



# FUTURE-PERFECT SYSTEM DESIGN

BEGINS WITH AN OUTBACK RADIAN SERIES INVERTER/CHARGER

With all the hallmark features you've come to expect from the **Radian inverter/charger**, the expanded Radian family includes **four models, seven operating modes** and **two advanced technologies**, all adding up to unmatched performance, reliability, value and system flexibility.



**Radian Series Inverter/Charger with GS Load Center**

## Radian Series Models

	Model Name	System Power	Market
<b>NEW</b>	GS8048A	8kW, 120/240V	For Selected North, Central and Latin American Countries
<b>NEW</b>	GS4048A	4kW, 120/240V	
	GS7048E	7kW, 230V	For Europe, Asia and other Global Countries
<b>NEW</b>	GS3548E	3.5kW, 230V	

## Radian Series Operating Modes

- 1 MINI GRID OPERATING MODE**  
 Ideal for sites where sufficient renewable energy enables mostly off-grid operation.
- 2 GRID-TIED OPERATING MODE**  
 Ideal for systems in regions with Feed-in-Tariff (FiT), net-metering or other incentive programs. Control use features include grid use timers.
- 3 GRIDZERO OPERATING MODE**  
 Ideal in areas where incentives are subject to change and utility sell-back options may be limited. Control use features include grid use timers.
- 4 SUPPORT OPERATING MODE**  
 Ideal for sites with small generators or inadequate grid power. Control use features include system-level high battery transfer (HBX) programming, prioritizing batteries as primary source.
- 5 BACKUP OPERATING MODE**  
 Ideal for systems where computers and other sensitive loads are present. Control use features include system-level high battery transfer (HBX) programming, prioritizing batteries as primary source.
- 6 UPS OPERATING MODE**  
 Ideal for commercial applications where uninterrupted power is mission-critical.
- 7 GENERATOR OPERATING MODE**  
 Ideal for systems with undersized or low power quality generators.

## Radian Series Technologies

### GRIDZERO

The newest of the Grid/Hybrid Radian's seven input modes, GridZero provides **the perfect balance between utility power and stored renewable energy**. By allowing a home or business to satisfy most of its power needs with renewable sources, grid supplied power is only tapped when load demand exceeds a pre-set threshold. While the Radian is still grid-connected, grid dependence can be reduced to zero whenever possible. GridZero technology offers four critical advantages compared to typical systems:

**Higher System Economics:** By maximizing the contribution of renewables to total energy consumption, selling back to the grid is no longer required for system Return on Investment (ROI).

**Lower Cost-of-Entry:** Through seamless blending of grid power and renewable energy sources, a smaller system can perform like a much larger one, reducing equipment and installation costs.

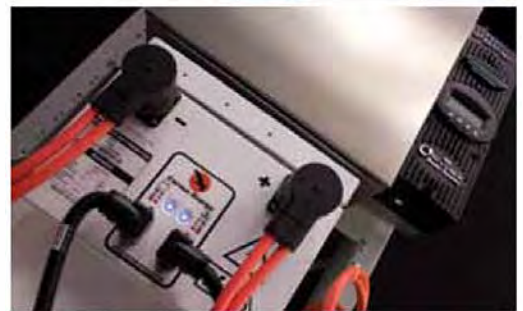
**Greater Simplicity:** Because the Radian Series remains connected and synchronized to the grid, no destabilizing transfer is required when grid power is needed.

**"Best Case Scenario" Design:** As energy policies and incentives change, GridZero technology can prioritize self-consumption and offset over sell-back to always deliver the best renewable energy value possible.

### ADVANCED BATTERY CHARGING

OutBack built its reputation on legendary off-grid reliability and battery backup expertise. That background is thoroughly built into the new Radians. In addition to GridZero Technology, the new Radians also feature an Advanced Battery Charging (ABC) profile option. Advanced Battery Charging offers **expanded charging voltage and time parameters, enabling system designers to accommodate the specific charging profiles** and algorithms of newer energy storage technologies including:

- **Lithium Ion** Batteries
- **Aqueous Ion** Batteries
- **Flow Chemistry** Batteries



OutBack's Radian Series inverter/charger support both standard and advanced energy storage platforms.

## Ready for Today, Designed for Tomorrow



GRIDHybrid.

Incorporating the same attention to detail you've come to expect from OutBack, the new Radian Family is **built on proven technology and forward-looking features** designed to offer performance and peace of mind. No matter what energy technology is in place tomorrow, you can design for it today with an OutBack Grid/Hybrid Radian Series inverter/charger. For more information, please visit [www.outbackpower.com](http://www.outbackpower.com) or [www.alpha-outback-energy.com](http://www.alpha-outback-energy.com).

