

2020 RV Solar Catalogue

Switch
Energy^{INC.}

Distributor of Renewable Energy Products



www.switchenergy.ca

The Freedom of the Road



Switch Energy Today!

A New Approach



At Switch Energy, we strive to provide the best products available in the industry. We are continually researching new products to discover new and innovative ways to provide our customers with the best power solutions.

If we told you we could increase your solar panels efficiency by up to 30% just by adding one low cost component, would you be interested? Read all about **MPPT technology** and judge for yourself.

Whether you are heading down the road less travelled or off to your favourite vacation spot, we will get you there safely and securely with the latest solar technology from Switch Energy.



Switch Energy RV Solar Kits

Solar kits are virtually maintenance free and are designed to give you years of uninterrupted power.



The Road Tripper - RV8104

Switch Energy 100 watt Kit

- Switch Energy 100 watt Solar Panel
- 30 amp Charge Controller
- MC4 RV Cable Kit
- Switch Energy Z bracket Kit



The Weekend Getaway - RV8107

Switch Energy 165 watt Kit

- Switch Energy 165 watt Solar Panel
- 30 amp PWM Charge Controller
- MC4 RV Cable Kit
- Switch Energy Z Bracket Kit



The Horizon Expander - RV8103

Switch Energy 165 watt Expansion Kit

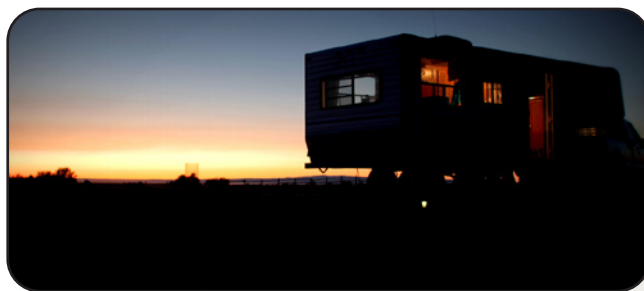
- Switch Energy 165 watt Solar Panel
- MC4 Y Adapter
- Switch Energy Z Bracket Kit



The Folding Kit - RV8110

Switch Energy 100 Watt MaxPower MPPT Folding Solar Panel

- Waterproof 20A MPPT Controller - 2 year warranty
- 100W Monocrystalline Solar Panel
- 25/10 year output and construction warranty
- Folded Size 80cm x 36cm x 7cm / 31.4" x 14.2" x 2.75"
- 8.2kg/18lbs total weight



Security Day & Night



Broaden Your Horizons



All kits include a proper RV mounting kit to ensure years of safe traveling.

Switch Energy RV Solar Kits

These kits keep your batteries charged giving you the freedom to use lights, heaters, and other DC appliances at your convenience.



The Highway Companion - RV8101

Switch Energy 165 Watt MaxPower MPPT Kit

- 165 Watt Solar Panel
- 50 amp MPPT Charge Controller with Remote Display
- MC4 RV Cable Kit
- Switch Energy Z Bracket Kit



The Weekend Getaway II - RV8102

Switch Energy 325 Watt MaxPower MPPT Split-Cell Kit

- 325 watt Split-Cell Solar Panel
- 50 amp MPPT Charge Controller with Remote Display
- MC4 RV Cable Kit
- Switch Energy Z Bracket Kit x2



The Horizon Expander II - RV8105

Switch Energy 325 Watt Expansion Kit

- 325 watt Split-Cell Solar Panel
- MC4 Y Adapter
- Switch Energy Z Bracket Kit x 2



The Magnum - RV8113

Magnum Energy 3000 watt Hybrid Kit

- ME MSH3012M Inverter/Charger
- ME Battery Monitor Kit
- ME Advance Remote Control



The Magnum II - RV8114

Magnum Energy MS2012 Kit

- ME MS2012 Inverter/Charger
- ME Battery Monitor Kit
- ME Advance Remote Control



The Magnum III - RV8115

Magnum Energy MS2812 Kit

- ME MS2812 Inverter/Charger
- ME Battery Monitor Kit
- ME Advance Remote Control

The Freedom of Power

Switch Energy kits are designed to keep your batteries charged which will give you the freedom to use lights, furnaces, and other DC appliances without the worry of running out of power.

All kits include a proper RV mounting kit to ensure years of safe traveling.



