

321-78017C

Nov. 2018



Instruction Manual

Temperature Calibration Kit

for MOC63u

Read the instruction manual thoroughly before you use the product.
Keep this instruction manual for future reference.

 **SHIMADZU CORPORATION**
KYOTO JAPAN

ANALYTICAL & MEASURING INSTRUMENTS DIVISION

HAND HELD DIGITAL ALARM THERMOMETER

Features :

- Wide Measurement Range
- Maximum / Minimum Temperature Memory
- Celsius and Fahrenheit Exchange
- Data Hold Function
- High / Low Temperature Alarm Setting
- Key Tone for Operation Confirmation
- Stainless Steel Probe
- Foldaway Stand

Specification :

Measurement Range :	- 50°C to 300°C
Accuracy :	±1.5°C between - 50°C to - 10°C ±0.5°C between - 10°C to 100°C ±1.5°C between 100°C to 200°C ±2.5°C between 200°C to 300°C
Display Resolution :	0.1°C over full range
Alarm Resolution :	1°C over full range
Sampling Rate :	1 seconds
Battery :	1.5 volt size AAA / UM4 or equivalent x2 piece (included) Battery life 400 hours(standard) The included battery is for operation check.
Auto power off :	None

Installation :

1. Unpack the thermometer
2. Pull out the battery cover
3. Install the battery with correct polarity position
4. Put back the battery cover

Operation :

- As soon as the battery is installed, the thermometer will perform a self test with all display segments switched on for about 2 second and then the normal temperature will be displayed.
- Insert the probe into test substance about 25mm / 1", get the reading when the reading become stable.

Data Hold :

1. Press [HOLD] button once will retain the display reading and the "HOLD" icon will be flashing.
2. Press [HOLD] button again will retain to normal display.

Maximum & Minimum Temperature Memory Display :

1. Press [MAX / MIN] once will display the maximum reading and the “Max” icon will be flashing.
 2. Press [MAX / MIN] once more will show the minimum reading and the “Min” icon will be flashing.
 3. Press [MAX / MIN] button again to return to normal display.
- ★ To clear the temperature memory, press [ON / OFF] to switch off and then on again.

Temperature Alarm Setting :

1. Press [SET] button once and the HI value (default is OFF) will be flashing.
 2. Use the [UP] and [DOWN] keys to set the desired alarm high limit.
 3. Press [SET] button once more and the LO value (default is OFF) will be flashing.
 4. Use the [UP] and [DOWN] keys to set the desired alarm low limit.
 5. Press [SET] again to finish the setting.
- ★ During the limit setting, holding down the [UP] or [DOWN] button will advance the value automatically and the [ON / OFF] button can be used to turn the limit on or off.
- ★ If the temperature value is out of the set limit then the alarm will sound.
- ★ Press any button will stop the alarm sound but the HI or LO icon will keep flashing until the temperature is within the set limit.

°C / ° F Select :

Press and hold [C / F] button for about 4 seconds then release to change the temperature unit.

Note :

1. When the MAX / MIN reading is being displayed or the HOLD function is activated the thermometer can not be powered off until all the activated functions are released.
2. If the display becomes dim change the battery with the same type and leakage free battery.
3. After each measurement, clean the probe immediately in order to avoid cross contamination.
4. The test probe can not be placed inside the oven.

— Temperature Calibration —

Temperature calibration can be performed with the temperature calibration kit.

The calibration record can be automatically produced with the optional printer.

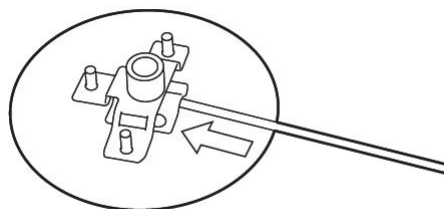
For details, refer to the instruction manual of MOC63u.



Caution Do not touch heater cover and the sensor probe or holder of temperature calibration kit during temperature calibration as they become very hot.

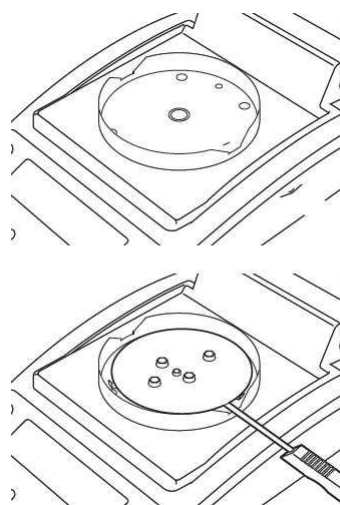
Touching these parts may cause serious burning.

- 1 Insert the thermometer probe firmly into the temperature calibration kit. Push the power button and turn on the thermometer.

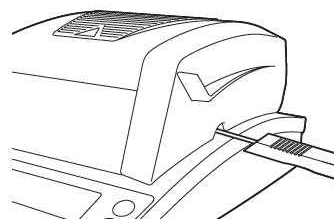


- 2 Open the heater lid of the moisture analyzer, take out the sample pan, and place holder of the temperature calibration kit assembled in step 1.

Align the hole in the holder hole with that in the wind shield.



- 3 Close the heater cover, and check that the sensor probe fits the indentation in the heater lid.



- 4 Start the menu.

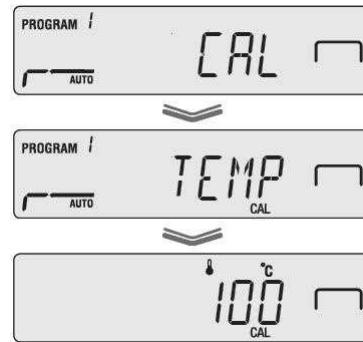


5 Select the temperature calibration from the menu.

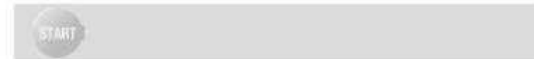


To calibrate the temperature correctly

Calibrate when the temperature of the moisture analyzer is the same as the temperature of the room.



