



# Radian™ Series

## GS8048A & GS4048A Inverter/Charger

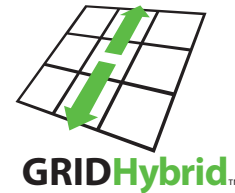
- Grid-Interactive and Stand-Alone Capability in the same package
- GridZero Technology Optimizes the Balance Between Stored and Renewable Energy Sources, Minimizing Grid Dependence
- Advanced Battery Charging Profile (ABC) Supports Leading-Edge Battery Technologies Including Lithium-Ion
- 8000W and 4000W of Continuous Power, Respectively
- Field-Adjustable Input/Output Voltage and Frequency Boundaries of 50/60Hz, 170-280VAC L-L and 200-260V Nominal, Respectively
- Unsurpassed Surge Capacity
- 120/240V Split-Phase Voltage
- Dual AC Inputs
- Field Upgradeable Firmware
- Field Serviceable Modular Design
- Simplified Stacking Design
- GS Load Center Option Allows for Quick and Easy Installation



**GS8048A**



**GS4048A**



OutBack Power's acclaimed Radian Series made the benefits of Grid/Hybrid technology available and accessible in one agile powerful, platform ideal for nearly all off-grid or grid-connected system architectures.

The new Radian Series inherit the hallmark features of the original design, including: dual AC inputs for grid/generator flexibility with no external switching required, unparalleled surge capability and operational stability, easy field upgradeability and stacking capability for large system scaling, simplified system commissioning through a powerful, easy-to-use configuration wizard, and multi-mode operational flexibility.

In addition, both models have a new Advanced Battery Charging (ABC) profile option to support leading-edge battery technologies such as Lithium-Ion and others, and enhanced diagnostics for improved performance. And both incorporate OutBack's GridZero technology, a superior level of intelligence in energy management for self-generation and self-consumption programs, providing precise balancing between using stored energy, solar and utility power, blending-in the latter to overcome surges and load spikes when needed. GridZero operation makes it possible for a smaller inverter and battery system to perform like a much larger one when required, putting stored and renewable energy sources to work and minimizing grid dependence. GridZero technology make the new Radians ideal for use in complex utility environments such as California and Hawaii.

Both models also support AC-coupling through a compatible OutBack load center to provide an economical solution for upgrading existing grid-tied systems to battery back-up capability. Complete system interfacing using the OutBack MATE3 and HUB communications manager enables the Radian to be connected with other OutBack Power electronics providing industry leading integration and a scalable power solution. Up to 10 units can be connected in parallel for systems up to 80kW continuous power output.

The GS8048A and GS4048A are certified to UL1741 for US applications, and CSA C22.2 No. 107.1 for Canada, and is IEC 62109-1 certified to meet the most stringent worldwide PV safety and emission standards.

This product is for selected North, Central and Latin American markets.



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## Radian Series Specifications

