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JVA Solar USB PSU Quick Start Guide

PTE0347



Introduction

The PTE0347 JVA Solar Regulator and USB Power Supply provides an integrated Wireless Cellular USB Dongle (Wingle) power supply with a solar battery charger and management system.

This product provides a Wi-Fi network wherever a 3G/4G signal is available*. The Wi-Fi can then be used to connect an IP device or Internet of Things (IoT) device to the Cloud (Internet).

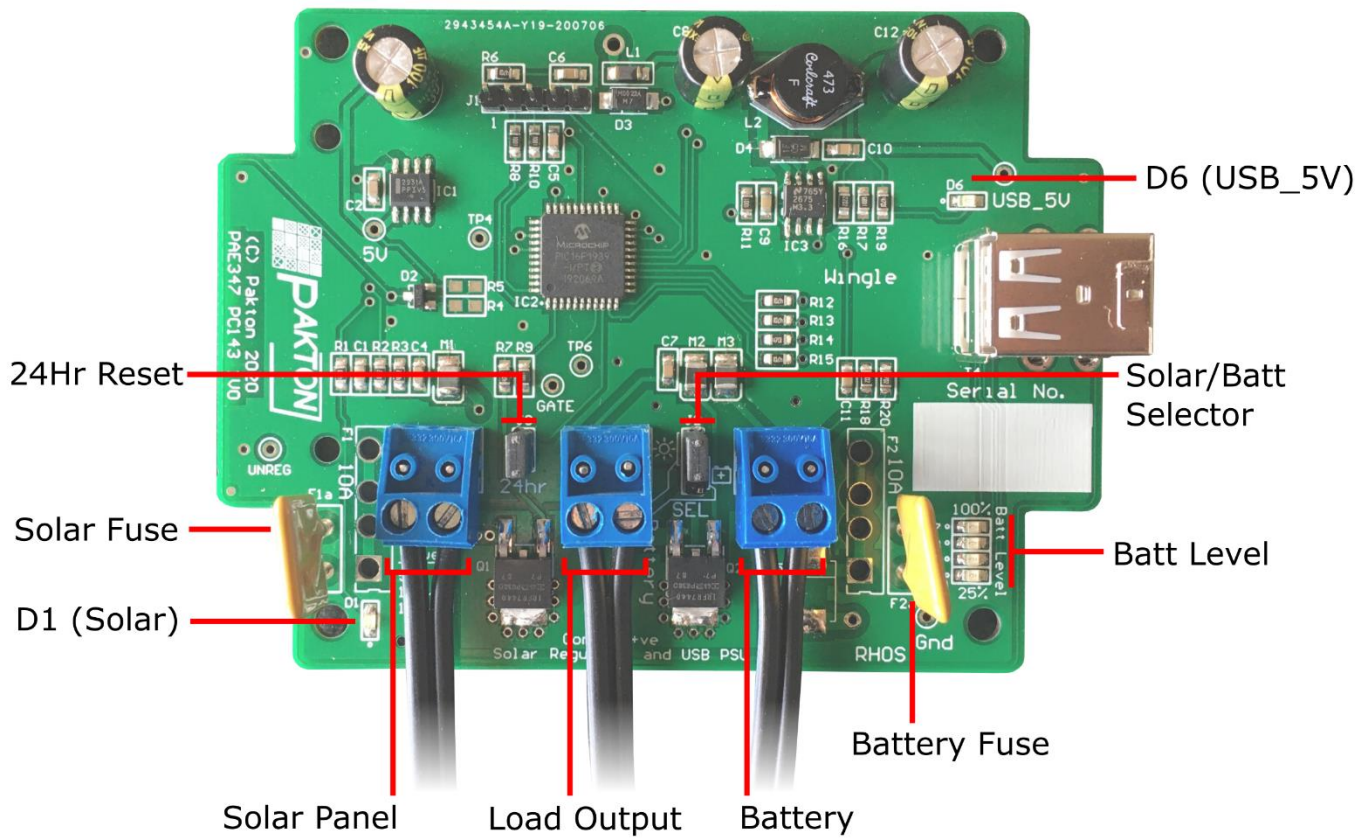
This quick-start guide explains how to connect your Wi-Fi enabled devices to the Wingle.

*An external cellular antenna may be connected to increase reception.

Specifications

Solar Panel	Nominal 12v Solar Panel (maximum open circuit voltage - 22vDC) Maximum power 150W
Battery	Nominal 12V DC Minimum battery size - 18Ah A larger battery may be required if you connect any other 12V device to it.
Outputs (1)	12v DC SAE connector Used for powering a device from the solar power
Outputs (2)	12v DC Battery Connection M8 Eyelet crimped terminals for battery
SIM	Full Size
Wi-Fi	2.4GHz b/g/n Up to 10 connections at a time
Network (Huawei E8372-608h)	3G 850/2100MHz 4GX 700MHz + 4G B1/3/7/21
Antenna connector	Female SMA Ensure antenna is mounted away from sources of interference such as AC or high voltage cables.

