

KIKUSUI PRODUCT HIGHLIGHT 2020



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AC power supply



Compact AC power supply (CV/CF)

PCR-MA Series

Compact AC power supply using the PWM inverter method

- **Compact design (PCR500MA)**
Small enough to fit on your work desk! Weighs only 6.5 kg and easy to carry!
- **Versatile output modes**
Three modes (AC, DC, AC+DC) are available. *1
- **High-quality output waveform**
Output voltage available in two ranges:
0-155 V / 0-310 V. The maximum current is 5 A (155 V range) or 2.5 A (310 V range) with a peak current that can triple the maximum-rated current for capacitor-input type rectifier loads. The distortion rate of the output waveform is below 0.5%. (PCR500MA)
- **Memory feature**
Three combinations of setting, voltage, and frequency can be stored and recalled on the front panel. By recalling memory during output, you can test sudden changes in voltage and frequency. Additionally, when using communication commands, the internal memory can store up to 11 settings.
- **LAN and USB digital interfaces included as standard. GPIB optional interface board also available.**

*1. AC+DC mode is only valid with communication.



Easy access with a built-in web server

Use a browser from a PC, smartphone, or tablet to access the web server built into the PCR-MA series for convenient control and monitoring.

[Recommended browser]

- Requires Microsoft Edge 10
- Requires Internet Explorer version 9.0 or later
- Requires firefox 8.0 or later
- Requires safari/mobile Safari 5.1 or later
- Requires Chrome 15.0 or later
- Requires Opera 11.0 or later

* Connecting with a smartphone, tablet, etc. requires a Wi-Fi environment (wireless LAN router etc.).



Low-noise, High-power AC power supply (CV/CF)

PCR36000M2

Bringing high power to your test environment at an affordable cost!



The PCR36000M2 is a single cabinet 36kVA stabilized AC power supply. Utilizing state-of-the-art switching technology, the PCR36000M2 provides stable, high-power output in an ultra-compact chassis. The user-friendly interface combined with low-noise, high-quality waveform output provides a power environment unrivaled by any power supply on the market.

Features

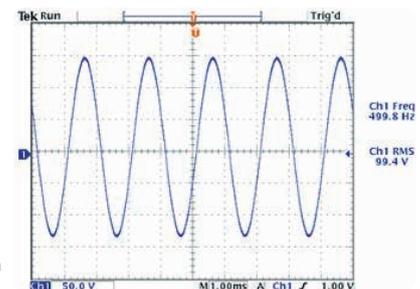
- Compact and lightweight
- High power - 36 kVA in a single, compact chassis
- AC 310 V output available
- Frequency: 10 Hz to 500 Hz
- Parallel operation up to 144 kVA

High-quality waveform output!

Precise Waveform Output
THD as low as 1% at 400 Hz output

Ultra-fine output accuracy and stability

The voltage regulation function allows for extremely stable waveform generation even in high frequencies



Output wave form

100 V, 500 Hz, with voltage regulation function



- Highly stable CVCF for production lines
- Low noise CVCF for EMC testing labs
- Stabilization of ATE system power lines
- High quality 400 Hz GPU for aircrafts etc.



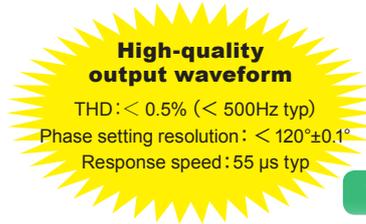
Ultra-compact AC/DC power supply (CV/CF)

PCR-WE/WE2 Series

The next generation of high-power, programmable AC power supplies.

- Compact size: 6 kVA in 6U (PCR6000WE2)
- Up to 36 kVA in a single unit
- 100% regenerative capability*1
- Mix-and-match parallel operation up to 144 kVA. Same model set up is not required (6 kVA or more)
- Power line disturbance simulation features
- Output frequency up to 5 kHz
- Output rating: AC 0 to 310 Vrms, DC 0 to ±438 V
- Flexible digital interface: LAN (LXI), USB, RS232C, GPIB (factory option)

*1. Only "R" models (PCR-WE2R) with 3-phase 200 V input. Regeneration on premises only.

