

RS  
Rack Series

SiC  
Technology

# EL AC/DC SiC-RS



## 4Q Regenerative AC/DC Electronic Load | SiC - Rack Series

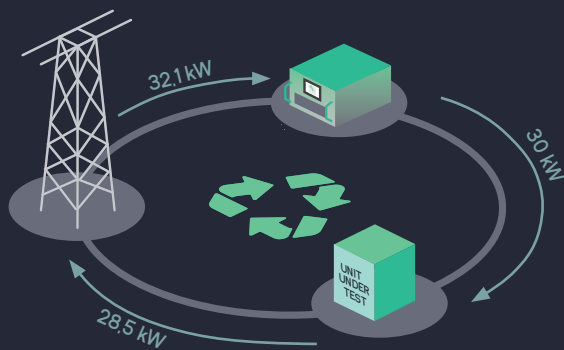
The EL AC/DC SiC-RS is the only AC and DC Load you will ever need. It redefines performance, reliability, and quality. With state-of-the-art SiC technology, it achieves lower switching losses and a reduced footprint, perfect for applications demanding both space and efficiency.

This cutting-edge, high-efficiency converter is crafted specifically for R&D, validation, and EoL testing across various advanced fields, including electromobility, EV charging infrastructure, V2G, smart grids, distributed energy resources, Power HiL, battery inverters, energy storage systems, and aerospace.



### Regenerative Technology

Like all CINERGIA products, the EL 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.



### High-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 EL AC/DC SiC-RS may be used as an AC Electronic Load, DC Bidirectional source/sink, Power Amplifier, Battery Tester, Cycler 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

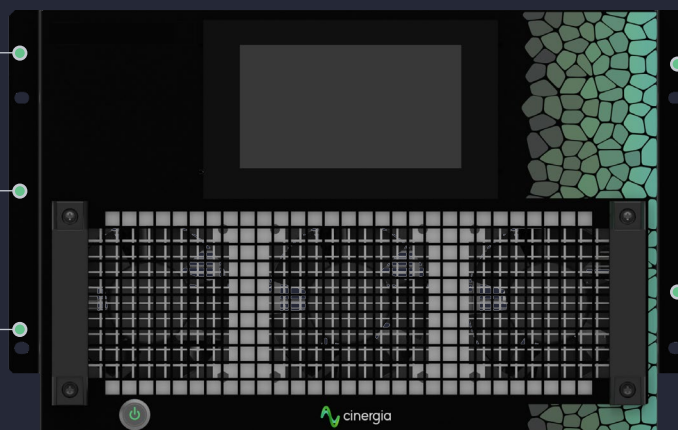
High performance and efficiency.

#### User Friendly Interface

Designed by engineers for engineers.

#### Larger Touchscreen

7-inch display for easy local operation.



#### 19" Rack format

With 30 kW in a 7U and a 715 mm 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.

EL AC/DC SiC-RS

Reference	AC Power Rated	AC Current Rated RMS Per channel	DC Power Rated	DC Current Rated Per channel	Weight (kg) (lbs)	Dimensions DxWxH (mm) (inch)
EL 22.5 AC/DC SiC-RS	22.5 kW/kVA	44 Arms	22.5 kW	±44A	50 kg 110.23 lbs	715 x 440 x 310 mm (7U) 28.14 x 17.32 x 12.20 "
EL 30 AC/DC SiC-RS	30 kW/kVA	44 Arms	30 kW	±44A	50 kg 110.23 lbs	715 x 440 x 310 mm (7U) 28.14 x 17.32 x 12.20 "

All specifications are subject to change without notice.

GRID SIDE

AC Input
Rated: 3x400 Vrms +Neutral+ Earth   3x480 Vrms* <sup>(optional)</sup>
Range: +15% / -20% (-10% @ P <sub>rated</sub> )
Frequency: 47-63 Hz
Efficiency: >93,5% (@rated conditions)

\*This option will add the IT-RS transformer.

AC ELECTRONIC LOAD MODE

Current Mode (CC)
Range: 0 to ±130% of I <sub>rated</sub>
Setpoint Resolution: 10 mArms
Effective Resolution: <0.05% of FS
Setpoint Accuracy: <± 0.2% of FS
Transient time: <100µs (10 to 90% of I <sub>rated</sub> )
Slew Rate: 1A/µs
Power Mode (CP/CS)
Range: from 0 to ±130% of P <sub>rated</sub>
The current setpoint is derived from ISI and <S
Setpoint Resolution: 1W, 1A
Impedance Mode (CZ)
Calculation method configurable (rms, instantaneous)
Range: from 0.8 to 1000 Ohm, 0.1 to 2000 mH, 0 to 3.7 mF
Current setpoint derived from  Z  and <Z
Setpoint Resolution: 0.01 Ohm / mH / mF

Connections

1. Analog Inputs: 6(BNC)

2. Analog Outputs: 6(BNC)

3. Fiber Optics(for master slave)

4. Ethernet (MODBUS TCP/IP)

5. Emergency Stop In & Out
6. Digital I/O

7. AC Grid Supply

8. AC Output (3P +N)

9. DC Output (3 channels, 6 terminals)

10. Protection Earth (PE)

Master / Slave

Parallel		in AC mode
Parallel	Serial	
	Serial Parallel	in DC mode

Talk directly with our engineers.

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DC BIDIRECTIONAL SOURCE/SINK MODE

Voltage Mode (CV)
Range: 2Q: 20 to 800V
Setpoint Resolution: 10mV
Setpoint Accuracy: ± 0.1% of FS
Current Mode (CV)
Setpoint Resolution: 10mA
Setpoint Accuracy: ± 0.2% of FS
Power Mode (CP)
Setpoint Resolution: 1W
Setpoint Accuracy: ± 0.4% of FS
Resistance Mode (CR)
Range: from 0.1 to 1000 Ohm
Setpoint Resolution: 0.01 Ohm
Setpoint Accuracy: ± 0.2% of FS

OPERATION MODES

AC	
Programmable Impedance(CZ)	Programmable Power (CP / CS)
Programmable Current(CC)	Steps
DC	
Programmable Constant Voltage(CV)	Steps
Programmable Constant Current(CC)	Battery Testing/Cycling
Programmable Constant Power(CP)	Battery Emulation
Programmable Constant Resistance(CR)	PV Panel Emulation
PHIL AC/DC	

Channel Configuration in EL

3 channels	* 1 channel	*Power derating applies
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Configuration Modes

EL AC	PHIL AC	DC	PHIL DC
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Channel Configuration in DC

3 channels	1 channel	Bipolar	Unipolar
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Scan the QR  
code to view  
the complete  
datasheet



Regenerative  
Power Electronic  
Solutions