

PowerRouter Solar Battery

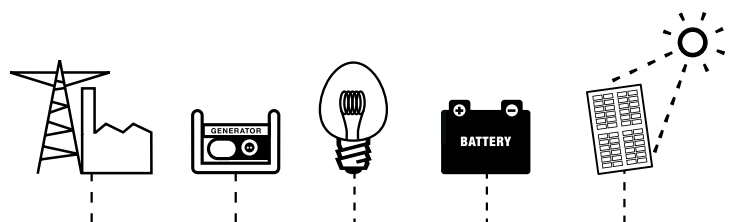
for on grid backup (UPS) or self-sufficiency (off grid)

The PowerRouter is designed to make you energy self-sufficient. This compact, all-in-one system provides a stable power supply in remote locations without a grid connection and in areas where the grid is unreliable. It is also great for those who want to maximize their self-generated solar energy in countries without feed-in incentives.

The PowerRouter Solar Battery is a solar inverter that can supplement its power from the grid or other sources, if necessary. The integrated Battery Manager will select optimum charging conditions for different types of batteries and protects against overcharging and deep discharge. The PowerRouter makes you truly energy self-sufficient, even off grid.



- available in 5.0kW, 3.7kW and 3.0kW versions
- compact, easy to install, all-in-one system
- compatible with all modern PV technologies, including thin film
- 2 fully independent inputs with MPP trackers for maximum yield and system configuration flexibility
- Uninterruptable Power Supply (UPS)
- integrated battery manager
- easy installation with built-in wizard
- integrated web-based monitoring & management



on-grid application

In countries without feed-in incentives, the PowerRouter provides a stable power supply for the loads connected directly to it. If there is not enough solar power to charge the batteries or keep your loads running, the PowerRouter draws supplementary power from the grid. In on-grid applications, you can opt to make grid power unidirectional and prevent the PowerRouter from feeding energy back into the grid. In areas where the grid is unreliable and unstable, the PowerRouter provides a stable source of energy.

off-grid application

In remote areas without a grid connection, the PowerRouter supplies stable power generated from renewable sources and stored energy. Its integrated battery manager ensures that your equipment continues to work when your solar power runs low. If necessary, it automatically starts up your diesel generator when your batteries are at a critical charge level. Diesel-powered charging and feeding the AC load is kept to a minimum. The generator shuts off when the batteries are fully charged. This economy of use keeps fuel consumption down and saves on maintenance.

intelligent battery manager

The battery manager can charge 24 Vdc and 48 Vdc wet, gel or other batteries. You can set optimum charging conditions for each type and application by adjusting voltage compensation, temperature compensation, and opting for a 3-stage adaptive or float charging protocol. Better battery management prolongs battery life and reduces costs.

uninterruptable power supply

The PowerRouter has a unique feature that guarantees uninterruptable power in on-grid applications. The PowerRouter can supply a stable 230Vac/50Hz power signal, even when the grid fails. The PowerRouter switches from grid to solar and battery power in less than 20ms, so your power supply does not get interrupted. In the event of a grid failure, the PowerRouter automatically disconnects and switches back on only when the grid has been stable for 30 seconds in order to protect connected loads from voltage spikes.

monitor & manage

When the PowerRouter is connected to the Internet, the web portal myPowerRouter.com gives detailed system information (e.g. performance, profit, energy balance, solar yield and battery status). The PowerRouter can also be remotely updated with new firmware containing the latest features, so your system is always up to date.

Specifications **PowerRouter Solar Battery**

| Grid | PR50SB-PR | PR37SB-PR | PR30SB-PR |
|--|--|-----------|-----------|
| Continuous output power at 40 °C (P nom) | 5000 Wac (4600 Wac DE) | 3700 Wac | 3000 Wac |
| AC output current | 22A | 16A | 13A |
| AC output voltage (nominal) | 230 Vac ± 2%, 50 Hz ± 0.2%, true sine wave <3% THD, single phase | | |
| AC output range (off-grid) | 180-264 Vac 45-55 Hz (limited by local anti-islanding regulations) | | |
| Protection | electronic, fused | | |
| Standby losses | ≤ 6W | | |
| User interface | interactive display with 4-button operation | | |
| Connectivity | ethernet RJ45, TCP/IP | | |
| UPS switch over time | <20 ms | | |

| Solar | PR50SB-PR | PR37SB-PR | PR30SB-PR |
|-------------------------|-----------------------------|---------------------------|-------------------|
| Max. Input | 5.5 kWp and 15 A per string | 4 kWp and 15 A per string | 3.3 kWp and 15 A |
| No. of strings | 2 | 2 | 1 |
| No. of MPP trackers | 2, fully independent | 2, fully independent | 1 |
| DC Disconnection switch | 4-pole, 600V, 15A | 4-pole, 600V, 15A | 2-pole, 600V, 15A |
| Solar Voltage | 150 – 600 Vdc | | |
| MPP Voltage | 100 – 480 Vdc | | |
| Solar Connections | MC4 | | |
| Max. Efficiency | 94.5% | | |
| Max. MPP Efficiency | 99.9% | | |

| Battery | PR50SB-PR | PR37SB-PR | PR30SB-PR |
|-------------------------------------|---|-------------------------------------|-------------------------------------|
| Output charge current | 25 - 200 A continuous, programmable | 25 - 155 A continuous, programmable | 25 - 125 A continuous, programmable |
| Battery types | Gel, AGM, NiCd, Li-ion | | |
| Battery voltage output range (Vout) | 18 – 32 Vdc | | |
| Battery capacity | min. 100 Ah, at 25A charge current | | |
| Charging curve | float or 3-stage adaptive with maintenance | | |
| Short circuit protection | electronic, at max. charge current, switch off <1 sec | | |
| Multipurpose relay | 2 (NO/NC, 250 Vac, 1 A, 24 Vdc, 5 A) | | |
| Battery temperature compensation | included | | |
| Battery voltage sense | included | | |
| Current shunt | included | | |

| Environmental | PR50SB-PR | PR37SB-PR | PR30SB-PR |
|--|---|-----------|-----------|
| Operating Temperature Range (full power) | -10 °C to +50 °C (derating from 40 °C) | | |
| Storage Temperature | -40 °C to +70 °C | | |
| Humidity | maximum 95%, non-condensing | | |
| Regulatory Approvals and Standards | CE | | |
| Safety | EN 60950-1, EN 62109-1, EN 60335-2-29, EN 62040-1 | | |
| Emission | EN 55014-1, EN 61000-3-2, EN 61000-3-3, EN 61000-6-3 | | |
| Immunity | EN 55014-2, EN 61000-6-2 | | |
| Anti Islanding Protection | VDE 0126.1.1, G83/1(UK), RD1663/2000(ESP), DK5940 E.d. 2.2 (IT), AS4777(AUS) (check www.PowerRouter.com for other country certifications) | | |
| Warranty | five years (optional: extension to ten years) | | |

| General | PR50SB-PR | PR37SB-PR | PR30SB-PR |
|---------------------|---|-----------|-----------|
| Protection Category | IP 21 | / | IP 54 |
| Dimensions (WxHxD) | 765 x 502 x 149 mm / 792 x 559 x 175 mm | | |
| Weight | 20.5 kg / 29.5 kg | | |
| Topology | galvanic isolated transformer | | |
| Cooling | forced airflow | | |

