

APM

OPERATION MANUAL

PLEASE READ THIS MANUAL VERY CAREFULLY BEFORE OPERATING

CONTENTS

1. INSTALLATION
 2. SPECIFICATIONS
 3. KEYBOARD LAYOUT AND DESCRIPTION
 4. INITIAL SETUP
 5. INSTRUCTION FOR USE
 6. TROUBLE SHOOTING
 7. DAILY CARE AND MAINTENANCE
- APPENDIX: ERROR CODES

INSTALLATION

Because of metrological legislation, installation/some metrological parameter settings are limited to be done by authorized personnel only. Do not attempt to change any of the built-in parameters. Contact your dealer for installation and technical assistance.

CAUTION:

This unit is legal for trade only when it is sealed (and/or stamped) and bearing a serial number. Do not attempt to break the seal (or stamp) affixed to this indicator or remove the serial number. Contact your dealer for more information and after sales service.

For most accurate weighing result, do not use the indicator in where or when the environment condition falls beyond as those listed on **SPECIFICATIONS**.

Do not attempt to open this unit or conduct any trouble shootings other than those listed on **TROUBLE SHOOTING**.

2. SPECIFICATIONS

Model No.	APM INDICATOR
Max.	USER DEFINED
n_{\max}	6000
Tare Range	1/3 Max. - e (NOTE 1)
Power-on Zero Range	$\pm 20\%$ Max. (NOTE 1)
Zero Range	$\pm 2\%$ Max. (NOTE 1)
Min. Load	20e (NOTE 1)
Max. measuring range	9.0mV
Min. signal voltage per verification scale interval	0.8 μ V
Power voltage requirements	6.0 VDC (BY EXTERNAL POWER ADAPTOR OR RECHARGEABLE BATTERY)
Minimum battery voltage	5.5 VDC
Load cell Excitation voltage	5 VDC
Minimal load cell impedance	85 Ω
Maximal load cell impedance	5000 Ω
Load cell connection	4-wire
Operation Environment	-10 $^{\circ}$ ~40 $^{\circ}$ C Non-condensed. R.H. \leq 85%

Specifications subject to change without notice.

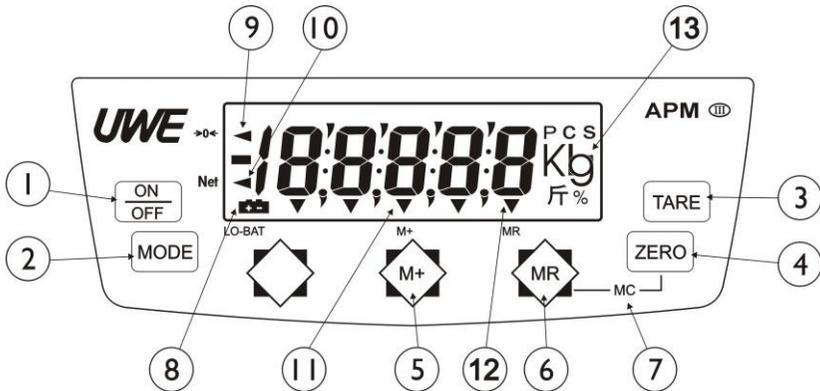
NOTE 1:

For Multi range or interval, change e to e_1 .

CAUTION:

To comply with the law of certain countries and certain approval requirements, the avoirdupois weight unit of this indicator may be disabled.

3. KEYBOARD LAYOUT AND DESCRIPTION



1. ON/OFF KEY

Press this key to turn indicator on or off.

2. MODE KEY

Press this key to shift among different weight units and/or turn backlight on/off.

3. TARE KEY

Press this key to tare off the weight of a container.

4. ZERO KEY

Press this key to set weight displayed to zero.

5. M+ KEY

Press this key to accumulate current weight to memory.

6. MR KEY

Press this key to recall the total accumulated weight from memory.

7. MC KEY

Press **MR** and **ZERO** simultaneously to clear weight from memory.

8. LO BAT INDICATOR

This indicator appears when input voltage is below the lowest input limit. Check the power supplied to the indicator.

