



# RGS Series

## Regenerative Grid Simulator

12 to 24kVA/kW, Scale up to 1.296 MVA/MW

### Highest Performing & Intelligent 2-in1 Regenerative Grid Simulator with Load Option

**High Power Density**  
Now up to 24kVA/kW in 4U



### Key Features

- Regenerative Grid Simulator
  - 4-Quadrant AC & DC Power Source
  - AC/DC Regenerative Load Option
- Regenerative Power > 90% Energy Efficiency
- High Power Density – Up to 24kVA/kW in 4U
- Parallel up to 216kVA/kW per cabinet
- Parallel cabinets up to 432kVA/kW
- Three-Phase High Power Systems to 1.296 MVA/MW
- AC, DC (Optional AC+DC) Output Capability
- Single, Split, Three-Phase; Multi-Channel Mode
- Constant Power Voltage Range:
  - 350Vac L-N/606Vac L-L or  $\pm 500Vdc$
- Exceptionally High AC Current
- RMS current up to 48A per phase (45Hz to 200Hz)
- High Frequency Range 15Hz - 200Hz
- Option F for 1200Hz
- Full Galvanic Isolation
- Isolated Neutrals Available (Option W)
- Waveform Capture and Scope Display
- Generate Harmonics AND Interharmonics included
- Built-in **SmartSource Suite** Remote Control

**Pre-Written Test Sequence Options:**  
IEC 61000-3/-4, IEEE 1547.1, and more.

### Flexible Control



### '2-in-1' RGS Series

The RGS Series is a high-performance regenerative grid simulator designed to emulate real-world utility grid conditions transportation electrification and grid modernization test applications. **Delivering up to 24 kVA/kW in a compact 4U, this series scales from 6 to 432 kVA/kW, with three-phase high-power configurations available up to 1.296 MVA/MW+.** Modular, flexible AC/DC power source and load operation with advanced waveform generation, enables precise grid emulation of events and user-defined conditions. Ideal for grid compliance testing to **IEEE 1547, UL 1741, IEC 61000-3/-4**, and more.

### Application Examples

- EV Charging, On Board Chargers (OBC), V2G, V2X
- Smart-Grid Simulation, Solar PV/Grid-Tied Inverters
- Energy Storage Systems (ESS), Home ESS
- AI Power Servers
- IEC Compliance Testing, Test Labs, Research Lab
- Bidirectional Applications (e.g. motors) to address back EMFs

### Highlights



2-in-1 Regen Grid Simulator and Optional Load at full power



Ideal for Grid Compliance Testing or Bidirectional applications



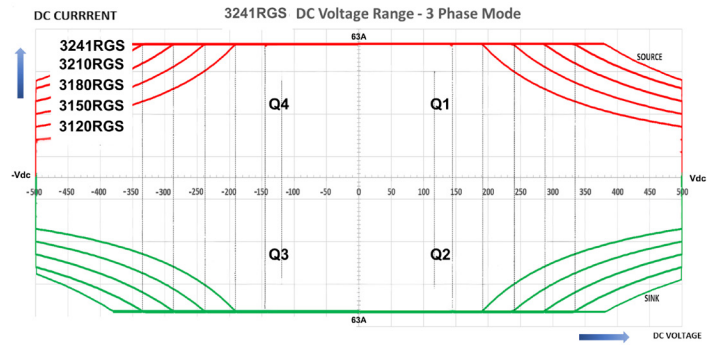
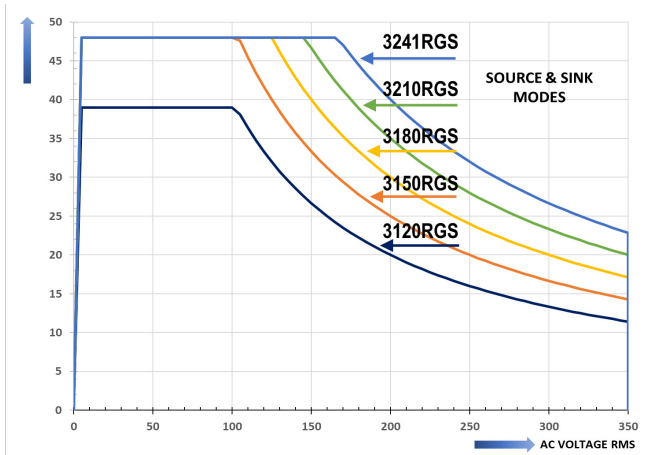
Exceptionally High Current and 2s Overload Capability



AC, DC, (or AC+DC), Source or Load Ultra Flexible Multi-Channel Testing

## Constant Power, Wide Voltage Range

The RGS Series uses a single, constant power voltage range for both higher current at lower voltage and higher voltages at lower currents eliminating the need to switch between voltage ranges. The RGS's constant power voltage range allows for testing a broad range of conditions and test requirements without interruption of output power.



