

# ***Sauter***

## ***Weighing Scale***

### ***Operation manual***



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**Introduction**

*This manual contains instructions for the use and maintenance of this model. Please, read it carefully before installing and using the scale.*

**1. Safety warnings**

- ☐ Disconnect from supply before installation or disassembly.
- ☐ Before start using it, check if the voltage in the characteristics label corresponds with the network you are going to connect it with. If not, do not connect the scale in the network
- ☐ Do not rest the scale over its plate or underplate because it can damage the load cell. To manipulate the low part (external platform connection, charger or to change battery) the scale should rest over its sides, but never over its plate.
- ☐ Do not hit the plate or underplate neither frontal nor on its sides, because the load cell could get damaged. It is a precision instrument, and it should be treated carefully.
- ☐ Before start using it, check the charger cable is not stucked or under pressure. It should be out from any pressure.
- ☐ The scale should only be used under proper environmental conditions indicated in this operation manual.
- ☐ Do not use this scale in places where there are unstable conditions or explosive danger.
- ☐ Do not place the scale near heat sources or under direct solar radiation influence
- ☐ Keep the scale far away from other electromagnetic radiation sources. Its influence could affect the weighting precision.
- ☐ When low-battery advertisement appears, the battery should be charged. If the battery remains discharged for a long time, it

deteriorates and could stop working.

- ☐ When changing battery, check if (+) and (-) terminals do connect to its corresponding terminals.

**IMPORTANT! In case of breakdown or inappropriate operation working due to an inadequate following of the instructions given before, the guarantee right will be lost.**

## **2. Features**



- ☐ Liquid glass display with backlight
- ☐ Cross keypad for intuitive menu use
- ☐ 4 weighting units.
- ☐ IP-67 protection against liquids and dust.
- ☐ Cell, supply and options hermetic connectors.

- ☐ 20 numeric tares memory
- ☐ 20 limit weights for +/- control memory.
- ☐ 100 products memory for piece counting.
- ☐ Checking function for Hi/OK/Low with optical and acoustic indication
- ☐ 220V/12V 800 mA Network adapter
- ☐ Automatic disconnection.

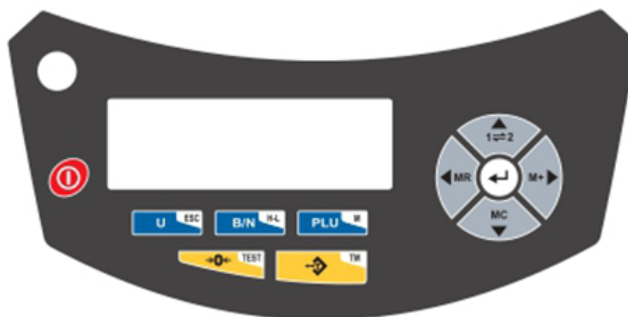
### **3. Options**

- ☐ Optional rechargeable battery.
- ☐ Double RS-232C data output ( PC and printer).
- ☐ External Tare input (pedal or button).

### **4. Product Package**

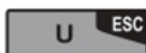
- ☐ 1 scale.
- ☐ 1 stainless steel plate.
- ☐ 1 220V/9V Network adapter.
- ☐ 1 Operation manual.
- ☐ Battery is not included, except if you order it.

### **5. Keypad and display description**



**Keypad:**

Turn on/off key. Press button to turn it on. To turn it off, press and hold the button for one second.



Change unit key. Press it to change unit. In menu mode, press it to escape from menu and return to normal mode.



Gross/Net key. When using tare mode, press it to show total weight, press it again and it will show net weight. To select "weight limit" mode, press and hold it for a few seconds.



PLU key. Press it to enter menu, it has access to limit memories, piece counting, tare mode and other utility functions.



Zero key. It adjusts scale to zero, correcting its deviations. Do it always when plate is empty. If you press it longer than a second, it shows display test.



Tare key. Press it to deduce the weight of any container or box placed over scale plate. Keep pressing to access tare memory.



MR and left arrow key. Press it to show accumulated total weight. In menu mode, confirm the selected adjust value, and return to previous menu.



M+ and right arrow key. Press it to save the value shown on the display. In menu mode, it shows the next function.



1-2 and up arrow key. Press it to change from scale plate to external plate (only for double platform function scales). In menu mode, it increases the value (number) on display.

