



10A-100A MPPT controller

HES MPPT Solar controllers are high quality, proven for long time use in off grid applications. It increase 10%-30% compared with a PWM. These are suitable for all common module technologies and are optimally suited for solar systems with module voltages higher than the battery voltage. In particular, such in expensive PV modules that are used for grid-connected systems can also be used autonomously.

Features

- Maximum Power Point Tracker (MPP tracker)
- Voltage and current regulation
- Multistage charging technology
- Automatic load reconnection
- Monthly equalization charge
- Graphical LCD display
- 8 units parallel working for 50A-100A

Protections

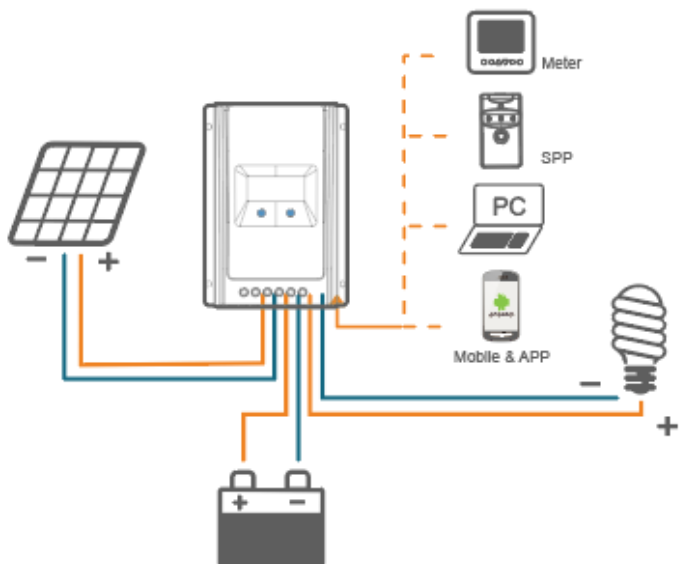
- PV Over Current/power
- PV Reverse Polarity
- Night Reverse Charging
- Battery Over Voltage
- Battery Over Discharge
- Controller Overheating★
- Lithium Battery Low Temperature
- Load Short Circuit
- Load Overload
- TVS High Voltage Transients
- PV Short Circuit
- Battery Reverse Polarity
- Battery Overheating

Operation

- Simple menu-driven operation
- Programming by buttons
- Multiple load switch

Certifications

- Compliant with European Standards (CE) IEC62109
- RoHS compliant
- Manufactured according to ISO 9001 and ISO 14001





Specification 10A-40A

Item	Tracer 1206AN	Tracer 2206AN	Tracer 1210AN	Tracer 2210AN	Tracer 3210AN	Tracer 4210AN
System nominal voltage	12/24VDC ^① Auto					
Rated charge current	10A	20A	10A	20A	30A	40A
Rated discharge current	10A	20A	10A	20A	30A	40A
Battery voltage range	8~32V					
Max. PV open circuit voltage	60V ^② 46V ^③		100V ^② 92V ^③			
MPP voltage range	(Battery voltage +2V)~36V		(Battery voltage +2V)~72V			
Max. PV input power	130W/12V 260W/24V	260W/12V 520W/24V	130W/12V 260W/24V	260W/12V 520W/24V	390W/12V 780W/24V	520W/12V 1040W/24V
Self-consumption	≤12mA					
Discharge circuit voltage drop	≤0.23V					
Temperature compensate coefficient ^④	-3mV/°C/2V (Default)					
Grounding	Common negative					
RS485 interface	5VDC/100mA					
LCD backlight time	60S (Default)					

Dimension

Item	Tracer1206AN Tracer1210AN	Tracer2206AN Tracer2210AN	Tracer3210AN	Tracer4210AN
Dimension	172x139 x 44mm	220x154x 52mm	228x164x55mm	252x180x63mm
Mounting dimension	130x130mm	170x145mm	170x164mm	210x171mm
Mounting hole size	Φ5mm			
Terminal	12AWG(4mm ²)	6AWG(16mm ²)	6AWG(16mm ²)	6AWG(16mm ²)
Recommended cable	12AWG(4mm ²)	10AWG(6mm ²)	8AWG(10mm ²)	6AWG(16mm ²)
Weight	0.57kg	0.94kg	1.26kg	1.65kg

Electrical Note

*When a lead-acid battery is used, the controller hasn't the low temperature protection.