Models:	Domestic (For Selected North, Central and Latin American Countries)		International (For Europe, Asia and other Global Countries)	
	GS8048A	GS4048A	GS7048E	GS3548E
Nominal DC Input Voltage	48VDC	48VDC	48VDC	48VDC
Continuous Output Power (@ 25°C)	8000VA	4000VA	7000VA	3500VA
AC Output Voltage (Selectable)	120/240VAC	120/240VAC (200-260VAC)	230VAC (210-250VAC)	230VAC (210-250VAC)
AC Output Frequency (Selectable)	60Hz (50Hz)	60Hz (50Hz)	50 (60Hz)	50Hz (60Hz)
Continuous AC Output Current (@ 25°C)	33.3AAC @ 240VAC	16.7AAC	30AAC	15.2AAC
Idle Consumption (Invert Mode, No Load)	34W	34W	34W	34W
Typical Efficiency	92.5%	92.5%	92%	92%
CEC Weighted Efficiency	92.5%	92.5%	—	—
Total Harmonic Distortion	Max. Total Harmonic <5% Max. Single Voltage Harmonic <2%	Max. Total Harmonic <5% Max. Single Voltage Harmonic <2%	Max. Total Harmonic <5% Max. Single Voltage Harmonic <2%	Max. Total Harmonic <5% Max. Single Voltage Harmonic <2%
Output Voltage Regulation	±2%	±2%	±2%	±2%
Maximum Output Current	1ms Peak: 100AAC @ 240VAC, 200AAC @ 120VAC 100ms RMS: 70.7AAC @ 240VAC	1ms Peak: 50AAC @ 240VAC 100ms RMS: 35.35AAC @ 240VAC	1ms Peak: 100AAC 100ms RMS: 70.7AAC	1ms Peak: 50AAC 100ms RMS: 35.35 AAC
Overload Capacity	100ms Surge: 16.97kVA 5 seconds: 12kVA 30 minutes: 9kVA	100ms Surge: 8.5kVA 5 seconds: 6.0kVA 30 minutes: 4.5kVA	100ms Surge: 16.3kVA 5 seconds: 11.5kVA 30 minutes: 7.9kVA	100ms Surge: 8.2kVA 5 seconds: 5.8kVA 30 minutes: 4.0kVA
AC Input Voltage Range (Adjustable)	(L1 or L2) 70 to 280VAC	(L1-N, L2-N) 85 to 140VAC	170 to 290VAC	(L-N) 170 to 290VAC
AC Input Frequency Range (Default)	54 to 66Hz @ 60Hz (45 to 55Hz @ 50Hz)	54 to 66Hz @ 60Hz (45 to 55Hz @ 50Hz)	45 to 55Hz @ 50Hz (54 to 66Hz @ 60Hz)	45 to 55Hz @ 50Hz (54 to 66Hz @ 60Hz)
Grid-Interactive Voltage Range	(L1-N or L2-N) 106 to 132VAC	(L1-N or L2-N) 108 to 132VAC, default	208 to 252VAC (EN50438)	(L-N) 208 to 252VAC, default
Grid-Interactive Frequency Range	59.3 to 60.5Hz	59.3 to 60.5Hz, default	57.0 to 61.0Hz (EN50438)	57.0 to 61.0Hz, default
Maximum AC Input Current	50AAC	50AAC	50AAC	50AAC
Continuous Battery Charge Output	115.0ADC	57.5ADC	100.0ADC	50.0ADC
DC Input Voltage Range	40 to 64VDC	40 to 64VDC	40 to 64VDC	40 to 64VDC
Temperature Range	Rated: -20 to 50°C (power derated above 25°C) Maximum: -40 to 60°C	Rated: -20 to 50°C (power derated above 25°C) Maximum: -40 to 60°C	Rated: -20 to 50°C (power derated above 25°C) Maximum: -40 to 60°C	Rated: -20 to 50°C (power derated above 25°C) Maximum: -40 to 60°C
Accessory Ports	Remote Temperature Sensor, MATE3 & HUB Communications		Remote Temperature Sensor, MATE3 & HUB Communications	
Non-Volatile Memory	Yes	Yes	Yes	Yes
Field Upgradable Firmware	Yes	Yes	Yes	Yes
Chassis Type	Vented	Vented	Vented	Vented
Certifications	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 ETI, 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	IEC 62477-1, AS4777.2, AS4777.3, EN61000-6-1, EN61000-6-3, EN61000-3-2, EN61000-3-3, AS3100, CE, RoHS compliant per directive 2011/65/EU	IEC 62109-1, IEC 62477-1, AS4777.2, AS4777.3, EN61000-6-1, EN61000-6-3, EN61000-3-2, EN61000-3-3, AS3100, CE, RoHS compliant per directive 2011/65/EU
Warranty	Standard 5 year	Standard 5 year	Standard 5 year	Standard 5 year
Weight (lb/kg)	Unit: 125.0 / 56.7 Shipping: 140.0 / 63.5	Unit: 82.0 / 37.2 Shipping: 94.0 / 42.6	Unit: 125.0 / 56.7 Shipping: 140.0 / 63.5	Unit: 81.0 / 36.7 Shipping: 93.0 / 42.1
Dimensions H x W x D (in/cm)	Unit: 28 x 16 x 8.7 / 71 x 40.6 x 22.1 Shipping: 34.5 x 21 x 14.5 / 87.6 x 53.3 x 36.8	Unit: 28 x 16 x 8.7 / 71 x 40.6 x 22.1 Shipping: 34.5 x 21 x 14.5 / 87.6 x 53.3 x 36.8	Unit: 28 x 16 x 8.7 / 71 x 40.6 x 22.1 Shipping: 34.5 x 21 x 14.5 / 87.6 x 53.3 x 36.8	Unit: 28 x 16 x 8.7 / 71 x 40.6 x 22.1 Shipping: 34.5 x 21 x 14.5 / 87.6 x 53.3 x 36.8



### Worldwide Corporate Offices

#### Headquarter Germany

Hansastraße 8  
D-91126 Schwabach  
Tel: +49 9122 79889 0  
Fax: +49 9122 79889 21  
Mail: info@alpha-outback-energy.com

#### Eastern Europe

ee@alpha-outback-energy.com

#### Middle East

me@alpha-outback-energy.com

#### France and Benelux

fbrl@alpha-outback-energy.com

#### Spain

spain@alpha-outback-energy.com

#### Russia

russia@alpha-outback-energy.com

#### Africa

africa@alpha-outback-energy.com

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