



PROGRAMMABLE AC/DC POWER SOURCE

KP3000S/KP3000GS

Full power 3 kVA AC and 3 kW DC

Supplies Stable Power

Conversion of Voltage and Frequency

Voltage Fluctuation Test

Power Supply Simulation

Stabilization of Voltage and Frequency



For R&D, production lines, built-in ATE systems

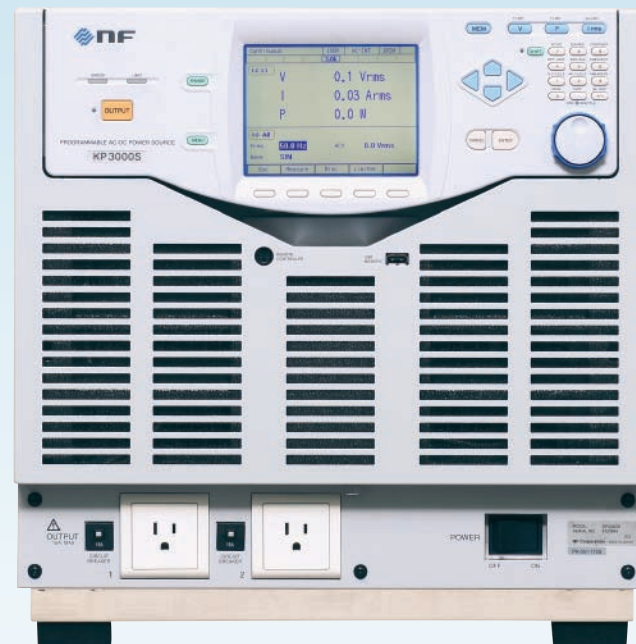


NF Corporation

Stable AC/DC Output for Optimal Performance.



KP3000S/KP3000GS Programmable AC/DC Power Source with three output modes, AC, DC, and AC+DC for wide applications. Advanced output control ensures constant high stability for various types of loads. Various functions enable improved testing efficiency and automation as well as increased operability. For production lines manufacturing household electrical appliances in ever larger sizes, for mixed lines composed of both AC and DC equipment, and for testing of DC-DC converters, this unit provides 3 kVA/3 kW power at a reasonable price.



▲ KP3000S (Foot type, optional outlets are equipped.)



▲ Rear-top side (KP3000S)

AC/DC Power Source Main Specifications

- Output capacity
AC : Single-phase 3 kVA, DC : 3 kW
- Output voltage
AC : 0 to 155 V / 310 V
DC : -220 V to +220 V / -440 V to +440 V
- Maximum current
AC : 30 A / 15 A (100 Vrms / 200 Vrms output)
DC : 30 A / 15 A (100 Vdc / 200 Vdc output)
- Peak current : 4 times
- Output Waveform : Sine, arbitrary, clipped sine

Functions for Various Applications

- Measurement functions
Voltage (rms value, average DC value, peak value), Current (rms value, average DC value, peak value, peak hold value), Power (active power, apparent power, reactive power), Load power factor, Crest factor, Sync frequency, Harmonic current (up to 40th order), CO₂ emissions
- Current limiter : peak value and RMS value
- Remote sensing, AGC, Auto Cal
- Sequence function* and simulation function*

A Wide Range of Interfaces to Support Automation and System Building

RS-232, USB, GPIB*, external control I/O

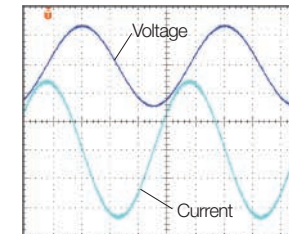
* Option for KP3000S; Standard equipment for KP3000GS

Feature

Stable Output

Low distortion Low output noise 4 times the maximum current

Low distortion, low noise, and stable output are achieved. This power source can supply stable power to various types of loads such as inductive and capacitive loads for low power-factor loads such as equipment with large-capacity noise filters and large power output transformers. Also, with its high-quality waveform output, this unit can be used as an AC stabilized power source for precision measurements such as the power consumption and standby power of electronic equipment.

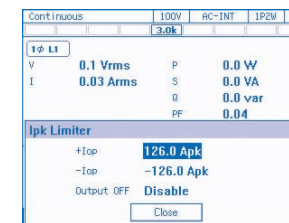


Example of Output Waveform <Capacitive Load 1000 μF>

Variable Current Limiter Function

Current RMS value Positive/negative current peak value

Output current limiting can be set with positive and negative peak values and effective value. After the activation of the limiter, the output can be automatically restored or turned off after a set time. This function is effective for limiting the rush current of motors, large-capacity capacitors, etc. and protecting against abnormal current caused when prototype operations fail.



