DATA SHEET

MPPT CHARGE CONTROLLERS

ICM-1024

OLMO SERIES

MPPT CHARGE CONTROLLERS

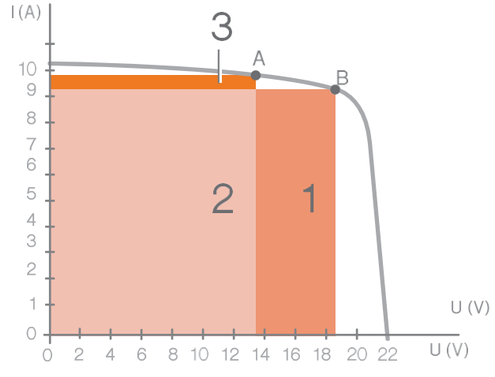
ICM 10/20/30 24

Features

- DSP processor architectureensures high speed and performance.
- MPPT efficiency>99%,peak conversion efficiency>98%.
- 12V/24V auto.
- PV input: 75V.
- Four-stage charging mode.
- USB output (10A only).
- LCD Display
- Real-time vivid LCD with graphicsymbols presenting the working statusand explicitly relatedparameters.
- Shows battery capacity percentageon display.
- Show battery typeon display.
- Works with charging mode (for luminaires).
- Adjustable parameters.
- Temperature compensation.
- Heat dissipation efficiencyincreased by 50% with new aluminum alloy plate design.
- Optimized circuit and key partsdesign.

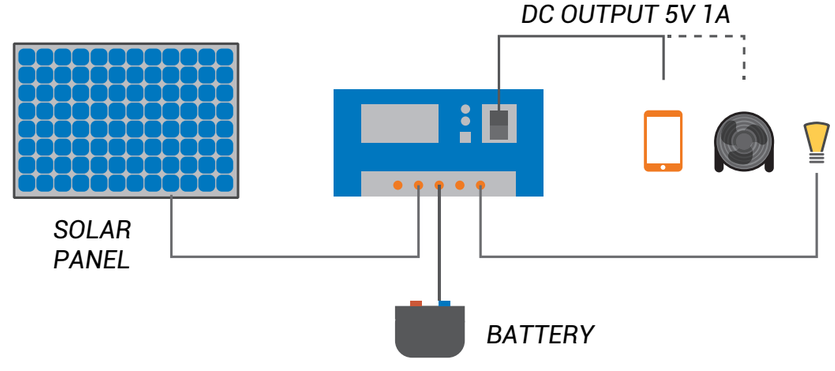
Electronic protections:

- Overload protection.
- Over discharge protection.
- Over temperatura protection.
- Automatic electronic fuse.
- Load and PV short-circuit protection.
- Input overvoltage protection.
- Reverse current protectionat night.
- PV, load and battery reverse connectionprotection.
- Overheating protection and USB outputshort-circuit protection.



Introduction to MPP

MPPT stands for maximum power point tracker.MPPT technology isthe technology that tracks the maximum power point of solar panels. Under certain temperatureand light conditions, thel V-curve of solar panels looks like the graph below. The power output of a solar panel is the product of I (current) and V (voltage), which corresponds to the rectangular area of the points on the I-V curve for solar panels. Look at the graph below left, when the solar panel works at point A, the power output is PA=2+3; when the solar panels work at point B, the output is PB=1+2. Obviously, we can see that PB>PA.The purpose of MPPT technology is to keep the solar panels always working at point B when external conditions change.



	ICM-1024	ICM-2024	ICM-3024
Maximum Load Current	10A	20A	30A
Default battery system voltaje.	12V/24V DC (Adjustable)	12V/24V DC (Adjustable)	12V/24V DC (Adjustable)
Maximum open circuit voltage PV	75V	75V	75V
Maximum input power	130W (12V) / 260W (24V)	260W (12V), 520W (24V)	390W (12V), 780W (24V)
Absorption Voltage	14,6VDC / 29,2VDC	14,6VDC / 29,2VDC	14,6VDC / 29,2VDC
Charging Voltage	14,4VDC / 28,8VDC	14,4VDC / 28,8VDC	14,4VDC / 28,8VDC
Flotation Voltage	13,8VDC / 27,6VDC	13,8VDC / 27,6VDC	13,8VDC / 27,6VDC
Low voltage alarm	11,5VDC / 23,0VDC	11,5VDC / 23,0VDC	11,5VDC / 23,0VDC
Low voltaje disconnection (LVD)	10,8VDC / 21,6VDC	10,8VDC / 21,6VDC	10,8VDC / 21,6VDC
Low voltage load recovery	12,6VDC / 25,2VDC	12,6VDC / 25,2VDC	12,6VDC / 25,2VDC
High voltage disconnection (HVD)	16,0VDC / 32,0VDC	16,0VDC / 32,0VDC	16,0VDC / 32,0VDC
High voltage load recovery	15,5VDC / 31,0VDC	15,5VDC / 31,0VDC	15,5VDC / 31,0VDC
Output Voltage	11,0~14,3VDC / 22,0~28,6VDC	11,0~14,3VDC / 22,0~28,6VDC	11,0~14,3VDC / 22,0~28,6VDC
Peak conversion efficiency	98% (Efficiency MPPT 99%)	98% (Efficiency MPPT 99%)	98% (Efficiency MPPT 99%)
Self-consumption without load	12mA (12V), 15mA (24V)	12mA (12V), 15mA (24V)	12mA (12V), 15mA (24V)
Refrigeration	Natural Convection	Natural Convection	Natural Convection
Working mode	Four scenarios: Absorption CC, absorption CV, CC floating, CV floating.	Four scenarios: Absorption CC, absorption CV, CC floating, CV floating.	Four scenarios: Absorption CC, absorption CV, CC floating, CV floating
USB Output	5V 1,2A	5V 1,2A	5V 1,2A
LCD Display	Charging voltage, charging current, battery voltage, battery capacity, output current	Charging voltage, charging current, battery voltage, battery capacity, output current	Charging voltage, charging current, battery voltage, output current
Operation Temperature	-20°C a 55°C	-20°C a 55°C	-20°C a 55°C
Humidity	10% a 90%, NC	10% a 90%, NC	10% a 90%, NC
Dimensions (mm)	169 x 101,4 x 45,5	196 x 111 x 54	188 x 133 x 59
Weight (g)	346	526	989
Certification	FC CE	FC CE	FC CE