Main Unit

**Model Name**

- KP3000S Programmable AC/DC Power Source
- KP3000GS Programmable AC/DC Power Source

**Description**

- 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

**Accessories**

- Instruction manual
- Power cables

Option

**Model Name**

- KP3000S Programmable AC/DC Power Source
- KP3000GS Programmable AC/DC Power Source

**Description**

- Sequence and Simulation (On order or after purchase)
- S/N (On order)
- Caster (On order or after purchase)

**Accessories**

- Control software for KP series
- Control software for KP-S series
- System Cable (for single-phase three-wire)
- System Cable for 3-phase
- Replacement Air Filter (For KP3000S)
- Rack Mount Adapter (inch)
- Rack Mount Adapter (millimeter)
- Additional Power Cable for 100 V input
- Additional Power Cable for 200 V input

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.)

Ordering Information

**Necessary Information**

- Model Name
- Model Number
- Description
- Remarks

**Accessories**

- Instruction manual
- Power cable

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

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

- Conversion of Voltage and Frequency
- Voltage Fluctuation Test
- Power Supply Simulation
- Stabilization of Voltage and Frequency

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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, 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.

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

Various Types of Output
With AC 3 kVA, full-power 3 kW 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.

Output Voltage Correction
- Remote Sensing
- AGC
- Auto Cal

Stable Output
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.

Variable Current Limiter Function
- Output current limit 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 capacitive loads, low-distortion and low-noise output, and a design for protection against abnormal current caused when prototype operations fail.

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.

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 kW output capacity adapts to almost all household electrical products, this unit can flexibly support mixed production lines for various products from small to large sizes. With the addition of sequence and simulation functions tailor-made to the line requirements, this unit powerfully supports improved production 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 GPIB, RS-232, and GPIB interfaces for external control input and output. External control with analogy 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 softwares applica-
tions. This power source is also equipped with a current limiter function that protects the equipment being tested is 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.

Programmable AC Power Source KP3000S/KP3000GS

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

*Please check the output voltage, frequency, phase, and current.

Multi-functional Single-phase Model
The KP3000GS includes sequence and simulation functions, GPIB interface, and external signal inputs (EXT and ADD) as standard.

This model is suitable for introduction into production lines, such as household appliances.
Output Waveforms

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 line.

Measurement items
Voltage (rms value, average DC value, peak value), Current (rms value, average DC optional 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 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

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, limit operation, output range, step synchronization of sequence and simulation, etc.

High Maintanability

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 (additional of external signals to internal signals) are provided.
  - *Option for KP3000S: standard equipment for KP3000GS
  - KP3005 only

- **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.

- **Arbitrary waveform**
  - The waveform can be set from 0° to 359° at output on/off. 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.

Programmable Sequences

Programming of various test patterns such as test repetition, combinations of test complex 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.

- **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)

Control Software

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. Complete programs can be easily created to automate various types of tests in production lines.

Remote Controller

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

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

Caster

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.
Specifications

The following settings and conditions are provided unless otherwise noted.

- AC/DC mode: 2 modes
- Signal source: Arbitrary
- Output power range: 200 W
- Output voltage range: 0 to 150 V
- Output current range: 0 to 5 A
- Output frequency range: 40 Hz to 550 Hz
- Display: 5.7 inch, contrast 0 to 99, blue or white base color.
- Control Software (Option): KP3000S/USB 1.1 or higher
- Dimensions: 50 kg, 430×398×562

Power Input

- Voltage: 100 V to 240 V ±5%, 47 to 63 Hz
- Current: 10 A to 20 A
- Power: 1 kW to 3 kW
- Efficiency: 97%
- Voltage setting range: 0 to 150 V
- Current setting range: 0 to 5 A
- Frequency setting range: 40 Hz to 550 Hz
- Load power factor: 0.8 (max)
- Resolution: 0.1 VA/1 VA (1000 VA or higher)
- Accuracy: ±0.5 V/±1.0 V (40 Hz to 550 Hz)
- Accuracy: ±0.15 V/±0.30 V (DC)
- Load crest factor: 3 (10 V to 150 V/20 V to 300 V)

Measurement Function

- Display: 5.7 inch, contrast 0 to 99, blue or white base color.
- Accuracy: ±0.5 V/±1.0 V (40 Hz to 550 Hz)
- Accuracy: ±0.15 V/±0.30 V (DC)
- Load crest factor: 3 (10 V to 150 V/20 V to 300 V)

Power Source

- Voltage: 100 V to 240 V ±5%, 47 to 63 Hz
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- Load crest factor: 3 (10 V to 150 V/20 V to 300 V)

Configuration of Phase Sequence System

- By connecting multiple KP3000S, a multi-phase system can be configured.
## Main Unit

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<th>Accessories</th>
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<tbody>
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<td>Programmable AC/DC Power Source</td>
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<td>• AC: 3 kVA, DC: 3 kW</td>
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| KP3000G                   | Programmable AC/DC Power Source                  |                              |
|                           | • AC: 3 kVA, DC: 3 kW                            |                              |
|                           | • Equipped with sequence and simulator functions, external signal input (EXT and ADD modes) and GPIB interface as standard. |

## Option

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**Notes**

- 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 times for purchase.
- The company names and product names described here are trademarks or registered trademarks of respective owners.

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

**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

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