Peak value setting

Protection Function

The KP3000S/KP3000GS has a built-in function for protecting the power source itself if a problem occurs due to issues such as output overvoltage or overcurrent, power unit trouble, internal control problems in areas such as the operation panel or communication, a rise in ambient temperature, or a drop in AC line voltage. If a problem occurs, it is displayed on the panel and output is turned off. This is used together with the current limiter function for protection against overcurrent, and it is possible to select either self-recovery after elimination of the problem, or output off after a designated time.

Various Types of Output

With AC 3 kVA, full-power 3kW output is also available for DC. The capacity is not reduced in DC mode. Since the AC+DC mode is also available, this power source can be used for a variety of applications.

A high S/N ratio is achieved in each mode. Use of the current limiter function in DC mode enables the high performance use of the unit as a DC power source. In addition, in AC+DC mode, simulations can be performed in which the DC component is generated temporarily, such as a sudden change in voltage.

	100 V range	200 V range	Resolution
AC			
Output voltage	0 V to 155 V	0 V to 310 V	0.1 V
Maximum current	30 A	15 A	-
Frequency	AC : 40 Hz to 550 Hz, AC+DC : 1 Hz to 550 Hz		0.1 Hz
DC			
Output voltage	-220 V to +220 V	-440 V to +440 V	0.1 V
Maximum current	30 A	15 A	-

Output Voltage Correction

There are cases where a voltage drop occurs at the load end due to wiring. The DP Series is equipped with functions to always supply the set voltage.

Remote Sensing

Switches the voltage detection point used for measurement and output voltage correction to either output terminal or sensing input terminal. Output is corrected by using this together with AGC and Auto Cal.

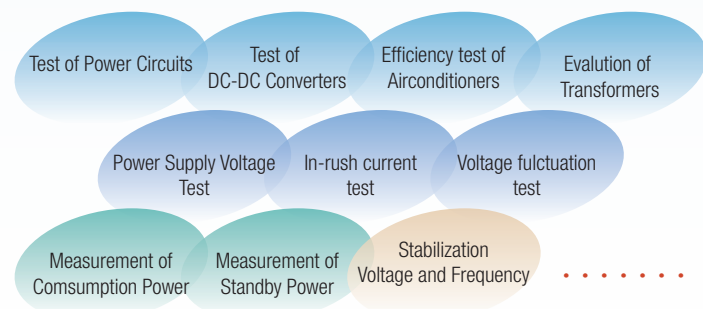
AGC

This function performs continuous correction to ensure equality between the RMS values of the detection point voltage and the output voltage setting value. Even if the load fluctuates, correction is performed automatically to maintain the same value as the setting value.

Auto Cal (Auto Calibration)

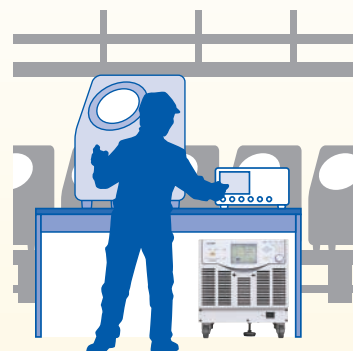
Each time Auto Cal is turned on, this function measures the detection point voltage and performs correction to ensure that the output voltage RMS value is equal to the voltage setting value.

For prototype evaluation in the stage of development, various tests in the production and inspection lines, and the stabilization of power lines at the laboratories...



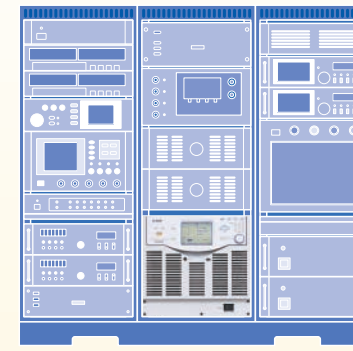
As a Power Source for Production Lines

High stability for various types of loads such as inductive and capacitive loads, low-distortion and low-noise output, and a design for ease of operability and maintainability make this power source ideal for various types of production lines. Since the 3 kVA output capacity adapts to almost all household electrical products, this single unit can flexibly support mixed production lines for various products from small to large sizes. With the addition of sequence and simulation functions tailored to the line requirements, this unit powerfully supports improved production line efficiency and automation.



As a Built-in Power Source for Automated Test Equipment

For use as a built-in power source for ATE systems, this unit is equipped with USB, RS-232, and GPIB* interfaces for external control input and output. External control with analog signals, contacts and status output is possible. Also external control of output range, voltage, frequency, etc. is supported. In addition, the sequence function in the main unit enables high-speed control that is not available with control software applications. This power source is also equipped with a current limiter function that protects the equipment being tested in the event of emergencies to always maintain a stable supply of power. This unit is ideal for use as a built-in power source for various types of ATE systems for R&D and in production lines.



