversion efficiency of 98%.
- Auto limit function in current and temperature compensation.
- Integrated RS485 communication and optional Bluetooth.
- Automatically reduces the power function when charging at high temperatures.
- Multiple charge control modes..
- High definition LCD display..
- Protections: input and output over voltage, low and high battery voltage protection, polarity, battery high and low voltage, reverse polarity, high and low temperature, short circuit, temperature, short circuit, photovoltaic over current.