

## SOCRATES 1200 : Portable Power System



Price: CAD \$2,519.00 - CAD \$2,829.00

**Product Categories:** [Cabin Solar Power](#), [Back-Up Systems](#), [On Location Off-Grid](#), [On The Road](#), [On The Roof](#), [RV & Van Systems](#), [Shop](#), [Tiny House Power](#)

**Product Tags:** [1200w](#), [1200Wh](#), [back-up power](#), [battery box](#), [cabin power](#), [canada](#), [emergency power](#), [fridge back-up](#), [lfp](#), [lifepo4 battery](#), [lithium](#), [portable battery](#), [power box](#), [socrates](#), [socrates 1200](#), [socrates 1200 canada](#), [solar](#), [solar battery canada](#), [solar power](#), [tiny house power](#), [tiny house solar](#)

**Product Page:**

<https://www.modernoutpost.com/product/socrates-1200-portable-power-system/>

### Product Variants

- SOCRATES 1200 : Portable Power System - Socrates (Pre-wired in crate) ()
- SOCRATES 1200 : Portable Power System - Parts Only (no crate) ()

## - SOCRATES 1200 : Portable Power System - Pre-Wired Wall Mount Board ( )

### Product Summary

The SOCRATES 1200 Portable Power System is our answer to consumer electronics power packs that just can't cut it. We've packed solid name brands into this kit, maximized input and output performance for Canada, so you have peace of mind energy for your cabin, tiny house, or home back-up needs. All packed into a custom built crate built locally here in Courtenay BC.

### Product Description

The SOCRATES 1200 Portable Power System is our answer to consumer electronics power packs that just can't cut it. We've packed solid name brands into this kit, maximized input and output performance for Canada, so you have peace of mind energy for your cabin, tiny house, or home back-up needs. All packed into a custom built crate built locally here in Courtenay BC.

There's a lot more packed into this package than you will find in any mass market solar battery. If you are looking at systems like the Goal Zero **Yeti 1000X**, [1500X](#)] or [3000X](#)], or the Jackery 1000, but are wanting something more robust, and capable of ample solar integration, proper back-up power performance, and serviceable parts, then the SOCRATES 1200 should be on your shortlist.

#### **The SOCRATES 1200 Advantages Serviceable & Replaceable Components**

What happens to that Amazon power pack once it reaches the end of its life? What happens to it if you have a warranty, or out-of-warranty issue? That's right... either way, it's landfill.

Sorry, but we think these systems should be more responsible & reliable than this. So, we use name-brands like [Victron Energy](#)], [Samlex](#)], and [Midnite Solar](#)] in this package. If you ever have a problem, each part is serviceable &/or replaceable.

Even the custom wood crate that houses the equipment can be modified to accommodate upgrades!

### **MPPT Solar Input Capacity**

The SOCRATES 1200 is designed like a mini off-grid cabin system. It incorporates an MPPT solar controller that handles up to 50A and 100V of input solar - that's up to 1400 Watts of solar on this 24V battery platform!

Compare this to the 50V or 30V, 400-600W limit of most common 'solar battery packs' like Goal Zero, Jackery, Bluetti, and others.

This higher voltage means you can use any solar modules up to & including 72-cell size without destroying your input controller.\*

Examples:

Three 425W, 72-cell modules in parallel

Four 350W, 60-cell modules in parallel

Two parallel strings of three 150W, 36-cell modules in series

Don't worry if you over-produce, it will simply clip the excess beyond 50A. This means you can oversize for better off-season performance.

\* Canadians should size series strings to a maximum open-circuit voltage that is 20% lower than the maximum input voltage for the controller in order to allow for cold-weather voltage rise from the solar array.

### **Emergency Back-Up Transfer Switch Built-In**

The SOCRATES can be used to take essential loads like fridges and freezers off-grid and provide back-up power during blackouts.

The system can be programmed in either of two modes...

#### **1. 'On-Line' mode (default)**

This mode prioritizes solar over grid/generator. Loads are powered from the battery/inverter output, and the system will only draw energy from the grid/generator input if the solar is not keeping-up with demand. Ideal for most off-grid applications wanting to maximize solar. We recommend setting the low-battery threshold to 70% DoD (depth of discharge) for lithium, or 40% DoD for AGM, so you always have ample reserve & long battery life (great if you use a generator for back-up to your solar during the winter months).

## 2. 'Stand-By Mode'

This is an ideal configuration if emergency back-up use is your primary concern. In this set-up, the system acts as a UPS system (Uninterruptible Power Supply). Grid power is passed through to the loads, and the battery is kept charged (low consumption thanks to the efficiency of lithium batteries). If you also have solar connected, the amount of power it draws from the utility will be reduced. If/when the grid goes down, the system switches in milliseconds to battery power. If you have solar connected, this power continues to flow to the battery & offsets your load consumption thereby extending your independence.

### Rational Battery Charging

When you have both solar & grid/gen sources connected, the AC input is automatically dialled-back in recognition of how much solar input is being provided. In this way, you are never at risk of charging your battery too aggressively.

### Solar Input Connections

Solar input connections are made via dual Anderson Power Pole APP45 ports (20A each). These ports make it easy to connect any brand of solar modules.