*Option for KP3000S; Standard equipment for KP3000GS

KP3000S

Configuration of Polyphase System

By connecting multiple KP3000S*, a polyphase system can be configured.
- Single-phase three-wire 6 kVA (2 cabinets)
- Three-phase 9 kVA (3 cabinets)

* Using an optional system cable;
PA-001-1720: for 1P3W
PA-001-1721: for 3P4W

3-phase 9 kVA System
(A rack cabinet is sold separately.)



KP3000GS

Multifunctional Single-phase Model

The KP3000GS includes sequence and simulation function, GPIB interface, and external signal inputs (EXT and ADD) as standard. This model is suitable for introduction into production lines, such as household appliances

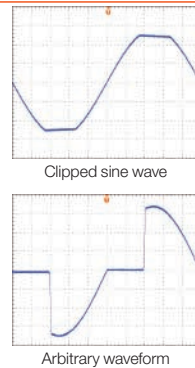
KP3000GS



Output Waveforms

Sine wave Clipped sine wave Arbitrary waveform

In addition to sine waves, clipped sine waves and arbitrary waves can be output. A power source test is supported that can simulate a fault in a commercial line. A clipped sine wave can be set with a crest factor or clipping ratio. An arbitrary wave can be easily created by using the optional control software and can be saved for reuse in the main unit memory through an external interface or in USB memory.

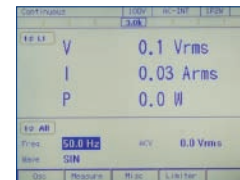


Measurement Functions

Abundant measurement functions comparable to those of a wattmeter are provided. Three measurement values can be selected for enlarged display to improve working efficiency in production lines.

Measurement items

Voltage (rms value, average DC value, peak value), Current (rms value, average DC value, peak value, peak hold value), Power (active power, apparent power, reactive power), Load power factor, Crest factor, Sync frequency, Harmonic current (up to 40th order), CO₂ emissions



Interface / External Control I/O

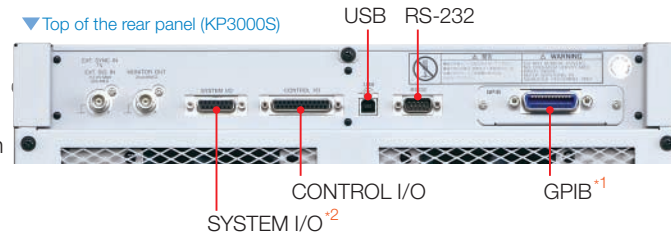
Interfaces and an external control I/O provide support for system integration and automation.

Interfaces RS-232, USB, GPIB^{*1}

External control I/O

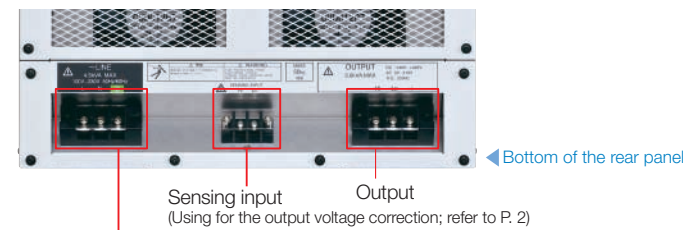
- **Control input:** Output on/off, sequence control, memory recall (basic setting memory, sequence, simulation)
- **Status output:** Power on/off, output on/off, protection operation, limiter operation, output range, step synchronization of sequence and simulation, etc.

^{*1} Option for KP3000S; Standard equipment for KP3000GS
^{*2} KP3000S only



Power Supply Input Flexibility

This power source can be used regardless of the power supply environment.



Power input (AC90 V to 250 V)

High Maintainability

Power Unit Modularization

With its various protection functions and the current limiter function, this power source is designed to prevent damage to the load and damage to the main unit itself. If a failure occurs in one power unit, the power supply to the affected unit is interrupted and 1.5 kVA operation can be continued temporarily. With such functions to respond to operating accidents, this power source can be used with confidence for production lines.

Abundant useful functions tailored to the needs of power source users are provided.

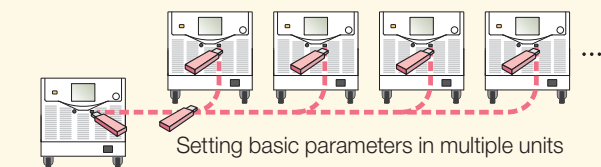
External Signal Input

SYNC (synchronization of signal source frequency with external signals), VCA (control of output voltage with DC signals), EXT* (amplification of external signals) and ADD* (addition of external signals to internal signals) are provided.

