

**USER MANUAL**

**WEIGHT INDICATOR MOD. SW22**



<b>TECHNICAL CHARACTERISTICS</b>
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POWER SUPPLY	230Vac +/-10% , 50-60Hz with external power device 7,5Vdc/1900mA or optional rechargeable battery (6 V – 3,2 Ah).
MAXIMUM ABSORPTION	400 mA (with 8 load cell )
WORKING TEMPERATURE	From -10 to +40 °C.
READABILITY	Max 60000 divisions
LEGAL DIVISIONS	Max 10000 or 2x6000 or 3x3000 .
DISPLAY	Red LED 6 digit display, h 20 mm .
LED	8 status LED
KEYBOARD	waterproof
LOAD CELL POWER SUPPLY	5Vdc ± 5%, 120mA (max 8 load cell da 350 Ohm).
SERIAL OUTPUT	n° 2 RS232
OPTIONS	ETHERNET OUTPUT USB OUTPUT FOR PEN DRIVE RS485 RS422 INTERNAL RECHARGEABLE BATTERY I/O OUTPUT CARD WITH N° 4 OUTPUT RELE' AND N° 2 DIGITAL INPUT ANALOG CARD WITH 0-20 Ma ; 4-20 mA ; 0-10 V ; 5-10 V

## 1.KEYBOARD AND LED INDICATORS

The frontal panel has a red led display with digit h. 20 mm and 8 led indicators and a waterproof keyboard with 20 keys.



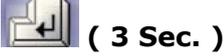
### 1.1 – Led indicators

-  If led is on, the weight is between  $-1/4 \div +1/4$  of zero
-  If led is off, the weight is steady
-  If led is on, the SW21 is working with internal battery; if led is blinking, the battery is low and need to be recharged through the charger
-  If led is on, the weight on the display is a net weight, that is there is a tare value stored.
-  If led n° 1 is on, the scale is in the first weighing range
-  If led n° 2 is on, the scale is in the second weighing range

If both of them are on, the scale is in the third weighing range

## 1.2 – Keyboard

	Zero scale
	Scale selection
	Print , First Total, General Total (3 sec. )
	Numeric keys functions enabled
	Escape
	Programming Menu / Decimal Point
	Enter
	Tare
<b>0 .. 9 +</b> 	Numeric Tare Value
 + 	Lock / Unlock Tare
<b>n +</b> 	Tare “n” recall
 + 	Multiple Tare
 <b>(3 sec.)</b>	Clear Tare
 + 	Sampling
 + 	Tare Archive Creation
 + 	PMU Setting
 + 	Date / Time setting
 + 	Set point value setting
 + 	Sub total display
 + 	Net / Gross display – Start unloading weighing mode
 + 	Weight / pieces / PMU display
 + 	High Resolution mode
 + 	Alarm set

 <b>Fn</b> + <b>Cod</b>	Print total active code
 <b>Fn</b> ( 3 Sec. )	Print copy
 <b>Fn</b> (3 sec.)	Battery charge level
 <b>Fn</b> + <b>Esc</b>	Lock / unlock keyboard
 <b>Esc</b> + 	Weighing delete
 <b>Fn</b> + 	Total by code
 <b>Esc</b> + 	Clear PMU

## 2 – GENERAL FUNCIONS

### 2.1 – Tare Function

The Tare function allows to clear the weight of a container on the plate of the scale.

Pressing key  the display will be zeroed and the Net Led will turn on.

The Tare operation can be carried out several times ; the maximum tare value is equal to the scale capacity.

If the Tare is locked, unloading the scale, the display will show a negative value while if the Tare is unlocked, the tare value will be cleared.

### 2.2 – Numeric Tare

The numeric Tare function allows to set a Tare value; it's possible, starting from a full container, to spin-off the Tare value and display the Net weight value

Input the numeric value of the tare ( including dot with key  and confirm with  .

The entered value is automatically rounded to the division currently active.

If you enter a value greater than full scale, the value is not accepted.

### 2.3 – Lock Tare

It is possible to lock the Tare value stored so that it will be stored also unloading the scale.

Press the keys  and  .

The display will show "T BL" ; starting from now, the tare value is locked.

To unlock the Tare value , Press again the keys  and  ; the display will show "T SBL" starting from now, the tare value is unlocked.

### 2.4 – Archive Tare creation

The operator has the ability to create an archive of 9 tare values that can be called directly by entering their identification code.

To access the tares, press keys in sequence  and  .

The display is ready for entering the identification code of the tare you want to enter or change (1 to 9) displaying "T - 1"; the selection is made with the ▲ and ▼ and confirm with  .

