KIKUSUI

The Never-Ending Evolution of Power Supplies!



Ultra-Compact AC/DC Programmable Power Supply PCR-WEA2 Series

Constant Current Output / Regenerative Electronic Load Option*

Additional operating modes: CC SUPPLY, CC LOAD
AC three-phase: Up to 120 A / Single-phase: Up to 360 A
Voltage: 160 Vrms/320 Vrms, DC ±226 V/±452 V
Synchronization frequency: 45 Hz to 65 Hz
6 kVA to 36 kVA (6 models)
Single-phase, single-phase three-wire, and three-phase loads — all in one unit!
Phase control, sudden change, and arbitrary waveform functions allow for flexible reproduction of load operation.

*This is a factory-installed option. It cannot be added to existing products.

Re: EVOLUTION

More features, more freedom!

All the capabilities of your AC/DC regulated power supply now with newly added constant current output and a regenerative electronic load mode!

Ultra-Compact AC/DC Programmable Power Supply PCR-WEA2 Series

Constant Current Output / Regenerative Electronic Load Option

The "Constant Current Output / Regenerative Electronic Load Function Option" is a factory option available for the PCR-WEA2 series (R models with a maximum power rating of 6 kVA or higher). In addition to the conventional AC/DC regulated power supply (CV SUPPLY) function, it adds two operating modes: Constant Current Output (CC SUPPLY) mode and Regenerative Electronic Load (CC LOAD) mode. The Regenerative Electronic Load mode provides advanced phase settings and can accurately reproduce arbitrary current waveforms. This enables versatile waveform control, including variable load power factor, sudden phase changes, and the reproduction of rapid load changes and harmonic currents.
During testing of bidirectional onboard chargers and various inverters, real-world load conditions can be simulated with high accuracy. With this option installed, the PCR-WEA2 series can be used as a bidirectional AC/DC regenerative power supply that can freely supply and absorb power.

■ **Models**

Supported models	Firmware version	Input voltage
PCR6000WEA2R	Versions 6.xx	Three-phase 200 V input
PCR12000WEA2R		
PCR18000WEA2R		
PCR24000WEA2R		
PCR30000WEA2R		
PCR36000WEA2R		

[Important] When this option is installed, parallel operation is available only in CV SUPPLY mode. Please note that parallel operation is not supported in CC SUPPLY mode or CC LOAD mode.

Regenerative Electronic Load Mode (CC LOAD) *CC mode and CC + CR mode can be selected.

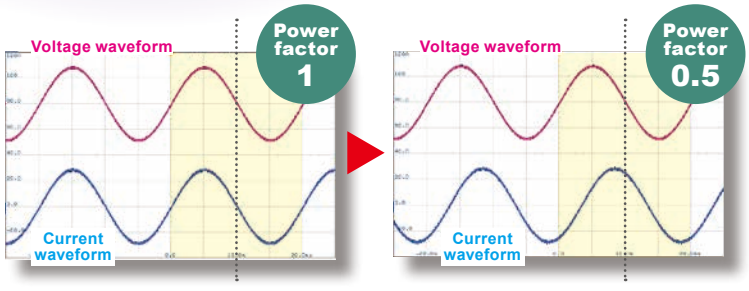
7 New Features

Full Control Over Phase and Waveforms

Operates as a constant-current, regenerative AC/DC load. Phase can be set in 0.1° increments, allowing precise power-factor adjustment. Using the arbitrary waveform feature, you can also reproduce capacitor-input waveforms and phase-control load behavior. The absorbed energy is regenerated back to the facility's primary side and reused, helping reduce CO2 emissions.

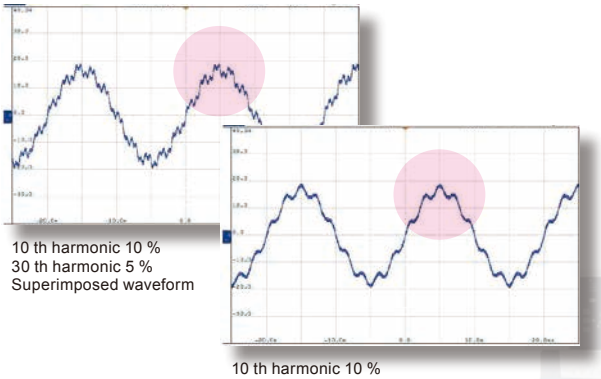
1. Variable phase (power factor)

The current phase can be set from −360° to +360° relative to any voltage.



2. Superimposed harmonic current

Any harmonic current can be superimposed.