*Option for KP3000S; standard equipment for KP3000GS

USB Memory

USB memory is useful for storing and making the same setting for many power sources in a production line and reading data created by the control software.



Output Waveform Monitor

The waveform of the output voltage and current can be monitored (only one terminal). The current waveform can be monitored by the oscilloscope without the current clamp.

Memory Function

Store and recall settings from nonvolatile memory.

Setting Range Limit Function

This prevents load malfunction due to mis-operation or other problems by limiting the setting range for the output voltage upper limit and the frequency upper and lower limits.

Turning Output on When Powering Up

This power source can be set so that the output is automatically turned on when the unit is powered up.

Output Relay Control

A semiconductor switch can be selected for switching output on and off at high speed.

Output On/Off Phase Setting

The phase can be set from 0° to 359° at output on/off. This function is useful for the inrush current measurement.

Power Unit Energization Setting

The power section is modularized in 1.5 kVA units. Power units can be set on or off to suit the load capacity. This enables efficient operation while reducing power consumption.

Abundant Functions for Improving the Efficiency of Power Supply Testing

Programmable Sequences

Option for KP3000S PA-001-1723

Programming of various test patterns such as test repetition, combinations of complex test conditions, and long-term testing enable automated test sequences.

Power source tests for each destination can be performed efficiently. When purchased with the optional control software, this power source can be freely programmed with very long and complex output patterns.



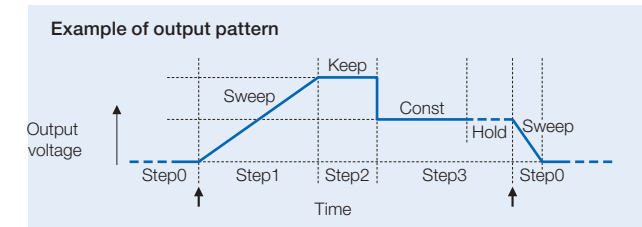
Sequence setting

Number of steps: Max. 255 (in 1 sequence)

Setting items: Step time, output range, AC/DC mode, DC voltage, AC voltage, frequency, waveform, start phase, stop phase, phase angle, step termination, jump count, etc.

Sequence control: Start, stop, hold, resume, branch 1, branch 2

Number of memories: 5 (nonvolatile)

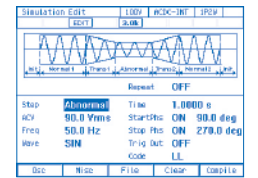


Voltage Fluctuation Testing

Option for KP3000S PA-001-1723

Simulates a problem in the power AC line such as blackout, voltage rise, voltage drop, abrupt phase changes, or abrupt frequency change, thereby enabling all types of AC line simulation such as prototype evaluation and product inspection.

When purchased with the optional control software, this power source can be easily programmed with various test conditions.



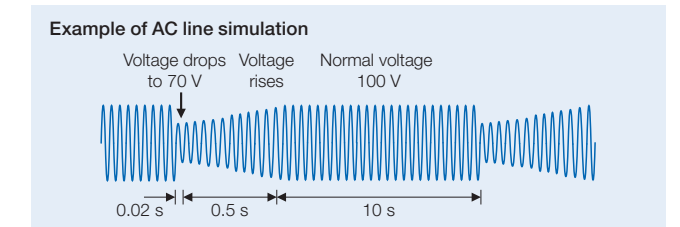
AC line simulation

Number of steps: 6 (Initial, Normal 1, Trans 1, Abnormal, Trans 2, Normal 2)

Setting items: Step time, output range, AC voltage, frequency, start phase, stop phase, trigger output, etc.

Waveform: Sine wave

Number of memories: 5 (nonvolatile)



Control Software

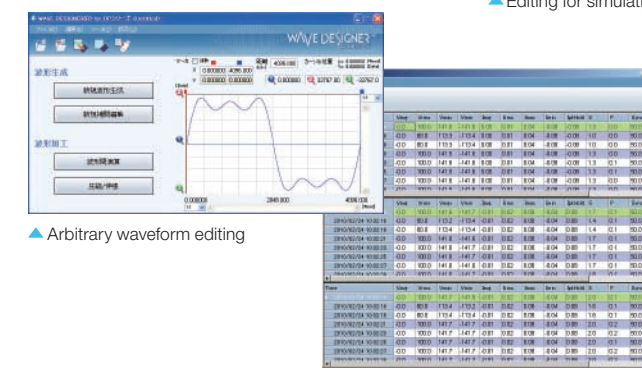
Option PA-001-1965 (KP3000S) PA-001-2052 (KP3000GS)

The optional control software enables basic parameter operations, data logging, arbitrary wave editing and transmission, and editing and control of sequences and simulations on a PC. Complex programs can be easily created to automate various types of tests in production lines.



