

RS
Rack Series

GE AC/DC SiC-RS



SiC
Technology

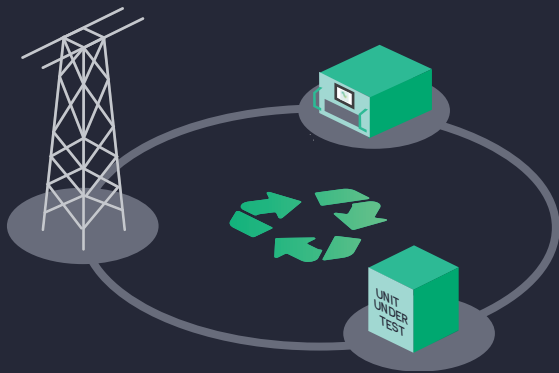
Regenerative 4Q AC Grid Simulator | SiC - Rack Series

The GE AC/DC SiC-RS is a 4Q Regenerative Grid Simulator and Regenerative DC Bidirectional Source and Sink. This pioneering high-efficiency converter has been meticulously designed for R&D, validation, and end-of-production-line testing in the fields of electromobility and charging infrastructures, smart grids, distributed energy resources, aerospace, Power HiL, battery inverter, and energy storage systems.

As the first member of our new Rack Series (RS) family, the SiC-RS sets a new standard for performance, reliability and quality. Harnessing the power of cutting-edge SiC technology, it features lower switching losses and reduced size and weight, making it an ideal solution for applications where space and efficiency are critical.

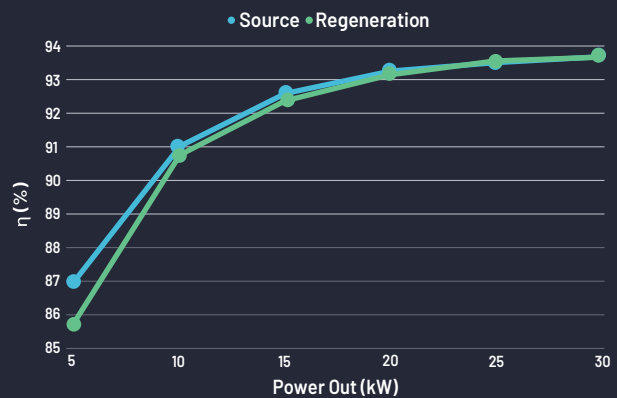
Regenerative Technology

Like all CINERGIA products, the GE AC/DC SiC-RS allows for the reinjection of used power back to the grid, resulting in a reduction of both consumed energy and required power contributing to a smaller carbon footprint.



The Highest Efficiency

Our Rack Series offers the highest efficiency on the market for both sourcing and regenerating energy, resulting in greater energy savings and a reduction in electrical installation rating.



Functionalities

The GE AC/DC SiC-RS may be utilized as an AC Grid Simulator, DC Bidirectional source/sink, Power Amplifier, Battery Tester, Cyclor and Emulator, or PV Panel Emulator.

Made in Europe

SiC-RS family products are fully designed and manufactured in Europe, subject to the most rigorous testing, and complying with all CE and quality standards.

SiC Technology

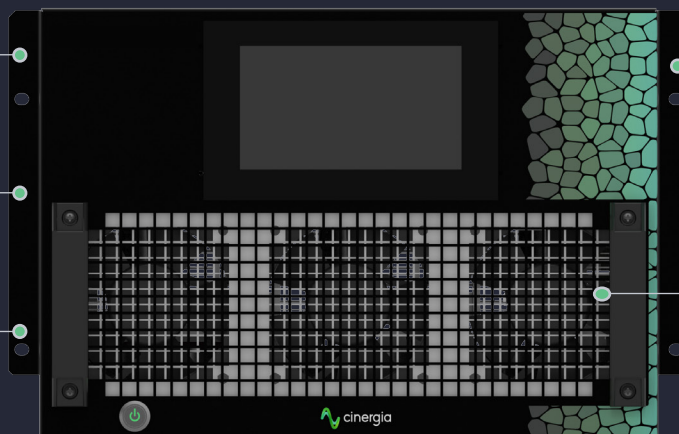
High performance and efficiency

User Friendly Interface

Designed by engineers for engineers

Larger Touchscreen

7-inch display for easy local operation



19-inch Rack format

With 30 kW in a 7U and 675mm depth unit, it can be easily mounted into standard 19-inch rack cabinets