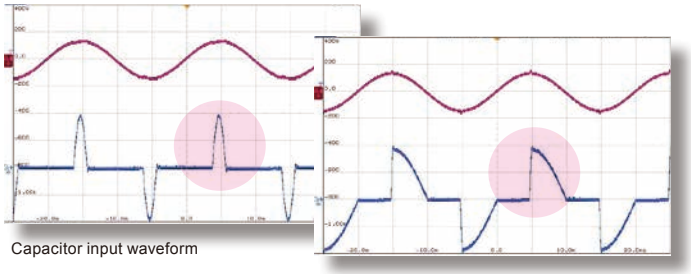


10 th harmonic 10 %
30 th harmonic 5 %
Superimposed waveform

10 th harmonic 10 %
Superimposed waveform

3. Special waveforms

21 special waveforms are preinstalled.
*To create user-defined special waveforms, the separate application software "Wavy for PCR-WE" is required.

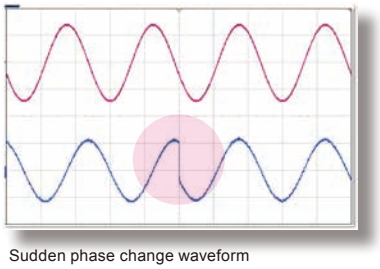


Capacitor input waveform

Phase control waveform

4. Rapid phase shift

Sudden phase (power factor) changes are possible at any time.



Sudden phase change waveform

PCR WEA/WEA2 SERIES
AC POWER SUPPLY

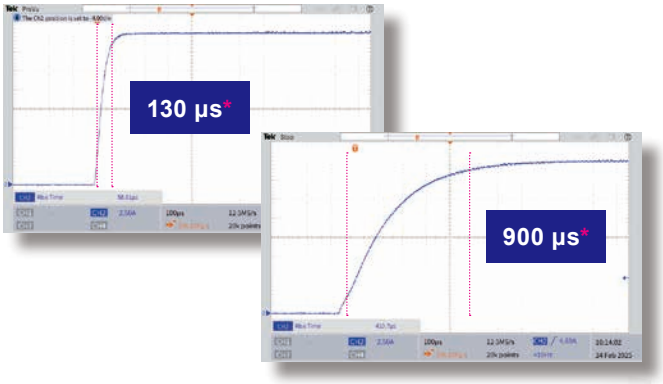
Constant Current Output Mode (CC SUPPLY)

Operates as a high-voltage, high-speed constant-current AC/DC power supply. You can select between single-phase, single-phase three-wire, or three-phase outputs. Phase settings and the arbitrary-waveform function let you freely shape the output current waveform. You can set the control response to one of four levels to match the application and ensure stable operation.

4-Level Response Settings

●FAST (High-speed response mode) ●MEDIUM FAST (Medium-speed response mode) ●MEDIUM SLOW (Stable response mode) ●SLOW (High-stability response mode)

FAST (High-speed response mode)



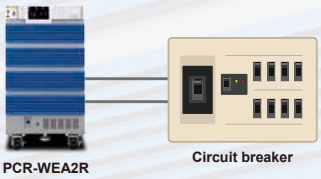
SLOW (High-stability response mode)

*At rated resistance load

CC SUPPLY Application Examples

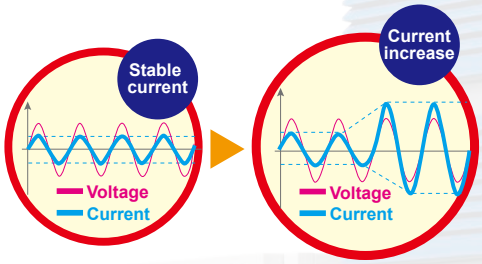
Circuit Breaker & Fuse Evaluation

For temperature-rise testing and performance evaluation of overcurrent protection devices.



5. Sudden load change

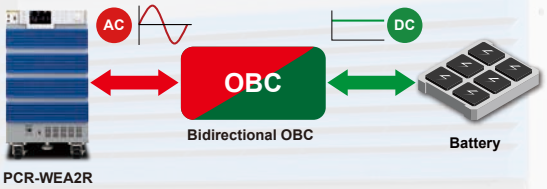
Load current level can be changed at any time.



CC LOAD Application Examples

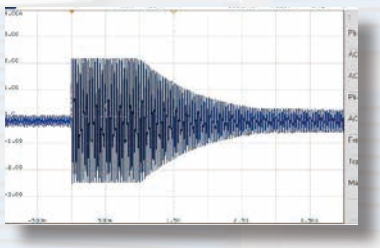
OBC (On-Board Charger) Evaluation

As a highly repeatable simulated load for OBC V2L/V2H evaluation.



