Meicheng®

KPS-12SD

SYSTEM POWER SUPPLY CONTROLLER

USER MANUAL

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SAFETY INSTRUCTIONS

1. Safety Precautions

Be sure to read the instructions in this section carefully before use.

Make sure to observe the instructions in this manual as the conventions of safety symbols and messages regarded as very important precautions are included.

We also recommend you keep this instruction handy for future reference.

2. Safety Symbol and Message Conventions

Safety symbols and messages described below are used in this manual to prevent bodily injury and property damage which could result from mishandling.

WARNING Indicates a potentially hazardous situation which could result in death or serious personal injury if mishandled.

When Installing the Unit

Do not expose the unit to rain or an environment where it may be splashed by water or other liquids, as doing so may result in fire or electric shock.

Only use with the voltage specified on the unit. Using a higher voltage which is specified may result in fire or electric shock.

Do not cut, kink, otherwise damage nor modify the power supply cord. In addition, avoid the power cord closing to heaters, and never place heavy objects including the unit itself on the power cord, as doing so may result in fire or electric shock.

Avoid installing or mounting the unit in unstable locations. Doing so may result in the unit falling down and causing personal injury or property damage.

Do not block the upper panel ventilation slots. Doing so may cause heat to build up inside the unit and result in fire. Avoid installing the unit in humid, dusty locations, or exposed to the sunlight directly. Keep the heaters, sooty smoke or steam away.

When Use It

If you encounter the following irregularity during use, immediately switch off the power. Don't operate the unit in this condition to avoid fire or electric shock.

If you detect smoke or strange smell

If water or any metallic object, gets into the unit

If the unit falls, or the unit case breaks down

If the power supply cord is damaged (exposure of the core, disconnection, etc.)

If it is malfunctioning (no sounds)

Do not insert nor drop metallic objects or flammable materials in the ventilation slots, that may result in fire or electric shock. Do not touch a plug or antenna during thunder and lightning that may result in electric shock.

Do not place heavy objects on the units, that may cause it to fall or break which may result in personal injury or property damage. In addition the object itself may fall off and cause injury and/or damage.

CAUTION Indicates a potentially hazardous situation which could result in moderate or minor personal, property damage if mishandled.

**KPS-12SD   System Power Supply Controller**

Features

- 40amp rating, with circuit breaker. Voltmeter to display incoming mains voltage. Good-sized connection terminal equipped with protective shield to guaranty the security.
- 12-channel output, each with 10amp, uses all-purpose outlets for different plugs.
- The KPS-12SD offers all basic power conditioning features. It provides varistor spike and surge protection across all three modes (line to neutral, line to ground, and neutral to ground), specialized 40amp multi-stage EMI filter is used to purify system power. The filter works to prevent noise from fluorescent lights, certain dimmers, radio transmitters, and similar sources of "electronic pollution" from leaking from the AC line to audio, video, or computer circuits. Ensuring the system operation stability and optimal performance.
- Intelligent design with MCU controlled, and with multiple control modes and interfaces:

Direct control modes	Key switch control
	Standby key START ON-OFF sequence control
	IR remote controller
External control modes	Emergency/External DC24V control in
	REM IN (TTL) DC5V control in
	Standard RS232 serial interface (IN/OUT)

Meeting all kinds of system configuration requirements.

- Flexible functional PC control software is supplied for system control. It can be programmed and controlled by PC through RS232 interface.
- IR remote controller can be used to switch on/off any channel output.
- Remote controller can be also used to multiple operation modes:
  A. It can set any channel as bypass mode.
  B. The delay interval (the time between the sequential turn-on or turn-off outlets 1 and 2, or 2 and 3) can be adjusted to a maximum of 10 minutes. Meeting special requirements of certain equipments (e.g. projector or others).
- Key Lock function to prevent accidental operation, and assist user administration.
- Mechanical Dimensions: 3UH, 19 inch W
  Construction: black and silver anodized aluminum panels.

