

# USER MANUAL

## BENCH SCALE



**APD-1: Bench scale with weight indicator which can be mounted attached to the platform or can be mobile.**



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## 1. INTRODUCTION

The purpose of this manual is to help the user get to know the scale's various functioning modes, the keys' functions and the display indications. It is possible that one may incur into the phrase "TECH.MAN.REF.": this means that an advanced function is being described (therefore, for the technical personnel) and which is further explained in the corresponding technical manual.

**We advise to carefully follow the instructions for programming the scale; by taking actions not indicated in this manual, one could cause the scale to not work properly.**

In addition to having all the characteristics of a high precision scale, the instrument has the unit of measure / pounds conversion function and the weighs totaliser.

The scale adapts itself to normal weighing applications in either industrial settings, such as during factory production processes, or that of commerce, such as legal for trade applications.

**This manual has been made as carefully and exactly as possible; in any case, your suggestions are always welcome.**



Any attempt to repair or alter the unit can expose the user to the danger of electric shock and it will void our warranty. This instrument is covered under warranty provided that **IT HAS NOT BEEN OPENED BY THE USER** for any reason. If any problem with the unit or system has been experienced please notify the manufacturer or the dealer from which the instrument was acquired.

**The 6V rechargeable battery has to be completely recharged (12 hours) in the first installation of the instrument; we RECOMMEND disconnecting the battery if the instrument is not going to be used for more than 30 days.**

**In order to avoid the deterioration of the rechargeable battery:**

**In standard conditions:**

**- never leave the battery partially or completely uncharged; at least once a week recharge it completely.**

**In case the instrument is not used for a long period, one needs to:**

**- completely recharge the battery before the system is switched off for the last time;**

**- recharge completely every 3 months.**

**Do not pour liquids on the indicator!**

**Do not use solvents to clean the indicator!**

**Do not expose instrument to either direct sun light or any heat sources!**

**Always mount the indicator and platform in a vibration free setting!**

**Read carefully & apply what described in the POWER SUPPLY AND START-UP section!**

**Do not install in an environment with any risk of explosion!**

**All the connections of the instrument have to be made respecting the rules applicable in the zone and in the installing environment.**

**Everything not expressly described in this manual has to be considered as improper use of the equipment.**



The crossed-out wheeled bin on the product means that at the product end of life, it must be taken to separate collection or to the reseller when a new equivalent type of equipment is purchased. The adequate differentiated refuse collection in having the product recycled, helps to avoid possible negative effects on the environment and health and supports the recycling of the materials of which the equipment is made. The unlawful disposal of the product by the user will entail fines foreseen by the

current regulations.

## 2. MAIN TECHNICAL SPECIFICATIONS

POWER SUPPLY	6Vdc trough 110-240 Vac 50-60Hz adapter or rechargeable battery (6V – 4,5 Ah). NOTE: recharge the battery using only the adapter provided.
MAXIMUM POWER	5 VA
OPERATING TEMPERATURE	From -10 to +40 °C (14 to 104 °F) (with even temperature).
DISPLAYED DIVISIONS	10000e, 3X3000e for legal for trade use expandable to 800.000 for internal use (with <b>minimum</b> signal coming from the 1,6mV/V cell).
MAXIMUM INPUT SIGNAL	6 mV/V.
MINIMUM VOLTAGE PER DIVISION	0.3 $\mu$ V (approved instrument); 0.03 $\mu$ V (non approved instrument).
RESOLUTION IN CALCULATION	1'500'000 points (with signal in input equal to 3mV/V).
KEYBOARD	Water resistant polycarbonate mechanic keys with tactile and acoustic feedback.
PROTECTIVE CASE OF THE INDICATOR	ABS console (IP 65 protection)
BODY OF THE SCALE AND WEIGHING PLATE	Stainless steel.
TARE FUNCTION	Available on the entire capacity.
AUTO POWER OFF	Programmable from 1 to 255 minutes, or disinserted.
LOW BATTERY WARNING	“Low Batt “ will appear on the display.
BATTERY RECHARGE TIME	12 hours.
LOAD CELL POWER SUPPLY	5Vdc $\pm$ 5%, 120mA (max 8 cells of 350 Ohms)
LOAD CELL CONNECTIONS	6 wires (CELL1) with Remote Sense, 4 wires (CELL 2, 3, 4) without Remote Sense.

**THE PARTS OF THE INSTRUMENT CONTAINING DANGEROUS ELECTRICAL TENSION ARE ISOLATED AND INACCESSIBLE TO THE USER UNLESS IT HAS BEEN DAMAGED, OPENED, OR ALTERED.**

## 3. SYMBOLS

To call the attention of the user, the following symbols are used both in the manual and on the instrument itself:



WARNING! This operation must be performed only by qualified personal.