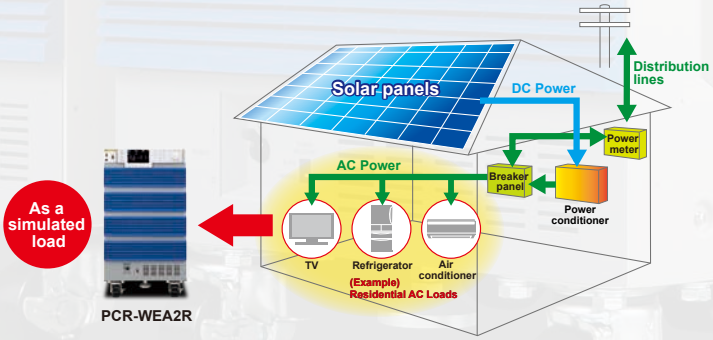
6. Inrush current simulation

Simulates inrush current when a motor starts.



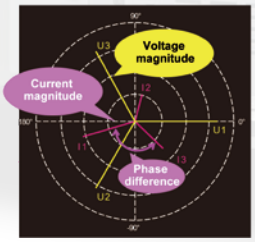
PV Inverter and V2H Converter Evaluation

As a simulated load for household appliances connected to an inverter.



7. Three-phase imbalance

You can set the current for each UVW phase and adjust the phase balance as needed.



Specifications

Model					PCR6000WEA2R	PCR12000WEA2R	PCR18000WEA2R	PCR24000WEA2R	PCR30000WEA2R	PCR36000WEA2R
Phase					1P2W/1P3W/3P4W switchable					
Power capacity *1			1P2W, 3P		6 kVA	12 kVA	18 kVA	24 kVA	30 kVA	36 kVA
			1P3W		4 kVA	8 kVA	12 kVA	16 kVA	20 kVA	24 kVA
CC Load mode/ CC Supply mode	AC	Current (L/H range) *2	Rating *3	1P2W	60 A/ 30 A	120 A/ 60A	180 A/ 90 A	240 A/ 120 A	300 A/ 150 A	360 A/ 180 A
				3P, 1P3W	20 A/ 10 A	40 A/ 20 A	60 A/ 30 A	80 A/ 40 A	100 A/ 50 A	120 A/ 60 A
			Setting range	1P2W	0 A to 66 A/ 0 A to 33 A	0 A to 132 A/ 0 A to 66 A	0 A to 198 A/ 0 A to 99 A	0 A to 264 A/ 0 A to 132 A	0 A to 330 A/ 0 A to 165 A	0 A to 396 A/ 0 A to 198 A
				3P, 1P3W	0 A to 22 A/ 0 A to 11 A	0 A to 44 A/ 0 A to 22 A	0 A to 66 A/ 0 A to 33 A	0 A to 88 A/ 0 A to 44 A	0 A to 110 A/ 0 A to 55 A	0 A to 132 A/ 0 A to 66 A
			Resolution		0.01 A (0 A to 99.99 A)/0.1 A (100 A to 999.9 A)					
			Accuracy (phase current)		±(0.3 % of setting +1 % of f.s) *4 *5 *6 *7					
		Load power factor			0 to 1 (leading or lagging)					
		Frequency setting		Range	1 Hz to 5 kHz (< 40 Hz power de-rating is required)					
				Resolution	0.01 Hz (1.00 Hz to 100.0 Hz)/ 0.1 Hz (100.0 Hz to 1000 Hz)/ 1 Hz (1000 Hz to 5000 Hz)					
				Accuracy	±0.01 % *4 temperature coefficient: ±0.005 %/°C					
		Phase setting		Resolution	0.01° *8/ 0.1° (1 Hz to 500 Hz)/ 1° (500 Hz to 4 kHz)/ 2° (>4 kHz)					
				Accuracy	Within ±(0.4°+ fo × 0.9°) fo: Frequency [kHz] *4 *9					
	DC	Current (L/H range) *2	Rating *3	1P2W	60 A/ 30 A	120 A/ 60 A	180 A/ 90 A	240 A/ 120 A	300 A/ 150 A	360 A/ 180 A
				3P, 1P3W	20 A/ 10 A	40 A/ 20 A	60 A/ 30 A	80 A/ 40 A	100 A/ 50 A	120 A/ 60 A
			Setting range	1P2W	-66 A to 66 A/ -33 A to 33 A	-132 A to 132 A/ -66 A to 66 A	-198 A to 198 A/ -99 A to 99 A	-264 A to 264 A/ -132 A to 132 A	-330 A to 330 A/ -165 A to 165 A	-396 A to 396 A/ -198 A to 198 A
				3P, 1P3W	-22 A to 22 A/ -11 A to 11 A	-44 A to 44 A/ -22 A to 22 A	-66 A to 66 A/ -33 A to 33 A	-88 A to 88 A/ -44 A to 44 A	-110 A to 110 A/ -55 A to 55 A	-132 A to 132 A/ -66 A to 66 A
			Resolution		0.01 A (0 A to 99.99 A)/ 0.1 A (100 A to 999.9 A)					
			Accuracy		±(0.3 % of setting +1 % of f.s) *4 *10					
+CR mode	Resistance *2 *11 (L/H range)		Setting range	1P2W	0.30 Ω to 853.33 Ω/ 1.20 Ω to 3413.33 Ω	0.15 Ω to 426.67 Ω/ 0.60 Ω to 1706.67 Ω	0.10 Ω to 284.44 Ω/ 0.40 Ω to 1137.78 Ω	0.08 Ω to 213.33 Ω/ 0.30 Ω to 853.33 Ω	0.06 Ω to 170.67 Ω/ 0.24 Ω to 682.67 Ω	0.05 Ω to 142.22 Ω/ 0.20 Ω to 568.89 Ω
				3P, 1P3W	0.90 Ω to 2560.00 Ω/ 3.60 Ω to 10240.00 Ω	0.45 Ω to 1280.00 Ω/ 1.80 Ω to 5120.00 Ω	0.30 Ω to 853.33 Ω/ 1.20 Ω to 3413.33 Ω	0.23 Ω to 640.00 Ω/ 0.90 Ω to 2560.00 Ω	0.18 Ω to 512.00 Ω/ 0.72 Ω to 2048.00 Ω	0.15 Ω to 426.67 Ω/ 0.60 Ω to 1706.67 Ω
			Setting resolution (Phase resistance)		0.01 Ω *12					
			Accuracy (Phase resistance)		±(1 % of setting + offset) *4 *13 *14 *15 *16					
Maximum application voltage				AC	±226 Vpeak/±452 Vpeak (output L/H range)					
				DC	±226 V/±452 V (output L/H range)					
Maximum peak current *17					4 times the rated current					
Efficiency *18					85 % (standard value)					