9. ZERO INDICATOR

This indicator appears to indicate zero weight status.

10. NET INDICATOR

This indicator appears to indicate the tare function is in operation and weight shown is net weight.

11. M+ INDICATOR

This indicator appears to indicate memory contains of stored data.

12. MR INDICATOR

This indicator appears to indicate the value shown is the total accumulated weight stored.

13. WEIGHT UNIT INDICATOR

The current weight unit is displayed here.

4. INITIAL SETUP

4.1 PLACING THE SCALE

In order to obtain an accurate weighing result, the complete weighing instrument (hereinafter referred as the scale) must be placed on a strong and level surface.

4.2 INTERNAL SETTING

4.2.1 Select Weight Unit

This indicator is equipped with metric and avoirdupois weight units. Default setting = metric weight unit only. Follow the below steps to enable/disable the avoirdupois units.

- a. Turn indicator off
- b. Press and hold **TARE**, then press **ON/OFF**
- c. Indicator displays **F.1**
- d. Press **TARE** twice
- e. Indicator displays **F.3**
- f. Press and hold **MODE** until the kg or lb sign appears.
- g. Press **MODE** to shift between kg and lb sign.
 - To enable the avoirdupois units, press **TARE** when the lb sign appears.
 - To disable the avoirdupois units, press **TARE** when the kg sign appears.

- h. After **TARE** is pressed, the indicator will go to **F4** (**AUTO POWER OFF** setting). Refer to **4.2.2** for **AUTO POWER OFF** setting or press **ZERO** to quit.

NOTE

To comply with the law of certain countries and certain approval requirements, the avoirdupois weight units may be disabled. Contact your dealer for more information.

4.2.2 Select Auto Power Off Setting

The indicator is equipped with **Auto Power Off Function**.

The indicator will be turned off automatically if it is not used for 4 minutes. Follow the below steps to enable/disable **Auto Power Off Function**

- a. Turn indicator off
- b. Press and hold **TARE**, then press **ON/OFF**
- c. Indicator displays **F.1**
- d. Press **TARE** three times
- e. Indicator displays **F.4**
- f. Press **MODE** to shift between **0._OFF** and **4._OFF**.
 - To enable **Auto Power Off Function**, press **TARE** then **ZERO** when **4._OFF** appears.
 - To disable **Auto Power Off Function**, press **TARE** then **ZERO** when **0._OFF** appears.
- g. After **TARE** then **ZERO** are pressed, the indicator will return to operation status.

5. INSTRUCTION FOR USE

5.1 BEFORE WEIGHING

Make sure that:

- a. Connect the load cell signal and power to the indicator properly.
- b. Place the scale on a level and strong surface.
- c. The indicator is turned on.
- d. The **ZERO INDICATOR** is on. If not, press **ZERO** to set display to zero.

5.2 WEIGHING

- a. Always place an object onto the scale gently. Excessive force applied to platter may cause damages to weight sensor.
- b. The weight of the object is displayed on the indicator automatically.
- c. It is a good practice to remove all loads from scale after weighing. It would prolong the lifetime of weight sensor.

5.3 SELECT WEIGHT UNIT

Press **MODE** to shift among kg → decimal → lb/oz. → kg weight units. Refer to **4.2.1** for internal setting procedures.

The weight unit used before power off would be employed when the indicator is turned on again.

5.4 TURN BACKLIGHT (OPTIONAL) ON/OFF

Press **MODE** to shift among various weight units with or without backlight.

Even though the backlight function is employed, backlight will be automatically turned off when a stable weight remained for 25 seconds or a zero weight is detected and remains stable for 10 seconds

Backlight will be automatically turned on again when a new weight is detected or when any key is pressed.

5.5 SET DISPLAYED VALUE TO ZERO WHEN UNLOADED

By pressing **ZERO**, weight displayed will be set to zero and **ZERO INDICATOR** appears.

Refer to **SPECIFICATIONS** for maximum zero range.

5.6 TARE OFF THE WEIGHT OF A CONTAINER

When a container is used, follow the below steps to tare off the weight of the container and get the net weight.

- a. Remove all loads away from platter
- b. Make sure that the **ZERO INDICATOR** is on.
- c. Place the container on the platter.
- d. Press **TARE**.