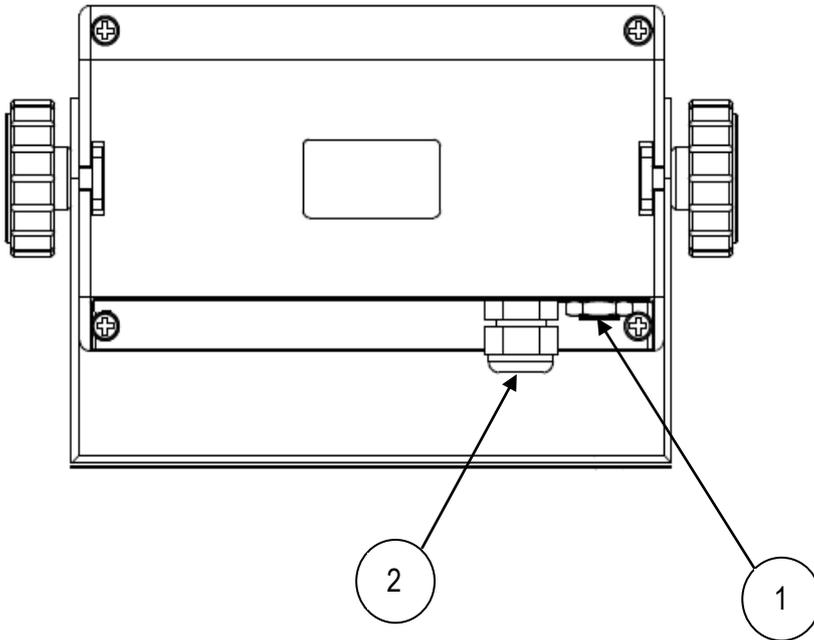
Conforms to the standards of the European Union.



Identifies the Class Of Precision defined by the OIML to represent 3000 divisions.

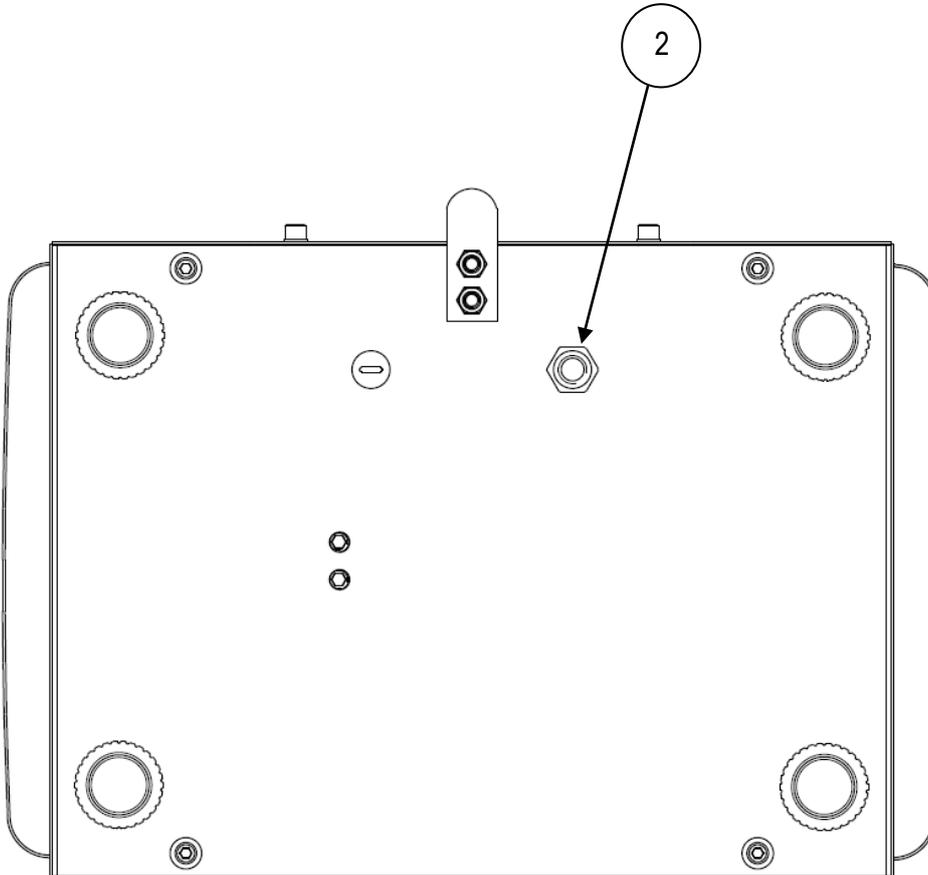
“**TECH.MAN.REF.**” means that an advanced function is being described (therefore for the technical personnel) which will be further explained in the corresponding technical manual.