The display will show the tare value actually in memory at that location or 00000.0; enter the tare weight and confirm with  ; The display will now show "MPL 01" corresponding to the multiplication factor to be applied to just set tare; entering a value other than 1, each time you select this tare automatically be multiplied by the factor set.

To exit press the tare database management press key  .

### 2.5 – Tare recall from archive

To recall a previously stored in the archive of Tare press the number key from 1 to 9 corresponding to it followed by  ; the display will show the value corresponding tare. Then confirm with  .

If the memory location contains a tare value equal to 0, pressing the button will have no effect.

### 2.6 – Clear a Tare value

To clear a stored tare value, Press  for 3 sec. .

### 2.7 – Multiplicative Tare factor

The operator has the possibility of introducing a multiplicative factor that will be applied to the value of the tare memory.

To access this feature, press the button  for 3 sec.

The display will show "No xx" where xx is the numerical value of the multiplicative factor active at the moment; to change this value, enter the desired number from the keypad and confirm with  .

The values are between 1 and 99.

From this moment the tare value assets, will be multiplied by this factor.

To cancel the effect of multiplication, proceed as described above, and set a value of 1.

## 2.8 – Numeric code setting

The operator has two 6-digit numeric codes to associate with each weigh as an identifier merchandise or client.

Set the desired value and confirm with COD.

A short press will confirm the COD value entered as number 1 while a long press (3 sec.) Button COD will confirm the entered value as Code 2

The two codes that you set are printed on the receipt and also on the COD code 1 will be carried out for aggregation operations per article, while the COD code 2 will be only printed without any operation of aggregation.

The entered code is reset each aggregation, you can lock it so that it remains in memory until you change it by the operator;

to do this enable the user to the menu item BL Cod

## 2.9 - Total active code print

It is possible to view and print the total number on the active product; To do this press keys in sequence  and COD.

The total weight on Article active in memory at that time is displayed for 3 seconds. ; if there is a printer is issued a receipt which contains data related to that article ; The operator then has the option to cancel the value (ENTER = YES; ESC = NO)

## 2.10 - View High Res Mode

This function displays the current weight with a resolution 10 times higher.

This display mode is activated by pressing keys in sequence  and F3; to highlight the fact that the display is located in High Res, the last digit flashes.

Press the button  to return to the standard display mode.

## 2.11 - Display the battery charge level

The level of charge of the internal battery of the instrument is divided on a scale from 1 to 10.

Press the button  for 3 sec. ; the display will show the current charge level.

Press the button  to return to the standard display mode

## 2.12 - Setting the set-point values (with I / O card)

If the optional I / O is installed , the terminal SW22 lets you manage four values of interruption associated with four programmable relays which can be connected motors or valves loaded to handle then a batch formula.

Press keys  and  in sequence and enters the programming phase of the values of interruption described above.

The display shows relay 1; to move to the next relay, use the ▲ button.

Press the button  to change the value of the relay desired; Enter the desired value and confirm with .

To exit the setup phase relays, press the key .

## 2.13 - Set Date and Time

The terminal SW-22 has an internal clock that automatically increased.

It is possible to change the current setting by pressing keys  and  in sequence, and the system is ready for you to enter the current date and time, press  DAY to change the date or move to TIME to change the time.

The instrument displays the values currently stored in the form ddmmyy and hh: mm, press  to confirm the data displayed or press the key  and enter the new value and confirm with .

## 2.14 - Viewing Gross Weight / Net Weight

The standard mode display provides the weight normally shown on the display is the Net Weight. By pressing the buttons  and F1 will display the gross weight for 3 sec. turning off

the respective signaling LED (Net).

### **2.15 - Alarm function Gross Weight - Net Weight - Subtotal - n ° of Pieces - Total Pieces (corresponds to the selection in the programming <ALERT> Set Point**

Pressing the  and F4 key will start the procedure of setting an alarm threshold to be associated with one of the following values: Gross Weight - Net Weight - Subtotal - n ° of Pieces - Total Pieces

The selection is made with the ▲ ▼ and confirm with 

At this point you can enter the desired value for the alarm threshold

To exit, press the key .

When the threshold is exceeded, the display starts flashing and the buzzer to sound (a single beep).

### **2.16 - Keyboard Lock**

It is possible for security reasons to disable the operation of the keyboard.

Press  and  keys in sequence ; the display will show for 3 seconds the message "Lock"; starting from this moment, every key press will only effect the display of the message "Lock".

To reactivate the keyboard press the keys  and  again.

