Orca

MPPT SOLAR HYBRID UPS

Ranger SolarX

Inverter + UPS + Solar in One Unit

One intelligent unit that combines an inverter, UPS and MPPT solar charger, for solar-powered homes and businesses.



1 kW	2 kW	3 kW	5 kW
OR-SX1K	OR-SX2K	OR-SX3K	OR-SX5K

≥98%
MPPT solar tracking efficiency

1–5 kW
Four models, 24 V and 48 V systems

‹10 ms
Transfer time for uninterrupted power

3-way
Solar + grid + battery, automatic

OVERVIEW

Solar power, without interruption

The Orca Ranger SolarX MPPT Solar Hybrid UPS is a reliable, intelligent energy solution for residential and commercial needs. Advanced MPPT (Maximum Power Point Tracking) technology delivers maximum solar energy conversion, while power stays uninterrupted from solar, battery or grid sources.

Designed for durability and flexibility, it combines high efficiency, strong protection and intelligent control, making it ideal for modern smart energy systems.

Why SolarX

- Built-in MPPT solar charge controller
- Hybrid operation: solar + grid + battery
- Programmable charging priority
- Intelligent BMS logic
- Supports high-capacity battery banks
- Suitable for off-grid & hybrid installations

APPLICATIONS

Ideal for

Solar Homes
Run the home on solar by day and stored energy by night.

Commercial Solar Backup
Keep offices and shops powered while cutting grid bills.

Frequent Power Cuts
Seamless backup in areas with an unreliable grid.

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KEY FEATURES

Smart solar, dependable backup

High MPPT Efficiency

Built-in MPPT charge controller (≥ 98%) extracts maximum power from your solar panels.

Hybrid Operation

Works with solar, battery and grid power automatically, with programmable charging priority.

Pure Sine Wave Output

Clean AC power, fully compatible with sensitive electronic devices.

LCD Display

Real-time status of solar input, battery and load at a glance.

Smart Protection System

Safeguards against overload, short circuit, overcharge and overheating.

Energy Saving & Silent

Optimises solar use to cut grid consumption; advanced inverter design runs quietly.

TECHNICAL SPECIFICATIONS

MODEL	OR-SX1K	OR-SX2K	OR-SX3K	OR-SX5K
Rated power	1 kW	2 kW	3 kW	5 kW
Battery voltage	24 V DC	24 V DC	48 V DC	48 V DC
AC input voltage range	90–280 V AC	90–280 V AC	90–280 V AC	90–280 V AC
Output voltage	230 V ±10%	230 V ±10%	230 V ±10%	230 V ±10%
Output frequency	50 / 60 Hz (auto)	50 / 60 Hz (auto)	50 / 60 Hz (auto)	50 / 60 Hz (auto)
Output waveform	Pure sine wave	Pure sine wave	Pure sine wave	Pure sine wave
Max PV input power	1000 W	2000 W	3000 W	5000 W
Max PV input voltage	100 V DC	145 V DC	145 V DC	145 V DC
MPPT efficiency	≥ 98%	≥ 98%	≥ 98%	≥ 98%
Max charging current	30 A	40 A	50 A	60 A
Transfer time	< 10 ms	< 10 ms	< 10 ms	< 10 ms
Efficiency (AC mode)	≥ 95%	≥ 95%	≥ 95%	≥ 95%
Display	LCD + LED	LCD + LED	LCD + LED	LCD + LED
Protections	Overload, short circuit, overcharge, reverse polarity			
Operating temperature	0 °C to 45 °C	0 °C to 45 °C	0 °C to 45 °C	0 °C to 45 °C
Dimensions (mm)	340 × 140 × 200	400 × 150 × 230	450 × 180 × 260	500 × 200 × 280
Net weight	8 kg	11 kg	14 kg	18 kg

Planning a solar backup system?

Tell us your load and our team will size the right model, panels and batteries.

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Specifications subject to change without notice.