## 4. INSTALLATION

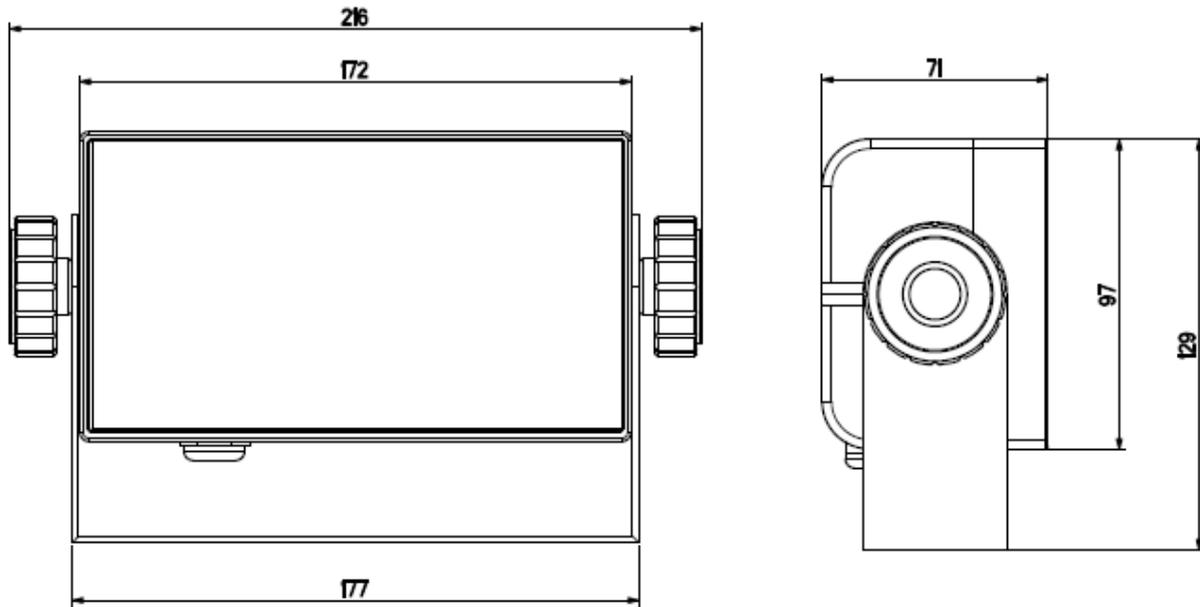


1) Input for the external power supply.

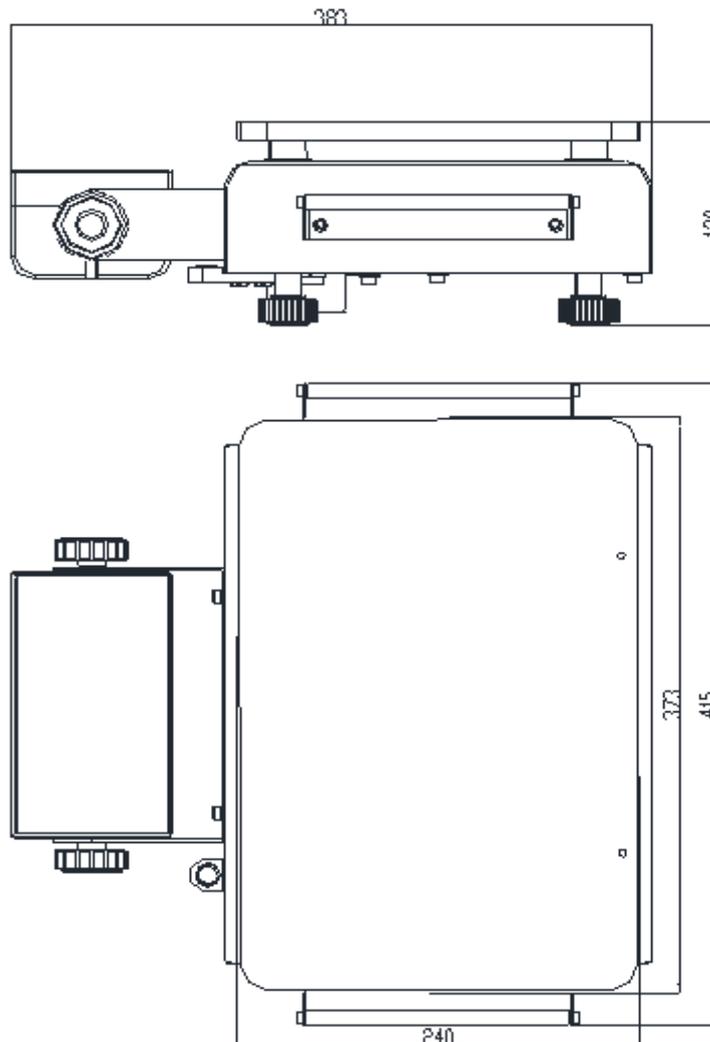
2) Input for the cable of the cell and battery power supply.



The digital weight indicator has an ABS case whose external dimensions are represented in figures. The indicator can be mounted attached to the platform or it can be installed in any desired position.



In the following figures, the dimensions of the scale and the plate are shown:



## 5. POWER SUPPLY AND START UP

### 5.1 POWER SUPPLY

The instrument can be powered with a 6 Vdc tension supplied from an AC/DC external adapter which should be connected to the 110-240 Vac mains voltage. Safety norms must be respected for the connection to the mains voltage including the use of a line which has to be free from noise generated by other electronic equipment.

It is also possible to power the scale through the rechargeable built-in battery.

#### 6V RECHARGEABLE BATTERY FEATURES

Material Lead

Power 4,5 Ah

Output 6 V

**THE BATTERY MUST ONLY BE REPLACED WITH AN ORIGINAL FROM THE MANUFACTURER.**

In order **TO POWER** the instrument through the 110-240Vac mains or **TO RECHARGE** the 6V battery, insert the plug end of the AC/DC power adapter into the socket in the lower part of the indicator (chapter "INSTALLATION") and the adapter in your main current source.

