

# Renogy 30 Amp PWM Charge Controller Regulator Off Grid for Battery Charging

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This is a simple PWM charge controller that does what it is supposed to do. It is NOT as efficient as an MPPT controller, but it is appropriate for small installations (less than 500 watts or so.) I found three cautions however: 1) The only heat sink for the unit is a flat sheet of aluminum on the back of the unit. THEREFORE, this device should be mounted vertically with at least a half-inch of space behind it for cooling airflow. 2) The load circuit simply connects the load to the batteries, and is only rated for 30 amps. If your load is higher, or if it is reactive (capacitive or inductive), use a slave relay of the appropriate current and voltage. If you don't know what I am talking about, find someone who does (eg a contractor or electrician) before you hurt yourself or burn down your house. 3) All of the positive (+) leads are hardwired together inside the controller (positive ground). I expected the negatives to be hardwired, so this was definitely unexpected. This makes no difference if you wire it up as recommended; however, you must take it into account if you are putting in meters, fuses, terminal blocks or even a system safety ground. Under no circumstances should you connect any of the negatives together.

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Okay so before buying this I saw the review about the guy who had the fire and dismissed it, figuring it was likely installed improperly or a one in a thousand defect. However upon receiving mine it looks like alls well except the box contains this bizarre label on the outside: "Please Note: These are positive ground controllers. If grounding is necessary it must be on the positive line. If the controller is to be used on a vehicle which has battery negative on the chassis, loads connected to the controller must not have an electrical connection to the vehicle body." Now I'm not sure what to make of that but I have extensive electronics and 12v automotive installation experience professionally and this sounds like they designed this device very poorly for its intended application. What it seems they are saying is "do not attach any additional grounding to the unit

because its ground scheme is opposite of everything you'll ever hook up to it and every vehicle made". It's got a plastic case but a metal back panel with 4 screws in it. Removing the back reveals the screws go into just the plastic of the case, so the metal back and screws are electrically isolated from the unit's internal circuit board and terminals. There are 3 power transistors which use that metal back plate as a heat sink but they are electrically insulated from it with non conductive pads. (the back plate is steel, should be aluminum if its purpose is a heat sink) So in theory it should still be usable on 12v negative ground systems (virtually every car made since grandpa was born) provided the consumer does not open the case, decipher the circuit board to ascertain its positive ground path points, solder a wire to one and ground it to the vehicle. **NOW WHO IN THEIR RIGHT MIND WOULD DO THAT?** It should still function in a negative ground circuit as long as this device "floats" and doesn't require a connection to the vehicle other than some nylon plastic cable ties or screws that only touch its plastic case. So I'm going to take a shot and keep it and install it and update the review as needed. This may just be a case of an okay product that someone added a useless or confusing label to. (there is an additional "dear customer" label on the unit itself that is even MORE confusing regarding polarity. Since it seems to concern cables for other renogy products I won't bother with it) **FURTHER** confusion is added by the instruction in the install paper to not let bare wires touch the "metal casing". Well the casing is plastic and if you didn't know that you would be scared to screw it to the vehicle. What I'll do is hook up a 12v battery, a wall wart with around 18v to simulate a solar panel, and a 12 volt load, with all three electrically attached via negative ground scheme, and we'll see what happens. If it burns it goes back. If it works I would advise the manufacturer to get their act together and clean up the labelling to a simple, concise set of instructions that don't leave even an experienced person scratching their head wondering "WTF is this?" **EDIT:** After two months on the vehicle analysis reveals this thing doesn't even function anyway. Panel output is over 17 volts. None of it gets to the connected battery. Cut it out of the circuit installed a switch between the panel and battery and you can see the voltage jump about a tenth every time you turn it on. Save your money this is a dodgy product in every way.

