

# Calibration of 371X series ELoad

## Verification test requirements

Be sure that you perform the verification tests:

- Under the proper environmental conditions.
- After the specified warm-up period.
- Using the correct line voltage.
- Using the proper calibration equipment.

## Environmental conditions

Conduct your performance verification procedures in a test environment that has:

- An ambient temperature of 18-28°C (65-82°F).
- A relative humidity of less than 80% unless otherwise noted.

## Line power

The 371X series e-load requires a line voltage of 110V/220V,  $\pm 10\%$  and a line frequency of 50Hz to 60Hz.

## Warm-up period

Allow the 371X series e-load to warm up for at least 30 minutes before conducting the verification procedures.

Also, allow the test equipment to warm up for the minimum time specified by the manufacturer.

## Recommended test equipment

- Fluke 341 Voltage Calibrator
- Keithley 2000, 6 1/2 digits multimeter
- Power Supply (8v, 0~30A)
- $0.1 \Omega \pm 0.01\%$  precision resistance

## Calibration of Voltage

① Open the upper cover of the Electronic Load, make sure all the instruments have been warmed up for at least 30 minutes. Set the e-load to OFF state. Connect the e-load to Voltage Calibrator as Figure 1.

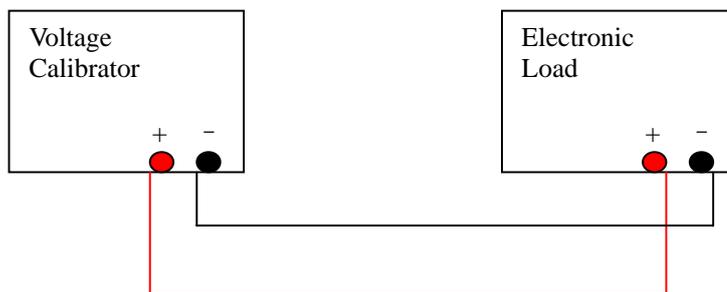


Figure 1.

② The PCB of e-load is shown as Figure 2. Set the output of the Fluke 341 to 35V, adjust VR2 on the board until the voltage value displayed on the Eload is  $35.00V \pm 0.02\%$

③ Set the output of the Fluke 341 to 3.5V, adjust VR1 on the board until the voltage value displayed

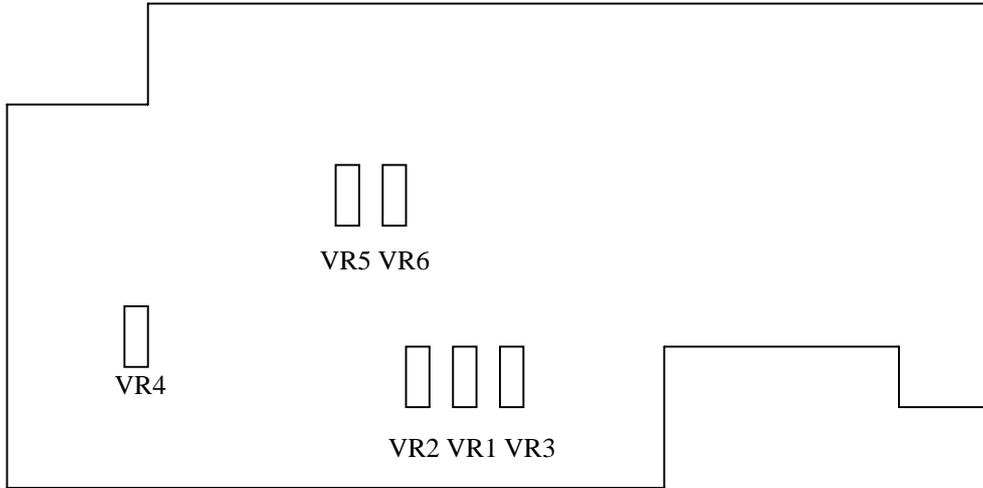


Figure 2.

on the Eload is  $3.500V \pm 0.02\%$

④ Set the output of the Fluke 341 to 350V, adjust VR3 on the board until the voltage value displayed on the Eload is  $350.00V \pm 0.02\%$

## Calibration of Current

① Make the connection as Figure 3.

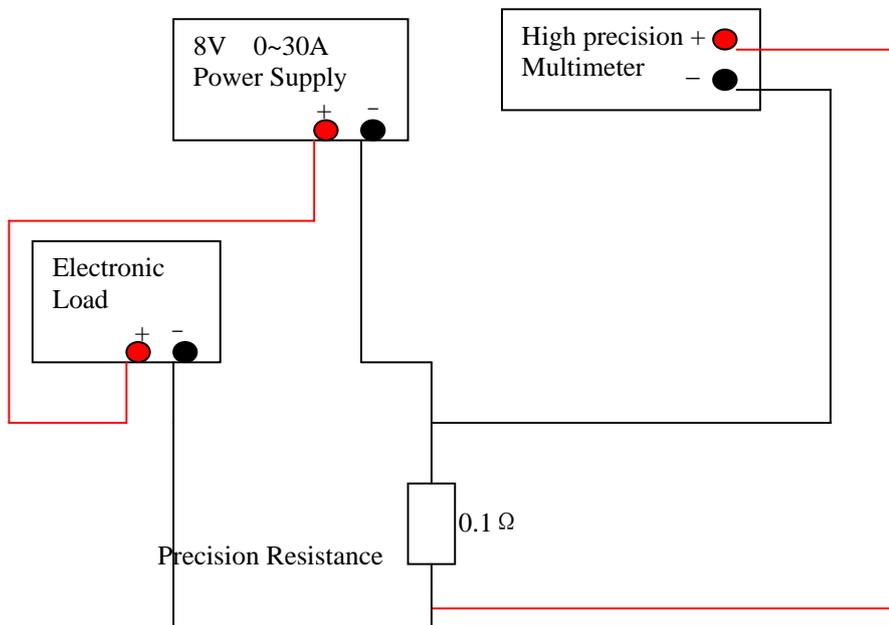


Figure 3.

② Set  $I=0A$ . Set Eload ON. Adjust VR4 on the board until the voltage value displayed on the Multimeter is between  $0.01mV \sim 0.02mV$ .

③Set  $I=2A$  . Set Eload ON. Adjust VR5 on the board until the voltage value displayed on the Multimeter is  $0.2V \pm 0.02\%$

④Set  $I=10A$ . Set Eload ON. Adjust VR6 on the board until the voltage value displayed on the Multimeter is  $1V \pm 0.02\%$