▲ Sequence editing

▲ Editing for simulation



▲ Arbitrary waveform editing

▲ Logging of measured values

Remote Controller

Option DP008

A remote controller is provided that allows users to remotely perform operations and settings.

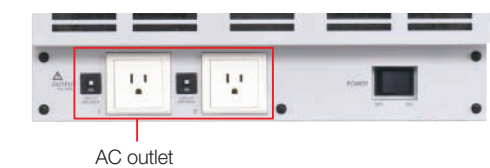
The remote controller features a numeric keypad and jog dial that enable operations and settings similar to those on the operation panel of the main unit to be performed.



Outlet

Option PA-001-1963

Two AC outlets (NEMA 5-15: for Japan/North America) are provided at the bottom of the front panel.



AC outlet

Caster

Option for KP3000S PA-001-1964

The casters with the freely movable front-wheels and fixed rear-wheels are attached instead of foot type. You can select foot type or caster type on order.



KP3000GS is not available for the foot type.

Specifications

The following settings and conditions are provided unless otherwise noted.

- Load: resistance load for power factor 1
- Signal source: INT (internal signal source)
- Output voltage waveform: sine wave
- AGC/Auto Cal: OFF
- Current limiter: factory default setting
- Output terminal: rear panel output terminal block

[set] indicates a setting value.

When two values are indicated with a slash, this means that specifications vary depending on the output range. The value before the slash is for 100 V specifications, and the value after the slash is for 200 V specifications.

AC/DC Mode, Signal Source

	Single-phase	Polyphase System (KP3000S only)
AC/DC Mode	AC, AC+DC, DC	AC, AC+DC
Signal Source	INT, VCA, SYNC, EXT*, ADD*	INT, VCA, SYNC

* Option for KP3000S

Power Output

AC Output *1	Output Power	3 kVA
	Output Mode	1P2W Floating output, it can be used with grounding of Lo terminal.
	Rated Output Voltage	100 V/200 V
	Output Range	100 V range/200 V range
	Rated Output Voltage	0.0 V to 155.0 V/0.0 V to 310.0 V, 0.0 Vp-p to 440.0 Vp-p/0.0 Vp-p to 880.0 Vp-p (Arbitrary waveform)
	Resolution	0.1 V
	Voltage Setting Range *2	±(0.5% of set + 0.6 V/1.2 V)
	Max. Current *3	30 A/15 A
	Max. Peak Current *4	4 times value of maximum current (Apk)
	Load Power Factor	0 to 1 (lead or lag, at 45 Hz to 65 Hz, external power injection and regeneration are not available.)
DC Output *7	Frequency Setting Range	AC mode: 40 Hz to 550 Hz, AC+DC mode: 1 Hz to 550 Hz
	Resolution	0.1 Hz
	Accuracy	±0.01% of set (23°C±5°C)
	Frequency Stability *5	±0.005%
	Output Waveform	Sine, arbitrary (16 types), clipped sine (3 types)
	Output On Phase	0.0 deg. to 359.9 deg. variable (resolution 0.1 deg.)
	Output Off Phase	0.0 deg. to 359.9 deg. variable (resolution 0.1 deg. selectable between active or inactive)
	DC Offset *6	Within ±20 mV (typ., fine adjustment available)
	Output Power	3 kW
	Output Mode	Floating output, it can be used with grounding of Lo terminal.
AC Output *1	Rated Output Voltage	100 V/200 V
	Voltage Setting Range	-220 V to +220 V/-440 V to +440 V
	Resolution	0.1 V
	Accuracy *8	±(1% of set I + 0.6 V/1.2 V)
	Max. Current *9	30 A/15 A
	Max. Instantaneous Current *10	4 times value of maximum current (Apk)
	Output Voltage Stability	Fluctuation with input voltage *11: within ±0.15% Fluctuation with output current *12: within ±0.15 V/±0.30 V (DC), within ±0.15 V/±0.30 V (45 Hz to 65 Hz), within ±0.5 V/±1.0 V (40 Hz to 550 Hz) Fluctuation with ambient temperature *13: within ±0.01%/°C
	Output Voltage Distortion Factor	0.5% or lower (40 Hz to 550 Hz, 50% or more of rated output voltage, maximum output current or below, AC and AC+DC modes)