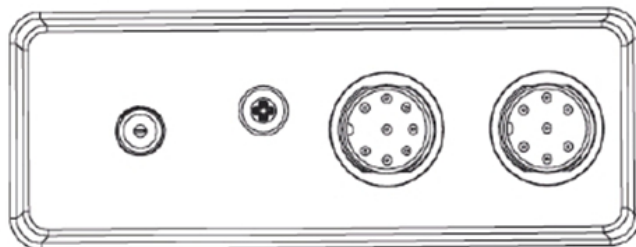


MC and down arrow key. Press it to erase accumulated weight memory. In menu mode, it decreases the value (number) on display.



Enter key. To confirm the selection done in programming mode.

## **6. Connections**



**AC/DC      RS-232    C2**

AC/DC:    Supply connector.

RS-232C: Double RS-232C data output RS-232C and tare (optional)

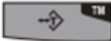
C2: External platform connector.

## **7. Basic function operation**

### **7.1 Zero adjust**

When scale plate is empty and it does not show zero value, press Zero key to correct it.

### **7.2 Tare function**

Place a container over the plate. Display will show tare value.  Press and it will show "0" value, deducting object weight. Now you can place other objects on the container, and display will show its net weight.

You can see the total value (gross weight) pressing  key. Press it again to return to net weight.



To cancel tare, remove all objects from the plate, and press . Display will show zero value.

Advice: If there is instability or temperature differences, display may not show 0 value. In this case, press  key to correct it.

Max tare range: Tare value cannot exceed the maximum scale capacity. The real scale capacity is the sum of maximum capacity minus the tare done.  
Real cap. = max cap. – tare.

### **TARE memory**

The scale has available 20 numeric tares. To memorize it, follow the

procedure below:

### **Memory programming**

- 1) Press  key. Display will show "PLUPro". Press  key several times till display shows "TLUPro".



- 2) Press  key. Display will show the memory used last time (for instance "TLU 01"). Last digits indicate the memory number.



Once memory position desired is selected, press  and display will show one number. To modify it and introduce a tare value, use  and  to select the desired digit. To go to right digit, press  to modify it use  and . To modify any digit on the left, press  till the desired digit sparks, then follow the same procedure explained before. To finish, press  key and tare will be saved. If we wish to keep saving tares, press again  and follow the same procedure. To finish, after confirming the last tare saved, display will show "TLUPro". Press  to escape to weighting mode.

### **TARE memory use**

In weighting mode, with empty plate, press  longer than a second till "TLU XX" is shown, where XX is the last digit of the TARE memory saved. To access to another memory position, press  and  to surf along the tare memories till you find the desired memory number.



To confirm, press . Display will show tare memory value with negative sign. Now you can place the object in the plate, and the tare value will be deducted from weighting value (shows net weight). You can operate with the object in the plate, then display indicate net weighting value.

### **7.3 Auto Tare**

This function allows tare function with recipient or box to be done automatically, without pressing  button. Display detects the first weight (recipient or box), then operates tare function (sets to 0), and gets ready to weight the product in the box or recipient. Afterwards, it sets to 0 and you can start again the same procedure repeatedly without pressing any button.

#### **Function activation**

To enable Auto Tare, follow this instructions:

1. Press  . Display will show "PLUPro". Press  several times, till display shows "AUT-t".
2. Press  . Display will show in the last position one digit, in accordance with the following meaning:  
0 – Unable function.  
1 – Enabled Function.
3. Press  to confirm. Press  to return to weighting mode



### **Function use**

1. Place the recipient or box over the plate. Scale will operate the tare function and display will show 0 and tare symbol will be on.
2. Place the object or objects inside the recipient or box. Display will show net weight, deducting the tare (recipient/box weight).
3. Remove all objects from the plate. Display will cancel tare and set to 0.
4. To weight again, repeat the same operation. You can use it indefinitely without pressing any button.

### **7.4 Current weighting**

Switch on the scale pressing  button.

Display will be on in a few seconds, afterwards it will show zero value.  
If there is any object in the plate, display will show the object weight, except from the case its weight is very low, then scale will start next zero following.



Press  to select desired weighting unit (default unit is "g or kg", depending on its configuration).

Place the object you desire to weight over the plate. Screen will indicate object weight value, it should be readen when  symbol is shown at the top left side on the display.



### 7.5 Accumulative weighting

This function adds up all weighting values accumulated, and shows its total value.

To use it, place the object you desire to weight, when display show stabilized weight value (stability symbol on), press  . Then, weight value adds to total.



Place another object, assure between new and previous object plate sets to 0 with stability symbol on.