The activation status of the keyboard is also maintained at shutdown indicator.

### **2:17 – Scale Selection**

The indicator allows SW22, behind enabling a proper parameter setup, to simultaneously manage two weighing platforms, each with its own characteristics.

The selection between the two platforms is done by pressing the button .

The status of the LED indicator indicates the platform currently in use:

Led off: Platform No. 1 in use

Led on: Platform No. 2 in use

## 3 – OPERATING MODE

Modes of operation are listed below and can be selected in the system menu "MODE"

<b>3.1 Weighing with totalization</b>	( Rif. MODE : STD )
<b>3.2 Weighing with partial zeroing</b>	( Rif. MODE : AZZER )
<b>3.3 Animal weighing</b>	( Rif. MODE : PES-AN )
<b>3.4 Counting mode</b>	( Rif. MODE : COUNT )
<b>3.5 Unload weighing</b>	( Rif. MODE : SCAR )
<b>3.6 Checkweigher</b>	( Rif. MODE : TOLL )
<b>3.7 Truck scales</b>	( Rif. MODE : WBR )
<b>3.8 Peak</b>	( Rif. MODE : PICCO )
<b>3.9 Receipt batch</b>	( Rif. MODE : RICETT )
<b>3.10 Simple batch</b>	( Rif. MODE : DOSAGG )

### 3.1 – Weighing with totalization

In this operating mode, pressing the key  it is possible to add the value of every single weight to the actual stored value.

If a printer is connected to the indicator, a ticket will be printed according to the programmed parameters.

#### 3.1.1 - Reversal weighed

Press keys  e  in sequence you can cancel a weighing operation performed incorrectly, if a sequence of weights is opened, namely: subtotal different from 0.

The display shows "00000.0" and waits for the weight value to be reversed typed from the keyboard and confirmed with the button  ; the display shows "000000" and waits for the progressive of the receipt to reverse typed from the keyboard and confirmed with .

If there is a printer, a receipt is issued in accordance with the active mode with the given weight and number of pieces preceded by the sign "-".

#### 3.1.2 - Reprint receipt

It is possible to reprint a receipt printed by pressing the key  for 3 seconds .

#### 3.1.3 - Print Subtotal

At the end of a sequence of weighings, the operator may ask to view and print the subtotal, ie the sum of the weighted up to that time.

If you press and hold for 3 sec. button , appears on the display for 3 seconds the value of the total in memory, and if a printer is connected, the subtotal printing operation is performed according to the programming mode active.

After this the subtotal is reset and its value is added to the total.

#### 3.1.4 - Print grand total

The Grand Total is the sum of all SubTotal executed since the last reset of the same.

If you press and hold for 3 sec. button  (with Subtotal = 0) the display will show for 3 seconds the value of the Total General.

If a printer is connected, a receipt is issued according to the programming mode activated. The operator also has the option to cancel the data displayed, or just to keep it in memory in which case the next Total Partial still be added to the current value.

To proceed with the reset value of the press , while  allows you to exit without resetting.

#### 3.1.5 - Print Total article

The third operation of Total that the terminal SW-22 provides the operator, is that of Total for Item, ie the sum of all items divided by code.

Press keys  and  in sequence and prints the total weight of all items with a value other than 0; in this case, the reset request concerns the total of all codes (ENTER = YES; ESC = NO).

### 3.1.6 - Display Subtotal

Press keys  and TOT in sequence the value of subtotal currently achieved is displayed for 3 sec. after which the display automatically returns to normal operation

## 3.2 - Weighing with partial resets

By selecting this mode, all operations are made as in "Weighing with totalization", with the difference that at each weighing, the weight value is automatically reset to zero, the balance is now ready to receive another weighing.

To close the sequence of weighted and require the subtotal, press the button  for 3 sec. After printing the total, the display will show the actual gross weight on the scale.

## 3.3 - Animal Weighing

This mode of operation is selected to prevent the normal movement of the animal on the scale may affect the oscillation of the weight on the display so as to make impossible an accurate reading.

Once you reach the maximum weight is carried an average between the oscillations around a default, and then the system will display, locking, this value on the display

## 3.4 - Counting Mode

By selecting this mode, you activate the typical functions of the counting operation and allow the entry of number of samples, the average piece weight and the alternating display of number of pieces, weight, average piece weight and net weight.

### 3.4.1 - Sampling

The first step to be carried out in an operation of counting is sampling.

This can be done in two modes:

Sampling charge: on the weighing plate is loaded a known number of details that will serve as samples for the calculation of the Average Piece Weight.