**Do not connect other equipment to the same socket as the one that the adapter is in.**

**Do not step on or crush the power supply cable.**

### 5.2 TURNING ON / OFF THE INSTRUMENT

**TO TURN ON** the scale press the **MODE/C** key until the indicator turns on; then release.

The display shows:

**XX.YY** is the installed software version.

The instrument turns on all the display segments and symbols.

**MAX XXX.XXX** capacity of channel 1

**bt XXX** in which XXX is a number from 0 to 100 which indicates the battery level (if present).

The scale has an "auto zero at start-up" function: in other words it means that if at start-up a weight within +/- 10% of the capacity is detected, it will be zeroed; if the weight is not within this tolerance, with a non approved instrument the display shows the present weight after a few instants, while with an approved instrument "ZEro" is shown continuously on the display, until the weight does not re-enter within this tolerance; the auto zero function at start-up may be disabled in the set-up environment (only with non approved instrument); see **SEtuP >> ConFiG >> PArAM >> Auto-0** parameter (**TECH.MAN.REF.**).

By pressing the **ZERO** key for an instant while the version is shown in the display, the indicator will show the following in this order:

**XX.YY** in which XX indicates the instrument type, YY indicates the metrological software version.

**XX.YY.ZZ** is the installed software version.

**APd** is the name of the installed software.

**bt XXX** in which XXX is a number from 0 to 100 which indicates the battery level (if present).

**-K- X.YY** in which K identifies the type of keyboard: K=0 5-key keyboard.

X.YY is the installed software version.

After this, it shows the programmed capacity and the minimum division, "hi rES" (in case of NOT approved instrument) or "LEGAL" (in case of approved instrument), the g gravity value, and finally it executes a countdown (self-check).

**TO RESTART** the scale keep the **MODE/C** key pressed for 8 seconds long: the indicator will turn off, then release the key and the indicator will automatically turn on.

**TO TURN OFF** the scale keep the **MODE/C** key pressed until the "- OFF-" message appears on the display; then release the key.

## 6. FRONT PANEL KEYS AND INDICATORS

The front panel of the indicator is designed for quick but simple weighing applications. It consists of a display with 6 digits, 25 mm in height and a 5 keys water-proof film keyboard.

While weighing various multifunction symbols indicating the functioning status will turn on (see the section "SYMBOLS ON THE DISPLAY").