After **TARE** is pressed, the **TARE INDICATOR** would appear.

Refer to **5.2** for weighing procedures. Weight displayed under is the net weight of the subject matter. Refer to **SPECIFICATIONS** for maximum tare range.

5.7 CLEAR THE TARE FUNCTION

Remove all loads from scale then press **TARE**. After **TARE** is pressed, the **TARE INDICATOR** would disappear.

5.8 MEMORY FUNCTION

5.8.1 Accumulate a Transaction To Memory

- a. Refer to **5.2** for weighing procedures.
- b. Press **M+** to save and accumulate data of current transaction to memory.
- c. Indicator displays "**P. 1**" and **M+ INDICATOR** appears to indicate that memory contains of stored data.

NOTE: "**P. ?**" means the total number of transactions accumulated to memory.

- d. Indicator returns to normal display status after 2 seconds.
- e. Repeat **a** to **c** for subsequent transactions.

5.8.2 Memory Recall

Press **MR** to recall total accumulated weight from memory. After **MR** is pressed, indicator displays **P. ?** (? Means the number of transactions accumulated), then a flashing value. The flashing value is the total accumulated weight stored in memory.

When the total accumulated weight is being displayed, **MR INDICATOR** appears to indicator that the value being displayed is the accumulated weight.

Indicator returns to normal display status after 3 seconds.

5.8.3 Memory Clear

All transactions stored in memory by pressing **MR** and **ZERO** simultaneously.

CAUTION: All data stored will be erased when the indicator is turned/powerd off.

5.9 LO BATTERY

This indicator appears when input voltage is below the lowest input limit.

5.9.1 In case a Rechargeable is Used

The indicator will be power off in about 5 to 10 minutes.
Recharge the battery now.

5.9.2 In case a Power Adaptor is Used

Check power supply to indicator immediately.

NOTE:

If LO BAT status is detected during power on, indicator shows **P-OFF** and the indicator will be powered off automatically.

6. TROUBLE SHOOTING

Syndrome	Indicator cannot be turned on
Check:	Is the indicator powered properly?
Action:	Check power supply to indicator.
Syndrome	Indicator turned off automatically
Check	Is Auto Power Off Function employed?
Action	Refer to 4.2.2 to disable Auto Power Off Function .
Check	Is the LO-BAT INDICATOR on?
Action	Check power supply.
Syndrome	Rated capacity cannot be reached
Check	Is the TARE INDICATOR on?
Action:	Turn the indicator off. Remove all loads and turn on again.
Check	Is there anything obstructing the scale?
Action	Remove all obstacles.
Syndrome	Blank display with only "kg" or "lb"
Check	Is the load applied to scale excess the rated capacity?
Action	Remove all loads and try again.

Syndrome **Indicator displays -----**

Check Is the load cell signal cables connected to the indicator properly?

Action Recheck signal cable connections.

Check Is load cell working properly?

Action Check load cell input/output.

Syndrome **Weighing result is not accurate**

Check Is the scale placed in a level condition?

Action Obtain a level condition.

Check Is the scale affected by airflow, vibration or RFI?

Action: Place the scale away from all disturbances.

Check Is the indicator calibrated correctly?

Action Contact your dealer.

7. DAILY CARE AND MAINTENANCE

7.1 Clean the indicator with a soft and damp cloth.
If necessary, apply a mild detergent.

7.2 Do not use any harsh, abrasive material, acetone, volatile solvent, thinner or alcohol for cleaning.

7.3 Verify the accuracy of indicator periodically.
Re-calibrate the indicator if necessary.

NOTE: In some countries, calibration requires authorized/qualified agent. Contact your dealer for more information.

7.4 Store indicator scale in a dry and clean place.

APPENDIX: ERROR CODES

P_OFF

Low battery status is detected during power on. Indicator will shut off after this message appeared.

Error

Error during calibration.

Case 1:

The 1st calibration weight entered is less than 1/3 of rated capacity

Case 2:

The 2nd calibration weight entered is over the rated capacity.

Case 3: The span value is not within the acceptable range.