Overview



LED Indicators

D1 (Solar)	Solid on when solar panel in sunlight Blinking when solar panel in low power conditions Off when no solar power detected
D6 (USB_5V)	Solid on when USB Power is turned on
Batt Level	Bottom LED flashes if no battery is connected (or battery is bad/dead) Solid on from bottom to top: Shows approximate battery voltage level (25% to 100%)

Weatherproof
Plastic Enclosure

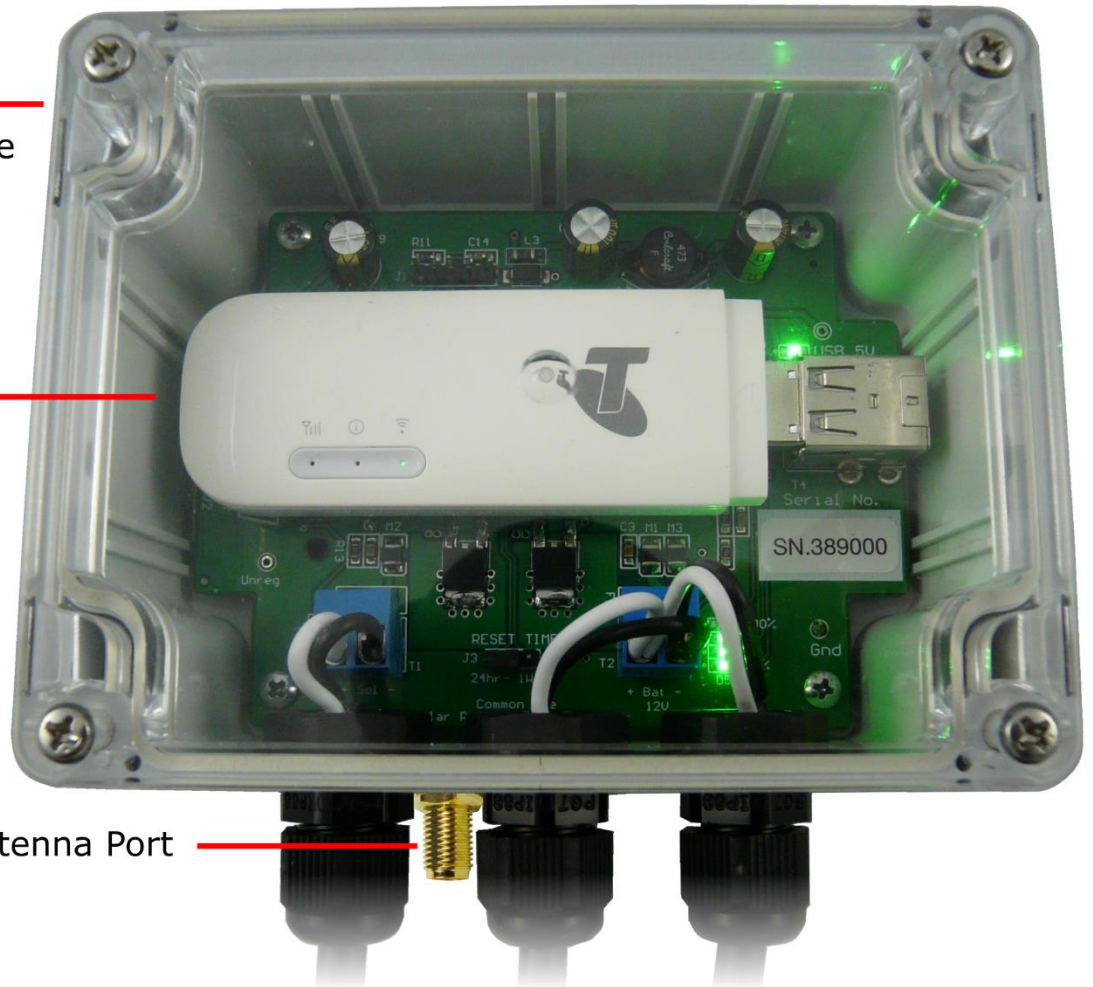
Wingle

Antenna Port

Solar Panel

Load Output

Battery



Before you start

Activate the SIM card

Activate your SIM card and test it in a mobile phone. The Wi-Fi network allows a data-only connection, the number of devices connected to the module will determine how much data will be used.

As a guide, a single IP Energizer or IP Monitor will use less than 1MB per day, so for connecting a single IP Energizer, an upper limit of 500MB per year is an option with a lot of headroom.

Battery Connection and First Power On

Connect the battery to the PTE0347 by the included battery connection cables. Ensure that the positive is connected to the red connector, and the negative to the black connector.

Once connected, the Batt Level indicator lights will show the approximate voltage level of the battery.