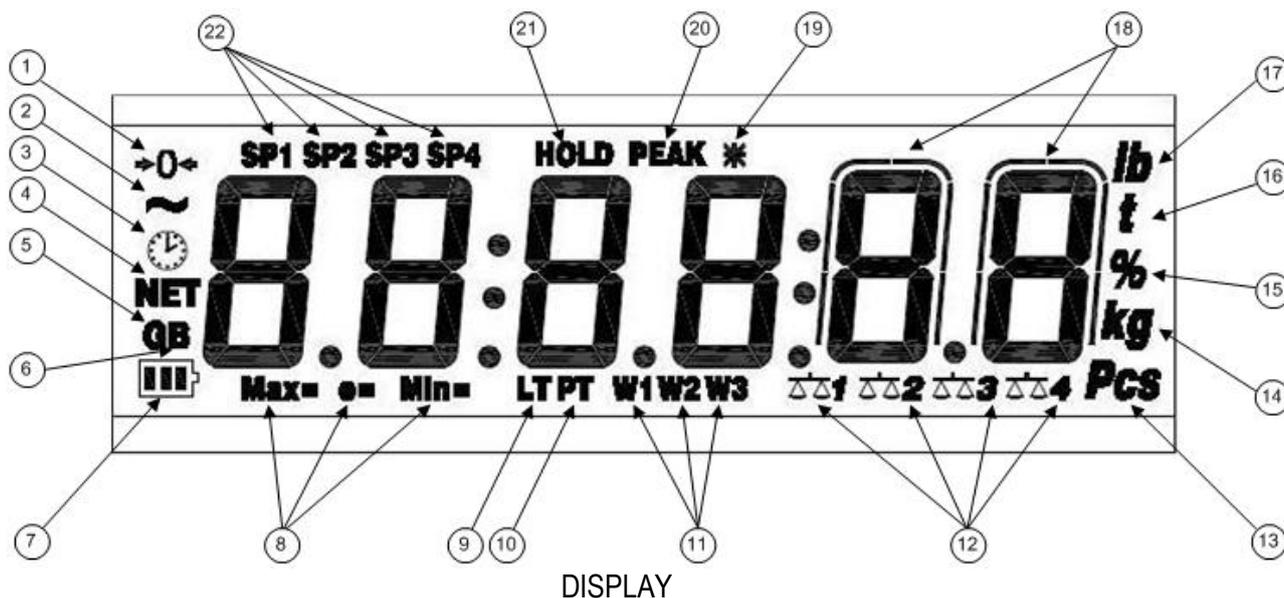


SCALE KEY	FUNCTION
ZERO	<ul style="list-style-type: none"> <li>- Zeroes the displayed gross weight, if it is within +/- 2% of the total capacity.</li> <li>- Cancels the value of the tare if the scale is unloaded.</li> <li>- When entering numbers it decreases the digit to be modified.</li> </ul>
TARE	<ul style="list-style-type: none"> <li>- If pressed for an instant it carries out the semiautomatic tare.</li> <li>- If pressed at length it allows entering the manual tare from keyboard.</li> <li>- Cancels the value of the tare if the scale is unloaded.</li> <li>- In the numeric input phase it increases the digit to be modified.</li> </ul>
M+	<ul style="list-style-type: none"> <li>- It carries out the totalization if the conditions for this operation are satisfied.</li> <li>- In the numeric input phase it selects the digit to be modified, from left to right.</li> </ul>
MR	<ul style="list-style-type: none"> <li>- If pressed for an instant, it carries out the display of the number of totalizations and the present total.</li> <li>- In the numeric input phase, it confirms the entry made.</li> <li>- In the SET-UP, it allows to enter a step or to confirm a parameter within a step.</li> </ul>
MODE/C	<ul style="list-style-type: none"> <li>- It turns the scale on and off.</li> <li>- If pressed during the display of the number of totalizations and present total, it clears the total.</li> <li>- In the numeric input phase, it quickly zeros the present value.</li> <li>- In the SET-UP, it allows to exit a step without confirming the change made.</li> <li>- Allows viewing the scale's metric information: capacity, division, minimum weigh for each configured range.</li> </ul>

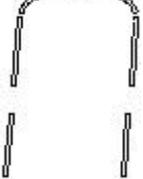
<b>Mc</b>	- Memory clear function: by pressing the MR and MODE/C keys in rapid succession the total is cleared.
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## 7. SYMBOLS ON THE DISPLAY

The display has symbols which show the scale's functioning status; you will find the description for each symbol below.



NUMBER	SYMBOL	FUNCTION
(1)	→0←	The weight detected on the weighing system is near zero, within the interval of $-1/4 \div +1/4$ of the division.
(2)	~	The weight is unstable.
(3)		Not managed.
(4)	NET	The displayed weight is a net weight.
(5)	G	The displayed value is a gross weight, if the Italian or English language is selected.
(6)	B	The displayed value is a gross weight, if the German, French or Spanish language is selected.
(7)		Indicates the battery charge level: see the section "LOW BATTERY WARNING".
(8)	MAX= MIN= e=	When viewing the metric information, it identifies the indicated capacity range. When viewing the metric information, it identifies the indicated minimum weigh range. When viewing the metric information, it identifies the indicated division range.
(9)	LT	The locked tare is enabled.
(10)	PT	The manual tare is active.
(11)	W1 W2 W3	The instrument is in the first weighing range. The instrument is in the second weighing range. The instrument is in the third weighing range.
(12)		Scale nr. 1 is always shown.

(13)	<b>PCS</b>	Not used.
(14)	<b>kg</b>	Indicates the unit of measure in use ("kg" for kilogram, "g" gram).
(15)	<b>%</b>	Not used.
(16)	<b>t</b>	Indicates the unit of measure in use (tons).
(17)	<b>LB</b>	Indicates the unit of measure in use (pounds).
(18)		Not managed.
(19)	<b>*</b>	Indicates that a key has been pressed.
(20)	<b>PEAK</b>	Not used.
(21)	<b>HOLD</b>	Not used.
(22)	<b>SP1</b>	Not used.
	<b>SP2</b>	Not used.
	<b>SP3</b>	Not used.
	<b>SP4</b>	Not used.

## 8. BASIC FUNCTIONS

### 8.1 ZERO SCALE

By pressing the ZERO key, it is possible to zero a gross weight value which is within +/- 2% of the capacity; after the zeroing, the display shows 0 weight and the relative pilot lights are turned on.

### 8.2 TARE OPERATIONS

#### AUTOMATIC TARE

By loading any weight on the scale, the corresponding value is acquired as tare.

**NOTE:** The automatic tare will be acquired only if the weight is AT LEAST A DIVISION, STABLE (instability ~ led off) and VALID (in other words, the OVERLOAD condition must not be created).

#### SEMI-AUTOMATIC TARE

By pressing the TARE key any weight value present on the display is tared: the display shows "tArE" for an instant and then 0 (net weight); the pilot lights turn on.

**NOTE:** The semiautomatic tare will be acquired only if the weight is AT LEAST A DIVISION, STABLE (instability ~ led off) and VALID (in other words, the OVERLOAD condition must not be created).

#### ENTERING THE MANUAL TARE FROM KEYBOARD

Press TARE for a few seconds: the display shows "- tM -" and then "000000". Enter the desired value using the following keys:

**ZERO** decreases the blinking digit.

**TARE** increases the blinking digit.

**M+** selects the digit to be modified (blinking); the scrolling of the digits takes place from left to right.

**MODE/C** if pressed for an instant it quickly zeros the present value; if pressed at length it allows to return to weighing without saving the changes made.

Confirm with the MR key; the value will be subtracted from the weight present on the plate and the relative pilot lights will turn on.