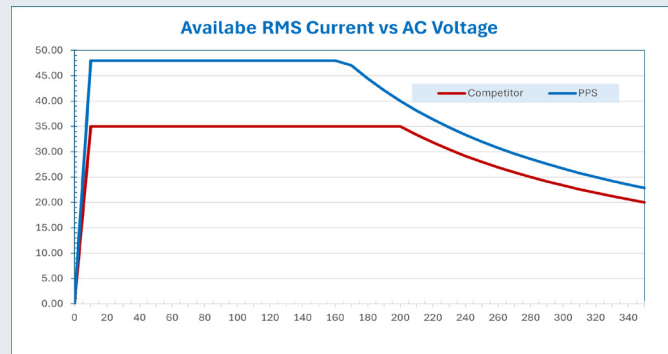
## Get Max RMS Current up to 48A: More Current at Low Voltage

The RGS provides a wide range of current eliminating the risk of over or under sizing the power source.

It also provides a **max current per phase of 48A available up to 166.7Vrms from 45 to 200Hz**, providing up to 37% more current at lower voltage compared to a typical unit on the market that maxes out at 35A/phase.

### Benefits:

- Higher RMS current rating at lower voltage settings
- Reduces capital investment
- Test Constant Power AC input products down to lowest rated input voltage

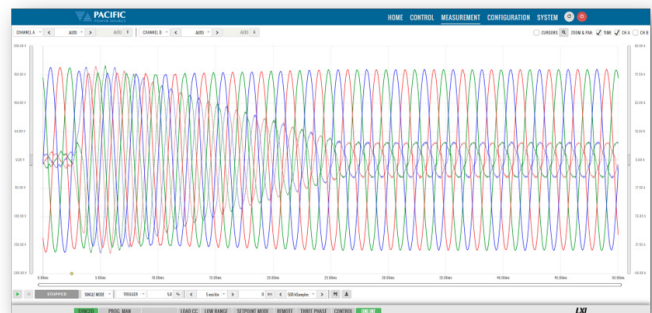


PPS RGS provides 37% more current at lower voltage compared to competitors at lower voltage.

## 130% Overload Capability for 2s

The RGS Series features overload capability, delivering 130% of rated current for up to 2 seconds to support inrush conditions during startup, transient events, and sudden load changes. Ideal for motor drives, industrial automation, and power conversion applications.

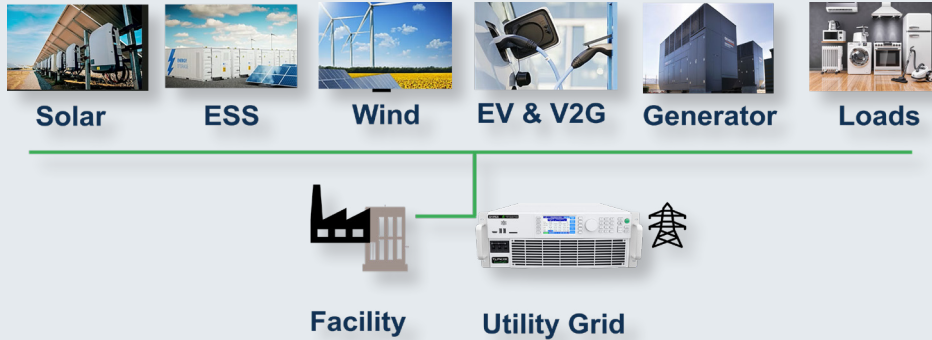
(overload capability from 42A)



Waveform Example of Inductive Motor Emulation: 400Hz, 55A

## Test Impacts of Microgrid & DER on the Grid

The **RGS Series** is ideal for testing regenerative and or bidirectional applications. Regenerative AC & DC power sources provide energy efficiency and significant cost savings by returning energy back to the facility. Regenerative bidirectional power flows are critical for simulating real-world conditions in transportation and renewable energy systems. Bidirectional power flows are also critical to prevent back-EMF in applications such as motors.



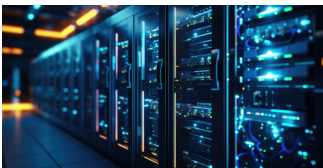
## Simulating Power for AI Data Server Racks & Infrastructure



AI Data Servers, Supercomputing



Power Cooling Infrastructure, PDUs, UPS, HVDC Distribution & Converters



Burn-in Testing



Transformers

### Test Solutions

- Regenerative Grid Simulator
- Regenerative AC & DC Load
- DC Load
- Bidirectional Power Source (for energy storage)

## Ultimate Multi-Channel Testing With Six Output Configurations

Test a wide range of grid conditions and EUTs with six output configurations in AC or DC, source or load mode.