Parts and Functions
Front Panel
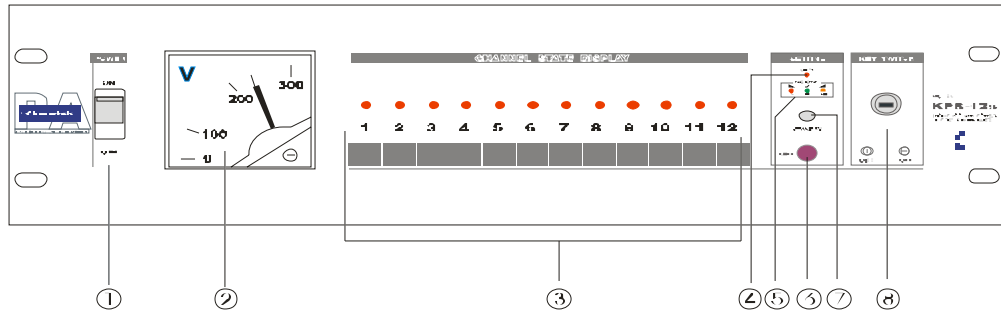
40A Circuit Breaker

AC Voltmeter

Channel Power Status LED indicator

LOCK Indicator

Delay Interval Setting Indicator

SET ON indicates turn-on delay setting mode;

SET OFF indicates turn-off delay setting mode in reversed sequence.

OK indicates delay interval setting orders are being carried out.

IR Sensor

STANDBY is a shortcut control key, push to on, and push again to off.

Key Switch turn the key clockwise to switch on and turn anticlockwise to switch off.

Remote Control

STANDBY

1-12 Channel Control Keys.

Use each key to control the power output

when LOCK is off.

Also use control keys to set delay of each channel.

SET ON (Delay)

SET OFF (Delay)
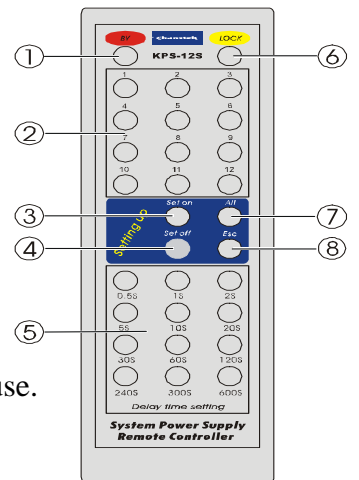
Delay Interval: 0.5 Second~600 Second

LOCK key:

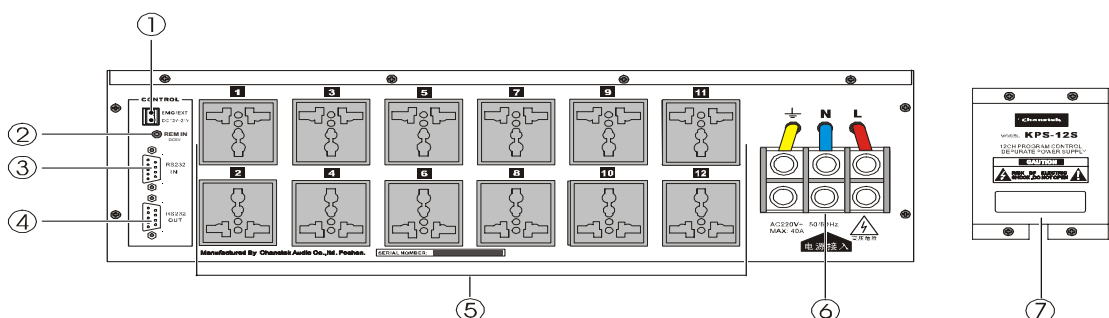It turn on/off the "LOCK" indicator in the front panel.

When "LOCK" lights up, the "standby" control key is out of use.

ALL: All channels are selected.

ESC: Use this key to exit delay setting, and SET

ON or SET OFF light off.

Rear Panel

EMG/EXT (DC 12V~24V): Emergency/External start control.
REM IN (DC 5V) for IR remote control input
RS232 IN
RS232 OUT
1~12 OUTLETS (Channel 1 ~12)
Mains Connection Terminal
Wiring Terminal Protective Shield

Operation
1. Mains Connection
A. Use 2.5, 4.0, or 6.0 RV/RVV/BV/BVV copper wires according to power specifications.
   Note: Properly connect in through L(live), N(neutral) and Ground wire.
B. When the circuit breaker is on, voltmeter indicates the AC voltage.

2. Control Operation
A. Ensure "LOCK" on the front panel lights off.
   Press the STANDBY key on front Panel, to turn on/off power. During the turning on/off process, press STANDBY to finish operation.
   Note: "press" in this operation means "press and hold the key for seconds" (When the key is effectively on, there is change in LOCK status).
B. Use 1-12 Channel Control Key to control the power on/off of each channel when "LOCK" is off.
C. Use Key Switch to turn on/off power, independent of LOCK status.
   Note: Remote Control can not control "LOCK" when Key Switch is on.