**NOTE:** If the entered value is not a multiple of the scale's minimum division, it will be rounded off.

#### CANCELLING A TARE

One can manually cancel the tare value in different ways:

- unload the scale and press the TARE or ZERO key.
- carry out the tares in deduction, partially unloading the scale and pressing TARE to zero the display.
- enter a manual tare equal to 0.

**NOTE:** it is possible to automatically cancel the tare value; see the following section.

#### LOCKED/UNLOCKED/AUTO/DISABLED TARE SELECTION

Normally, when a tare value is entered (semi-automatic or manual), by unloading the scale plate, the display shows the tare value with a negative sign (LOCKED TARE). For one's convenience it is also possible to choose that the tare value cancels itself automatically each time that the scale is unloaded (UNLOCKED TARE or AUTO TARE), or disable the tare functions.

With the UNLOCKED tare:

**In case of SEMIAUTOMATIC TARE the net weight, before unloading the scale, may also be 0.**

**In case of MANUAL TARE the net weight before unloading the scale must be greater than 2 divisions and stable.**

To set the type of tare:

- Turn on the scale, press the TARE while the firmware version is displayed (the display shows the "F.ModE" menu).
- Press MR to enter the menu.
- Press ZERO many times (to scroll ahead through the parameters) or TARE (to scroll backwards) until one finds the "tArE" parameter.
- Press MR to enter the parameter.
- With the ZERO or TARE keys select the possible options: "LoCK" (locked tare), "unLoCK" (unlocked tare), "Auto" (automatic tare), "diSAb" (disabled tare).

- Confirm with MR.
- Press the MODE/C key many times until the display shows the message "SAVE?".
- Press MR to confirm the changes made or another key for not saving.

The instrument stores the last selection made, also after it is turned off.

### 8.3 LIMITATION OF THE TARE FUNCTIONS FOR DIRECT SALE

With approved instrument, it is possible to limit the tare functions, by setting "yES" in the step **SEtuP >> d.SALE (TECH.MAN.REF.)**. In this case, all the tare operations will be disabled.

With approved instrument, the **d.SALE** step is read-only.

### 8.4 AUTO POWER OFF FUNCTION

It is possible to automatically turn off the scale (from 1 to 255 minutes), or disable it; the auto power off takes place when, **with unloaded scale**, the weight has not been moved or a key has not been pressed for the time set: the display shows the "- OFF -" blinking message and an acoustic signal is emitted; after this the scale turns off.

For the setting, follow the procedures below:

- Turn on the scale, press TARE while the firmware version is displayed (the display shows the "F.ModE" menu).
- Press MR to enter the menu.
- Press ZERO many times (to scroll ahead through the parameters) or TARE (to scroll backwards) until one finds the "En.SAVE" parameter.
- Press MR to enter the menu
- Press ZERO many times (to scroll ahead through the parameters) or TARE (to scroll backwards) until one finds the "AutoFF" parameter.
- Press MR to enter the parameter.
- With the ZERO or TARE keys select the possible options: "diSAb" (auto switch-off disabled), "EnAb" (auto switch-off enabled).
- Confirm with MR; if "EnAb" has been selected, one will be asked to enter the number of minutes after which the scale should turn off: enter a number between 1 and 255 (using the M+ key to select the digit to be modified and ZERO/TARE to decrease/increase it) and confirm with MR.
- Press many times the MODE/C key until the display shows "SAVE?".
- Press MR to confirm the changes made or another key for not saving.

### 8.5 LOW BATTERY WARNING

One should set the supply mode by setting the step **SEtuP >> ALiM**.

The charge level is shown in the weighing phase by the battery symbol:

-  : battery is charged.
-  : battery is partially charged.
-  : battery is discharged: connect the scale to the mains for recharge the battery or replace it.

Furthermore, for a few seconds the "Low.bat" message appears on the display (minimum level voltage).

When recharging the battery, the display shows the recharging phase below:

**RECHARGING PHASE:**  →  →  →  →  ...

**RECHARGE IS COMPLETED:** 

#### NOTES:

- While recharging, the instrument can be used as usual.
- The instrument automatically turns off when the voltage goes below the minimum level.
- It's possible to view the recharge percentile of the battery by pressing the **ZERO** key upon start-up (see the section "POWER SUPPLY AND START-UP").

## 8.6 MULTI RANGE FUNCTIONING (for legal for trade approved instruments)

The multi range functioning allows to subdivide the scale capacity in two or three ranges, each which is up to 3000 divisions, improving in this way the first range division in the dual range and the first two ranges in the triple range.

For example, with a 30 kg cell platform it is possible to approve the weighing system with:

- A single range: 6 kg capacity and 2 g division (3000 div.).
- Dual range: 6 / 3 kg capacity and 2/1 g division (3000 + 3000 div.).
- Triple range: 15 / 6 / 3 kg capacity and 5/2/1 g division (3000 + 3000 + 3000 div.).

### NOTES:

- For the approval of the weighing system in dual and triple range the cell must have better technical features in comparison to the cell used for the approval in a single range.

The multirange functioning is shown by the turning on of the relative symbol on the display which identifies the range in which one is operating; by passing to the second range, the second range division is enabled; by passing to the third range, the third range division is enabled. At this point the first range division is restored **only by passing by the gross zero of the scale**.