*At minimum operating environment temperature

*At 25°C environment temperature

*When a lithium-ion battery is used, the system voltage can't be identified automatically.

Specification 50A-100A

Item	Tracer5210AN	Tracer6210AN	Tracer5415AN	Tracer6415AN	Tracer8415AN
System nominal voltage	12/24VDCVDC or Auto		12/24/36/48VDCVDC or Auto		
Rated charge current	8V～32V		8V～68V		
Rated discharge current	Sealed/Gel/Flooded/User				
Battery voltage range	80A/58V				150A/58V
Max. PV open circuit voltage	50A	60A	50A	60A	80A
MPP voltage range	625W/12V 1250W/24V 1875W/36V 2500W/48V	750W/12V 1500W/24V 2250W/36V 3000W/48V	625W/12V 1250W/24V 1875W/36V 2500W/48V	750W/12V 1500W/24V 2250W/36V 3000W/48V	1000W/12V 2000W/24V 3000W/36V 4000W/48V
Max. PV input power	100V ^① 92V ^②	150V ^① 138V ^②			
Self-consumption	(Battery Voltage+2V) ～72V ^③	(Battery Voltage +2V) ～108V ^③			
Discharge circuit voltage drop	≥99.5%				
Temperature compensate coefficient ^④	≤98.7%				
Grounding	—3mV/℃/2V(Default)				
RS485 interface	98mA/12V;60mA/24V;50mA/36V;46mA/48V				
LCD backlight time	Common negative				
Item	Rated Value:5A/30VDC; Max. Value:0.5A/60VDC				
System nominal voltage	RS485(RJ45)				
Rated charge current	60S(Default)				

Item	Tracer10415AN	Tracer5420AN	Tracer6420AN	Tracer8420AN	Tracer10420AN
Nominal System Voltage	12/24/36/48VDC or Auto				
Battery Input Voltage Range	8V～68V				
Battery Type	Sealed/Gel/Flooded/User				
Battery fuse	150A/58V	80A/58V		150A/58V	
Rated charge current	100A	50A	60A	80A	100A
Rated charge Power	1250W/12V 2500W/24V 3750W/36V 5000W/48V	625W/12V 1250W/24V 1875W/36V 2500W/48V	750W/12V 1500W/24V 2250W/36V 3000W/48V	1000W/12V 2000W/24V 3000W/36V 4000W/48V	1250W/12V 2500W/24V 3750W/36V 5000W/48V
Max. PV open circuit voltage	150V ^① 138V ^②	200V ^① 180V ^②			
MPP Voltage Range	(Battery Voltage +2V) ～108V ^③	(Battery Voltage+2V)～144V ^③			

Dimension

Item	Tracer5210/5415/5420AN	Tracer6210/6415/6420AN
Dimension	261×216×119mm	340×236×119mm
Mounting dimension	180×204mm	260×224mm
Mounting hole size	Φ7	
Terminal	6AWG(16mm ²)	2AWG(35mm ²)
Recommended cable	6AWG(16mm ²)	16mm ² (5AWG)
Weight	3.5kg	4.5kg
Item	Tracer8415/8420AN	Tracer10415/10420AN
Dimension	394×240×134mm	394×242×143mm
Mounting dimension	300×228mm	300×230mm
Mounting hole size	Φ7	
Terminal	2AWG(35mm ²)	
Recommended cable	25mm ² (4AWG)	35mm ² (2AWG)
Weight	6.1kg	7.4kg

Electrical Note

*At minimum operating environment temperature;

*At 25℃ environment temperature

*The maximum PV open circuit voltage must never exceed 138V or 180V at 25℃ environment temperature.

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All specifications and information are given with good intent, errors are possible and products may be subject to change without notice. Pictures may differ from actual products depending on local market re-quirements and regulations. A solar power system consists of a controller, inverter and load end. Multiple controllers/inverters are shown to represent the wide range that HES has.