- **Isolated neutrals** allow each phase to operate independently as a voltage source, current source, or optional load.
- **Forms 1 through 3:** Common for single, split or three-phase AC connections.
- **Forms 4 through 6:** Test up to three EUTs' to be tested with the same source or load.

For example, test three independent single-phase 8 kW EUT's simultaneously using a single 24kW RGS unit.

- **Form 5:** Supports different frequencies on each phase simultaneously.

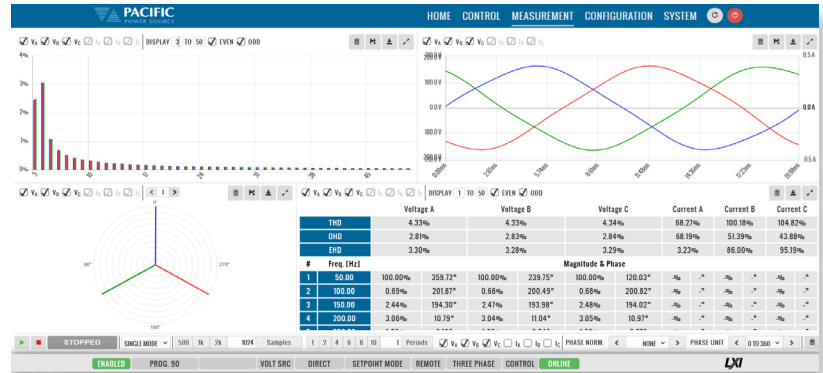
Simultaneous AC & DC Operation on Single Phases and Automatic Switching of Operation Modes

|         | FORM 1    | FORM 2      | FORM 3      | FORM 4      | FORM 5      | FORM 6      |
|---------|-----------|-------------|-------------|-------------|-------------|-------------|
| Phase A | ONE PHASE | SPLIT PHASE | THREE PHASE | ONE PHASE A | ONE PHASE A | SPLIT PHASE |
| Phase B |           |             |             | ONE PHASE B | ONE PHASE B |             |
| Phase C |           |             |             |             | ONE PHASE C |             |

Mixed AC/DC, Source / Load mode combinations available in Forms 4, 5 and 6.

## Powerful Waveform & Measurement Tools

- Built-in waveform digitizer with scope function
- Fast transient capabilities at 200µsec
- LIST, PULSE and STEP Transients
- Over 200 Arbitrary Waveform
- 10 Standard, Sine, Square, Triangle, Clipped
- Harmonics AND Interharmonics
- Pre-written test standards for grid compliance testing (Option)

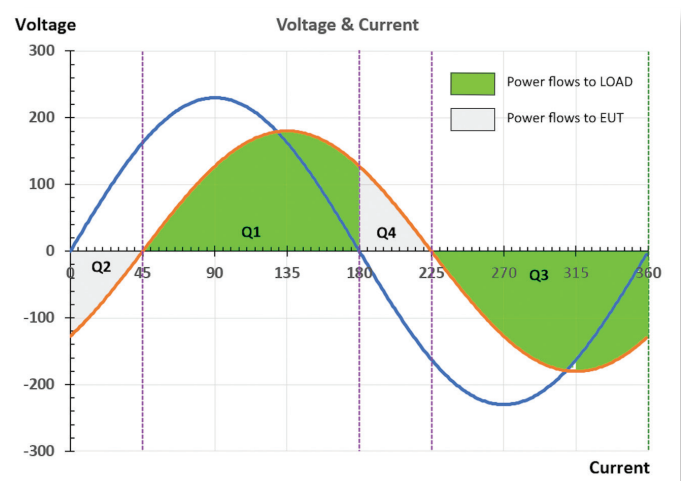
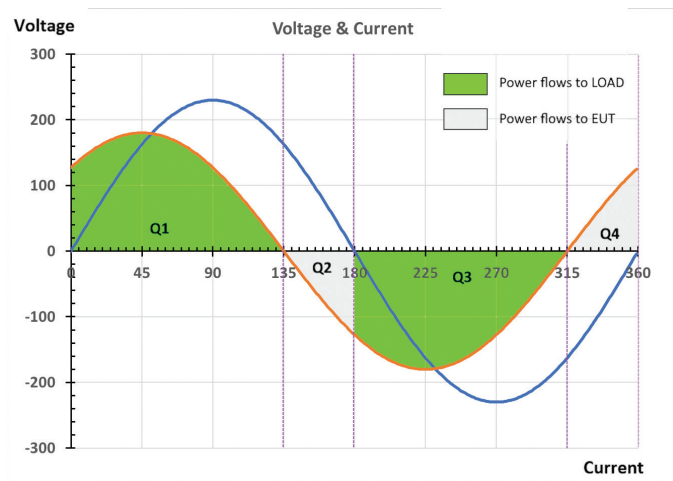


Easily Generate Harmonics & interharmonics

## Fully Test AC Power with 4-Quadrant Load (Option L)

Supports testing of PV inverters, V2G systems, EV chargers (EVSE), batteries, UPS systems, and AC/DC power supplies. Full four-quadrant operation with programmable phase shift enables simulation of inductive, capacitive, linear, non-linear (rectified), leading, and lagging power factor loads.