The Victron Smart Start - RV8100

Victron 165 watt MaxPower MPPT Kit

- Switch Energy 165 watt Solar Panel
- Victron SmartSolar 100/300 Mppt Controller
- MC4 RV Cable Kit
- Switch Energy Z Bracket Kit



The Folding Kit II - RV8111

Switch Energy 140 Watt MaxPower MPPT Folding Solar Panel

- Waterproof 20A MPPT Controller - 2 year warranty
- 140W Monocrystalline Solar Panel
- 25/10 year output and construction warranty
- Folded Size 54cm x 68cm x 7cm / 21.2" x 26.6" x 2.75"
- 10kg/22lbs total weight



The Victron Smart Start II - RV8108

Victron 325 Watt MaxPower MPPT Kit

- 325 Watt Solar Panel
- Victron SmartSolar 100/50 Mppt Controller
- MC4 RV Cable Kit
- Switch Energy Z Bracket Kit



The Folding Kit III - RV8112

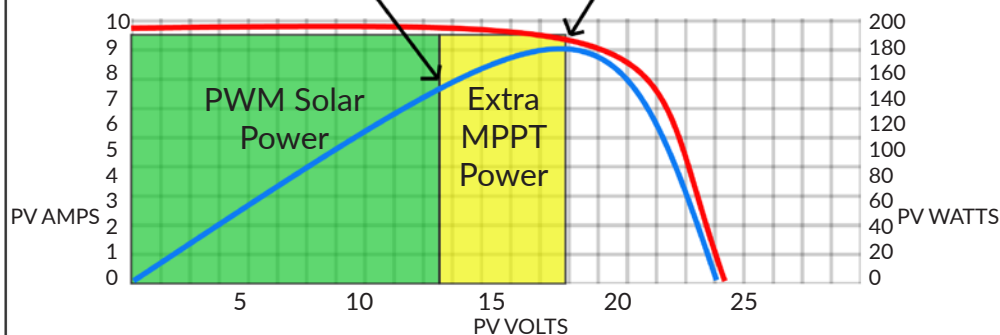
Switch Energy 200 Watt MaxPower MPPT Folding Solar Panel

- Waterproof 20A MPPT Controller - 2 year warranty
- 200W Monocrystalline Solar Panel
- 25/10 year output and construction warranty
- Folded Size 78cm x 68cm x 7cm / 30.7" x 26.6" x 2.75"
- 14.5kg/32lbs total weight

PWM vs. MPPT Solar Charge Controllers

PWM controllers can only charge at the battery voltage. (12V)

MPPT controllers use additional voltage from the solar panel to generate more charging amps



MAXIMUM POWER POINT TRACKING

Why would you pay for a 165 watt panel and settle for only 114watts of power? It just doesn't make sense!

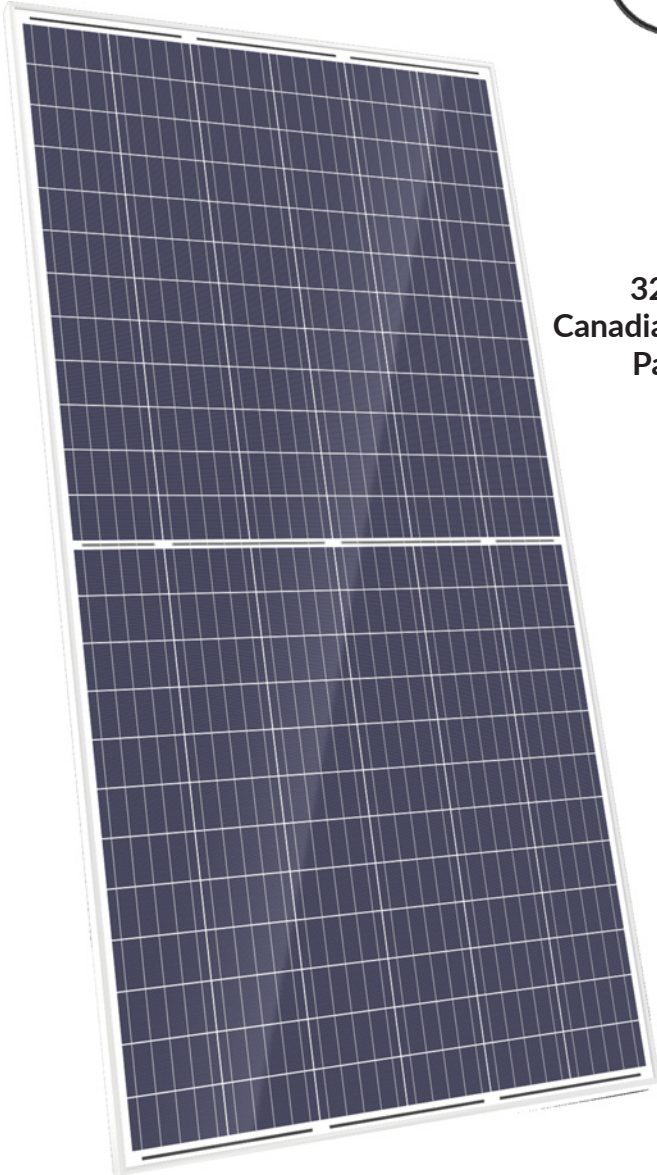
The increased wattage more than off sets the additional cost of the MPPT charge controller.

