

7.2 Button Operation : (Fourbuttons: PV · BAT/up · DC/down · S)(Table 7)

Button	Accessible information	In setup mode fucton	Button	Setup items
	PV voltage/PV current/ PV power/PV total energy	Go up/increase		S01 Bat-Type->USER/SEL/FLD/GEL/LIT S02 Device address S03 Load mode->ON/OFF/USER S04 Bat-temp->°C/°F S05 Charge-Volt->9-60V S06 Nominal-Volt->8.5-58V S07 Under-volt protection voltage S08 Under-volt recovery voltage S09 Over-volt protection voltage S10 Over-volt recovery voltage S11-S12 Realtime set S13-S14 Date set
	Bat voltage/Bat current/ Bat power/Bat percentage/ Bat temp/Bat type/ Device address			
	Load voltage/Load current/ Load power/ Load total energy/ Load working mode			

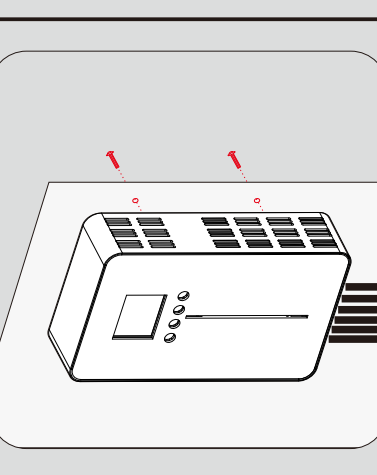
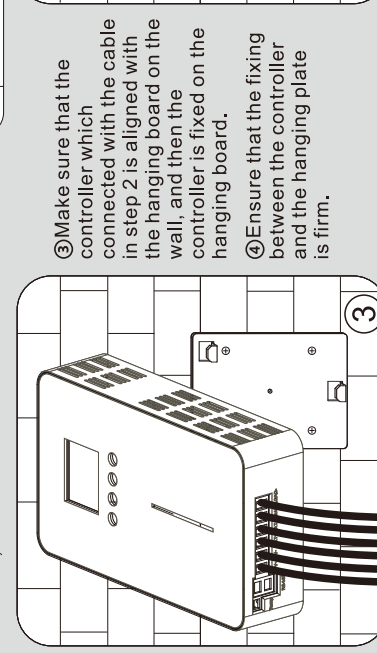
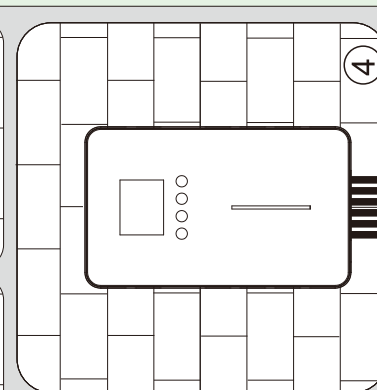
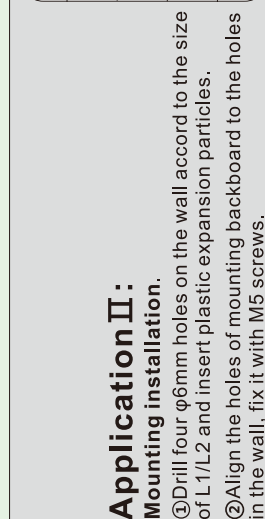
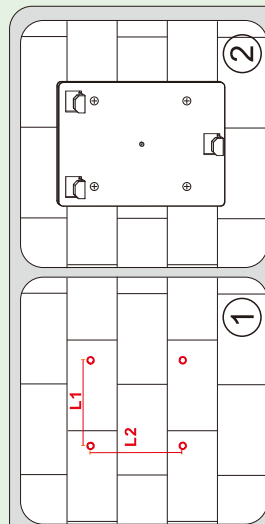
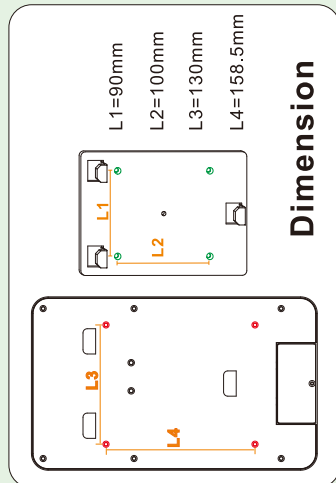
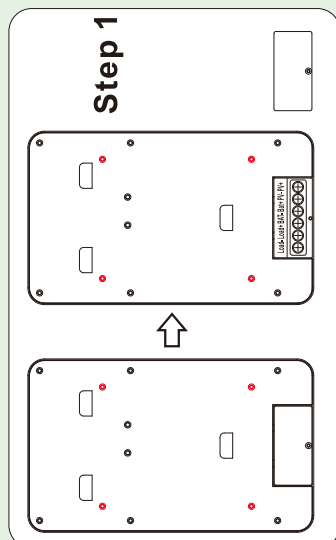
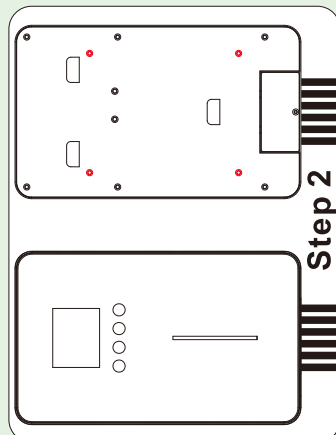
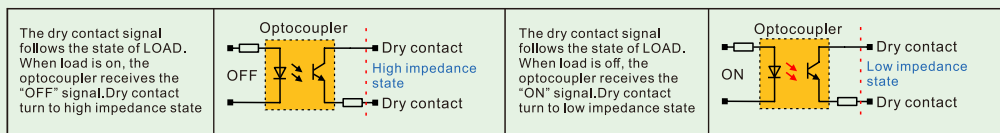
8. FAQ .(Table 8)