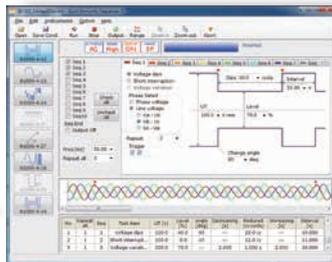


Simple, user-friendly application software for various standard testing!

EMC IEC61000-4
 Power line disturbance immunity testing software
SD009-PCR-LE/WE NEW
 (Quick immunity sequencer)

The latest standards for IEC61000-4 supported!

The latest standards for IEC61000-4 supported!



Standard	Description
IEC61000-4-11*1	Voltage dips, short interruptions, and voltage variations (≤16A)
IEC61000-4-13	Harmonics and interharmonics
IEC61000-4-14	Voltage fluctuation
IEC61000-4-17	Ripple on DC input power port
IEC61000-4-27	Unbalance
IEC61000-4-28	Variation of power frequency
IEC61000-4-29*2	Voltage dips, short interruptions, and voltage variations on DC input port
IEC61000-4-34*1	Voltage dips, short interruptions, and voltage variations (exceed 16A)

*1. Need to use Dip simulator for compliance test

*2. For preliminary test

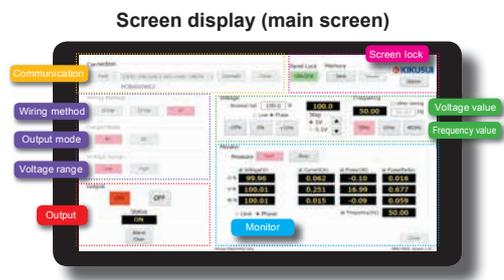
Avionics test software
SD012-PCR-LE/WE NEW
 (Avionics test software)

Easy test simulation for avionic standards including [MIL-STD-704] and [DO-160]!



Remote control software for the windows tablet
SD021-PCR-LE/WE NEW
 (RMT CONT software for PCR-WE)

The Windows tablet can be used as a remote controller !



DC power supply



Compact wide-range DC power supply (CV/CC)

PWR-01 Series

New flagship bench-top DC power supply

- Sequence function (supports triggered synchronization)
- Variable internal resistance function
- A virtual multi-channel bus (VMCB) function makes multi-channel operation more efficient
- A wide range of voltage and current settings can be combined within its output power rating (3 to 4 times)
- All models are equipped with front-facing output terminals as standard (maximum 10 A)
- Operating temperature guaranteed up to 50 °C. Storage temperature: -25 °C to +60 °C
- Max-rated current: 200 A Max-rated power: 2000 W
- LAN (LXI compliant) /USB/RS232C as standard interface



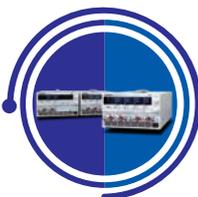
Compact DC power supply (CV/CC)

PMX-A Series

A standard feature of the networking capability provides extended applications of the ordinary testing.



- Series regulator system with excellent noise performance
- High-setting resolution-voltage: 1 mV, Current: 0.1 mA (PMX18-2A)
- Wide range of output variations (9 models are available)
- External analog remote control
- Monitoring and status-signal output
- CV, CC priority start function (to prevent overshoot when the output is ON)
- Remote sensing function (18V, 35V models)
- LAN (LXI compliant) / USB / RS232C as standard interface



Compact Multi-output DC power supply (CV/CC)

PMX-Multi Series

Three models with 2, 3 and 4 outputs. Optimal for R&D as well as manufacturing lines.