Graph based on 165 watt module.
PWM = 114 Watts vs. MPPT = 161 Watts
(MPPT controllers are around 97% efficient)

Freedom Matters



325W
Canadian Solar™
Panels



Panels are CSA Approved for the Canadian Market

**MaxPower
MPPT
Split-Cell
RV Kits!**

**Split-Cell
Anti-Shading
Technology**

**The Weekend Getaway II
RV8102 Switch Energy Kit**

- Candian Solar Split-Cell Panel
- 50A MPPT Charge Controller
- Remote Display
- MC4 RV Cable Kit
- Switch Energy Z Bracket Kit x 2

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MaxPower MPPT Technology



- MPPT tracking efficiency is up to 99.9%.
- Due to an advanced digital power technology, the circuit energy conversion efficiency is as high as 98%.
- It provides an active charging voltage regulation feature. At battery open circuit or lithium battery BMS overcharge protection, the controller battery terminal will output the rated charging voltage value
- Available in multiple battery types and support charging procedures of various types of batteries such as lithium battery, colloidal battery, sealed battery, vented battery, lithium battery, etc.
- A current-limited charging mode is available. When the power of solar panel is too large and the charging current is higher than the rated value, the controller automatically reduces the charging power so that the solar panel can operate at the rated charging current.
- Support automatic identification of lead-acid battery voltage.
- External LCD screen or Bluetooth module can be connected for viewing of equipment operating data and status, and modification of controller parameters is supported.
- Built-in over-temperature protection mechanism ensures that when temperature exceeds the set value of the device, the charging current decreases linearly with the temperature, thereby reducing the temperature rise of controller and avoiding high temperature damage.
- Temperature compensation and automatic adjustment of charge and discharge parameters help to improve battery life.
- Solar panel short circuit protection, battery open circuit protection and TVS lightning protection etc.

MPPT Charge Controller Features

System voltage	12V/24VAuto	Charging Conversion efficiency	≤98%
Zero-load loss	<10mA	MPPT tracking efficiency	>99%
Battery voltage	9V to 35V	Temperature compensation coefficient	-3mv/°C/2V(default) Lithium battery features no T.C.
Max. PV Open Circuit Voltage	92V(25°) 100V(Lowest Ambient Temperature)	Operating temperature	-35° to +45°
Max. power point voltage range	(Battery Voltage+2V) ~72V	Protection degree	IP32
Rated charging current	40A - 50A	Weight	1.3kg
Rated load current	20A	Communication method	TTL Serial Communication
Max. capacitive load capacity	10000uF	Altitude	≤ 3000m

Connectivity Matters



SmartSolar Mppt Charge Controller

*MPPT: Ultra
Fast Maximum
Power Point
Tracking*



Multiplus 12|3000|120 Inverter Charger

Bluetooth inside

With Bluetooth being implemented in most Victron Energy products, wireless communication between the products will simplify system installation and enhance performance.

Victron BMV-712 Smart Battery Monitor

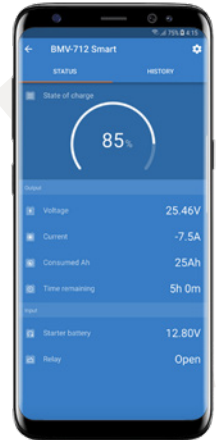
Bluetooth inside

With Bluetooth built-in, the BMV Smart is ready for the Internet of Things (IoT) era.

Download the Victron Bluetooth app

Use a smartphone or other Bluetooth enabled device to:

- customize settings
- monitor all important data on single screen Inverter and chargers
- view historical data
- update the software



Other features:

- Battery voltage, current, power, amp hours consumed & state of charge
- Remaining time at the current rate of discharge
- Programmable visual and audible alarm
- Programmable relay, to turn off non critical loads or to run a generator when needed
- 500 Amp quick connect shunt and connection kit
- Shunt selection capability up to 10.000 Amps
- VE.Direct communication port
- Stores a wide range of historical events, which can be used to evaluate usage patterns and battery health
- Wide input voltage range: 6,5 – 70V
- High current measurement resolution: 10 mA (0,01A)
- Additional input to measure voltage (of a second battery), temperature or midpoint voltage, and corresponding alarm and relay settings

Switch to Lead Carbon Batteries

Maintenance Free, Designed for Partial State of Charge



SWE12-42



SWE12-65



SWE12-100



SWE12-150

2800 cycles @50% Depth of Discharge

* battery cases may also come in green or grey

Portability Matters



Portable 12 Volt Folding Panel Kit

Portable Folding Panels provide a portable alternative to standard RV solar kits. They are just as efficient and durable as conventional panels, but fold up into a carrying bag. They come ready to go with a built on waterproof regulator and easy to connect cables.