6 Start heating at 100°C.

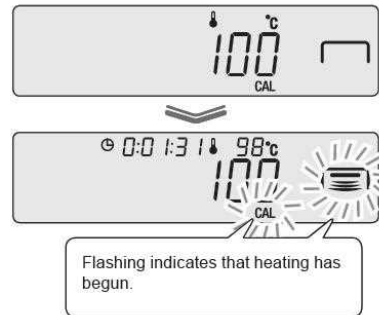


A heating process begins.

What if you open the heater lid during the heating process...

It is dangerous to touch the heater lid and the inside of the lid during calibration as they become extremely hot. Basically, do not open the heater lid during temperature calibration. Otherwise, the temperature calibration may not be accurate. Should you be forced to open the lid, close the lid in less than a minute to continue the calibration process. When one minute has elapsed, "ERR.100" appears on the display panel and the calibration is interrupted.

Press **ESC** to return to the [TEMP] mode.



7 When temperature indication (100°C) flashes, enter the calibration temperature.



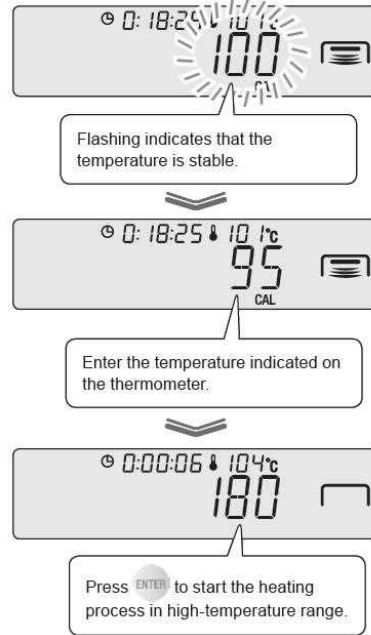
After 15 minutes has elapsed, the temperature indication flashes.

Enter the temperature (calibration temperature) indicated on the thermometer of the temperature calibration kit.

Press **ENTER** to start the heating process in high-temperature range.

If it is left while the indicator is flashing...

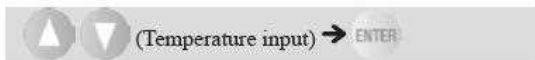
Finish entering the figure within 15 minutes after the indicator starts flashing. If it is not finished, [AboRT] will be displayed and the calibration will finish.



8 When temperature indication (180°C) flashes, enter the calibration temperature.

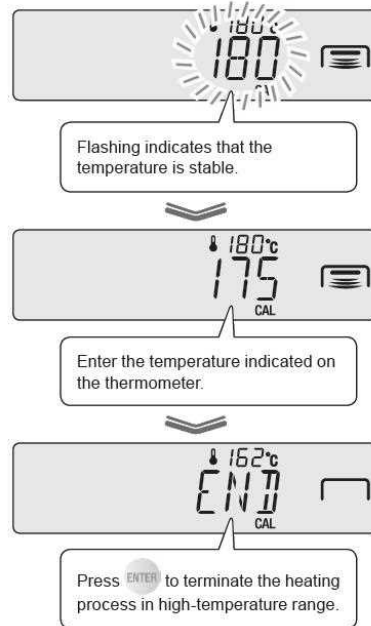
After 15 minutes has elapsed, the temperature indication flashes.

When [END] is displayed, the temperature calibration terminates, and the moisture balance returns to the standby state after a short period of time.



If it is left while the indicator is flashing...

Finish entering the figure within 15 minutes after the indicator starts flashing. If it is not finished, [AboRT] will be displayed and the calibration will finish.



SHIMADZU CORPORATION

TOKYO OFFICE

3, Kanda-Nishikicho 1-chome, Chiyoda-ku, Tokyo 101-8448, Japan
Phone: 81(3)3219-5641 Fax: 81(3)3219-5710
Cable Add., SHIMADZU TOKYO
Overseas Telex No.: 0232-3291 (SHMDT J)

KYOTO OFFICE

1, Nishinokyo-Kuwabaracho, Nakagyo-ku, 604-8511 Japan
Phone: 81(75)823-1200 Fax: 81(75)812-3438
Cable Add., SHIMADZU KYOTO
Overseas Telex No.: 05422-166 (SHMDS J)

SHIMADZU INTERNATIONAL TRADING (SHANGHAI) CO., LTD.

(Shanghai Office)
Flat 24F Shanghai Xin Hua Lian Building, NO. 755, Huai Hai Zhong
Road Shanghai 200020, People's Republic of China
Phone: 86(21)6472-8442 Fax: 86(21)6472-8648

SHIMADZU SCIENTIFIC INSTRUMENTS INC

7102, Riverwood Drive, Columbia, Maryland 21046, USA
Phone: 1(410)381-1227 Fax: 1(410)381-1222

SHIMADZU EUROPA GmbH

Albert-Halm-Strasse 6-10, D-47269 Duisburg, F. R. Germany
Phone: 49(203)7687-0 Fax: 49(203)7666-25

SHIMADZU (ASIA PACIFIC) PTE LTD.

16 Science Park Drive #01-01 The Pasteur Singapore Science Park,
Singapore 118227, Republic of Singapore
Phone: 65-778-6280 Fax: 65-779-2935

SHIMADZU DO BRASIL COMERCIO LTDA.

Avenida Marques de Sao Vicente, 1771-Barra Funda,
CEP 01139-003, Sao Paulo, SP, Brazil
Phone: 55(11)861-1688 Fax: 55(11)861-2209