- *1: [V] = Vrms, [A] = Arms, and power supply input voltage is 200 V, unless otherwise specified.
- *2: In the case of 10 V to 150 V/20 V to 300 V, sine wave, no load, 45 Hz to 65 Hz, DC voltage setting 0 V, 23°C ± 5°C
- *3: If the output voltage is higher than the rated value, this is limited (lowered) to satisfy the power capacity. If there is the DC superimposition, the RMS current of AC+DC satisfies the maximum current. In the case of 40 Hz or lower or 400 Hz or higher, and the ambient temperature is 40°C or higher, the maximum current may decrease.
- *4: For the capacitor input type rectified load (crest factor=4), the rated output voltage, and 45 Hz to 65 Hz.
- *5: For 45 Hz to 65 Hz, the rated output voltage, no load and the resistance load for the maximum current, and the operating temperature.
- *6: In the case of AC mode and 23°C ± 5°C
- *7: [V]=Vdc, [A]=Adc, the power input voltage is 200 V, and the polarity is relative to Lo terminal, unless otherwise specified.
- *8: In the case of -212 V to -10 V, +10 V to +212 V/-424 V to -20 V, +20 V to +424 V, no load, AC setting 0 V, 23°C ± 5°C.
- *9: If the output voltage is higher than the rated value, this is limited (lowered) to satisfy the power capacity. If there is the AC superimposition, the RMS current of DC+AC satisfies the maximum current. In the case that the ambient temperature is 40°C or higher, the maximum current may decrease.
- *10: Instantaneous = within 2 ms, at the rated output voltage
- *11: For power input 90 V to 250 V, power input 200 V reference, the resistance load at maximum current, the rated output
- *12: In the case that the output current is changed from 0% to 100% of maximum output current. For output voltage 75 V to 150 V/150 V to 300 V, no load reference. However, if the output voltage is higher than the rated value, the maximum current is limited to satisfy the power capacity.
- *13: For power input 200 V, no load, the rated output voltage, DC or 45 Hz to 65 Hz.

Configuration of Polyphase System

By connecting multiple KP3000Ss, a polyphase system can be configured. (KP3000S only)

2 cabinets	Single-phase three-wire 6 kVA	Using a system cable for 1P3W (PA-001-1720)
3 cabinets	Three-phase 9 kVA	Using a system cable for 3P4W (PA-001-1721)

Power Input

Voltage	100 V to 230 V±10% (Max. voltage 250 V)
Frequency, Phase	50 Hz ±2 Hz or 60 Hz ±2 Hz, single phase
Power Factor *14	0.95 or more (typ., at AC100 V input), 0.90 or more (typ., at AC200 V input)
Efficiency *14	77% or more (typ., at AC200 V input)
Max. Power Consumption	4.5 kVA

*14: In the case of AC-INT, the rated output voltage, the resistance load at the maximum current, 45 Hz to 65 Hz output.

Measurement Function

Display	Normal	Displays almost all measured and setting values (except harmonic current value)
	Simple	Displays three measurement values (except harmonic current value) enlarged.
Voltage	RMS Value	Full scale: 250.0 V/500.0 V, Resolution: 0.1 V
	DC Average (avg) (only single phase)	Full scale: ±250.0 V/±500.0 V Resolution: 0.1 V
	Peak Value (pk)	Full scale: ±250.0 V/±500.0 V
	Max/Min Individual	Resolution: 0.1 V
Current *15	RMS Value	Full scale: 40 A/20 A, Resolution: 0.01 A
	DC Average (avg) (only single phase)	Full scale: ±40 A/±20 A Resolution: 0.01 A
	Peak Value (pk)	Full scale: ±160 A/±80 A, Resolution: 0.01 A
	Max/Min Individual	Hold the maximum values of I max I and I min I with the polarity (with the clear function)
Power *16	Active (W) *17	Full scale: 3600 W Resolution: 0.1 W/1 W(1000 W or higher)
	Apparent (VA) *18	Full scale: 4500 VA Resolution: 0.1 VA/1 VA(1000 VA or higher)
	Reactive (var) *18 *19	Full scale: 4500 var Resolution: 0.1 var/1 var(1000 var or higher)
Load Power Factor *18	Measurement range: 0.00 to 1.00, Resolution: 0.01	
Load Crest Factor	Measurement range: 0.00 to 50.00, Resolution: 0.01	
Synchronization Frequency (only sync mode)	Display range: 38.0 Hz to 525.0 Hz Resolution: 0.1 Hz	
Harmonic Current *20	Measurement range: Up to 40th order. Full scale: 40 A/20 A, 100% Resolution: 0.01 A, 0.1%	
CO ₂ Emissions Display	Instantaneous, integration value for internal loss or output power. CO ₂ emissions coefficient: variable	