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Bought 3 of these ( 1 spare) for 2 sign lighting systems. Positive ground prevented input wattmeter keep-alive. Following inverter positive had to be connected directly to battery to prevent controller resetting. Single digit readout of work

mode took some "getting used to" Difference in readings of "7" Mode 7 and "7 Dot" (Mode 17). Competition 30 A controller (: XCSOURCE LD296) seems to have resolved that. "Rising Block" terminals require backing screws out until they click once for every turn, to make sure connecting wires are seated properly INSIDE the block before tightening. You need to look into the wire holes as you're inserting the wires to get it right. We had one battery wire that wasn't inserted properly, but "felt" tight, it generated enough heat to partially melt the terminal block housing. We didn't give it a "stiff tug" to make sure the connection was good. Not necessarily a design flaw, more like an uneducated user. We got it resolved but it involved removing the terminal strip from the board... a process that could have been avoided had we followed the above instructions. Some on-line reviews stated that manufacturer would no longer support the timing function but it wasn't a problem for us. Our systems run 7 hours nightly in mode 7, confirmed by a running time meter, with no problem. Renogy's 100 watt panels, tilted 45 degrees south, recharge 35AH and 55AH batteries, after a 43% nightly discharge, by 1 PM in southern Arizona sun on shortest December days. See all 154 customer reviews...

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Product Details Sales Rank: #4596 in Lawn & Patio Size: 30A Brand: Renogy Model: PWM30CC Dimensions: .98" h x 3.74" w x 5.51" l, Features Easy to use and cool to look at. Renogy 30A PWM solar controller protects your battery from overcharge and discharge. Our high quality product handles up to 30 amps of array current and up to 450 watts of solar power. It comes with LED indicator showing when solar is charging the battery and when the system is over voltage. Maintains 12/24 volt batteries in a fully charged state and gives free protection to your solar panels and batteries. Renogy 30A PWM solar controller is designed with a microcontroller for automatic lighting control functions.

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Product Description Description The main advantage of Pulse Width Modulation (PWM) is that power loss in the switching devices is very low. When a switch is off, there is practically no current. When the device is on, there is almost no voltage drop across the switch. Power loss, being the product of voltage and current, is thus in both cases close to zero. PWM also works well with digital controls, which, because of their on/off nature, can easily set to the needed duty cycle. This solar system controller adopts the most advance digital techniques and operates fully automatically. The PWM battery charging can greatly increase the lifetime of your battery and has various unique functions and quite easy to use

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Auto recognition Max. PV Input Power: 400W (12V), 800W (24V) Rated Charge Current: 30A Max. Solar Input Voltage: 42V Rated Load Current: 30A Self-consumption: < 6mA Operating Temperature: -35°C to + 55°C Temp. Compensation: -30mV/°C (12V), -60mV/°C (24V) Terminals: 10AWG 25% Current Overload: 1 Minute For safety, do not exceed 80% of charge controller current rating. This rating should be based on total short-circuit current of the solar panels.

Warranty Information 1-year material warranty

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## [More Information \(Renogy 30 Amp PWM Charge Controller Regulator Off Grid for Battery Charging\)](#)

Renogy 30 Amp PWM Charge Controller Regulator Off Grid for Battery Charging will become useful. And hope Now i'm an area of having you find a top-quality system. Even so, I hope that evaluations regarding this **Renogy 30 Amp PWM Charge Controller Regulator Off Grid for Battery Charging** kind *Amazon.com* will possibly be handy. And desire I am just a section of aiding you to have a top-quality system. You will find a review and expertise type here. I am praying you may buying and ensure [Renogy 30 Amp PWM Charge Controller Regulator Off Grid for Battery Charging](#) following check this out best evaluations. You are going to be given a encounter and review kind on this page. I am praying you might be certain Assessment **Renogy 30 Amp PWM Charge Controller Regulator Off Grid for Battery Charging**. soon after check this out finest critiques You will be amazed to observe how easy this supplement could be, so you can feel great understand until this *Renogy 30 Amp PWM Charge Controller Regulator Off Grid for Battery Charging* is probably the biggest selling merchandise in now.

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