- The selection of the range number with multirange functioning is made during the scale's calibration (**TECH.MAN.REF.**).

## 8.7 CONVERSION OF THE UNIT OF MEASURE

It is possible to execute the weight conversion from the unit of measure of the scale to pounds and vice versa, by pressing the MODE/C key.

To enable or disable this function, follow the procedure below:

- Turn on the scale, press the TARE key while the firmware version is displayed (the display shows the "F.ModE" step).
- Press MR to enter the step.
- Press ZERO many times (to scroll forwards through the parameters) or TARE (to scroll backwards) until one finds the "un.ConV" step.
- Press MR to enter the parameter.
- With the ZERO or TARE keys select the possible options: "diSAbL" (disables the unit conversion), "EnAbLE" (enables the unit conversion).
- Confirm with MR.
- Press the MODE/C key many times until the message "SAVE?" is shown on the display.
- Press MR to confirm the changes made or another key to not save.

### NOTES:

- The present total will be cleared when the conversion takes place.
- The conversion causes the state of instability of the weight.
- The conversion can take place for any unit of measure set during the calibration.
- With approved instrument the weight in pounds is displayed for 5 seconds, after which the display returns to the scale unit of measure.

## 8.8 DISPLAY OF METRIC DATA (inFO)

The scale is fitted with a function named "INFO", thanks to which it is possible to view the configuration metric data:

- Keep the MODE/C key pressed until the display shows "inFo", and release.
- The capacity value of the first range will appear.
- Press the ZERO key to scroll the following data, in this order:  
Capacity 1° range ⇒ Minimum weigh 1° range ⇒ Division 1° range ⇒  
Capacity 2° range ⇒ Minimum weigh 2° range ⇒ Division 2° range ⇒  
Capacity 3° range ⇒ Minimum weigh 3° range ⇒ Division 3° range ⇒  
Capacity 1° range ⇒.....
- Press the TARE key to scroll backwards the metric data.
- Press the MODE/C key to return to weighing.

### NOTES:

- The minimum weigh corresponds to 20 net weight divisions.
- The data of the second and third range appear only if actually configured.

## 9. TOTALISATION

Inside the **F.ModE >> totAL** step of the setup environment it is possible to set the parameters for the function of totalisation:

### **tot.Mod:** TYPE OF TOTALIZATION

It is possible to select the type of totalisation: manual (MAnuAL) or automatic (Auto).

### **n.WEiGh:** NUMBER OF WEIGHS

If one sets this parameter as "yES", for each operation of totalisation the number of weighs and the total weight are displayed. If the total weight has more than 6 digits, its visualisation takes place in two stages.

If one sets the parameter as "no", for each operation of totalisation only the "-tot-" message is displayed.

### **Wai.St:** WAIT STABILITY

Once one has set the wait stability time with a value different from 0, each operation of totalisation will be executed only if the weight is in stability. When the weight is not stable and **M+** key is pressed, the unstable weight is displayed blinking and one is not allowed to press any key; the totalisation will remain pending. If the wait stability time is expired and the weight is not stable, the present accumulation will be aborted with the display of the "unStAb" message and error beeping.

If one sets this parameter with the value 255, the waiting stability time is infinite on each accumulation.

Once one has set the wait stability time at 0, if one press the **M+** key and the weight is not in stability, the operation of totalisation is instantly aborted with the display of the "unStAb" message and error beeping.

**NOTE:** This parameter takes effect only if the manual totalisation has been set.

### **MAx.tot:** NUMBER OF CONSECUTIVE TOTALISATIONS AFTER WHICH THE TOTAL IS AUTOMATICALLY CLEARED

After having carried out the number of totalisations set in this step, the accumulated total is shown on the display and cleared; one can set a value between 0 and 255.

**NOTE:** the value 0 disables the function.

## 9.1 OPERATIONS OF TOTALISATION

This scale allows to totalize the weight in load and unload.

### **Totalisation in load:**

If the manual totalisation has been set, in order to carry out the totalisation it is necessary to load the weight on the scale and press the **M+** key; then the weight is accumulated in the total.

If the automatic totalisation has been set, there is the automatic acquisition of the stable weight loaded on the scale and then the accumulation of the weight in the total.

To totalize, the net weight must be:

- at least 1 division with not approved instrument and manual totalisation;
- at least 10 divisions with not approved instrument and automatic totalisation;
- at least 20 divisions with approved instrument.

### **Totalisation in unload:**

If a tare is active, one can totalize also negative values of weight: after having executed the tare, by removing part of the weight from the scale, the negative value of the unloaded weight is displayed and it is possible to totalize this value. The totalisation is executed by pressing the **M+** key if the manual totalisation has been set or automatically when the weight is stable if the automatic totalisation has been selected.

To totalize, the negative net weight must be:

- at least 1 division with not approved instrument and manual totalisation;
- at least 10 divisions with not approved instrument and automatic totalisation;
- at least 1 division with approved instrument and manual totalisation;
- at least 20 divisions with approved instrument and automatic totalisation.

**Note:** to totalize the negative net weight, with not approved instrument the gross weight must be greater than or equal to zero; with approved instrument the gross weight must be at least 20 divisions.