- AC Modes: Constant Current, Constant Power & Apparent Power, Constant Resistance, CR+CC, CC / CS Rectifier Mode 1 $\phi$  & 3 $\phi$
- DC Modes: Constant Current, Constant Power, Constant Resistance, CR+CC



## Reduced Capacitance Option for High Frequency Load Mode Optimization (M25057)

- Mod is available to enhance loading capability to further reduce output capacitance and optimize load performance.
- Reduced output capacitance for enhanced high-frequency load operation
- Optimized AC Load Performance in all applications where AC input Voltage has HF Switching Noise
- Output LC filter minimizes unwanted reactive current caused by high frequency voltage at Load input
- Enables increased operation stability when input AC voltage has high frequency content

# User Friendly Control Options

## Multiple Control Options

- Intuitive Touch Screen LCD Display
- Soft Key driven Menus
- Built-In **SmartSource Suite** Web Interface
- LAN, GPIB, RS232 & USB Interfaces, and ModBus (optional)
- Supports external touch screen monitor via Video Output Interface



## Simplify Test Automation with **SmartSource Suite** Remote Control Platform

Easily monitor, control, and manage testing with the RGS's **SmartSource Suite** remote control platform. Use the built-in web browser interface with real-time control. Access control panels and test sequences on-premises or on any mobile device (laptop, phone, tablet) via secure client access.

- Full control and measurement capability
- Program settings and measurement read back including digital scope and harmonics data
- Extensive safety protection settings
- Waveform selection, preview and edit modes
- Execution of user's custom test sequences
- Transient data entry and execution screen using a spreadsheet layout

## Built-in Galvanic Isolation Reduces Safety Risks

RGS provides facility-to-output and phase-to-phase/channel-to-channel galvanic isolation, ensuring no electrical connection between channels. Each phase can operate as an independent source with full voltage and frequency control. This fully isolated design improves operator safety, prevents ground loops and UUT damage, and eliminates the need for external transformers - reducing system cost and footprint.

### Low Leakage Optimization Option (M26007)

- Reduced AC input common-mode capacitance minimizes leakage current to earth
- Prevents nuisance tripping of RCD\*/GFCI protection devices.
- Maintains full voltage and current source operation
- Simplifies integration into protected laboratory and production environments
- Ideal for installations with sensitive protection devices or strict leakage current requirements

\*M26002 combines both reduced output capacitance AND low leakage (M25057 and M26007 RCD\* (Residual-Current Device): Residual-current circuit breaker or ground fault circuit interrupter)



## Modular & Scalable Power up to 1.296MW

Easily parallel multiple chassis to reach up to 216kW with 432Amps / phase per cabinet. Parallel cabinets up to 432kW. Three-Phase High Power System configurations available up to 1.296MW using a three-phase central controller.

- Easy configuration, flexible set up and reduced downtime
- Scalable power - expand now or later
- Mix different power ratings in parallel systems
- Cost-effective auxiliary no-controller models available
- Integrated 19" Rack systems offered in 18U, 32U, 42U cabinets.
- **Parallel configuration kits available** for custom cabinet integration.

NOTE: Cabinet sizes vary in EU, UK, India, China. Contact Global Sales Centers for more information



