

Technical Note

SYSTEM PERFORMANCE UNDER SPECIFIC TEMPERATURE CONDITIONS

This technical note focuses on the operating temperature limitations and derating data for the SunPower Reserve system specifically utilizing the RESERVE-INV-1-P5-L1-INT inverter and RESERVE-BAT-1-DC-4-INT battery. It aims to provide installers with guidance on the anticipated system performance under various temperature conditions.

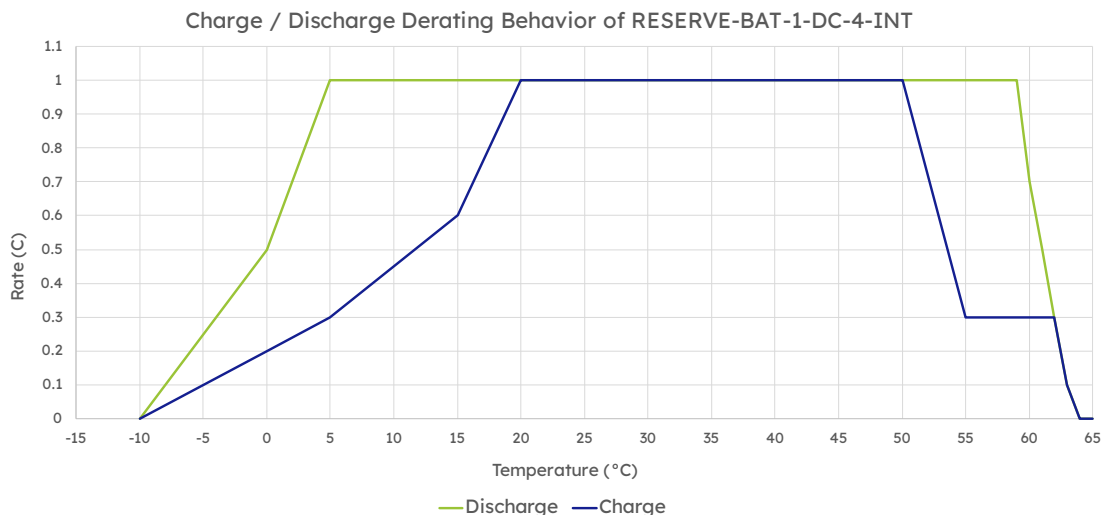
IMPORTANT: Before installing any SunPower Reserve system, carefully read and follow the latest Product Datasheet and Product Warranty explaining the product temperature limitations

RESERVE-INV-1-P5-L1-INT Operating Temperature Limitations and Derating Data

- The RESERVE-INV-1-P5-L1-INT inverter has a broad operating temperature range spanning from -25°C to 60°C
- For optimal performance, the recommended operating temperature range is 10°C to 30°C
- Operating the inverter outside this ideal temperature range may lead to diminished system performance

RESERVE-BAT-1-DC-4-INT Operating Temperature Limitations and Derating Data

- The RESERVE-BAT-1-DC-4-INT battery has distinct operating temperature ranges for charging and discharging
 - Charging: 0°C to 60°C
 - Discharging: -10°C to 60°C
- Operating the battery outside the specified temperature ranges can negatively affect both its performance and its overall lifespan



Impact of Temperature on System Performance

- Temperature has a significant influence on the performance of both the inverter and the battery
- To maximize system performance, installers must carefully assess the anticipated temperature conditions at the installation site and location
- Strategic system placement in a well-ventilated area, shielded from direct sunlight, rain and snow is crucial for maintaining optimal operating temperatures
- Implementing shading solutions can further mitigate the adverse effects of high temperatures
- In regions characterized by extreme temperature swings, supplementary measures like cooling fans or temperature-controlled enclosures might be necessary to preserve optimal operating temperatures

By understanding the temperature limitations and derating data specific to RESERVE-INV-1-P5-L1-INT inverter and RESERVE-BAT-1-DC-4-INT battery, installers can make well-informed decisions about system placement and ensure the best possible performance for end-users.