

**AFW/APF**

**ELECTRONIC WEIGHING INDICATOR**

**OPERATION MANUAL**

PLEASE READ THIS MANUAL VERY CAREFULLY BEFORE  
ATTEMPT TO OPERATE THIS INDICATOR

**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: APPEARANCE

JUNE 2003 REV 2

*Specifications subject to change without prior notice*

## 1. 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.	AFW/APF INDICATOR
Max.	USER DEFINED
$n_{max}$	3000 ( <b>NOTE 1</b> )
Tare Range	1/3 Max. $\pm$ e ( <b>NOTE 2</b> )
Power-on Zero Range	$\pm$ 0.1% Max.
Zero Range	$\pm$ 0.2% Max.
Min. Load	20e ( <b>NOTE 3</b> )
Max. measuring range	9.0mV
Min. signal voltage per verification scale interval	1.5 V
Power voltage requirements	6.0 VDC (BY EXTERNAL POWER ADAPTOR OR RECHARGEABLE BATTERY)
Minimum battery voltage	5.5 V DC
Load cell Excitation voltage	5 V DC
Minimal load cell impedance	85
Maximal load cell impedance	1000
Load cell connection	4 wires
Operation Environment	0°~40°C Non-condensed. R.H. $\leq$ 85%

*Specifications subject to change without notice.*

### NOTE 1:

The recommend division when application is legal for trade (OIML mode) is 3000 and 6000 to 7500 when application is not legal for trade (normal mode). The maximum display division under OIML mode when Extended Display function engaged is 30000, the same as under non-OIML mode.

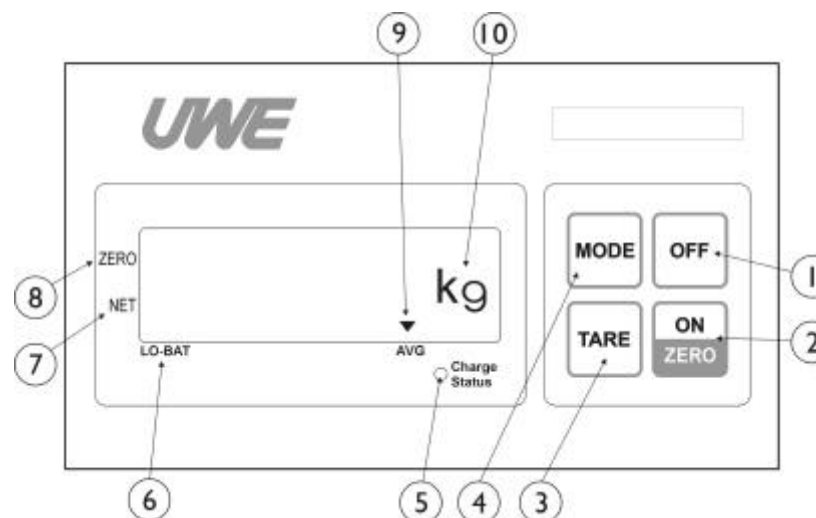
**NOTE 2:**

When under OIML mode, for Multi range or interval, change  $e$  to  $e_1$ . When under non-OIML mode, the default setting is full tare range.

**NOTE 3:**

For Multi range or interval, change  $e$  to  $e_1$ .

**3. KEYBOARD LAYOUT AND DESCRIPTION**



(MODEL SHOWN: AFW)

**1. OFF KEY**

Press this key to turn indicator off.

**2. ON/ZERO KEY**

Press this key to turn on scale or to set weight displayed to zero.

**3. TARE KEY**

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

**4. MODE KEY**

Press this key to shift among metric/ avoirdupois weight unit and turn on/off backlight (optional).

#### 5. IN-CHARGE INDICATOR

Red color: Recharging on process

Green color: Charging completed

#### 6. LO-BAT INDICATOR

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

#### 7. NET INDICATOR

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

#### 8. ZERO INDICATOR

This indicator appears to indicate zero weight status.

#### 9. AVERAGE INDICATOR

This indicator flashes to indicate the digital motion filtering function is being employed.

#### 10. WEIGHT UNIT INDICATOR

**;**kg; indicates the metric unit is being employed.

**;**lb indicates the avoirdupois unit is being employed.

#### 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 Display Segment Check

User can enter this function to check to see if the display and backlight (if purchased) are functioning properly.