## Parallel Systems Installed in 19" Rack Cabinet

| Models              | Rated Power <sup>1</sup><br>AC / DC mode | Voltage Ranges <sup>2</sup><br>Vac L-N / Vdc | Max. AC/DC Current per<br>phase in 3 & 2 Phase Mode | Rack Space |
|---------------------|--|--|---|------------|
| <b>3300RGS-4UC</b>  | 30 kVA, kW / 30 kW                       | 0-350 Vac / ± 0-500 Vdc                      | 84.0 Arms / 42.0 Adc                                | 18U        |
| <b>3360RGS-4UC</b>  | 36 kVA, kW / 36 kW                       | 0-350 Vac / ± 0-500 Vdc                      | 84.0 Arms / 42.0 Adc                                | 18U        |
| <b>3481RGS-4UC</b>  | 48 kVA, kW / 48 kW                       | 0-350 Vac / ± 0-500 Vdc                      | 96.0 Arms / 126.0 Adc                               | 18U        |
| <b>3630RGS-4UC</b>  | 63 kVA, kW / 63 kW                       | 0-350 Vac / ± 0-500 Vdc                      | 126.0 Arms / 63.0 Adc                               | 18U        |
| <b>3721RGS-4UC</b>  | 72 kVA, kW / 72 kW                       | 0-350 Vac / ± 0-500 Vdc                      | 144.0 Arms / 168.0 Adc                              | 18U        |
| <b>3961RGS-4UC</b>  | 96 kVA, kW / 96 kW                       | 0-350 Vac / ± 0-500 Vdc                      | 192.0 Arms / 210.0 Adc                              | 32U        |
| <b>31050RGS-4UC</b> | 105 kVA, kW / 105 kW                     | 0-350 Vac / ± 0-500 Vdc                      | 210.0 Arms / 105.0 Adc                              | 32U        |
| <b>31201RGS-4UC</b> | 120 kVA, kW / 120 kW                     | 0-350 Vac / ± 0-500 Vdc                      | 240.0 Arms / 252.0 Adc                              | 32U        |
| <b>31441RGS-4UC</b> | 144 kVA, kW / 144 kW                     | 0-350 Vac / ± 0-500 Vdc                      | 288.0 Arms / 294.0 Adc                              | 32U        |
| <b>31681RGS-4UC</b> | 168 kVA, kW / 168 kW                     | 0-350 Vac / ± 0-500 Vdc                      | 336.0 Arms / 168.0 Adc                              | 42U        |
| <b>31921RGS-4UC</b> | 192 kVA, kW / 192 kW                     | 0-350 Vac / ± 0-500 Vdc                      | 384.0 Arms / 378.0 Adc                              | 42U        |
| <b>32161RGS-4UC</b> | 216 kVA, kW / 216 kW                     | 0-350 Vac / ± 0-500 Vdc                      | 432.0 Arms / 0.0 Adc                                | 42U        |

Note 1: For Split Phase mode, rated power is 2/3.

Note 2: For Voltage ranges above 333Vac some frequency and Vthd restrictions apply.

Note 3: Above 200Hz max current derates with Option F.

### Additional Information:

- Paralled systems up to 432kVA/kW.
- Three-Phase high power system configurations available up to 1.296 MVA/MW; Contact Factory for details.
- Legacy model numbers are still available for ordering.
- Contact factory for cabinet output wiring modifications to support single phase AC mode on cabinets above 84kVA

# Technical Specifications

| Model   | 3120RGS-4U  | 3150RGS-4U              | 3180RGS-4U                               | 3210RGS-4U              | 3241RGS-4U              |
|---|---|-------------------------|--|-------------------------|-------------------------|
| <b>Modes of Operation: Regenerative Grid Simulator, Regenerative DC Power Source. Regenerative Electronic Load optional.</b>  |   |                         |  |                         |                         |
| <b>AC or DC Output</b>  |   |                         |  |                         |                         |
| Phase Modes (Form)  | 1, 2 or 3   | 1, 2 or 3               | 1, 2 or 3                                | 1, 2 or 3               | 1, 2 or 3               |
| Maximum Power (Total)   | 12 kW/kVA   | 15 kW/kVA               | 18 kW/kVA <sup>1</sup>                   | 21 kW/kVA <sup>1</sup>  | 24 kW/kVA <sup>1</sup>  |
| Per Phase / Channel   | 4 kW/kVA  | 5 kW/kVA                | 6 kW/kVA                                 | 7 kW/kVA                | 8 kW/kVA                |
| DC Offset: < 20 mV   Output Noise (DC – 300 kHz) < 150 mV rms   |   |                         |  |                         |                         |
| <b>Voltage</b>  |   |                         |  |                         |                         |
| Range <sup>2</sup>  | AC Range: 0 - 350 VLN / 0 - 606 VLL   DC Range: 0 - ±500 VDC                        |                         |  |                         |                         |
| Resolution  | 0.01  |                         | Accuracy:                                | ± 0.25% F.S             |                         |
| Harmonic Distortion (R Load, , Vac > 120Vrms)   | < 100 Hz < 0.3%   100 Hz to 500Hz < 0.5%   500 to 1000 Hz < 1.0%   > 1000 Hz < 1.5% |                         |  |                         |                         |
| Line Regulation   | < 0.1% for 10% Line Change  |                         |  |                         |                         |
| Load Regulation   | ± 0.02% (CSC Mode)  |                         |  |                         |                         |
| Phase Angle - Range (B, C)  | 0 - 359.9°  |                         | Resolution:                              | 0.1°                    |                         |
| <b>Maximum Current</b>  |   |                         |  |                         |                         |
| 3 & 2 Phase modes AC / DC   | 34.0 ARMS /<br>16.7 ADC   | 48.0 ARMS /<br>21.0 ADC | 48.0 ARMS /<br>21.0 ADC                  | 48.0 ARMS /<br>21.0 ADC | 48.0 ARMS /<br>21.0 ADC |
| 1 Phase mode AC / DC  | 100.0 ARMS /<br>50.0 ADC  | 144.0 ARMS /<br>63.0ADC | 144.0 ARMS /<br>63.0ADC                  | 144.0 ARMS /<br>63.0ADC | 144.0 ARMS /<br>63.0ADC |
| Current Crest Factor (AC)   | 3.0 : 1   |                         | 2.5 : 1                                  |                         | 2.5 : 1                 |
| <b>Frequency</b>  |   |                         |  |                         |                         |
| Range: 15.00 – 200.0 Hz std or 15.00 - 1200Hz Option F  |   |                         | Resolution / Accuracy: 0.01 Hz / ± 0.01% |                         |                         |
| <b>AC Input</b>   |   |                         |  |                         |                         |
| Input Voltage Range / Freq  | 380Vac – 480Vac ± 10%, 4 Wire, L1, L2, L3 and PE / 47 - 63 Hz                       |                         |  |                         |                         |
| Nom. Phase Current @ 400Vac / 480Vac  | 21 Arms / 18 Arms   | 26 Arms / 22 Arms       | 31 Arms / 26 Arms                        | 36 Arms / 30 Arms       | 42 Arms / 35 Arms       |
| Input Power Factor  | 0.99  |                         | Efficiency:                              | 90%+                    |                         |
| <b>Measurement</b>  |   |                         |  |                         |                         |
| Vrms Range / Accuracy   | 0 – 350 VLN / 0-606 VLL / ± 0.25% F.S.  |                         |  |                         |                         |
| Irms Range <sup>3</sup> / Accuracy  | 50.0 A / ± 0.5% F.S.  | 50.0 A / ± 0.5% F.S.    | 50.0 A / ± 0.5% F.S.                     | 50.0 A / ± 0.5% F.S.    | 50.0 A / ± 0.5% F.S.    |
| Power Range <sup>3</sup> / Accuracy   | 4 kW / ± 1.5 % F.S.   | 5 kW / ± 1.5 % F.S.     | 6 kW / ± 1.5 % F.S.                      | 7 kW / ± 1.5 % F.S.     | 8 kW / ± 1.5 % F.S.     |
| Scope Function  | Sample Rate: 54932.47 Hz / Window: 1024 Samples / Bandwidth: 1200 Hz                |                         |  |                         |                         |
| <b>Transient Functions</b>  |   |                         |  |                         |                         |
| Programming: 200 Steps / 400 Segments, LIST, PULSE & STEP Modes, Frequency, Volt AC, Volt DC, Waveform, Ramp Time, Dwell Time.<br>Time range: 0.1 - 10000000.0 ms, Time resolution 0.1 ms |   |                         |  |                         |                         |
| Execution: Run from step # to step #, Run, Step, Restart, Stop   Program Storage: Non-volatile, 100 Programs + Transients   |   |                         |  |                         |                         |

