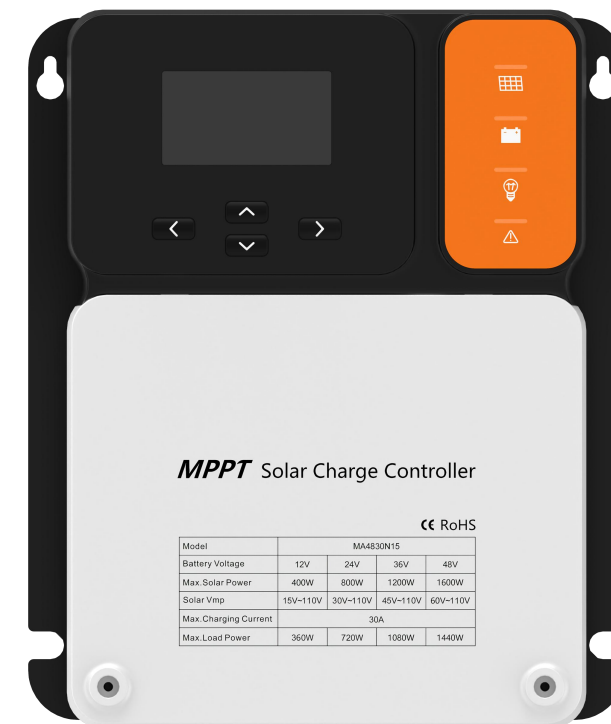


# Comparison between ML series & MA series



ML series



MA series

Product positioning: As a update version of ML series, MA series not only inherits the excellent genes of high energy conversion efficiency and high reliability, but also has more configurable parameters to meet the diverse needs of users; more powerful capacitive and inductive load starting ability; better charging algorithm to help improve battery life; better user-friendly display interface and accessories and new appearance design.

No.	items	ML series			MA series			
0	models	ML2420/30/40	ML4830N15	ML4860	MA2430N15	MA2440N15	MA2460N15	MA4830N15
1	Rated load current	20A			30A	40A		30A
2	Max. Voc	100V	150V		150V			
3	Max. charging current	Default			Adjustable [1]			
4	Display interface	Turn the page manually to view the full parameters			Single interface to display complete parameters without manually page turning			
5	Communication port	RS232*1 RS485*1 optional	RS485*1,RS232*1		TTL*1,RS485*1, CAN optional [2]		TTL*1,RS485*2, CAN optional [2]	
6	Serial port baud rate	Fixed value 9600kps			Adjustable			
7	Load short-circuit protection	Only 3.01 or higher program version models support manual on/off			Support manual on/off [3]			
8	Charging mode	Default			Add full mode [4]			
9	Battery-free mode	Only 3.01 or higher program version models (only in Li-ion battery mode)			✓ [5]			
10	Restart	Restart requires a power cut			Support manual restart under power-on condition			

11	Parallel connection	×	✓ [6]	✓ [6]	×	✓ [6]	✓ [6]
12	Pre-start of load	×			✓ [7]		
13	Constant voltage output (only in lead-acid battery mode) [8]	×			✓ [8]		
14	Wiring terminals	×			U-type cold pressing cable lugs*6		
15	Static protection	×			Anti-static shell		
16	Warranty	3 years			3 years		

**Note:**

[1] Adjustable between 0-maximum value, this function is mainly applicable to better charge and discharge control after communication between the device and BMS, which is beneficial to extend battery life

[2] CAN default to RV-C protocol

[3] When the load is capacitive or inductive, turning off the load short-circuit protection function can avoid mistakenly triggering short-circuit protection at startup

[4] If the charging current is less than the set value after the battery enters the floating state, it will stop charging after one minute, and the screen will display "FULL" state.



「5」 In Li-ion battery mode, it support battery-free with load when the input voltage of PV is higher than the overcharge voltage, and the input power is higher than the load power

「6」 Up to 16 units connects in parallel

「7」 Improve capacitive load start-up stability

「8」 Since the device adopts equal voltage output, i.e. the load voltage is equal to the battery voltage, in the lead-acid battery mode, even if a lead-acid battery connected in series fails or is disconnected, causing the battery voltage to drop, the load side can still maintain constant voltage output for a short period of time, and in the case of unbalanced load voltage and battery voltage, the device will not charge the battery until the battery voltage returns to normal, and after the battery power is depleted After the battery power is exhausted, the device needs to be restarted and the battery reconfigured. Users can regard "constant voltage output of lead-acid battery" as an emergency function to keep the load running for a short time when a lead-acid battery fails or is disconnected in a special situation.