



Solar Energy Australia
A Powerbox Company



Guardian Series

38 kWh | 50 kWh

Pre-assembled Battery System for On and Off-Grid Energy Storage Applications



Solar Energy Australia's Guardian Series is a range of pre-wired battery systems for energy storage and stand-alone power applications. Designed and manufactured in Australia, with solar installers in mind, the Guardian Series' rechargeable smart lithium-ion batteries provide reliable backup power for residential and commercial & industrial (C&I) applications.

The Guardian Series brings to the Australian market tried and tested lithium-ion battery technology from Polarium, a Swedish based global leader in energy storage. These batteries have stood the test of time in some of the most demanding Australian applications, including remote telecommunications and critical infrastructure installations across Australia's north.

FEATURES

- **Industry leading Energy Density** – up to 50.8 kWh in a 1.28m high cabinet
- **Simple** – Guardian is pre-wired for 'plug and play' installation. Easy connection to installation via Amphenol SurLok connectors.
- **Smart** – The ability to monitor key battery data including State of Charge (SOC), State of Health (SOH), Battery Voltage, Current, Minimum Cell Voltage, Maximum Cell Voltage, Cell Temperature, and Cycle Count via Bluetooth or supported PCE platform.
- **Flexible** – The Guardian is Inverter agnostic, suitable for both DC coupled and AC coupled solar installations and can be expanded at any time.
- **Peace of Mind** – Guardian Series carries a manufacturer backed 10 Year Warranty.



Safety

Polarium batteries are designed and tested by TÜV to meet all international safety standards. Battery modules contain multiple safety layers as well as redundancy in critical components and processes, ensuring the Guardian system is always safe even under abnormal operating conditions.



Energy Resilience

The Guardian is maintenance free. In the event a battery is over-discharged once voltage is applied to the terminals the battery will automatically turn on without user intervention. Polarium's patented Current Limiting Device (CLD) ensures the charging of the battery is always optimized, even under high temperature and will prevent dangerous overcharging of the battery cells.



Local Support

At Solar Energy Australia we are more than a product supplier. Take comfort knowing you are dealing directly with a manufacturer and distributor, with in-house engineering and technical support who has been at the forefront of the industry since 1997. We back our products and our customers.

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ELECTRICAL CHARACTERISTICS

| | Guardian 38 | Guardian 50 |
|-----------------------------------|---------------------------------|-------------------|
| Nominal Voltage | 50.8 VDC | |
| Rated Capacity @25°C | 38.1 kWh / 750 Ah | 50.8 kWh / 1000Ah |
| End-of-Discharge Voltage (LVBD)** | 35 VDC (recommend 43.4 VDC min) | |
| Peak Charge / Discharge Current | 300 A (<1 min) | 400A (<1 min) |
| | Limited to 250 A via MCCB | |
| Charge Voltage for 100% SOC | 58.8 VDC | |
| Charge Voltage for 80% SOC | 56 VDC | |
| Efficiency | >96% | |

ENVIRONMENTAL CHARACTERISTICS

| | | |
|-----------------------------------|-----------------------------|--|
| Operating Temperature Charging | 0 to +50°C | |
| Operating Temperature Discharging | -20 to +60°C | |
| Storage Temperature | -20 to +60°C | |
| Calendar Life @ 80% SOC 20 years | 20 years | |
| IP Rating | IP20 | |
| Cooling | Thermostatically controlled | |

PHYSICAL CHARACTERISTICS

| | | |
|---------------------------|-----------------------------------------------|-------|
| Weight Approx. | 300kg | 360kg |
| Dimensions (w x d x l) mm | 685 (w) x 763 (d) x 1280 (h) mm | |
| Connections | Amphenol Surlock 10.3mm (left, right or rear) | |

SAFETY & COMPLIANCE

| | | |
|------------------------------------|----------------------------------------------|--|
| Complies to Best Practice Guide | Yes | |
| Safety Standards | AS IEC62619:2017, AS/NZS 62368.1:2018,UN38.3 | |
| Circuit breaker per battery module | 100 A, BMS Controlled, single pole | |
| Battery System Circuit Breaker | 2P 250A DC MCCB Ue=500VDC Icu=15kA | |

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