Press again  and the second weight will be added to total.

You can weight several objects following this procedure.



To know accumulated sum value, press ◀MR and display will show total accumulated value.

You can check accumulated weight value when you desire, and keep on accumulating weight values. To erase memory, press MC ▼ and accumulated value will be deleted.

## 7.6 Piece counting function

The use of this mode is to count pieces of homogeneous weight. After doing a simple sampling, scale saves the piece weight, and indicate the number of pieces placed in the plate.

### Sampling

To do the sampling, when scale shows 0 and plate is empty, press and hold for longer than a second  button, till display shows "10" or other value flashing.

This value is the quantity of pieces you can place on the plate as sampling. If pieces are small, to increase the precision of counting it is recommended to place a number larger than 10. To do it, press ▲ $\frac{1}{2}$ 2, then increase the sampling value to 20, 30, 50 or 100. To decrease, press MC ▼.



Once desired value is selected, count the number of pieces indicated on the

display and press  . Display will stop flashing and will show sampling value.

### Counting



Place the pieces you desire to count (it should be the same unitary weight from the sampling) in the weighting plate. It can be counted inside a recipient, if tare has been done before (check Tare Use chapter)

Display will show the total quantity of pieces.

To return to Weight mode in the standard weight unit, press  .

If you desire to return to piece counting mode using the same unitary weight than last time, press  several times still display shows  symbol.

### **7.7 Piece Counting Preset**

When display on piece counting mode (  on) and the stability symbol on, press  .

Press  once, and display will show "CLUPro".

The two digits on the right are the 100 memory position available (from 00 to 99).

Use  and  to set the target value in the flashing digit, use  and  to set the other digit. Use  and  to set the desired memory position value, and confirm with  .



Display will show again "CLUPro". Press  to escape to counting mode.



To access to memory database and change one position, press and hold



. Scale will show "CLU XX", where XX is the memory position.



Use  and  to increase and decrease the flashing digit, use  and  to move the digit on the right or the left. When setting desired memory position, press  to confirm it. Scale from now will be programmed with the set piece counting memory.

We can start piece counting placing pieces on the counting plate or in a recipient if we use tare function.

### 7.8 Weight limit function (+/-)

This function is suitable to classify a list of products by weight, ruling out those that are under or over the desired min or max weight.

Scale shows a bar with negative left extreme, and positive right extreme, and in the center the accepted products.

This figure indicates if each product is in the desired range set. It uses a beep as acoustic signaling. We offer a relay card to connect external advice or control devices.

Scale has 20 memories available for this function.

### **7.9 Weight limit saving and reply mode.**

- 1) Press  . Scale will show "PLUPro". Press  to confirm, and display will show at right the function memory position number.



- 2) To access to desired memory position, use  and  to increase and decrease position number and set the desired one.
- 3) To confirm, press  .



- 4) Select nominal value, use  and  to increase and decrease position to find the desired one. Use  and  to move to right or left digit. Once you find the desired nominal value, press  to confirm.
- 5) Now we should introduce superior increase value for each display

segment. We do the selection using the previous procedure. To confirm, press .

- 6) Do the same operation for the lower increase, which normally is the same as the superior one, but in some cases could be different, then it should be introduced.

### **Advice mode selection**

Advice mode should be programmed for limit function. Scale indicates by a "BEEP" if weight is in or out the set limits. It can be programmed in two different ways:



1- Advice when weight is in the limits.

2- Advice when weight is out of set limits.

Use  and  to select the desired value, and use  to confirm.

### **Type of advice selection**

Advice mode could be either a continuous beep, or just a one time beep. To set it, use  and  to select the desired value, and to confirm press .



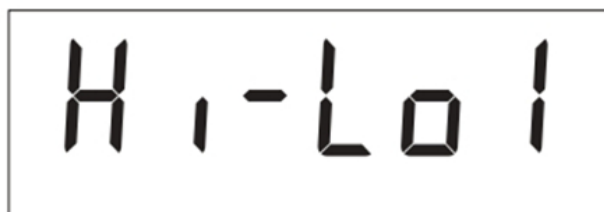
- 1- No sound.
- 2- One-time "BEEP"
- 3- One continuous "BEEEEEEP".

Press  to confirm introduced data, escape using .

Scale returns to normal use mode

### **Limit function activation(+/-)**

- 1) Press and hold  still it shows "Hi-Lo X", where "X" indicates if function is enabled or disabled.