- Each output is isolated
- High setting resolution (voltage: 1 mV, current: 0.1 mA)
- ON/OFF delay for each output
- Simultaneous display of all channel statuses
- Simple series/parallel connection between channels (CH1 & CH2)
- High quality LCD panel for improved visibility
- LAN (LXI Compliant)/USB/RS232C standard interface



1U Wide-range, programmable DC power supply

PWX Series

Ideal for N-to-M network-based remote control and monitoring a next-generation rack-mounted power supply



- A wide range of voltage and current settings can be combined within its output power rating (3 times)
- PFC circuit of 0.99 (with 100 V) or 0.97 (with 200 V) at full load *TYP value
- Variable internal resistance feature*1
- A thin and lightweight design with a 1U height
- Expandable output voltage by series operation (up to 2 units by the same model)*2
- LAN (LXI compliant) /USB/RS232C as standard interface

*1. Factory option, excluding the PWX750ML

*2. Excluding the PWX750HF and the PWX1500H



Programmable, bipolar power supply (CV/CC)

PBZ Series

Superior output characteristic by adopting the Power Amplifier

7 new features for optimum test simulation!

+1

- 1 **Waveform generation**
 - 2 **Sequence feature**
 - 3 **Synchronized operation**
 - 4 **Parallel operation**
 - 5 **Unipolar mode**
 - 6 **High-speed response 100 kHz^{*1}/150 kHz^{*2}(CV)**
 - 7 **Low ripple noise!**
- +1 **Peak current output (6x rating)^{*3}**

^{*1}. 100 kHz for standard models (PBZ20-20, 40-10, 60-6.7, 80-5)

^{*2}. 150 kHz for "A" models (PBZ20-20A)

^{*3}. "A" models (PBZ20-20A)



PBZ20-20

- PBZ20-20 (±20V/±20A)
- PBZ40-10 (±40V/±10A)
- PBZ60-6.7 (±60V/±6.7A)
- PBZ80-5 (±80V/±5A)

● USB, GPIB and RS232C standard digital interface (LAN option available)



PBZ20-20A

Peak current
6x
rating
(±120 Apk CV)

● USB, GPIB and RS232C standard digital interface (LAN option available)



High-power intelligent bipolar power supply(CV/CC)

PBZ-SR/BP Series

High-speed response with even higher power

- User-defined waveform generation function
- Sequence function
- Synchronized operation function
- Central control with master unit utilizing master and slave operation
- Master unit display of total output current of all units (display of combined value) ^{*1}
- Safety design that switches all units off when alarm is generated for 1 unit ^{*2}
- LAN (capable of LXI), USB, GPIB, and RS232C provided (standard)

^{*1} Slave unit displays its own output current

^{*2} If the alarm for the master unit is cleared, alarms for all units are cleared.



PBZ-BP Series

Support for
large current

20V/200A
40V/100A



PBZ-SR Series

Support for
large current

20V/100A
40V/50A
60V/33.5A
80V/25A



High-efficiency, High-capacity switching DC power supply (CV/CC)

PAT-T Series

Environmentally conscious, energy-saving, high-capacity power supply



- Output capacity of 8 kW from a unit of standard rack width(430 mm), a height of about 130 mm(3U), and a depth of about 550 mm
- Incorporates a power factor correction circuit to improve the power environment and contribute to energy saving
- Capable of full-load, continuous operation even at an ambient temperature of 50 °C
- RS232C standard digital interface, USB,GPIB, LAN(LXI compliant) options available



High-efficiency, High-capacity switching DC power supply (CV/CC)

PAT-TM/TMX Series

Environmentally conscious, energy-saving, high-capacity power supply

- 16 kW to 40 kW capacity, with four types of racks (Up to 2000A!)
- Harmonic current suppression and energy savings with a built-in power factor correction circuit!
- Built-in breaker available on model names that end with an "X"
- 3-phase 200 V input and 3-phase 400 V input available
- Lineup: 164 models total (both 3-phase 200 V input specifications and 3-phase 400 V input specifications are available for all 82 models shown in the table below)
- RS232C standard; USB, GPIB, and LAN (LXI compliant) available as options



Model with breaker

Model without breaker

Electronic loads



Multifunctional electronic load (CC/CV/CR/CP)