- a. Scale is off
- b. Press and hold **TARE**, then press **ON/ZERO**
- c. Scale displays **F.1**
- d. Press **TARE** once to **F.2**
- e. Press **MODE** and all segments will light up to allow user to check the condition of display
- f. Press any key to exit and **TARE** for next function setup or **ON/ZERO** to restart the scale

###### 4.2.2 Select Auto Power Off Setting

The scale is equipped with **Auto Power Off Function**. The scale will power off automatically if it is not used for 4 minutes. Follow the below steps to enable/disable **Auto Power Off Function**.

- a. Scale is off
- b. Press and hold **TARE**, then press **ON/ZERO**
- c. Scale displays **F.1**
- d. Press **TARE** three times to **F.4**
- e. Press **MODE** to shift between **0.\_OFF** or **4.\_OFF**
  - To enable **Auto Power Off Function**, press **TARE** when **4.\_OFF** appears
  - To disable **Auto Power Off Function**, press **TARE** when **0.\_OFF** appears
- f. After **TARE** is pressed, indicator display **F.5**
- g. Press **MODE** to enter next set up or **ON/ZERO** to restart the scale

#### 4.2.3 Select RS-232 Baud Rate & Protocol

This scale is equipped with 3 RS232C output baud rate and 2 transmission protocol settings for user to select.

- a. Scale is off
- b. Press and hold **TARE**, then press **ON/ZERO**
- c. Scale displays **F.1**
- d. Press **TARE** four times to **F.5**
- e. Press **MODE** to enter
- f. Press **ON/ZERO** to select baud rate of 4800, 9600 or 19200
- g. Press **MODE** again to enter transmission protocol setup

- h. Press **ON/ZERO** to select protocol of P=N81 or P=E71
- i. When the preferred transmission protocol shows on display, press **TARE** to confirm and proceed to the next selection or **ON/ZERO** to restart the scale

#### NOTE:

The default data output format of the scale is

Baud Rate = 9600

Data Bit = 8

Stop Bit = 1

Parity = None

#### 4.2.4 Select Digital Motion Filtering Function

This indicator equipped with animal weighing function that enables user to select when the indicator is using for weighing livestock.

- a. Scale is off
- b. Press and hold **TARE**, then press **ON/ZERO**
- c. Indicator displays **F.1**
- d. Press **TARE** five times to **F.6**
- e. Press **MODE** to shift between **Filt.0** or **Filt.1**
  - To enable **Animal Weighing Function**, press **TARE** when display shows **Filt.1**

- To disable **Animal Weighing Function**, press **TARE** when display shows **Filt.0**
- f. After **TARE** is pressed, indicator display **F.9**
- g. Press **MODE** to enter next set up or **ON/ZERO** to restart the scale

#### 4.2.7 Select Auto Tare Function

This scale is equipped with auto tare function which tares off the initial weight automatically when this function is engaged. The tare weight is automatically cleared when everything is removed from platter.

- a. Scale is off
- b. Press and hold **TARE**, then press **ON/ZERO**
- c. Scale displays **F.1**
- d. Press **TARE** eight times
- e. Scale displays **F.9**
- f. Press **MODE** to select between Tr\_on or TroFF
  - To enable **Auto Tare Function**, press **TARE** when **Tr\_on** appears
  - To disable **Auto Tare Function**, press **TARE** when **TroFF** appears
- g. After **TARE** is pressed, scale display **F.1**
- h. Press **MODE** to enter next set up or **ON/ZERO** to restart the scale

## 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 **ON/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 between metric or avoirdupois weight units. The weight unit used before power off would be employed when the scale is turned on again.

**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.

**5.4 TURN BACKLIGHT (OPTIONAL) ON/OFF**

Follow the below steps to turn on and off backlight (if purchased).

- a. Scale is on
- b. Press and hold **ON/ZERO** until backlight is activated; or press **MODE** to shift between metric and avoirdupois weight to turn on and off 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 **ON/ZERO**, weight displayed will be set to zero and **ZERO INDICATOR** appears.

