
Calibration Procedure for Maynuo M98xx DC LED Electronic Loads

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The following procedure is how to calibrate M98xx series electronic load. The calibration is divided into three parts including calibration of current, voltage and sense voltage. It is allowed to calibrate only one item among the three but also calibrate all the three items one after the other.

In our factory standard streamline operations, we use a Keithley 2000 Multimeter as a high accuracy multimeter, a M8813 power supply as a voltage source and a M8851 as a current source to complete the calibration procedure.

Calibrating tools:

Please choose the proper voltmeter and Ammeter.

- a. High resolution DMM (6 1/2 digit) for example Keithly 2000
- b. M8813 power supply or equivalent (150 V/0.01 A) as voltage source
- c. M8851 power supply or equivalent (5 V/50 A) as current source

1. The steps to calibrate the voltage

Notes:

- I Using M8813 (or equivalent power supply) as the voltage source, set its output value to 150V/0.01A. Do not do any other settings after set the power source to 150 V/0.01 A during the whole voltage calibration.
- I Before you enter the CALIBRATION procedure, make sure the load you want to calibrate is under LED mode, where there is character 'D' on the display.
- 1) Quickly press "shift", ▲, ▼, "Enter" in sequence, a prompt for entering an unlock key will be displayed;
- 2) First input the password '666' and press the key ENTER. Then the VFD display will show you CAL on the right;
- 3) Press the key V-SET to calibrate the voltage. Input the same voltage values as the readings (four readings in general) from the Keithley 2000 multimeter.
Input the reading UL-L=xxx, press the key Enter
Input the reading UL-H=xxx, press the key Enter
Input the reading UH-L=xxx, press the key Enter
Input the reading UH-H=xxx, press the key Enter
After you set the four readings, there is CALIBRATION showing on VFD display.
- 4) Please press the key **Escape** to leave the CAL mode of the load when the CALIBRATION is showing on the VFD display.
- 5) Switch off the load and then start it again, the load voltage calibration is finished.

Wiring diagram for voltage calibration



Keithley 2000



M8813 Power Supply



M97xx electronic load needs calibration (M9712 for example)

2. The steps to calibrate the current

Note:

Using M8851(or or equivalent power supply) as current source, set its output value at 6 V/60 A. Do not do any other settings on the current source after set its value at 6 V/60 A.

Wiring diagram for current calibration



M97xx electronic load needs calibration (M9712 for example)

- 1) Quickly press "shift", ▲, ▼, "Enter" in sequence, a prompt for entering an unlock key will be displayed;
 - 2) First input the password '666' and press the key ENTER. Then the VFD display will show you CAL on the right;
 - 3) Press the key I-SET to calibrate the current. Input the same current values as the readings(2 readings in general) from the M8851 DC power supply (or from the 5 V/50 A Ampere Meter), press the key Enter;
 - 4) Reset the same current value as the second readings from the M8851 DC power source(or the 5 V/50 A ampere meter) press the key Enter;
 - 5) Please press the key **Escape** to leave the CAL mode of the load when the CALIBRATION is showing on the VFD display.
 - 6) Switch off the load and then start it again, the load current calibration is finished
3. **The steps to calibrate remote sensing (the voltage between the terminal -S, +S)**
- 1) Quickly press "shift", ▲, ▼, "Enter" in sequence , a prompt for entering an unlock key will be displayed;
 - 2) First input the password '666' and press the key ENTER. Then the VFD display will show you

- CAL on the right;
- 3) Press the key P-SET to calibrate the voltage between the terminals –s and +s. Input the same voltage values as the readings(2 readings in general) from the Keithley 2000 multimeter. After you set the 2 readings, there is CALIBRATION showing on VFD display.
 - 4) Please press the key **Escape** to leave the CAL mode of the load when the CALIBRATION is showing on the VFD display.
 - 5) Switch off the load and then start it again, the calibration is finished.

Wiring diagram for calibration