- *15: In the case that output current is 5% to 100% of maximum current.
- *16: In the case of sine wave, 50 V or higher output voltage, and that output current is 10% or higher of maximum current.
- *17: For the load with power factor 1
- *18: Excluding DC mode
- *19: For the load with power factor 0.5 or lower
- *20: AC-INT mode, fundamental wave 50 Hz/60 Hz only

Current Limiter

Peak Current Limiter *21	Positive current	+15.0 Apk to +126.0 Apk/+7.5 Apk to +63.0 Apk
	Negative current	-126.0 Apk to -15.0A pk/-63.0 Apk to -7.5 Apk
	Resolution	0.1 Apk
	Limiter operation	Automatic recovery or output turn-off when the limited state continues over the specified time
RMS Current limiter *21	Setting range (RMS)	1.5 A to 31.5 A/1.5 A to 15.8 A
	Resolution	0.1 A
	Limiter operation	Automatic recovery or output turn-off when the limited state continues over the specified time

*21: When you set the number of units by the power unit energization setting to 1, the setting range becomes half.

Sequence Function

Option for KP3000S

Number of Memories	5 (nonvolatile)
Number of Steps	255 max. (for each sequence)
Setting Range of Step Time	0.0010 s to 999.9999 s
Operation within Step	Constant, keep, linear sweep
Parameters	Output range, AC/DC mode, AC phase voltage, frequency, waveform, DC voltage, start phase, stop phase, phase angle, step termination, jump count (1 to 9999, or infinite), specification of the jump-to step, synchronous step output (2 bit), specification of the branch step, trigger output
Sequence Control	Start, stop, hold, resume, branch 1, branch 2

- Sequence function works with AC-INT, AC+DC-INT and DC-INT.
- AC voltage, frequency, waveform, start phase and stop phase cannot be set with DC-INT.

Simulation

Option for KP3000S

Number of Memories	5 (nonvolatile).
Number of Steps	6 (initial, normal 1, transition 1, abnormal, transition 2, normal 2).
Step Time Setting Range	0.0010 s to 999.9999 s (0 s can be set for transition steps only).
Parameters	Output range, AC voltage, frequency, waveform (sine wave only), start phase (excluding transition steps), stop phase (excluding transition steps), synchronous step (2 bit), trigger output, repeat count (1-9999 times or infinite).
Simulation Control	Start, stop.

- In simulation function, only AC and sine wave, fixed for AC+DC-INT.

Control Software (Option)

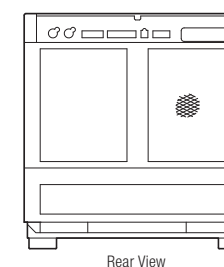
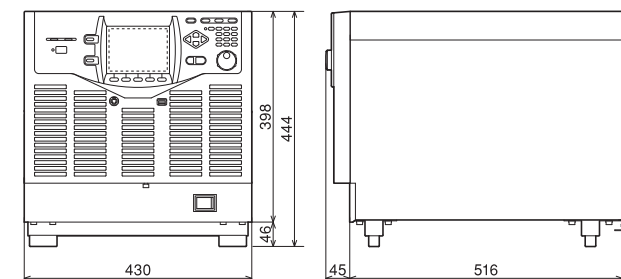
Functions	Remote Control	Parameter setting, saving, loading, and others.
	Status Monitor	Monitors and displays status of connected equipment.
	Logging	Reads and saves measured values.
	Arbitrary Waveform	Waveform creation and edit, transfer, display and file operations
Operating Environment	Sequence and Simulation	Sequence data creation, edit, save, transfer, preview, execution control, monitor/display during execution, and others.
	CPU	300 MHz min. (1 GHz min. recommended)
	Memory	256 MB min. (512 MB min. recommended)
	Free Hard Disk Space	50 MB min.
Interface	Display	Can display 1024 × 768 pixels or more, and 256 colors or more
	OS	Windows 2000/XP/Vista (made by Microsoft)
	Disk Drive	CD-ROM drive
	Interface	USB 1.1 or higher

Generals

Withstanding Voltage	AC 1500 V or DC 2130 V (inputs vs. outputs/chassis, inputs/chassis vs. outputs)
Insulation Resistance	30 MΩ or higher (DC 500 V), (inputs vs. outputs/chassis, inputs/chassis vs. outputs)
Operating Temperature/Humidity	0°C to +50°C, 5% to 85% RH (absolute humidity 1 to 25 g/m ³ , no condensation)
Dimensions (W×H×D) mm	430×398×562
Weight (approx.)	50 kg
Accessories	Instruction manual, power cable (KP3000S: for 100 V or 200 V AC input (Select on order); KP3000GS: for 200 V AC input)