*1. The power capacity when all power modules are enabled. When any power module is disabled, see the value of an applicable power capacity.
*2. When the applied voltage is between 100 V and 161 V/ 200 V and 322 V, the output current is reduced by the applied voltage. When the output frequency is between 1 Hz and 40 Hz, the output current is reduced by the output frequency. The output current is 70 % at 1 Hz.
*3. Voltage ranges guaranteed by specifications are 1 V to 160 V/ 2 V to 320 V (AC) and 1.4 V to 226 V/ 2.8 V to 452 V (DC).
*4. At an ambient temperature of 23°C ±5°C.
*5. At an output frequency between 45 Hz and 65 Hz.
*6. At a load power factor of 1, a sine wave, FAST response, and the initial damping frequency.
*7. At 25% or more of the rated current, when the +CR mode is turned off.
*8. Only applicable to a case where the waveform bank is 0 and the output frequency is 1 Hz to 500 Hz.
*9. Within ±(0.4°+ 2.5 µs × 360° × fo × 103) = ±(0.4°+ fo × 0.9°) fo: Frequency [kHz]
Example of angle conversion of the formula in the table at a specific frequency
Within ±0.5° (when 60 Hz output) Within ±0.8° (when 400 Hz output)
*10. At a load power factor of 1, FAST response, the initial damping frequency, and the +CR mode OFF.
*11. The resolution of the CR resistance value has a range that differs between the resolution that can be entered and the resolution that can actually be set. For details, see “Relationship between the setting resolution and the internal resolution of CR resistance value setting”.
*12. When the setting resolution [Ω] ≥ the internal resolution [Ω]. For details, see “Relationship between the setting resolution and the internal resolution of CR resistance value setting”.
*13. At FAST response and the initial damping frequency.
*14. For AC voltage applied: A sine wave, 100 V/ 200 V in the ranges of an attached table “Accuracy-guaranteed resistance ranges”. For DC voltage applied: 100 V/ 200 V in the ranges of an attached table “Accuracy-guaranteed resistance ranges”.
*15. When the current setting is 0 A, the output frequency is 45 Hz to 65 Hz, and in DC.
*16. An impedance including a reactive current for AC voltage applied.
*17. Repeated output is possible when the crest factor is 4.
*18. At an applied voltage of 100 V/ 200 V, the rated output current, a sine wave, a load power factor of 1, an output frequency of 40 Hz to 1 kHz.