PLZ-5W Series

High-speed response, advanced communications, large-scale system capability

- Operation voltage: 1 V to 150 V (min. 0.05 V)
- High speed slew rate: 60 A/μs
- Arbitrary I-V characteristics: installed "ARB mode"
- Parallel operation feature: up to 10.8 W (2160 A) by connecting the booster units.
- LAN(LXI compliant)/RS232C/USB are standard interface. External analog control. *GPIB option



Multifunctional electronic load (CC/CV/CR/CP)

PLZ-5WZ Series

The perfect addition for battery production and maintenance



- The all-new PLZ-5WZ series allows for easily configured impedance measurements with dedicated impedance measurement software
- Impedance measurements are made during discharge, allowing for real-time measurement of impedance values from the DUT
- Capable of R, jX, O, and Z measurements
- Measures AC frequency from 100 Hz - 10 kHz (seven fixed settings) and signal levels can be set arbitrarily
- Equipped with a voltage slope correction function that minimizes the effect of voltage slope during battery discharge tests
- LAN (LXI compliant), USB, RS232C, GPIB (option), external analog control

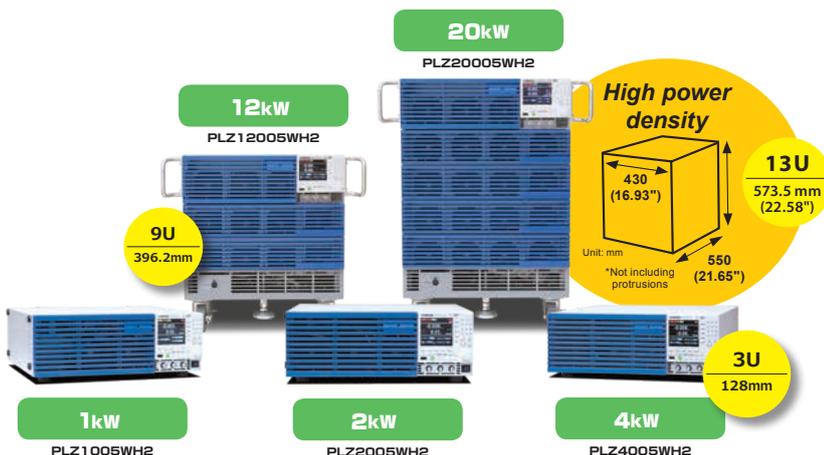


Compact high voltage DC electronic load (CC/CV/CR/CP)

PLZ-5WH2 Series

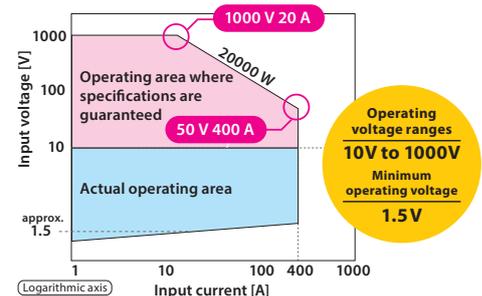
Ideal for high-voltage power supply and high-voltage storage battery evaluation!

- Operating voltage: 10 V to 1000 V (min. 1.5 V)
- Power capacity: 1 kW/2 kW/4 kW/12 kW/20 kW, 5 models
- 100 kW/ 2000 A with parallel operation (max. 5 units) connectable with 5WH series
- LAN (LXI)/USB/RS232C standard digital interface *GPIB optional
- Synchronized operation and sequence function
- Arbitrary I-V characteristics: installed "ARB mode"
- Data-logging: voltage/current/power measurements (measurement display, programmable internal memory)



Wide ranging operation voltage up to 1000 V

[Operating area of PLZ20005WH2]



Safety testers



Electrical safety multi-analyzer

TOS9300 Series

Hipot, insulation resistance, ground bond, Leakage or partial discharge, this analyzer covers it all!