- 2) To enable, use  and , select one out of the two following options.
  - 0- Limit function disabled.
  - 1- Limit function enabled.
- 2) Press  to confirm. Display will show "PLU XX" where "XX" is the memory position.
- 3) Select one of the positions, use  and  to

modify the flashing value, and also ◀MR and M+▶



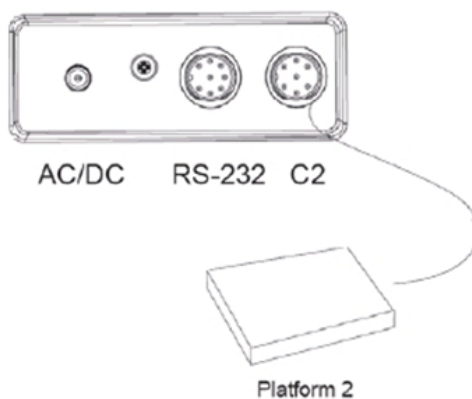
- 3) Confirm the selection with ↩, and press ◀MR to escape.
- 4) Place the object over the plate, and scale will show one part of the bar on, depending on its weighting value and weight limits saved, it will show (+) or (-) symbols. In case weighting is in the limits, it will show a central value in the bar on.



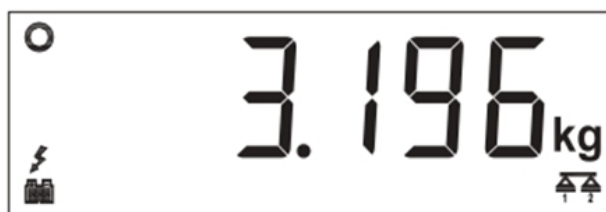
### 8 Second platform (double version platform)

Scale models which have external weighting platform let scale plate and another accessory external platform work at the same time.

External platform should be connected to scale C2 connector.



To change from scale plate to external platform 2, you should press  , also shown as changing platform symbol.



Place the object you desire to weight on the plate indicated on the pictograph at the right bottom part of the display. Scale will show the weight in that platform.

To see again the weight on the scale's plate, press again  .

## 9. Advanced functions

To access to function menu, press  , and display will show "PLUPro".

### 9.1 Backlight activation

After following the last instructions, press  several times, till display shows "bL-SET".



Press  to confirm and use  and  to select the desired option between the following ones:

No - Backlight always on.  
Off - Backlight always off.

Auto - Auto backlight, it turns off after scale stability symbol turns on for

5 seconds.



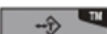
Press  to confirm function. To escape, press .

## 9.2 Auto Hold Mode Function

To access function menu, press , and display will show "PLU Pro".

Press  till display shows "Hold". Press  to confirm and display will show "Hold X". "X" is the saved option. To change it, press  or , according to the following values:



- 0- Inactive function.
- 1- Show top value (peak value)
- 2- Holds weighting value. Press  to unable.
- 3- Holds display weighting value till the object is removed.
- 4- Holds display value till another object is placed over the plate, indicating second object weight.

Press  to confirm function, and  to escape.

## 9.3 Auto Power off

To access function menu, press , display will show "PLUPro".

Press  till display shows "AUt-0". Confirm pressing

 . Display will show one digit at the right, according to the following table:

- 0- No automatic power off after 1 minute without use.
- 1- Automatic power off after 2 minutes without use.
- 2- Automatic power off after 3 minutes without use.
- 3- Automatic power off after 5 minutes without use.
- 4- Automatic power off after 10 minutes without use.
- 5- Automatic power off after 15 minutes without use.



To change it, press  or  .

Confirm pressing  .

To escape, press  .

#### 9.4 Stability Filter

In adverse environmental conditions, or when scale is used in instable weightings, you can increase the weighting stability with filters.

To access this function, press  and display will show "PLU XX". Press  till display shows "FiLTER". Press  to confirm, and display will show a digit on the right, in accordance with the following table:

- Filter 0- Originally programmed in Factory (Do not use if you do not know)
- Filter 1- Stable environments (fast response)
- Filter 2- Not really stable environments (medium response speed)
- Filter 3- Instable environments (low response speed)
- Filter 4- Very instable environments (slow response speed)
- Filter 5- Strongly instable environments (very slow response speed)
- Filter 6- Extremely instable environments (very slow response speed)

To change it, press   $\uparrow$  or   $\downarrow$  .

Confirm pressing  .

To escape, press  .

### 9.5 Sound activation

Keypad produces a sound when pressing keys. This sound can be disabled if you desire to. To disable, press  and then press  $M+$   till display shows "bEEP" on display.