Easy Integration

Analog & digital I/O and the open MODBUS/TCP protocol are provided for seamless integration into automated test lines

GE AC/DC SiC-RS

Reference	AC Power Rated	AC Current RatedRMS Per channel	DC Power Rated	DC Current Rated Per channel	Weight (kg)	Dimensions DxWxH (mm)
GE 30 AC/DC SiC-RS	30 kW	43 Arms	30 kW	±40A	50 kg	675 x 440 x 310 mm (7U)

All specifications are subject to change without notice.

GRID SIDE

AC Input

Rated: 3x400Vrms+Neutral+Earth | Range: +15% / -20% (-10% @ P_{rated})

Frequency: 48-62 Hz

Efficiency: >93,5%

AC GRID SIMULATOR MODE

Voltage Mode (CV)

Range: 0 to 295Vrms phase-neutral

Fundamental frequency range: 10 to 100Hz(consult us for higher frequencies)

Harmonics and interharmonics range: 0,1 to 50th independent per phase

Setpoint Resolution: 10mVrms

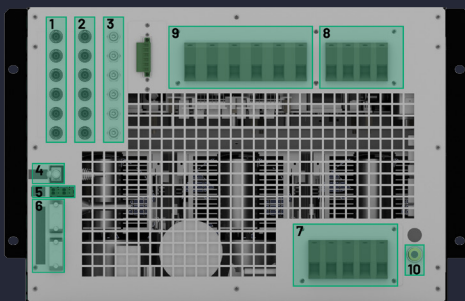
Setpoint Accuracy⁽⁴⁾: $\pm 0.1\%$ of FS

Transient Time: <math>< 100\mu s</math>, 10 to 90% of FS

Grid fault testing (dips, voltage and frequency fluctuations, flicker...)

Connections

- Analog Inputs: 6 (BNC)
- Analog Outputs: 6 (BNC)
- Fiber Optics(for master slave)
- Ethernet (MODBUS TCP/IP)
- Emergency Stop In & Out
- Digital I/O
- AC Grid Supply
- AC Output (3P +N)
- DC Output (3 channels, 6 terminals)
- Protection Earth (PE)



Channel Configuration in GE

3 channels

* 1 channel

*Power derating applies

Channel Configuration in DC

3 channels

1 channel

Bipolar

Unipolar

Talk directly with our engineers.

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Scan the QR code to view the complete datasheet



Regenerative
Power Electronic
Solutions

DC BIDIRECTIONAL SOURCE/SINK MODE

Voltage Mode (CV)

Range: 2Q: 20 to 800V

Setpoint Resolution: 10mV

Setpoint Accuracy⁽⁴⁾: $\pm 0.1\%$ of FS⁽³⁾

Current Mode (CV)

Setpoint Resolution: 10mA

Setpoint Accuracy⁽⁴⁾: $\pm 0.2\%$ of FS⁽³⁾

Power Mode (CP)

Setpoint Resolution: 1W

Setpoint Accuracy⁽⁴⁾: $\pm 0.4\%$ of FS⁽³⁾

Resistance Mode (CR)

Range: from 0.1 to 1000 Ohm

Setpoint Resolution: 0.01 Ohm

Setpoint Accuracy⁽⁴⁾: $\pm 0.2\%$ of FS⁽³⁾

OPERATION MODES

AC

Programmable Voltage (CV) Steps

DC

Programmable Current (CC) Steps

Power Amplifier (HiL) Battery Testing/Cycling

Programmable Voltage (CV) Battery Emulation

Programmable Power (CP) PV Panel Emulation

PHIL AC/DC

Configuration Modes

GE AC

PHIL AC

DC

Master / Slave

Parallel

in AC mode

Parallel

Serial

Serial Parallel

in DC mode