Note 1: Maximum Power rating is reduced below 40Hz on 3180RGS, 3210RGS and 3240RGS models

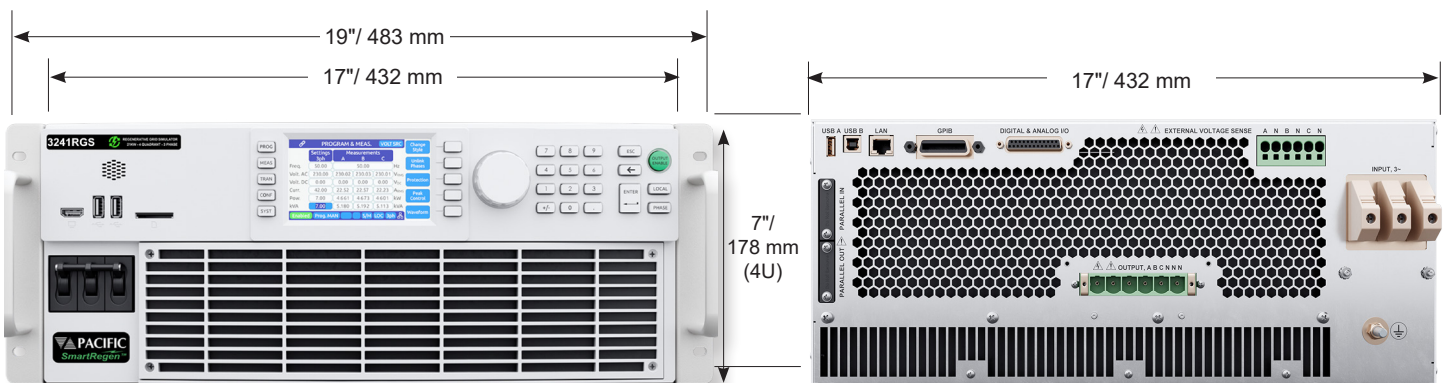
Note 2: Extended Voltage Range: 0 - 365 VLN / 0 - 632 VLL, with VTHD < 1.0% @ 50-60Hz

Note 3: Measurement range is times three in single phase mode.

