



INFINIPOWER
Powering Trust. Driving Innovation

CUT SHEET

RPS-7000 Regenerative Power System

AC Source · AC Load · Grid Simulator



The RPS-7000 regenerative power system delivers 6 kVA – 18 kVA per unit, with up to three units paralleled for 54 kVA/kW, providing a versatile platform for high-performance testing. Featuring a full four-quadrant AC/DC source and load design, it enables regenerative operation to feed energy back to the grid, reducing power and cooling costs. With advanced waveform simulation and harmonic analysis, it ensures precise, efficient, and reliable testing for new energy systems, AI servers, electric vehicles (EVs), and power electronics, while enhancing flexibility and energy utilization across R&D and compliance validation.

KEY FEATURES

- Power range: 6 kVA – 18 kVA
- Single-phase current: 48A / 144Arms
- AC source, load, and grid simulator in a single unit.
- Maximum current increased by 35%.
- Boosts efficiency to 90% from 80%.
- 50th order harmonic analysis for advanced testing.
- Scalability: Up to 54 kVA with 3 units in parallel.
- Flexible output: single, three, or split-phase.
- Trigger in & out enables seamless synchronization.
- Multiple communication interfaces.
- PowerVue remote management software.
- LIST, PULSE, STEP, TRANSIENT, and Arbitrary Waveform.
- Modular design with built-in DSP enables fast maintenance and calibration.
- Function Test: IEC 61000-3-2/-3-3/-3-11/-3-12/-4-11/-4-13/-4-14/-4-28/-4-34

PowerVUE:

The remote control software supports PC-based operation, AIoT monitoring, configuration, waveform monitoring, and IEC 61000 compliance testing (e.g., 4-11, 4-13, 4-14, 4-17, 4-28, 4-29).



About INFINIPOWER:

With 20+ years of R&D expertise in power testing, INFINIPOWER team delivers industry-leading solutions with trusted performance, precision, and stability. Backed by world-class manufacturing and TÜV certification, INFINIPOWER empowers customers—powering trust, driving innovation in the new energy era.

Technical Specifications

Item		RPS-7012	RPS-7015	RPS-7018
AC INPUT	Phase	3Ø3W		
	Voltage	200 - 240 VL-L ± 10%, 380 - 480 VL-L ± 10%		
	Frequency	47 - 63Hz		
	Max. Current	47A/phase (200 - 240 VL-L ± 10%) 25A/phase (380 - 480 VL-L ± 10%)	58A/phase (200 - 240 VL-L ± 10%) 31A/phase (380 - 480 VL-L ± 10%)	62A/phase (200 - 240 VL-L ± 10%) 38A/phase (380 - 480 VL-L ± 10%)
	Power Factor(*1)	0.99(Typical)		
AC OUTPUT	Phase Modes	3Ø, 1Ø or Split phase selectable		
	Max. Power	12kVA/8kVA(Split phase)	15kVA/10kVA(Split phase)	18kVA/12kVA(Split phase)
	Per Phase/Channel	4kVA	5kVA	6kVA
AC VOLTAGE	Range	0 - 350VL-N, 0 - 606VL-L, 0-700VL-L(Split phase) Option : 0 - 400VL-N, 0 - 692VL-L, 0-800VL-L(Split phase)		
	Resolution	0.1V		
	Setting Accuracy	± (0.1% of setting + 0.2% F.S.)		
	Total Harmonic Distortion (*2)	<0.3% @ 50/60Hz, <1% @ 15-1000Hz, <1.5% @1001-1500Hz		
	Line Regulation (*3)	± 0.1%		
	Load Regulation (*4)	± 0.2%		
	Phase Angle	Range	0 - 359.9°	
	Resolution	0.1°		
MAX. AC CURRENT	RMS(*5)	105A(1Ø)/35A(3Ø/Split)	120A(1Ø)/40A(3Ø/Split)	144A(1Ø)/48A(3Ø/Split)
	Peak	315A(1Ø)/105A(3Ø/Split)	360A(1Ø)/120A(3Ø/Split)	432A(1Ø)/144A(3Ø/Split)
	Crest Factor	3	3	3
FREQUENCY	Range	DC, 15.00 - 100.0 Hz, Option : DC, 15.00 - 1500.0 Hz		
	Resolution / Accuracy(*6)	0.01Hz / ± 0.01% of setting at voltage > 10v		
DC OUTPUT	Max. Power	12kW/8kW (Split phase)	15kW/10kW(Split phase)	18kW/12kW(Split phase)
	Per Phase/Channel	4kW	5kW	6kW
DC VOLTAGE	Range	±495VDC, ±990VDC(Split phase), Option : ±565VDC, ±1130VDC(Split phase)		
	Resolution / Setting Accuracy	0.1V / ± (0.1% of setting + 0.2% F.S.)		
MAX. DC	Current Range	78.75A(1Ø)/26.25A(3Ø/Split)	90A(1Ø)/30A(3Ø/Split)	108A(1Ø)/36A(3Ø/Split)
HARMONIC	Synthesis Function	up to 50 Harmonic orders @ 50/60Hz fundamental frequency		
REGENERATIVE FUNCTION	Current iTHD(*7)	<6%(Typical)	<5%(Typical)	<5%(Typical)
	Power Factor(*8)	0.97(Typical)		
CURRENT LIMIT FUNCTION	Setting	1Ø	0.1 - 105A	0.1 - 120.0A
		3Ø/Split phase	0.1 - 35A	0.1 - 40.0A
	Resolution	0.1A		
	Accuracy	± (2.0% of setting + 0.5% F.S.)		
Response Time	< 0.5s			
MEASUREMENT	Voltage (AC)	Range	0 - 350VL-N, 0 - 606VL-L, 0 - 700VL-L(Split) Option : 0 - 400VL-N, 0 - 692VL-L, 0 - 800VL-L(Split)	
		Resolution / Accuracy	0.01V / ± (0.1% of reading + 0.2% F.S.) at Voltage > 5V	
GENERAL	Interface	USB, Ethernet, External I/O(DB25), Option: GPIB, CAN Bus		
	Display	Full Color, Touch LCD Display, 5" Diagonal size, 800 x 400 Pixels resolution		
	Protection	OCP, OVP, OPP, OTP, SHORT, FAN		
	V Sense / Efficiency (*9)	Yes / > 90% (Typical)		
	Dimension(H x W x D) / Weight	132.8 x 432 x 718 mm / 60kg		
ENVIRONMENTAL	Cooling	Variable speed fan cooled, front intake, rear exhaust		
	Operating / Storage Temperature	0 to 40°C / -40 to 85°C		
	Altitude / Operating Humidity(*10)	2000m (6500 feet) / 0% to 95% RAH		
REGULATORY COMPLIANCE	Safety	Low Voltage Directive 2014/30/EU, EN 61010-1:2017		
	EMC	CE marked for EMC Directive 2014/30/EU per EN 61326-1:2013 Class A		
	CE Mark LVD Categories	Installation Overvoltage Category: II; Pollution Degree: 2; indoor use only.		

For items 1-10(*), please consult the datasheet; all information is subject to change without notice.