MODEL 714B DC LOW VOLTAGE REGULATED POWER SUPPLY

INSTRUCTION MANUAL

This equipment is an all-transisterized, low voltage, series-regulated DC power supply. Output current of 250～350 mA max. in the specified voltage range is available and voltage is continuously variable.

The feature of this equipment include compact construction, voltmeter and amperemeter on the front panel, and short-current limiting provision to eliminate the damage due to accidental short circuit of the output and it is possible to mount on the 19" standard rack.

Volatge drop across the amperemeter and stand-by switch contact is compensated.

Kikusui Electronics Corporation

S P E C I F I C A T I O N S

Power Supply .....V 50/60 c/s

Ambient Temperature 35°C max.

Dimensions 87 (W) x 234 (H) x 202 (D) mm

(Max.) 90 (W) x 244 (H) x 265 (D) mm

With 19" mounting frame

482 (W) x 266 (H) x 202 (D) mm

(Max.) 482 (W) x 276 (H) x 265 (D) mm

Weight Approx. 4.7 kg

19" mounting frame " 4.0 kg

Items supplied with equipment:

1 - Short-Bar — 1

1 - Instruction — 1

1 - Test Data — 1

Output

Output Terminals — Provided triangularly, 19 mm (3/4") apart each other

Polarity — Either positive or negative.

Maximum Voltage between Output Terminals and Chassis : up to ± 100 volts

Output

	714B-812	714B-1014	714B-1418	714B-1824	714B-3040	714B-6090
voltage range	8～12 V	10～14 V	14～18 V	18～24 V	30～40 V	60～90 V
max. current	350 mA	350 mA	350 mA	350 mA	350 mA	250 mA
*load regulation	30 mV	30 mV	30 mV	30 mV	50 mV	60 mV
**line regulation	30 mV	30 mV	30 mV	30 mV	30 mV	30 mV

*load 0～100%, change **line voltage ± 10% change

Ripple — Max. 5 mVp-p

Overload Protector — Automatical recovery

Voltmeter — class 2.5 (JIS)

Amperemeter — class 2.5 (JIS)

* Green band on voltage range for using

PRECAUTIONS

Ambient Temperature

This equipment may be used continuously at rated load where ambient temperature never exceeds 35°C and when line voltage variation is less than ± 10% for rated voltage. Even if ambient temperature may be lower than 35°C, maximum output current should be derated when the equipment may be subjected to the direct sun light, or where other type of heat radiation exists.

When the waveform of power source is distorted, regulation for load change may become poor and temperature in this equipment may be increased.

Overload Protector

This equipment employed a constant current tube to protect from permanent damage of series transistor, amperemeter and etc. resulting from accidental short circuit of output. For above reasons, it may endure shorted condition for several 10 seconds, under some limited conditions, for several minutes.

Removing the shorted circuit, output voltage recovers automatically to initial value.

A constant current tube requres some time to operate. While this time, each part in the equipment should be supposed to be injured to some extent more or less.

Also frequent repetition of shorting makes the equipment overheat due to accumulation of heat generating in transient state.

Capacitor or Lamp Loading

As several 10 times current flows in to such as tungsten lamp, heater of tube, motor and etc., at its starting time, it is necessary that the transient current is not over the rating of this equipment.

In case of large capacitor load, use series resistor to prevent flowing large charging current and after the capacitor being charged, short the series resistor.

Series Operation

Two or more of this equipment may operate in series connection to obtain over 35 volts. In this operation, the voltage between ground and either plus or minus terminal should not be over ± 100 volts. In this case, the circuit of Fig. 1 should be used to protect constant current tube from burn-out.

Parallel Operation

It is impossible, because a little difference of the each output voltage make large difference of output current in each equipment.

Voltage Drop within Meter

Voltage across the amperemeter and stand-by switch is compensated.

A D J U S T M E N T S

Adjustment of Output Voltage Range

These screw driver adjustments are located in rightside of cabinet inside of rubber cover. Placing "Output" knob in maximum position, adjust the screw driver control to obtain specified maximum output voltage. Placing "Output" knob in minimum position, adjust the screw driver control to obtain specified minimum output voltage. This procedure should be repeated several times. The screw driver control for maximum output voltage adjustment is located near rear panel and that for minimum output voltage adjustment is located near front.

Removal of Cabinet

Put off the set-screws in rear side of cabinet and draw the cabinet rearward.

Mounting Rack

This equipment may be put on 19" mounting frame with two plates of L type and it is possible to mount five equipments on a frame.

Also the case for use on a table with a frame is prepared.

Fig 1