3. Set-up Operation:
Use Remote Control to set up the system after power is turned off and "LOCK" is lit.
A. Set on/off BYPASS:
   Set on any channel as BYPASS, then the channel outlet being switched on. Equipments incorporating clocks or timers such as MTC timer controller, VCR's, or equipment that must respond to wireless remote actuation should use the outlets.
   Sample 1: Set on Channel 1 and Channel 2 as BYPASS.
            Press Set on to light on. Press "1" key on, then press BY, and OK Indicator lights up for 1 second, showing the setting is confirmed. Press "2" key on, then press BY, and OK Indicator lights up for 1 second, showing the setting is accomplished. Thus Channel 1 and Channel 2 become BYPASS, and both channels light up constantly.
   Sample 2: Set Channel 2 off BYPASS.
            Press Set off to light on. Press "2" key, then press BY, channel 2 turn off, and OK Indicator lights on for 1 second, showing the setting is accomplished. Thus Channel 2 cancel BYPASS mode.

B. Set the delay interval between adjacent channels of power up or down:
  The delay time is factory preset as 1 second between adjacent channels. It can be adjusted according to the user's requirements.

  Sample 1: To set the turn-on delay interval from Channel 1 to Channel 2 at 0.5 second.
  Press "Set on", and the "Set on" LED on Front Panel lights up. Press "2" key and the "2" LED on Front Panel lights up, then press 0.5s key, and OK Indicator lights up for 1 second, showing the setting is confirmed.

  Sample 2: Set the delay time of sequential turn off from Channel 3 to Channel 2 is 300 second. Press "Set off" key and the "Set off" LED on Front Panel lights up. Press "2" key, then press "300s" key, and "OK" Indicator lights up for 1 second, showing the setting is accomplished.

  Sample 3: Set the delay time of sequential turn on from Channel 1 to Channel 2 is 0.5 second. Press "Set on" and the "Set on" LED on Front Panel lights up. Press "ALL" key, then all the indicators of 12 channel light up, press 0.5s key, and OK Indicator lights up for 1 second, showing the setting is confirmed.

  Note: Press ESC key to exit setting mode. If you do no operation after setting, it will exit automatically a little time later.

C. Factory Preset Recovery:
  The delay time is factory preset as 1 second between adjacent channels. Users can return to factory preset according to needs.
  When LOCK indicator is on, hold **ESC** key till all "Set on", "OK", "Set off" indicators flash simultaneously, then recovery is accomplished.

4. External Controls:
Standard models have a variety of external control connectors, controlled by external equipments.

A. **EMG/EXT** connection terminal
  It's used for emergency or external control needs. When the control signal coming, the equipment will power up quickly (0.5 seconds delay). The control signal is within the range of DC12V~24V, polarity free, insulated through light coupling.

B. **REM IN** provides a common external TTL control mode, which is conveniently embedded in central control systems. DC5V for IR Remote Control input.

C. **RS232** standard serial interface provides an open platform to control this equipment more flexibly. Connected computers can operate, control, program, and set 1 or more KPS-12SD. They meet the requirements of complex and diverse systems.

Installation and Connection

The equipment is 19 inch 3UH standard rack mounted cabinet.

