MPPT Solar Charge Controller

SC 12048 HV

SC 12048 HV | PV 550V

JOEYOUNG

SunSync **App**

Compatible with lithium LiFePO4/ lead-acid/flood

Up to 6 units in parallel for capacity extension

Wide MPPT range from 60Vdc~500Vdc

PV Max. 550Vdc, suitable for latest N type solar panel

Isolation between PV and battery enhanced system safety

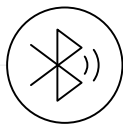Synchronization charging with off-grid inverter

Plug-and-play quick connection MC4 PV terminals

Optional bluetooth monitoring (SunSync APP available)

Work with SunSync APP
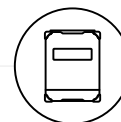
Bluetooth monitoring work without internet

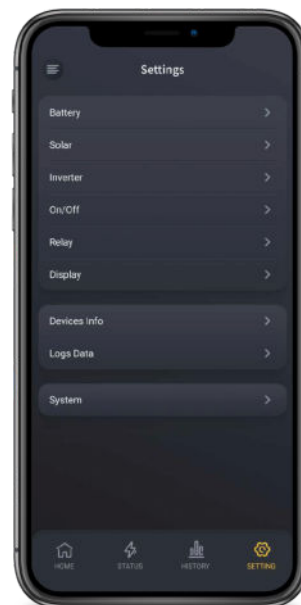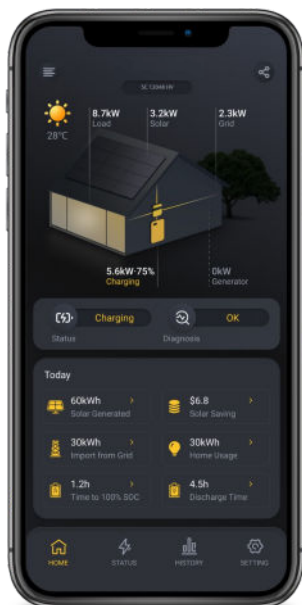**New device setting guidance with step-by-step workflow**

Setting all parameter in one APP

Comprehensive trouble shooting

Compatible with all sunflx products

Connection

LCD Panel

Button

SC 12048 HV | PV 550V

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BMS/Solar Inverter/
Solar Controller Port

Battery Terminal

PV Terminal

BMS/COM1

MONITOR

COM2

BATTERY

PV INPUT

WARNING
High Voltage

Solar Controller Parallel Port

Fan

Wifi/Bluetooth Dongle Port

Sunsync APP

Grid   PV

PV

PV

PV

PV

AC Load

INVERTER

COM   COM

MPPT

COM   COM

MPPT

JOEYOUNG

JOEYOUNG

JOEYOUNG

BMS

MPPT

COM   COM

MPPT

JOEYOUNG

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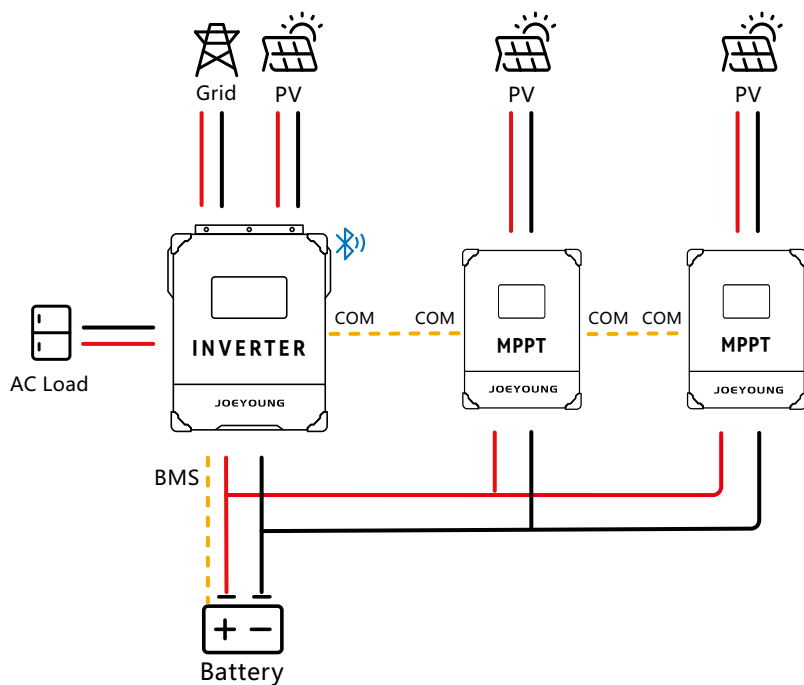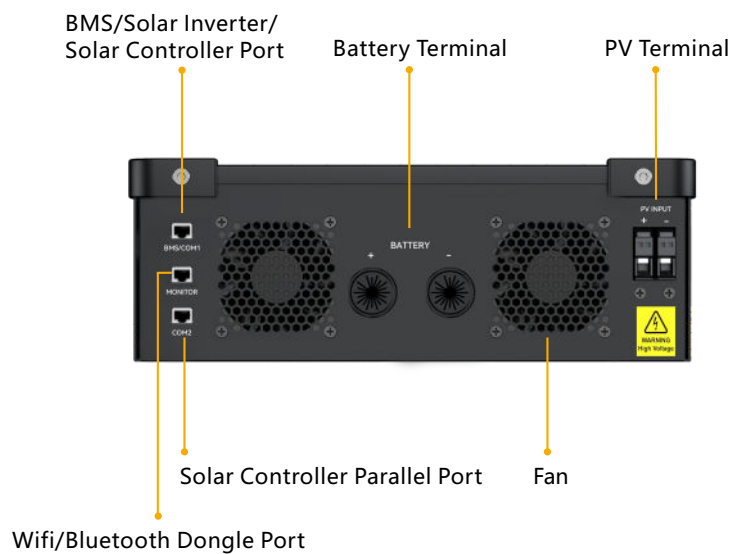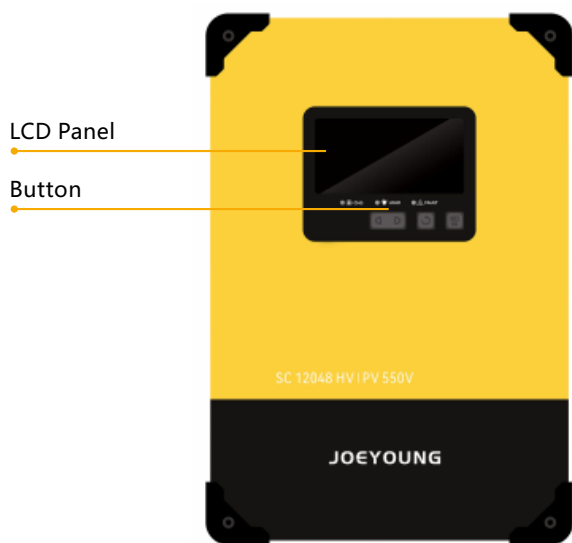
BMS

