## Calibration Process for MS8040

I. Calibration of variable resistor:

  Variable resistor can be calibrated in two steps:

1. Calibration of reference voltage: turn the rotating switch of the meter to V position, and DC 2V will be shown on the meter; if not, switch the meter to DC 2V mode; input a standard voltage of 1 V from V and COM terminals and adjust the variable resistor R70 so that meter reading is around 1.0000 V

2. Calibration of capacitor: turn the rotating switch of the meter to CAPACITANCE position. Switch the meter to 200 nF mode, and input a capacitance signal of 200 nF from V and COM terminals; adjust variable resistor R73 so that meter reading is around 200.0 nF (with an error of 2-3 graduations). Check if specifications of every capacitance mode are within the specified range; if it cannot be well calibrated, send the meter for repairing.

II. Software calibration:

  Software calibration applies only for voltage, current, resistance, and temperature

(i). Switch to calibration mode

1. Turn the rotating switch of the meter to OFF position:
2. Press BACKLIGHT key and then switch the rotating switch to V position; do not release BACKLIGHT key until ------ is displayed
3. Press RANGE key, and ---- will be displayed
4. Press PCLINK key to enter CALIBRATION mode, and ---0 will be displayed

(ii). Instructions for screen display under calibration mode:

  There are 3 steps under calibration mode:

1. Select a test point to be calibrated, and the serial number to be calibrated will be displayed in flashing mode on screen;
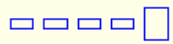


2. Press FUNC button to switch between DC/AC, and press RANGE key to switch the range; press Hz key to select a test point to be calibrated.
3. After the point to be calibrated is selected, press RANGE key to confirm the selection of the point to be calibrated, and input a relevant input signal
4. Confirm it and save; after test value becomes stable, press PCLINK key to save it; the meter will give off two beeps after saving is completed. Flashing will be stopped on screen, and test value will no longer be refreshed. This signifies that calibration is completed.

(iii). Input calibration signal:

1. For DC voltage, two points are calibrated for each range except the range of 1000 V: 0 input and the middle value (such as the calibration of 1 V for the range of 2 V); for the range of 1000 V, 0 input and the point of 600 V are calibrated; for DC current (except the position of 10 A), resistance, and CLAMP, 0 input and the middle value are calibrated for each range, while zero input and the point of 6 A are calibrated for the position of 10 A; whereof the 0 input point can be calibrated according to the requirement.

2. For AC voltage, two points are calibrated for each range except the range of 1000 V: the middle value and the value of 1.9X (such as the calibration of 1 V 60 Hz and 1.9 V 60 Hz for the range of 2 V); for the range of 1000 V, 300 V 60 Hz input and 600 V 60 Hz are calibrated; for DC current (except the position of 10 A) and CLAMP, the middle value input and 1.9X value are calibrated for each range, while 3 A and 6 A points are calibrated for the position of 10 A;

3. For the position of TEMPERATURE, the two points of room temperature (0 mV) and 100 degree (4.1 mV) need to be calibrated

(iv) Button descriptions

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| Button name | Function description |
|---|---|
| FUNC | Changing DC-AC indication |
| RANGE | Changing range indication (confirming calibration point) |
| Hz | Changing the calibration point for the current position (such as changing ---0 to ---1) |
| PCLink | Saving |