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

**NOTE:**

-When scale is set at OIML and application is legal for trade. User only needs to press **ON/ZERO** once when setting the value to zero. The re-zero function will take place when reading is stabilized

-When scale is set at Normal and application is not legal for trade. User can set the value to zero at anytime when pressing **ON/ZERO**

**5.6 TARE OFF THE WEIGHT OF A CONTAINER**

When a container is used, follow the below steps to manually tare off the weight of 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 **NET 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.

**NOTE:**

- When scale is set at OIML and application is legal for trade. User only needs to press **TARE** once when tare off a weight. The tare function will take place when reading is stabled
- When scale is set at Normal and application is not legal for trade. User can tare off the weight anytime when pressing **TARE**

**5.7 CLEAR THE TARE FUNCTION**

- a. Remove all loads from platter
- b. The tare effect will be cancelled:
  - Automatically if automatic tare function is employed, or
  - By pressing **TARE**
- c. After **TARE** is pressed, the **NET INDICATOR** would disappear

**5.8 EXTENDED DISPLAY**

This indicator is equipped with extended display for reference when it is operating under OIML mode. Press and hold **MODE** for 2 seconds and display will show the extended digit for 5 seconds before return to normal.

**5.9 RECHARGE SCALE**

The indicator is equipped with a built-in rechargeable battery. When the **LO-BAT INDICATOR** appears, recharge the scale immediately. Failure to do so may cause unrecoverable damage to the rechargeable battery. Charging is completed when the color of the **IN-CHARGE INDICATOR** turns green.



## 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 **NET 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** Display shows 00000 after counting down

**Check** Is the load applied to platter excess the rated capacity of scale?

**Action** Remove all loads from platter and try again.

**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: APPEARANCE

MODEL SHOWN: APF



CAPACITY STICKER:

AFW  Max 30kg Min 200g T=-0.99kg e=d=10g	
AFW  Max 60kg Min 400g T=-19.98kg e=d=20g	APF  Max 60kg Min 400g T=-19.98kg e=d=20g
AFW  Max 150kg Min 1kg T=-49.95kg e=d=50g	APF  Max 150kg Min 1kg T=-49.95kg e=d=50g
AFW  Max 300kg Min 2kg T=-99.9kg e=d=100g	APF  Max 300kg Min 2kg T=-99.9kg e=d=100g



# KONFORMITÄTSERKLÄRUNG

*Declaration of conformity*

*Declaration de conformite*

Die ichtselbsttatigen Waage



*The non-automatic weighing instrument*

L'instrument de pesage a fonctionnement non automatique

Hersteller: <i>Manufacturer:</i> Fabricant	Universal Weight Enterprise Co., Ltd.
Typ/Modell: <i>Type/Model:</i> Type/modele:	AFW/APF
Nr. der EG-Bauartzulassung (gegebenen falls): <i>No of the EC type-approval certificate (where applicable):</i> Nodu certificat d'approbation CE de type (le cas echeant):	T6126

entspricht dem in der Bescheinigung uber die Bauartzulassung beschriebenen Baumuster, sowie den Anforderungen der EG-Richtlinie 90/384/EWG in der jeweils geltenden Fassung und den Anforderungen folgender EG-Richtlinien:

*corresponds to the production model described in the EC type-approval certificate and to the requirements of the Council Directive 90/384/EEC as amended and to the requirements of the following EC directives:*

correspond au modele decrit dans le certificat d'approbation CE de type, aux exigences de la directive 90/384/CEE modifiee et aux exigences des directives CE suivantes:

\*Diese Erklarung gilt nur in Verbindung mit einer Konformitatsbescheinigung einer benannten Stelle.

*\*This Declaration of conformity is only valid with a certificate of conformity issued by a notified body*

\*Cette declaration est valide seulement avec une aattestation de conformite d'un organisme notlflle.

Anmerkung 1: Der mit \* gekennzeichnete Satz entfällt, wenn die nichtselbsttätige Waage vom Hersteller geeicht wurde.

*Note 1: The sentence marked with \* does not apply, if the non-automatic weighing instrument was verified by the manufacturer.*

Note 1: La phrase marquée avec \* ne s'applique pas au cas ou l'instrument de pesage a fonctionnement non automatique a eie vaifie par ie fabricant.

Unterschrift

*Signature*

Signature

Datum

*Date*

Date

Apr. 23. 2003