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MaxPower MPPT Foldable Panels

Available in
100W, 140W, & 200W
Kits

Dimensions (Folded):
787mm x 534mm x 70mm
31" x 21.02" x 2.75"

Weight: 16kg / 35.27lbs

Charge Controller Type: MPPT
Waterproof

Panel Type: Monocrystalline

Warranty: 25 Year Panel Output

10 Year Construction, 2 Year
Controller

Magnum Energy Remote Control

The Magnum Energy Remote is designed to be simple to use while offering full menu features for set-up and control. It offers multiple functions in one place, including: inverter on/off, charger on/off, shore power breaker settings, AGS control, meter button, setup, and technical menus.

Adjustable settings include:

- Shore power input from 5 to 60 amps
- AGS settings for voltage, temperature, quiet time, clock and status
- Inverter and charger settings for search watts, battery bank size, battery type, charge rate
- VAC dropout, contrast, and power saver
- Tech settings for battery temperature, transformer and internal FETs, software revisions, and factory reset
- A standard 50ft wire allows for plenty of room to display the remote with ease



Magnum Automatic Generator Start

Magnum Energy's Automatic Generator Start (AGS) controllers allow your generator to automatically start based on low battery voltage, state of charge, and/or high temperature when used with a ME-BMK (Battery Monitor Kit) and a ME-ARC (Advanced Remote Control). ME-BMK is required for SOC (State of Charge).

Two models are available:

- The stand alone version of the AGS (ME-AGS-S) works well for installation and operation without an inverter
- The network version of the AGS (ME-AGS-N) allows operation of the AGS via the ME-RC or ME-ARC

ME-AGS-N Features:

- All settings are adjustable from the ME-RC or the ME-ARC remote
- Auto start is locked out when utility power is present
- Portable generator mode
- The AGS accommodates 12, 24 and 48 volt settings



Manual start and stop: Auto Gen Start settings do not interfere with the manual start/stop operation of the generator. Just use any existing start/stop switch for your generator.

Parts and Accessories

Solar Panels

Switch Energy 100, 160, and 285 watt panels

Folding Solar Panels with Carrying Case

150 Watt MPPT Folding Panel with case

Panel Mount Kits

Switch Energy Z Bracket Kit

Solar Charge Controllers

TriStar TS45 TS45MPPT

TriStar TS60 TS60MPPT

SRNE 40 - 50A MPPT Charge Controller

Victron SmartSolar 75/15 - 100/50

Iota Chargers

DLS-30, DLS -45, DLS-55 & DLS-75

IQ4 Smart Charger Module

Battery System Monitors

Victron BMV-712 Smart

The TriMetric 2025-A

BMK from Magnum Energy

Smart Battery Combiner, 25 amp

T Fuses

200, 300, and 400 amp fuses are available

Automatic Transfer Relays

30 amp & 50 amp

Magnum Inverters

MMS1012, MMS1012-G, MS2012, MS2812, MSH3012M

Kisae Inverters

SWXFR 1210, 1220, 1230,

IC 121040, 122055, 1230150

Morningstar Inverter

SureSine 300

Victron

Multiplus 12|3000|120 Inverter Charger

Venus GX, Victron Color Control GX

Victron Temperature Sensor

Magnum Accessories

AGS-N Auto Gen Start-network

AGS-S Auto Gen Start-stand alone

ME-RC50 Remote Control

ME-ARC Advanced Remote Control

Lead Carbon Batteries

SWE12-42, SWE12-65

SWE12-100, SWE12-150



How To Size Your System

Why should you install a solar charging system? A solar system will give you the freedom to camp anywhere without having to give up the comforts of home. Whether you need power for battery maintenance only, or for fulltime RV living, we have the system to suit your needs.

12 Volt Appliance	DC Watts	x Quantity	x Hours/Day	= Total Watt Hours/day
Incandescent Lights	18			
Fluorescent Lights	24			
Water Pump	48			
12 Volt T.V.	36			
Furnace	96			
12 Volt Stereo	9.6			
Gas Detector	2.4	1	24	58
120 VAC Appliance				
T.V.	60			
VCR/DVD	48			
Satellite Dish	1200	1	0.1	120
Microwave	1200	1	0.1	120
Toaster	720	1	0.1	120
Coffee Maker	144			
Blender	300			
Computer	60			
Lap Top	50			
Total Watt Hours/Day				