MC4 > APP45 (standard rooftop solar modules)

SAE > APP45 (many 36-cell modules like Coleman or NOMA)

Goal Zero APP30 > APP45 (convert from stacked to side-by-side terminal config)

Powerfilm Weatherpack > APP45

Let us know what you need, and we will provide.

### Output Ports

The SOCRATES 1200 provides a wide range of power output ports...

- AC: 1200 Watts, 120V Pure sinewave power is provided via GFCI protected outlets.

Surge capacity for pumps & motors is up to 300% (3600VA)

- USB: USB-C with Power Delivery 18W, USB Quick Charge QC 3.0, Dual 2.4A USB Ports.

- 12V: 15A CLA power socket (car power socket).

### System Monitoring

The system can be monitored in two ways...

#### 1. Inverter Interface

The inverter display shows solar input, AC grid input, AC output to loads, battery voltage, and more.

## 2. Victron Bluetooth

The Bluetooth interface to the Victron solar charge controller allows you to monitor solar input performance and battery status from your smartphone.

### **SOCRATES 1200 Specifications In Brief Input**

Solar : 1250W @ 18-100V

AC (grid/gen) : 10A @ 120VAC

### **Output**

AC: 1200 Watts, 120V Pure sinewave

GFCI protected outlets

Peak Surge: 300% (3600VA)

USB-C with Power Delivery: 18W

USB Quick Charge QC 3.0

Dual 2.4A USB Ports

CLA Socket: 180W (15A @ 12V)

### **Energy Storage**

External to the SOCRATES - choose your battery type and capacity, and we'll provide the box (or the plans to DIY)

The SOCRATES is configured as a 24V system, so 4x 6V batteries, or 2x 12V batteries in series are required. Or, you can order a Lithium-Iron-Phosphate battery pre-built for 24V.

24V was used to maximize the solar input capacity (twice the solar input).

### **Safety**

2x 20A 150VDC PV input breakers

1x 50A 150VDC PV output breaker

1x 200A 48VDC Inverter input breaker

1x 10A 120VAC Input charger breaker

1x 15A 120VAC Inverter output breaker

### **Dimensions**

LxWxH : 52 x 39 x 47cm / 20.5 x 15.3 x 18.5"

Weight : 42.7kg / 94lbs

## **The Spec Sheets... Inverter : [Samlex-EVO-1224F-HW](#)] Solar Charge Controller : **Victron SmartSolar MPPT 100/50****

Choose Your Battery

The SOCRATES 1200 is build to work with any battery technology or battery bank capacity you need for your application. Although a minimum of 1200Wh useable capacity is recommended, you are free to choose the solution that best meets your needs - you are unbound.

### **Lithium Iron Phosphate Battery Chemistry**

An LFP battery bank will provide leading capacity in a smaller & lighter footprint. RELiON is one of the leaders in 12V & 24V lithium battery systems. For example, their 100Ah battery stores over 1200 Watt-Hours of energy, or enough to run a standard fridge for 8-12 hours without any input. Standard and self-warming 'low-temperature' models are available.

**RELiON RB100** or **RELiON RB100-LT** : [Discover Blue](#) : Many others too.]

Canadian Low-Temperatures?

Did you know that lithium batteries do not like to charge below 0C temperatures? Their BMS (battery management system) severely limits the input to the battery as it approaches freezing. They will discharge at low temperatures, but they restrict charging.

What is a good Canadian to do?

So, we offer a low-temperature version of this battery from RELiON which incorporates a warming system powered by the charging source (not the battery). Once the cells have reached a positive temperature, the battery starts charging normally. A fantastic option for any Canadian who needs reliable performance down to -20C. See the order form to request this upgrade.

### **AGM Lead Acid**

And of course, there is always the tried & true AGM lead-acid. AGM is suitable for indoor use, and is maintenance-free. Look to [Discover Battery](#)], [Surrette Rolls](#)], & **Trojan** for leading options. L16 for cabins & homes, GC2 Golf Carts for RVs & boats, and Group 24 or 31 for general use.

## [Discover](#)] : **Rolls** : **Trojan** : [AMPower](#) : And so many more.] **Options For Ordering...**

Order the standard SOCRATES 1200, or save some dollars by ordering without the crate.

We can provide the complete set of internal parts (excluding wire) for your own DIY power cabinet project.

### **Why The Crate?**

Seems a bit different, but the short answer is because we hate breakable plastic crap.

This box will take the bumps and scrapes of life and will only show character as a result of its experiences. Built tough with 3/4" pine and corner bracket reinforcement.

You can modify this box if you ever want to upgrade parts.

You can paint this up to become a part of your independent off-grid style!

Most cabin or tiny house systems are mounted onto plywood in a utility cabinet, so why shouldn't a portable system get packed in something renewable & workable? Want a different approach? Perhaps just the equipment pre-mounted on a plywood backplate for use in a tiny house power cabinet or cabin? Let us know... easily done.

Got Questions?

Want this concept but with different guts?

[Send us a note!](#)

## Product Attributes

- Dimensions: 1 &times; 1 &times; 1 cm
- Weight: 45 kg
- Package: Socrates (Pre-wired in crate), Parts Only (no crate), Pre-Wired Wall Mount Board

## Product Gallery