Dimension Drawings

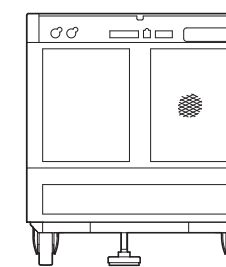
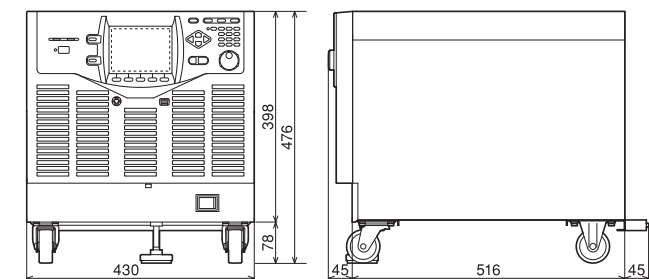
KP3000S (Foot type)



KP3000S (Caster type)

Refer to the dimension of KP3000GS for the caster.

KP3000GS



Ordering Information

Main Unit

Model Name	Description	Accessories
KP3000S Programmable AC/DC Power Source	<ul style="list-style-type: none"> ■ AC: 3 kVA, DC: 3 kW ● Connects multiple KP3000Ss by the optional system cable to configure a polyphase output system. (2 units: single-phase three-wire 6kVA; 3 units: three-phase four-wire system) ● Selects the foot type or caster type on order. 	<ul style="list-style-type: none"> ● Instruction manual ● Power cable (Select 100 V input or 200 V input on order.)
KP3000GS Programmable AC/DC Power Source	<ul style="list-style-type: none"> ■ AC: 3 kVA, DC: 3 kW ● Equipped with sequence and simulation function, external signal input (EXT and ADD modes) and GPIB interface as standard. ● Not available for a polyphase system ● Caster type 	<ul style="list-style-type: none"> ● English instruction manual ● Power cable (200 V input)

Option

○ : Standard equipped ▲ : On order △ : On order or after purchase

Product Name	Model Name	Description	KP3000S	KP3000GS	Remarks
Sequence and Simulation	PA-001-1723	Adds sequence and simulation function.	▲	○	
Adds EXT and ADD modes	PA-001-1724	Adds EXT and ADD as the signal source.	▲	○	
GPIB	PA-001-1725	Adds GPIB interface	▲	○	
Outlet	PA-001-1963	Two AC outlets (NEMA 5-15: for Japan/North America) are added to the bottom of the front panel.	▲	▲	
Caster	PA-001-1964	Attaches the casters with the freely movable front-wheels and fixed rear-wheels and an adjustable foot, instead of feet.	△	—	The option to change foot type to caster type after purchase.
Control software for KP series	PA-001-1965	Panel operation, editing/transferring the arbitrary waveforms, and editing/exporting/performing sequence and simulation	△	—	For KP3000S
Control software for KP-G series	PA-001-2052		—	△	For KP3000GS
System Cable (for single-phase three-wire)	PA-001-1720	Single-phase three-wired 6kVA system can be configured by connecting two KP3000Ss	△	—	
System Cable (for 3-phase)	PA-001-1721	Three-phase 9kVA system can be configured by connecting three KP3000Ss	△	—	
Remote Controller	DP008	Remote controller equipped with ten key and jog dial	△	△	
Replacement Air Filter	PA-001-1966	Replacement air filters. Two types, double filters.	△	△	
Rack Mount Adapter EIA (inch)	PA-001-1728	A set of brackets to mount the product on the EIA standard compliant rack	△	△	
Rack Mount Adapter JIS (millimeter)	PA-001-1732	A set of brackets to mount the product on the JIS standard compliant rack	△	△	
Additional Power Cable for 100 V input	PA-001-1973	When you need two or more cables, or you change the power environment , and so on, additional purchase is possible.	△	△	
Additional Power Cable for 200 V input	PA-001-1974		△	△	

Notes

The permission for exportation of the Japanese Administration is necessary for export outside Japan.
(KP3000S corresponds to Clause 2 (8) Frequency converter, Appendix 1 of Export Trade Control Ordinance.)

- The contents of this catalog are current as of February 10, 2012.
- External view and specifications are subject to change without prior notice.
- Please check the latest specifications, prices, and lead time for purchase.
- The company names and product names described here are trademarks or registered trademarks of respective owners.

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