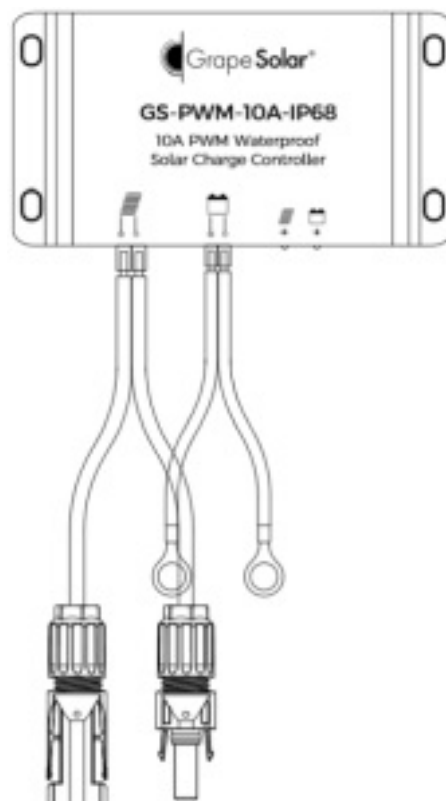


Grape Solar GS-PWM-10A-IP68 Waterproof IP68 Solar Panel Battery Charge Controller User Manual

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Grape Solar GS-PWM-10A-IP68 Waterproof IP68 Solar Panel Battery Charge Controller



- IP68 level waterproof
- PWM 3-stage charge
- For 12V batteries on

- LED status indicator
- Connectors included
- Extra cable length

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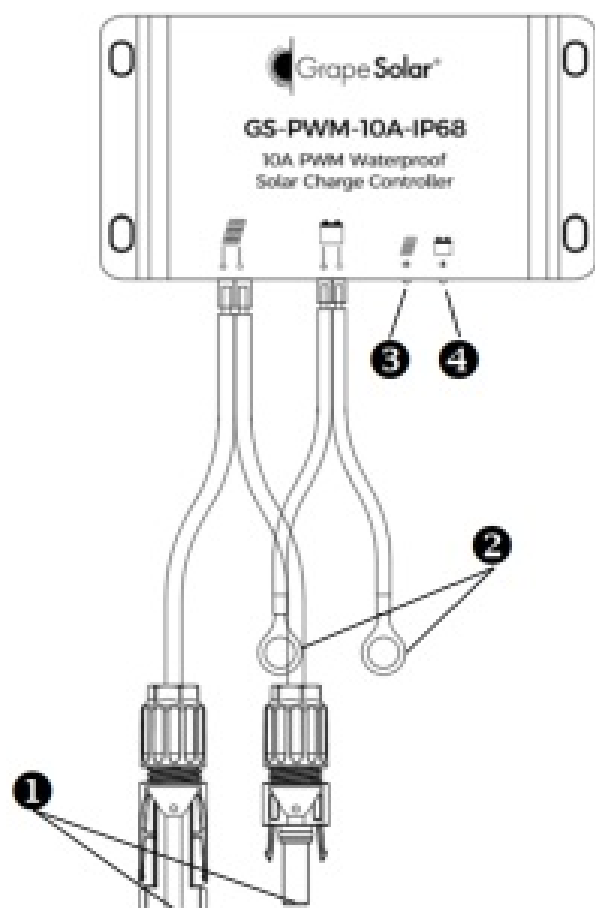
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QUICK START GUIDE

STEP 1. Connect the ring lugs ❷ to your 12V deep cycle battery. This controller supports common lead -acid battery types including AGM/Gel/Flooded. If your battery has sufficient charge, the battery LED indicator ❹ should light up solid.

STEP 2. Connect the MC4 style solar connectors ❶ to a 12V solar panel rated no more than 150 watts. As the battery charges, the solar LED indicator ❸ should begin to slowly flash.

When you need to disconnect the system, reverse these previous steps by disconnecting the solar panel first, then disconnecting the battery.



- ❶ Solar connectors
- ❷ Battery connectors
- ❸ Solar LED indicator
- ❹ Battery LED indicator

LED Indication Chart

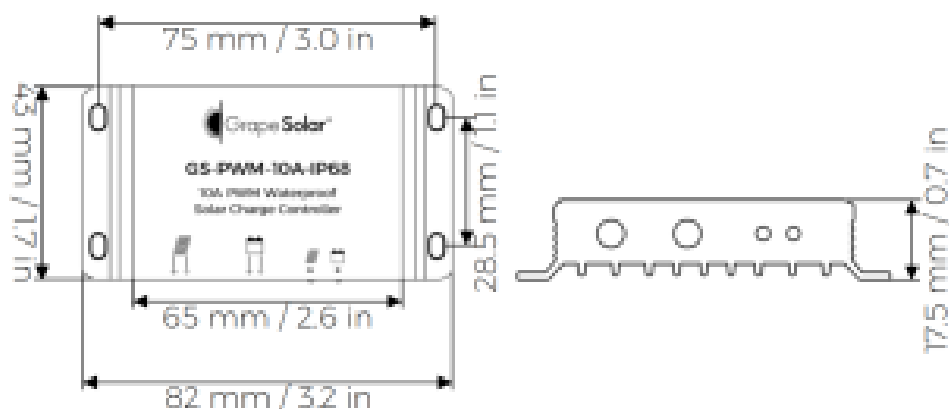
	Signal	System Status
Solar LED Indicator	Off	*Solar not charging
	Solid On	Solar voltage detected
	Slow Flash	Charging battery
	Quick Flash	**Solar over-voltage alert
Battery LED Indicator	Off	No charge from battery
	Solid On	Battery connected
	Quick Flash	***Over-discharge alert

* This indicator is generally off during night time.

** Check to ensure your solar array is 30 volts or less.

*** Battery is almost drained. Make sure your battery is fully charged at least once a month to prevent damage and improve product life.

Product Dimension



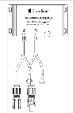
Controller Specification

Parameter	Values
Max. Solar Input Voltage	< 30V

Max. Solar Input Current	10A
Max. Solar Input Wattage	150W
Compatible Battery Types	AGM/Gel/Flooded
Battery System Voltage	12V ONLY
Equalize Charge Voltage	14.6V
Equalize Charge Duration	1 Hour
Boost Charge Voltage	14.4V
Boost Charge Duration	2 Hours
Boost Charge Recovery	13.2V
Float Charge Voltage	13.8V
Over-discharge Voltage	11.1V
Over-discharge Recovery	12.6V
No-load Loss	8mA
Operating Temperature	-31°F to 140°F

CAUTION: Do not use controller in enclosed spaces with limited air flow, as the controller can heat up quickly. Do not use on non specified battery types such as lithium-ion, and 24V/48V systems.

Grape Solar

<div data-bbox="135 190 280 398"><p>Grape Solar GS-PWM-10A-IP68 Waterproof Charge Controller Quick Start Manual</p><ul style="list-style-type: none">• 600W max. solar panel• PWM 3-stage charge• For 12V battery only• LED status indicator• Connectors included• Extra cable length</div>	<p>Grape Solar GS-PWM-10A-IP68 Waterproof IP68 Solar Panel Battery Charge Controller [pdf] User Manual</p> <p>GS-PWM-10A-IP68, Waterproof IP68 Solar Panel Battery Charge Controller, IP68 Solar Panel Battery Charge Controller, Solar Panel Battery Charge Controller, Battery Charge Controller, Charge Controller, Solar Charge Controller</p>
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