

External Linear Power Supply

User's Manual

Revision 2.0 – Nov. 24, 2010

ELE-C58J-501

<i>Rev.</i>	<i>Date</i>	<i>Author</i>	<i>Description of change</i>
A	2010-03-30	TF	formerly called SC2-ELE-S58J-501
2.0	2010-11-24	MA	Took 5V supply out, added part number for high-current -6.2V.

DO NOT OPEN THE CABINET or TAMPER WITH THE LOCKING BARS THAT ARE ON THE FRONT OF THE KEPCO SUPPLIES.

DO NOT USE ANY FRONT PANEL TIP JACKS TO SUPPLY POWER TO EXTERNAL CIRCUITRY.

HOOK UP THE EXTERNAL FANS CABLE PRIOR TO POWERING UP THE SUBRACK.

ENSURE THAT THE AC POWER CORDS FOR THE KEPCO SUPPLIES ARE BOTH PLUGGED INTO THE REAR PANEL.

ENSURE THAT THE DC POWER CORDS FROM THE REAR PANEL ARE FASTENED TO THE KEPCO SUPPLIES.

Switching sequence for ON: MAIN, LOGIC, CORE, ANALOG (switch from Left to Right)

Switching sequence for OFF: ANALOG, CORE, LOGIC, MAIN (switch from Right to Left).

The overall mechanical dimensions of the power supply, (excluding foldable handles), is:

Height= 16.0"

Width= 21.0"

Depth= 24.5"

Weight= 139.5lbs

The schematics of the power supply unit can be found in "Linear Power Supply Wiring Diagram" ELE_C58J_001.

The pin out of both DC output power cables is identical. This means that the cables can be swapped without any concern. The pin out of the Amphenol connectors on the rear panel is listed in figure 6.

The output voltages are as follows. +2V5d, +4V5d, +6V7a, -6V7a, +15Va.

Note that +15Va is only needed when using older MCE hardware.

There are aluminum bars that lock the voltage and current adjustment on the Kepco supplies found on the lower portion of the 8U high cabinet. Do NOT remove the bars or adjust the knobs. The voltage and current levels on the Kepco supplies have been pre-set.

There are tip jacks on the front panel that allow the user to read the output voltages and currents of the supply. DO NOT USE THE TIP JACKS TO SUPPLY POWER TO EXTERNAL CIRCUITRY.

The +2V5d and +6V7a supplies have panel meters for current monitoring and tip jacks for voltage monitoring on the front panel. The +4V5d, -6V7a, +15Va have jacks that the user can measure both voltage and current. The "COMMON" labeled Black tip jacks refer to the current and voltage tip jacks above them. They are not common to each other, or any tip jacks in other columns.

Voltage measurement is done using a DVM connected to the "VOLTAGE" and "COMMON" jacks and is read directly with no conversion factor.

Current is measured as a voltage read across the appropriate shunt resistor for the circuit in question. The +4V5d and -6V7a power supply circuits express measured current values as 10mV/A. The +15Va power supply circuits express measured current values as 100mV/A.

The Upper removable shelf of the power supply is populated with the following linear power supplies by power-one:

Part Number	Function	Current output
HC5-6/OVP	4V5d power	6A
HB12-1.7-A ¹	-6V7a power	1.7A
HAD15-0.4-A ²	+15Va power	0.4A
HAD12-.4-A	24V External Fan	N/A

¹: Note that configuration suggested here can power up 1 MCE. If you use HB12-3.4A, then you can use these supplies to drive up to 2 MCEs.

²:The 15V output is only needed for older MCE hardware, i.e., RC Rev. B, AC Rev. B, ...

Lower Deck of Power supply cabinet has two pre-set Kepco JQE series power supplies. The front panel adjustments have been locked with aluminum bars. Do not remove these or unscrew the set screws.

Part Number	Function	Current output
JQE6-22M	+2V5d power	22A
JQE15-25M	+6V7a power	25A

The listed current output values are from the manufacturer of the modules within the cabinet and do not take into account parasitic losses from cables and interconnects.

For further details on the power supply modules that make up the power supply refer to:

www.power-one.com

www.kepcopower.com

For JQE6-22M see Kepco Instruction Manual Doc. # M576220 Rev. 19 (included).

For JQE15-25M see Kepco Instruction Manual Doc.# M607540 Rev. 24 (included).

Fuses for the Upper Shelf modules:

F1=10A SLO BLOW

F2=1A SLO BLOW

F3=0.5A SLO BLOW

F4=0.5A SLO BLOW

F5=0.5A SLO BLOW

F6=0.5A SLO BLOW

Removal of Upper Shelf:

-Turn OFF the power supply: Switch OFF; ANALOG, CORE LOGIC, MAIN.

-Remove All external connections to the power supply.

-REAR:

-Disconnect the DC power connections from the two Kepco's

-Unplug the AC line cords from the Upper Shelf Rear Panel

-Remove the INNER 4 x 10-32 PHI screws that hold the Rear Panel to the inverted U-shaped Aluminum Keeper Plate"

-FRONT:

-Remove 4 x 10-32 PHI screws that fasten the grill to the front panel to the mounting rails.

-Remove the Grill components.

-Remove the OUTER 4 x 10-32 PHI screws that fasten the Front Panel to the Mounting Rails.

-SLOWLY pull out the Upper Shelf. Ensure the DC Power connectors at the rear do not snag on the perforations of the Kepcos' cabinets.

Installation of Upper Shelf is the reverse of removal.