## 9.2 REACTIVATION OF THE TOTALISATION

To avoid undesired totalisations, the **M+** key is active just once; its reactivation depends on the setting of the "rEACt" parameter (**TECH.MAN.REF.**) in the setup environment. It can be reactivated after the passing of the weight by the zero of the scale, by instability of the weight or always.

If the reactivation on instability has been set, the totalisation is reactivated by instability of the weight with manual totalisation or by instability and change in weight of 10 or 20 divisions (respectively with not approved or approved instrument) with automatic totalisation.

By pressing the **M+** key again, **without having reenabled the totalisation**, the "no.0.unS" error message is displayed and an acoustic signal is emitted.

### NOTES:

- If the gross or net weight in absolute value is less than the requested minimum weight, by pressing the **M+** key the display shows the "LoW" error message.
- If the scale is in the under load or over load status, by pressing the **M+** key the display shows the "un.oVEr" error message.

## 9.3 VISUALIZATION OF THE TOTAL

By pressing the MR key one can temporarily view on the display the number of weighs and the net weight total. If the total weight has more than 6 digits, the visualisation of this value takes place in two stages.

## 9.4 ZEROING OF THE TOTAL

The instrument increases the total weight upon each totalisation; it can be cleared in the following modes:

- by executing the **Mc** (memory clear) function: press in rapid succession the MR and MODE keys (the "tot.Clr" message is displayed);
- by executing the conversion of the unit of measure;
- by turning off the instrument;
- automatically after having carried out the number of totalisations set in the <<**MAX.tot**>> step.

## 10. INSTRUMENT MESSAGES WHILE IN USE

MESSAGE	DESCRIPTION
<b>ZEr0</b>	The scale is zeroing the weight.
<b>unStAb</b>	One is trying to totalize with an unstable weight.
<b>un.oVEr</b>	One is trying to totalize with the weight in underload or in overload, in other words, with a weight of 9 divisions greater than the capacity or of 100 divisions below the gross zero.
<b>LoW</b>	Weight less than the minimum weight provided for the totalisation or the transmission of the string, standard or extended, upon pressing of the print key.
<b>no.0.unS</b>	Weight not passed by net 0 or by instability.
<b>ErMot</b>	Unstable weight during the calibration.
<b>PrEC.</b>	It is displayed if one tries to calibrate the zero point without first having confirmed the number of calibration points.
<b>ErPnt</b>	During the acquisition of a calibration point a null value has been read by the converter.
<b>Er – 11</b>	Calibration error: a too small sample weight has been used; it is advisable to use a weight equal to at least half of the scale capacity.
<b>Er – 12</b>	Calibration error: the acquired calibration point (tP1 o tP2 o tP3) is equal to the zero point (tP0).
<b>Er – 37</b>	The number of converter points per scale division is less than two. Carry out again the calibration with special attention to the capacity and the division.
<b>Er – 39</b>	It is displayed when the instrument has not yet been calibrated and initialized. Press the <b>TARE</b> key when the instrument displays “Er – 39” to enter the technical set-up environment. Carry out the initialization of the indicator (“dEFAu” parameter) and finally the programming of all the parameters of the set-up environment and the calibration.
<b>Er – 85</b>	It is displayed when the instrument has been initialized but not yet been calibrated. Press the <b>TARE</b> key when the instrument displays “Er – 85” to enter the technical set-up environment and carry out the calibration.
<b>C.Er. – 36</b>	During the calibration some internal negative points have been calculated: - the calibration point is less than the zero point. - the signal is negative (check the connections)
<b>undEr</b> (blinking)	The weight in underload (i.e. a weight of 100 divisions below the gross zero, if the instrument is approved) is notified through this message and by an acoustic signal.
<b>oVEr</b> (blinking)	The weight in overload (i.e. a weight of 9 divisions greater than the capacity) is notified through this message and by an acoustic signal.

## DECLARATION OF CONFORMITY

This device conforms to the essential standards and norms relative to the applicable European regulations. The Declaration of Conformity is available in the web site [www.diniargeo.com](http://www.diniargeo.com)

## WARRANTY

The TWO YEARS warranty period begins on the day the instrument is delivered. It includes spare parts and labour repair at no charge if the INSTRUMENT IS RETURNED prepaid to the DEALER'S PLACE OF BUSINESS. Warranty covers all defects NOT attributable to the Customer (such as improper use) and NOT caused during transport.

If on site service is requested (or necessary), for any reason, where the instrument is used, the Customer will pay for all of the service technician's costs: travel time and expenses plus room and board (if any).

The Customer pays for the transport costs (both ways), if the instrument is shipped to DEALER or manufacturer for repair.

The WARRANTY is VOIDED if any of the following occurs: repairs or attempted repairs are made by unauthorised personnel, connected to equipment installed by others, or is incorrectly connected to the power supply, or instrument has defects or damage due to carelessness or failure to follow the guidelines in this instruction manual.

This warranty DOES NOT provide for any compensation for losses or damages incurred by the Customer due to complete or partial failure of instruments, even during the warranty period.

## AUTHORIZED SERVICE CENTRE STAMP