Battery

Battery

Diagram1: Inverter and controller synchronous charging
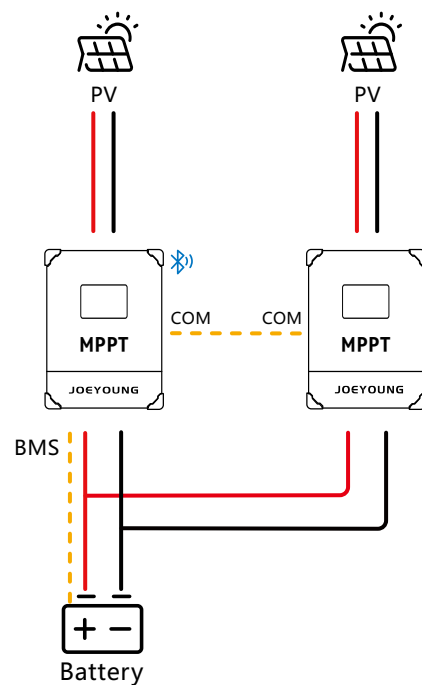
Diagram2: Controller parallel charging

Datasheet

Model	SC 12048 HV	User-Settable
PV INPUT		
Max. PV Array Power	6000W	
Start up Voltage	80Vdc	
PV Array MPPT Voltage Range	60~500Vdc	
Max. PV Array Open Circuit Voltage	550Vdc	
MPPT Input Current	18Amp	
MPPT Tracking Efficiency	99.9%	
Conversion Efficiency	97%	
Self Consumption	5W	
DC OUTPUT		
Nominal Battery Voltage	48Vdc	
Battery Type	Lithium LiFePO4/Lead-Acid/Flood /User Defined	
Bulk Charging Voltage	56.4Vdc	✓
Floating Charging Voltage	54Vdc	✓
Charging Curent	120A Max. 60A Default	✓
PROTECTION		
High Voltage Cut-off Voltage	Yes, 63Vdc	
High Voltage Recovery Voltage	Yes, 62Vdc	
Over Temperature	Yes	
Lightning Protection	Yes	
GENERAL		
Isolation Design	Yes	
Heat Dissipation	Fan Cooling	
Altitude	<2000m	
Humidity	5% to 95% Relative Humidity (Non-Condensing)	
Operating Temperature Range	-10°C to 50°C	
Storage Temperature	-15°C~ 60°C	
MC4	1000Vdc 30A MC4	
Dimension (D*W*H)	118*236*365 mm	
Net Weight	6.7 KG	
Warranty	2 Years	
COMMUNICATION		
Embedded Interface	RJ45*3 (2*RS485,1*RS232)	
Synchronised Parallel Operation	Yes, Up to 6 Units With RS485	
Work With WIFI/Bluetooth Monitoring Dongle (Optional)	Yes, by RS232	
Work With Lithium Battery BMS	Yes, by RS485	
CERTIFICATION		
Certification/Standard	CE (EN-IEC62109-1, EN-IEC62109-2); RoHS	

Specifications are subject to change without notice