|  | <b>GS8048A</b>  | <b>GS4048A</b>   |
|--|---|--|
| <b>Nominal DC Input Voltage</b>                | 48VDC   | 48VDC  |
| <b>Continuous Output Power at 25°C</b>         | 8000 VA   | 4000 VA  |
| <b>AC Output Voltage/Frequency</b>             | 120/240VAC, 60Hz (50Hz)   | 120/240VAC, 60Hz (50Hz)  |
| <b>Continuous AC Output Current at 25°C</b>    | 33.3AAC @ 240VAC  | 16.7AAC  |
| <b>Idle Consumption (Invert Mode, No Load)</b> | 34W   | 34W  |
| <b>Typical Efficiency</b>                      | 93%   | 92.5%  |
| <b>CEC Weighted Efficiency</b>                 | 92.5%   | 92.5%  |
| <b>Harmonic Distortion</b>                     | Maximum Total Harmonic: <5%<br>Maximum Single Voltage Harmonic: <2%   | Maximum Total Harmonic: <5%<br>Maximum Single Voltage Harmonic: <2%  |
| <b>Output Voltage Regulation</b>               | ± 2%  | ± 2%   |
| <b>Maximum Output Current</b>                  | 1 ms Peak: 100 AAC @ 240VAC, 200AAC @ 120VAC<br>1 ms RMS: 70.7 AAC @ 240VAC   | 1 ms Peak: 50AAC @ 240VAC<br>1 ms RMS: 35.35 AAC @ 240VAC  |
| <b>Overload Capability</b>                     | 100 ms Surge: 16.97 kVA<br>5 seconds: 12 kVA<br>30 minutes: 9 kVA   | 100 ms Surge: 8.5 kVA<br>5 seconds: 6.0 kVA<br>30 minutes: 4.5 kVA   |
| <b>Maximum AC Input Current</b>                | 50AAC @ 240VAC  | 50AAC  |
| <b>AC Input Voltage Range (Adjustable)</b>     | (L1 or L2) 70 to 280VAC   | (L1-N or L2-N) 85 to 140VAC  |
| <b>Grid-Interactive Voltage Range</b>          | (L1-N or L2-N) 106 to 132VAC  | (L1-N, L2-N) 108 to 132VAC, default  |
| <b>Grid-Interactive Frequency Range</b>        | 59.3 to 60.5Hz  | 59.3 to 60.5Hz   |
| <b>AC Input Frequency Range (Default)</b>      | 54 to 66Hz @ 60Hz (45 to 55Hz @ 50Hz)   | 54 to 66Hz @ 60Hz (45 to 55Hz @ 50Hz)  |
| <b>DC Input Voltage Range</b>                  | 40 to 64VDC   | 40 to 64VDC  |
| <b>Continuous Battery Charge Output</b>        | 115.0 ADC   | 57.5ADC  |
| <b>Temperature Range</b>                       | Rated: -20 to 50°C (power derated above 25°C)<br>Maximum: -40 to 60°C   | Rated: -20 to 50°C (power derated above 25°C)<br>Maximum: -40 to 60°C  |
| <b>Warranty</b>                                | Standard 5 year Warranty  | Standard 5 year Warranty   |
| <b>Weight</b>                                  | Unit: 125 lbs (56.7 kg)<br>Shipping: 140 lbs (63.5 kg)  | Unit: 82 lbs (37.2 kg)<br>Shipping: 94 lbs (42.6 kg)   |
| <b>Dimensions (H x W x D)</b>                  | Unit: 28 x 16 x 8.7" (71.1 x 40.6 x 22.1 cm)<br>Shipping: 34.5 x 21 x 14.5" (87.6 x 53.3 x 36.8 cm)   | Unit: 28 x 16 x 8.7" (71.1 x 40.6 x 22.1 cm)<br>Shipping: 34.5 x 21 x 14.5" (87.6 x 53.3 x 36.8 cm)  |
| <b>Accessory Ports</b>                         | Remote Temperature Sensor and<br>MATE3 & HUB Communications   | Remote Temperature Sensor and<br>MATE3 & HUB Communications  |
| <b>Non-volatile Memory</b>                     | Yes   | Yes  |
| <b>Field Upgradable Firmware</b>               | Yes   | Yes  |
| <b>Chassis Type</b>                            | Vented  | Vented   |
| <b>Certifications</b>                          | Listed to UL1741, CE, CSA C22.2 No. 107.1, IEC 62109-1, AS4777.2, AS4777.3, EN61000-6-1, EN61000-6-3, EN61000-3-2, EN61000-3-3, AS3100, RoHS compliant per directive 2011/65/EU | Listed to UL1741, CE, IEC-62109-1 ETL, CSA C22.2 No. 107.1, RoHS compliant per directive 2011/65/EU, FCC Class B, EN61000-6-1, EN61000-6-3, EN61000-3-2, EN61000-3-3 |

\*Functions, but does not necessarily meet all component specifications.



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