# Technical Specifications

| Parameters   |   | Specifications   |                             |
|--|---|--|-----------------------------|
| <b>Remote Control Interfaces / Analog &amp; Digital I/O</b>  |   |  |                             |
| USB Type B, LAN (LXI), GPIB / IEEE488, RS232, all on rear panel; External USB WIFI adapter / ModBus TCP / CAN/CAN-FD |   |  |                             |
| Analog Inputs (4)/Outputs(4)   | AI1, AI2, AI3, A14<br>User defined functions.   | AO1 AO2, AO3, AO4<br>User-defined measurement unctions |                             |
| Digital Inputs (6)/Outputs(6)  | Remote, Inhibit, Trans. Trig., Phase Sync,<br>User                                    | Output Relay, Transient, Function Strobe, Sync         |                             |
| <b>Environmental</b>   |   |  |                             |
| Cooling: Variable speed fan, front intake, rear exhaust; Energy Saving Modes: Standby & Sleep                        |   |  |                             |
| Temperature  | Operating: 0 to 40 °C / 32 to 104 °F  | Storage: -20 to 70 °C/-4 to 158 °F                     |                             |
| Humidity   | < 80%, non-condensing   | Altitude:  | 2000 m / 6500 feet          |
| <b>System Features</b>   |   |  |                             |
| USB Ports: 2 on Front Panel, 1 on Rear Panel, All Type A   |   | SD Card: 32 GB max. Capacity                           |                             |
| Video Output Port  | Monitor Out, Front Panel  |  |                             |
| <b>Dimensions &amp; Weights</b>  |   |  |                             |
| Chassis Size H x W x D   | 7.0"x17.0"x25.0" / 178x432x635 mm   | Shipping: 20" x 27" x 38" / 508 x 686 x 965 mm         |                             |
| Weight Per 4U Height Unit  | Net:  | 111.2 lbs. / 50.4 kg                                   | Shipping: 151 lbs / 68.5 kg |
| <b>Regulatory Compliance</b>   |   |  |                             |
| Safety   | IEC 61010-1:2010 (Edition 3)  |  |                             |
| EMC - Emissions / Immunity   | EN 55011:2009+A1:2010 / EN 61000-4-2, -4-3, -4-4, -4-5, -4-6, -4-8 and EN 61000-4 -11 |  |                             |
| Product Category   | EN 61326-1:2013 (Measurement, Laboratory and Control Equipment)                       |  |                             |
| Agency Approvals   | CE Mark, NRTL Nemko US/Canada   | RoHS (2011/65/EU):                                     | EN50581:2012                |

## Unit Dimensions



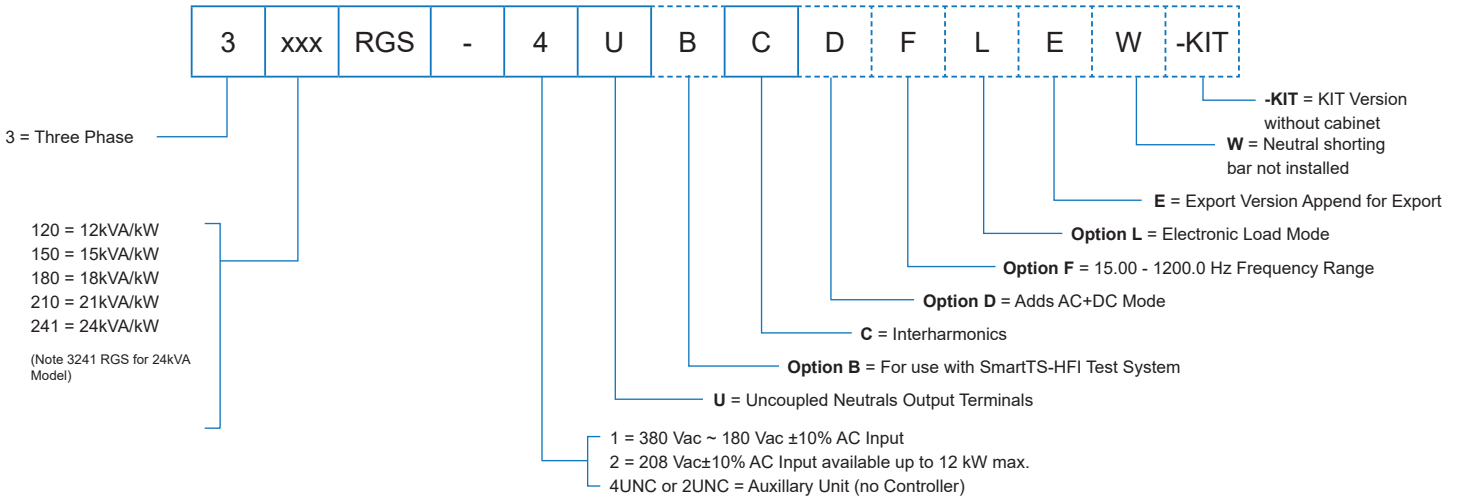
The RGS is designed for bench top or 19" equipment rack operation.