*6. Damping frequency

Depending on the circuit of the load (especially inductive loads), the current waveform may oscillate. This function attenuates (damps) the oscillation by matching the damping frequency to the oscillation frequency.

Response	Setting range	Factory default
SLOW	2000 Hz to 11800 Hz	5500 Hz
MED.SLOW	1100 Hz to 12500 Hz	6000 Hz
MED.FAST	600 Hz to 13600 Hz	6500 Hz
FAST	500 Hz to 15400 Hz	7500 Hz

*14. Accuracy-guaranteed resistance ranges

Model	Power capacity	1P3W, 3P		1P2W	
		L range	H range	L range	H range
PCR6000WEA2R	6 kVA	5.00 Ω	20.00 Ω	5.00 Ω to 1.67 Ω	20.00 Ω to 6.67 Ω
PCR12000WEA2R	12 kVA	5.00 Ω to 2.50 Ω	20.00 Ω to 10.00 Ω	3.33 Ω to 0.84 Ω	13.33 Ω to 3.34 Ω
PCR18000WEA2R	18 kVA	5.00 Ω to 1.67 Ω	20.00 Ω to 6.67 Ω	2.22 Ω to 0.56 Ω	8.89 Ω to 2.23 Ω
PCR24000WEA2R	24 kVA	5.00 Ω to 1.25 Ω	20.00 Ω to 5.00 Ω	1.67 Ω to 0.42 Ω	6.67 Ω to 1.67 Ω
PCR30000WEA2R	30 kVA	4.00 Ω to 1.00 Ω	16.00 Ω to 4.00 Ω	1.33 Ω to 0.34 Ω	5.33 Ω to 1.34 Ω
PCR36000WEA2R	36 kVA	3.33 Ω to 0.84 Ω	13.33 Ω to 3.34 Ω	1.11 Ω to 0.28 Ω	4.44 Ω to 1.12 Ω

KIKUSUI

KIKUSUI ELECTRONICS CORPORATION
1-1-3, Higashiyamata, Tsuzuki-ku, Yokohama, Kanagawa, 224-0023, Japan
Phone:(+81)45-593-0200, Facsimile:(+81)45-593-7591, https://global.kikusui.co.jp/

KIKUSUI AMERICA, INC. https://kikusuiamerica.com/
3625 Del Amo Blvd., Suite 160 Torrance, CA90503
Phone: +1(310)214-0000, Facsimile: +1(310)214-0014, E-mail: kikusui@kikusuiamerica.com

KIKUSUI TRADING(SHANGHAI)Co., Ltd. http://www.kikusui.cn
Room 305, Shenggao Building, No.137, Xianxia Road, Shanghai City, China
Phone: +86-(0)21-5887-9067, Facsimile: +86-(0)21-5887-9069, E-mail: sales@kikusui.cn

KIKUSUI ELECTRONICS EUROPE GmbH https://kikusui-europe.com
Grossenbaumer Weg 8, 40472 Duesseldorf, Germany
Phone: +49(211)54257600, E-mail: support@kikusui-europe.com

KIKUSUI ELECTRONICS INDIA PRIVATE LIMITED
200-10 17th Cross Rd, Govindaraja Nagar Ward, MC Layout, Vijayanagar, Bengaluru, Karnataka 560040
Phone: +91 8023156713, Whatsapp: +91 9880028259, E-mail: kikusui-india.sales@kikusui-india.com

For our local sales distributors and representatives, please refer to "sales network" of our website.

● Distributor:

■ All products contained in this catalogue are equipment and devices that are premised on use under the supervision of qualified personnel, and are not designed or produced for home-use or use by general consumers. ■ Specifications, design and so forth are subject to change without prior notice to improve the quality. ■ Product names and prices are subject to change and production may be discontinued when necessary. ■ Product names, company names and brand names contained in this catalogue represent the respective registered trade name or trade mark. ■ Colors, textures and so forth of photographs shown in this catalogue may differ from actual products due to a limited fidelity in printing. ■ Although every effort has been made to provide the information as accurate as possible for this catalogue, certain details have unavoidably been omitted due to limitations in space. ■ If you find any misprints or errors in this catalogue, it would be appreciated if you would inform us. ■ Please contact our distributors to confirm specifications, price, accessories or anything that may be unclear when placing an order or concluding a purchasing agreement.

Printed in Japan

Issue: Oct. 2026 202610PDFEC11