PCB wired to batt image

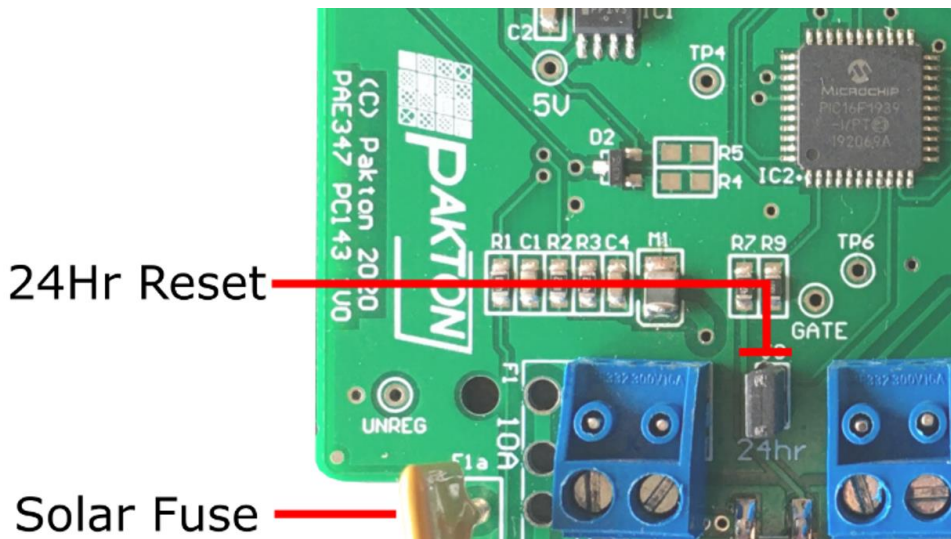
Connect a Wi-Fi Device

Follow the instructions included with the device being used, this is now a standard Wi-Fi Access Point and can be joined by any Wi-Fi enabled device.

Connect IP Energizer

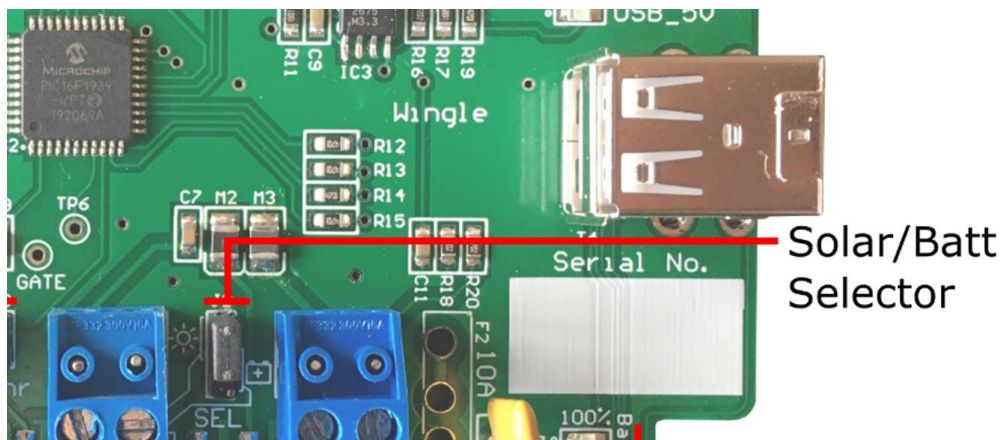
Please follow the guide included with the IP Energizer product which uses the IP Energizer Controller (IPEC) application, free for download and install on Android and iOS devices.

24Hr Reset Function



The 24Hr Reset function is designed to restart the USB device (Wingle) if it “locks up”. It does this by shutting down the USB power for a very short time. Testing has shown that this function does not lead to any significant loss of service. To disable the 24 Hr reset, remove the jumper from the two pins.

Load Voltage Source Selector



This jumper selects the voltage source for the load output, either:

- Solar Panel Direct voltage (Top 2 pins)
- Battery Direct voltage (Bottom 2 pins)

JVA’s IP Energizer® range is compatible with the Solar Panel Direct voltage (up to 22V) and will run more efficiently on this higher voltage. To use the Solar Panel Direct voltage, move the jumper to the top two pins.

To select the Battery Direct voltage (12V nominal), move the jumper to the bottom two pins. This is the suggest setting for any third party devices along with the rest of the JVA Agricultural Energizer Range and is selected by default.

Troubleshooting

Fault	Likely Cause	Remedy
No lights are on	Power is not connected Power wires are reversed Fuse is blown [high power units]	Check power connections Check battery polarity Check Blade Fuses [high power]
Batt Level Flashing	Battery Disconnected Bad Battery	Check Battery Connections Check Battery voltage Check Blade Fuses [high power]
USB_5V LED Off	USB Device drawing too much current	Unplug USB device, check for damage/seek manufacturer advice
Battery not charging	Solar Wiring backwards Broken cables Solar panel broken Blown Fuse [high power units]	Check that Solar + goes to the left-hand screw terminal Check that the battery cables are not damaged Check Solar panel for physical Damage (broken glass, bent frame, etc.) Check Battery Fuse [high power]
Cannot connect to Wi-Fi	Low signal from 3G/4G Out of Wi-Fi Range (~10m) SIM Card not inserted correctly	Check Management page of Wingle Move closer to Wingle Re-insert SIM card

If the unit is still not working correctly, contact your nearest JVA distributor for technical support.

JVA Distributors

If you have any questions or need further assistance, please email us at sales@jva-fence.com.au or call

Region	Number
Australia	07 3103 0582
South Africa	0861 782 349
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For more information on our complete range of electric fencing products please see the JVA website at www.jva-fence.com