- All-in-one safety tester model (TOS9303LC)
- New amplifier type allows for 40A AC/DC ground bond testing (ground bond tester models)
- Electrical breakdown inspection setting available
- AC5 kV/100 mA, DC7.2 kV/100 W hipot test
- Touch current/protective conductor current/leakage current testing (TOS9303LC)
- High voltage scanner capable of output distribution both stand-alone and when connected with existing withstanding voltage/insulation resistance testing equipment models [TOS5300 series, etc.] (TOS9320)
- LAN/USB/RS232C standard digital interface

● Test items

Model	AC Withstanding Voltage (AC Hipot)	DC Withstanding Voltage (DC Hipot)	Insulation Resistance	Earth Continuity (Ground Bond)	Leakage Current	Partial Discharge
TOS9300	●		●			
TOS9301	●	●	●			
TOS9301PD <small>Under development</small>	●	●	●			●
TOS9302	●			●		
TOS9303	●	●	●	●		
TOS9303LC	●	●	●	●	●	



Hipot tester / Hipot tester with insulation resistance test

TOS5300 Series

A new standard for hipot & insulation resistance testing applied to world-wide input voltage

- The PWM amp system provides highly-stable output
- 5 kV/100 mA (500 VA) AC hipot test
- 6 kV/maximum output 50 W DC hipot tester (TOS5301)
- 25 V-1000 V (7 steps), 500 V or greater, up to 5.00 GΩ insulation resistance test
- High-precision measurement ±1.5% of reading (with voltmeter 500 V or higher, Ammeter 1 mA or higher)
- Rise time(AC/DC) / fall time(AC) control
- USB standard digital interface



Hipot tester

TOS5200

A perfect AC hipot test solution, with 500 VA capacity and equipped PWM amplifier at very affordable investment



- The PWM amp system provides highly-stable output
- 5 kV/100 mA (500 VA) AC hipot test
- High-precision measurement ±1.5% of reading (with voltmeter 500 V or higher, ammeter 1 mA or higher)
- Rise time(AC/DC) / fall time(AC) control
- Supporting the world-wide input voltage
- Reducing the tact time
- USB/RS232C standard digital interface

To make Kikusui power supplies and electronic loads to be more useful!

Sequence creation software Wavy series

DC power supply



PWR-01 Series



PMX-A Series



PBZ Series



PBZ SR Series

PAT-TM/TMX Series



PAT-T Series



PWX Series

Wavy Series

Electronic load

Coming Soon!



PLZ5WH2 Series



PLZ-U Series



PLZ4W,4WL,4WH Series



PCZ Series



PLZ5W Series

AC power supply

NEW

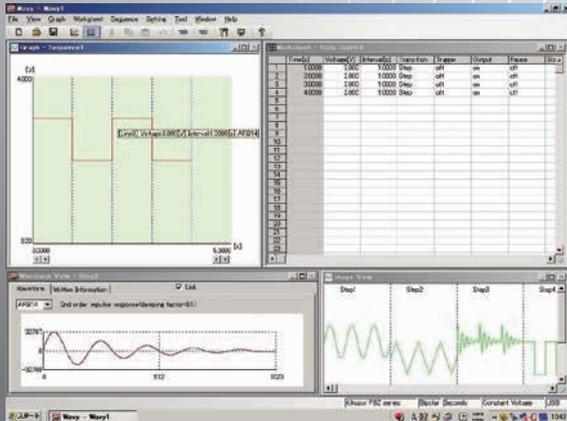


PCR-WE / WE2 Series



PCR-LE / LE2 Series

Captured image from Wavy for PBZ



[Main screen]
Allows you to create and edit sequence data easily using a mouse!



"Remote Control Panel" works as graphical remote controller for power supplies and electronic loads, with Monitoring and data logging function.

User-defined arbitrary waveform function enables you to edit the captured waveform from an oscilloscope and output it via a power supply.

Download!
The tryouts available!

Full function tryout usable for 3 weeks.
Download at our web site!

<http://www.kikusui.co.jp/en/download/>

Wavy

●Distributor/Representative

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