Press  to confirm, use   $\downarrow$  to select the right digit in accordance with the following options:

- 0- Sound off
- 1- Sound on

### 9.6 AD converter verification function.

This function shows the value of Analogical/Digital converter to verify the proper working of the whole scale including weight cells.

It is useful for our Technical Assistants to do checkings and to identify eventual scale failures without having to send your scale to our Technical Assistant Department.

To see converter value, press  , afterwards press  till it shows "i count ". Press  to confirm, and display will show a 6 digit number which normally will be changing, not stable.

To escape this function, press  and then press  .

### 9.7 RS-232C data output configuration (optional)

Out of the two data outputs, one can be configured, and can be used to connect to a PC or other accessories.

To access configuration, press  and then press  till it shows "UArT".

Press  to confirm, it will show the following speed transmission data options:

001 – 1200 bauds  
002 – 2400 bauds  
004 – 4800 bauds  
009 – 9600 bauds  
019 – 19200 bauds  
038 – 38400 bauds  
057 – 56800 bauds  
058 – 115000 bauds

Use  and  , select the desired option, and confirm pressing  .

It will show "dbit 8" message. Is an option which cannot be modified and means that lenght is 8 bit. Confirm pressing  .

Afterwards, it will show "PAri 0", which is also an option which cannot be modified and means parity. Confirm pressing  and escape pressing

 .

**9.8 Print Format**

Printer data output can be configured with 5 different print formats, in accordance with the following versions:

**Format 1**

|           |          |
|-----------|----------|
| Tara:     | 0.000 kg |
| P.Netto:  | 0.500 kg |
| N.pesada: | #00010   |

**Format 2**

|           |          |
|-----------|----------|
| P.Bruto:  | 0.500 kg |
| Tara:     | 0.000 kg |
| P.Netto:  | 0.500 kg |
| N.pesada: | #00011   |

Format 3

|             |          |
|-------------|----------|
| Cantidad:   | 65 u     |
| P.Neto:     | 0.500 kg |
| P.Bruto:    | 0.500 kg |
| Tara:       | 0.000 kg |
| P.unitario: | 0.008 kg |
| N.pesada:   | #00012   |

Format 4

|             |          |
|-------------|----------|
| Cantidad:   | 65 u     |
| P.Neto:     | 0.500 kg |
| P.Bruto:    | 0.500 kg |
| P.unitario: | 0.008 kg |
| N.pesada:   | #00013   |

Format 5

|                |            |
|----------------|------------|
| Desviacion:    | - 0.500 kg |
| Peso standard: | 0.500 kg   |
| Limite de peso | 1.000 kg   |
| N.pesada:      | #00014     |

To select the desired format, with the scale in weighting mode, press "PLU". It will show "PLUPro". Press **M+▶** till display indicates "PrnFrn".

Press **↵** to modify print format, from 1 to 5, in accordance with the shown models. To use one of them, select the number with **▲<sub>1⇌2</sub>** and **MC** **▼** keys.

Press **↵** to confirm function. Display will show "LFn" followed with two digits. Its function is to select the number of empty lines you desire to print after data block. If you set the value to 1 or 0, printer will not let empty space between data blocks, if you set a high value (10), printer will let 10 empty lines after printing.

Select the desired value using **▲<sub>1⇌2</sub>** and **MC** **▼** and arrows **M+▶** or **◀MR** to modify the next digit. Confirm the final value with **↵**.

Display will show "Lan" message followed by a number, which is the print language. This digit has to be set according to the following table:

- |   |         |
|---|---------|
| 0 | English |
| 1 | Spanish |
| 2 | French  |
| 3 | German  |

Press **▲<sub>1⇌2</sub>** and **MC** **▼** to select the desired language, to save it press **↵**.

Display will show "COM" message followed by a number, in accordance with the following description:

- |       |                                          |
|-------|------------------------------------------|
| COM 0 | TTL Series Printer Output (internal use) |
| COM 1 | RS-232C Printer Output (LP-3 model)      |

Use  and  to select the desired option, press  to confirm.

Normally the set value will be option 1 to use our printer LP-3 model or compatible.

Press  to escape from menu.

In weighting mode, press , scale will send weighting value in the print format indicated.

In the weighting format, it is numbered from #00001" value to #99999#. To set it to zero, press  in weighting mode.

Important: Data output to print is compatible with our LP-3 . If you use another type of printer, we cannot guarantee its appropriate working.