Synchronous control and connection of multiple power supplies

The first set is the host

← Mains input

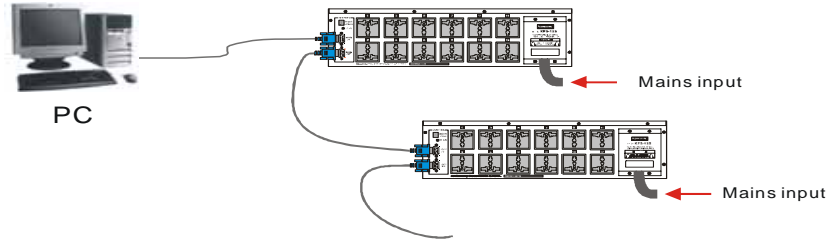synchronizing controlled by the host
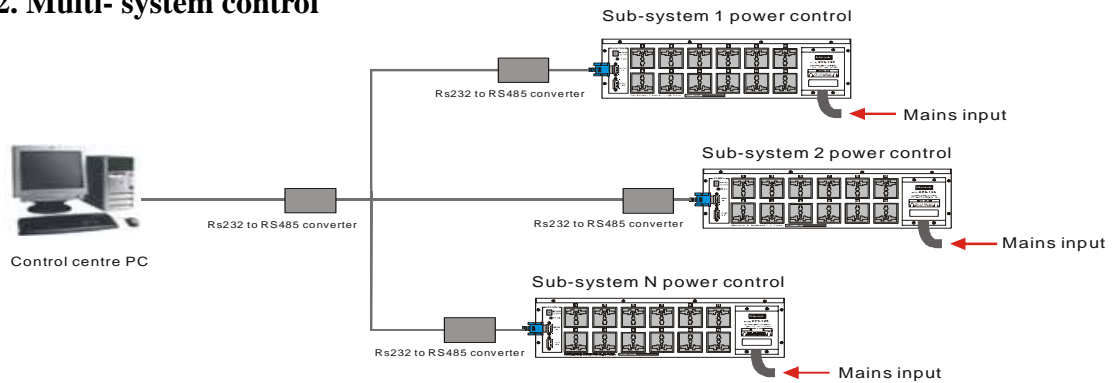
← Mains input
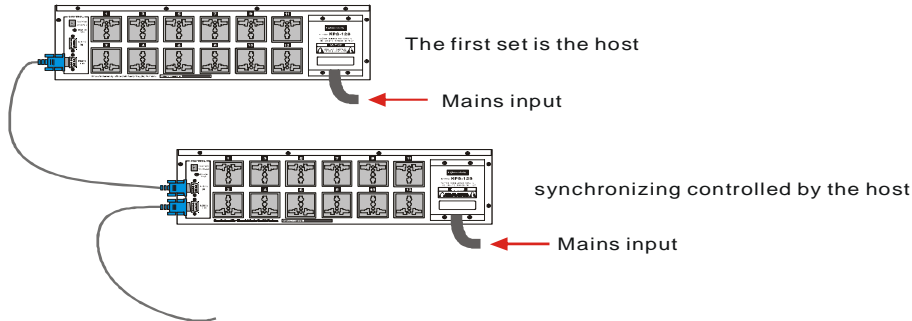
Note:

It applies especially to multiple power supplies in one system. Synchronous control of dependent power supplies can be realized both in direct control and REM external control modes of host power supply.
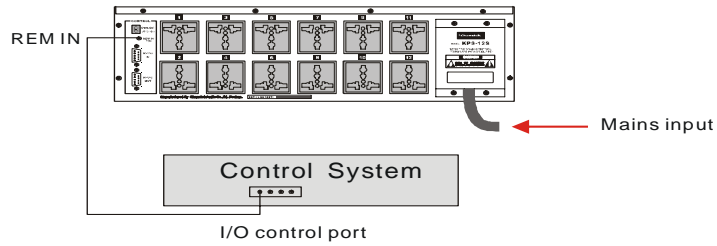
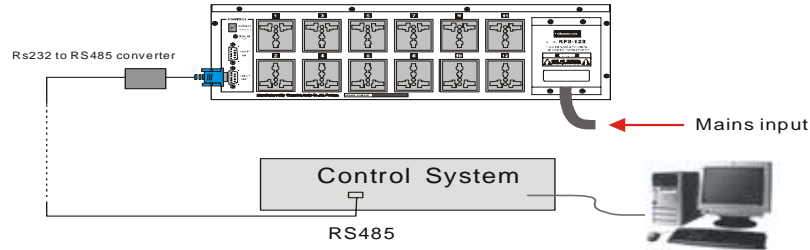## PC Control Connection

1. Single system control

PC

← Mains input

← Mains input

2. Multi- system control

Sub-system 1 power control

Rs232 to RS485 converter

← Mains input

Sub-system 2 power control

Rs232 to RS485 converter   Rs232 to RS485 converter

← Mains input

Control centre PC

Sub-system N power control

Rs232 to RS485 converter

← Mains input

Control System Connection

1

REM IN

Mains input

Control System

I/O control port

2

Rs232 to RS485 converter

Mains input

Control System

RS485

Specifications

Mains	AC 100 - 240V 50-60Hz
Overall capacity	40A
Output	Channel 1~12, 10A Universal Outlets
Panel control	STANDBY key control (" LOCK" indicator is off) Key Switch turn on and turn off IR remote controller for single channel controlling and start up/down
External control	DC 12~24V quickly start up control for emergency DC 5V REM IN for remote control RS 232 serial port for PC or other system controller
Conditioning filter	RFI filter to reduce conductive noise. Suppress power switching noise, continuous or fitful pulse interference and no leakage to ground. Work Current: 40 amp Leakage Current < 0.5 mA Compliance to Europe CISPR, USA FCC standards
Dimension	482 X 354 X 132 mm
Weight	6 kg
Accessories	IR remote controller, user's manual, warranty card, keys of key switch