Fault	Possible Reasons	Solution
Controller cannot start up, screen can not be on	Battery positive and negative reversely connected.	Check the wiring, reconnect in right order.
Controller-not charging, PV voltage undetectable .	PV Input positive and negative reversely connected .	Check the wiring, reconnect in right order.
Controller is on and PV voltage is normal, but not charging.	The controller can not recognize battery system voltage . (The "System" in LCD flashes) .	Check whether battery voltage in LCD is in the range of controller system recognition .
The battery is in a low energy or empty for a long time.	Solar panels quantity are too less to generate enough energy . Battery capacity is too small to Store enough energy .	Increase solar panels quantity . Increase battery capacity .

9. Parameters

Model	R48L40	R48L50	R48L60	R48L80	R48L100			
Product Category	MPPT efficiency		≥ 99.5%					
	Standby consumption		0.5W~1.2W					
	Heat-dissipating method		Fan-Cooling					
Input Parameters	Battery system voltage Range(Lead acid)							
	12V system:	9~15VDC	24V system:	18~30VDC	36V system:	32~40VDC	48V system:	42~60VDC
	Li-ion battery system							
	8~60VDC(Default), ≤60VDC(Optional activation function)							
	Max. PV input voltage(Voc)							
	150VDC							
	Min. Vmpp Voltage							
	Battery voltage + 2V							
	Start-up charging voltage							
	Battery voltage + 3V							
Charge Parameters	Low input voltage protection							
	Battery voltage + 2V							
	Over voltage protection / Recovery							
	150VDC / 145VDC							
	Rated PV Power	12V system	520W	650W	780W	1040W	1300W	
		24V system	1040W	1300W	1560W	2080W	2600W	
		36V system	1560W	1950W	2340W	3120W	3900W	
		48V system	2080W	2600W	3120W	4160W	5200W	
		Li-ion	504W~2016W	630W~2520W	756W~3024W	1008W~4032W	1260W~5040W	
	LOAD Parameters	Activation for lithium battery						
Optional								
Battery types(Default Gel battery)								
Sealed(SEL), Gel(GEL), Flooded(FLD), User-defined(USE) Li-ion(Lit)								
Rated charge current								
40A	50A	60A	80A	100A				
Temperature compensation								
-3mV/°C/2V (default)								
Charge method								
3-stages: CC(Constant Current), CV(Constant Voltage), CF(Floating Charge)								
Output voltage stability accuracy								
± 0.2V								
Display & Communication	Load voltage							
	Same as battery voltage.							
	Rated load current							
	30A		50A					
	Load control mode							
On/Off mode, PV voltage control mode, Dual-time control mode, PV + Time control mode								
Low voltage protection								
Settable								
Setting method								
PC software /APP / Controller								
Display								
High-definition LCD segment code backlight display								
Communication								
Dual RJ45 port / RS485 protocol / PC (via RS485-USB Cable) & APP (via Wi-Fi module) / Centralized monitoring (via parallel connection and RS485-USB cable)								
Other Parameters	Protection							
	Input & output over-volt / low-voltage protection, reverse polarity protection, over-heating protection, battery shedding protection etc.							
	Operating ambient temperature							
	-20°C ~ +50°C							
	Storage temperature							
	-40°C ~ +75°C							
	IP(Ingress protection)							
	IP21							
	Altitude							
	0~3000m							
Max. Wiring size		28 mm ²			50 mm ²			
Recommended breaker		≥ 60A	≥ 80A	≥ 80A	≥ 100A	≥ 120A		
N. weight (kg) / G. weight (kg)		2.15 / 3.05		5 / 6.15				
Product size / Packing size(mm)		305×185×72 / 420×275×150			380×210×80 / 490×350×195			

10.External electrical port — Dry contact



③Make sure that the controller which connected with the cable in step 2 is aligned with the hanging board on the wall, and then the controller is fixed on the hanging board.
④Ensure that the fixing between the controller and the hanging plate is firm.

Application II: Mounting installation.
①Drill four φ6mm holes on the wall according to the size of L1/L2 and insert plastic expansion particles.
②Align the holes of mounting backboard to the holes in the wall, fix it with M5 screws.

Step 3 Application I: Install on cabinet or boards.
Drill four φ4mm holes on the wall according to the size of L3/L4, and then fix the controller with four M4 screws from the back .