The Rear Panel provides connections for AC Input, External Sense, Aux I/O and remote control interfaces.

# Ordering Information

## RGS Series Model Number Encoder

Note: Solid outlined fields must be specified. Dashed outlined fields are optional



NOTE: 4U indicates that the shorting bar for output neutrals will be installed on the units by default. If Option W is selected, the units will be shipped with shorting bar for neutrals removed and provided in the ship kit instead.

| Order Example: 3240RGS-4UCL   | Typical Delivery Items  | Available Accessories   |
|---|---|---|
| <ul style="list-style-type: none"> <li>Bench Model, 24 kVA, 3-Phase, Regenerative Grid Simulator with Load option, USB, RS232, LAN, GPIB &amp; AUX I/O</li> <li>Auxiliary Models (No controller)</li> </ul> Order Example: 3210RGS-4UNC | <ul style="list-style-type: none"> <li>Power Source</li> <li>Rack Mount Handles</li> <li>Certificate of Compliance</li> </ul> | <ul style="list-style-type: none"> <li>Output shorting adapter for single phase output mode use. P/N 160086 (not for W)</li> <li>Paralleling Cable, 1 Ft. (Included with Aux NC models). P/N 778036</li> <li>Rack slides. P/N 703251</li> </ul> |

### Additional Load Options

- M25057**- High-Frequency Load Optimization
- M26007**-- Low-Leakage Load Optimization
- M26002**- Both M25057 and M26007 combined

## Pre-Written Test Sequence Options

Test Sequence Options require use of built-in SmartSource Suite via LAN or USB.

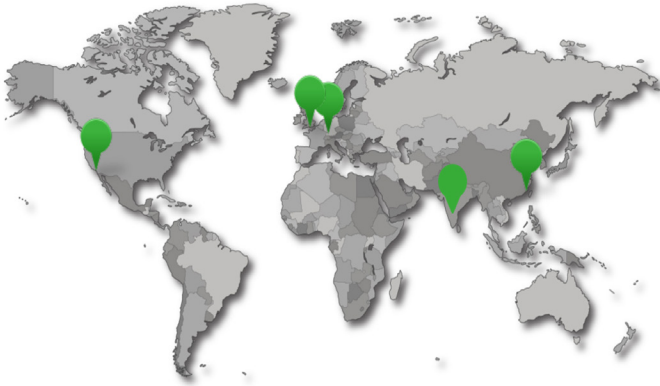
- IEC Test Suite - IEC 61000-4-11p, IEC 61000-4-14, IEC 61000-4-17, IEC 61000-4-27p, IEC 61000-4-28, IEC 61000-4-29p and IEC 61000-4-34
- IEC 61000-4-13 Standard
- IEEE 1547.1-2020
- Semi-F47-0706
- KS C 9610-4-11, KS C 9610-4-29
- MIL-STD 1275 Rev E
- EN62116



# Innovate the Way You Test

by making it simpler, safer, more productive, and sustainable.

## Global Sales & Service Centers



The Power of Expertise

### About Pacific Power Source

Founded in 1971, Pacific Power Source is an industry leading manufacturer of AC and DC power test solutions. Our reputation as a market and technology leader stems from our best-in-class products, commitment to R&D investments, and exceptional worldwide customer support.

Pacific Power Source is a PPST Solutions Company.

**AMERICAS & INTERNATIONAL**  
**Pacific Power Source, Inc.**  
**Irvine, USA**  
 Phone: +1(949) 251-1800  
 Fax: +1 (949) 756-0756  
[sales@pacificpower.com](mailto:sales@pacificpower.com)

**EUROPE**  
**Pacific Power Source Europe GmbH**  
**Kappelrodeck, Germany**  
 Phone: +49 7842 99722-20  
 Fax: +49 7842 99722-29  
[info@pacificpower.eu](mailto:info@pacificpower.eu)

**GERMANY, AUSTRIA & SWITZERLAND**  
**Caltest Instruments GmbH**  
**Kappelrodeck, Germany**  
 Phone: +49 7842 99722-00  
 Fax: +49 7842 99722-29  
[sales@caltest.de](mailto:sales@caltest.de)

**UNITED KINGDOM**  
**Caltest Instruments**  
**Petersfield, UK**  
 Phone: +44 (0) 1483 302 700  
[sales@caltest.co.uk](mailto:sales@caltest.co.uk)

**INDIA**  
**Caltest Instruments**  
**Private Limited**  
**Bangalore, India**  
[sales@caltestindia.com](mailto:sales@caltestindia.com)

**CHINA**  
**PPST Shanghai**  
**Shanghai, China**  
 Phone: +86-21-6763-9223  
 Fax: +86-21-5763-8240  
[info@ppst.com.cn](mailto:info@ppst.com.cn)