Press keys  and  in sequence, and place the sample on the scale plate and enter their number and confirm with ; the Average Piece Weight is displayed for 3 sec., and then the calculated number of pieces; add at this point the total quantity of pieces to count the number of which will be automatically updated on the display.

Download sampling: the download sampling operation is carried out starting from a container full of pieces already placed on the scale plate, from which the samples are removed.

Press keys  and  in sequence and take the scale plate samples, enter their number and confirm with ; is displayed for 3 sec. the Average Piece Weight calculated and then the total number of pieces present in the scale.

In both cases it is very important to consider the value of Tara that, in order to avoid counting errors, must be separated from the Gross Weight through the various features available.

To clear the stored value of the average piece weight, press keys  and  in sequence.

### 3.4.2 - Setting manual PMU

In the case in which the Average Unit Weight of the details that you want to count is known, it is possible to avoid the phase of sampling described above, by entering the value.

This operating mode is recommended when there is the certainty that the details are homogeneous, ie that do not show even minor differences in weight with one another.

Type the numeric value corresponding to the Average Piece Weight grams to be used for

counting and sequentially press the  and  keys.

To clear the stored value of the average piece weight, and press keys  e  in sequence.

### 3.4.3 - Aggregation Weight / Piece

When you press  the weight and the corresponding number of pieces on the balance is added to the totals currently in memory.

If you have activated an identification code, is also updated total weight and total pieces related to that code.

If there is a printer, a receipt is issued according to the programming mode active (type printer: TST1-DEVICE and card type: CARTEL).

Remain unchanged functions of Partial Aggregation Aggregation and General've seen previously in paragraphs 3.1.3 and 3.1.4 as well as the ticket reprint function (see point 3.1.2)

### 3.4.4 - Reversal Weight / Piece

Press keys  and  in sequence you can cancel a weighing operation performed incorrectly, provided it is open a sequence of weights, namely: subtotal different from 0.

The display shows "00000.0" and waits for the weight value to be reversed typed from the

keyboard and confirmed with the button  ; the display shows "000000" and waits for the

number of pieces you want to deduct from the total, typed from the keyboard and confirmed with , then the display will show "000000" and waits for the receipt to reverse progressive

typed from the keyboard and confirmed with . If there is a printer, a receipt is issued in accordance with the active mode with the given weight and number of pieces preceded by the sign "-"

### 3.4.5 - Display items - PMU - Net Weight

Press keys  and **F2** in sequence switches the display mode of the number of pieces to that of the Average Piece Weight and pressing **F2** again, the Net Weight.

Leaving the selected display mode of the Average Piece Weight, after 3 sec. The system automatically returns to the display mode of the number of pieces.

### 3.4.6 - Total Print article

The third operation of Total that the terminal SW-22 provides the operator, is that of Total for Item, ie the sum of all items divided by commodity code.

Press keys  e  in sequence and prints the total weight of all items with a value other than 0; in this case, the reset request concerns the total of all codes (ENTER = YES; ESC = NO).

### 3.4.7 - Display Subtotal

Press keys  and **TOT** in sequence and the value of the subtotal currently achieved is displayed for 3 sec.

## 3.5 - Weighing discharge

Selecting this mode will be possible, starting from a full container, display the weight taken from it.

To start viewing the unloaded weight, starting with a load placed on the scale, press keys  and  in sequence.

The display is cleared and removing weight from the scale, its value is displayed in the positive on the display. Pressing keys  and **F1** in sequence will be displayed for 3 seconds. the weight on the scale yet. To return to normal weight, while maintaining operational mode exhaust weighing in, press  and **F1** .

The functions described above are also connected to the relays in case this is the card I / O so as to realize a repeated dosing of a predefined quantity, starting from a full container placed on the weighing plate.

### 3.6 – Checkweigher



Selecting this option only works with Multi-field is not enabled, the 2 LEDs : are used to indicate if the weight scale is inside or outside (positive or negative) of a target range; if there is also the optional I / O outputs are also provided on the relay.

In this mode, the sequence of commands  and **Set** has a different meaning from the standard as it gives access to the procedure for selecting the mode of implementation of the audit tolerance.

Menu items can be selected using the keys ▼ and ▲ are:

1. Target
2. Limit

Selecting Target with the key  you can enter a target value of weight and the amount of variation allowed in higher or lower.

Selecting Limit (with the button ) the display will show the initials LL (lower limit) and after 00000.0; type the desired value for the lower limit and confirm; the display shows the symbol UL (upper limit) and after 00000.0; Enter the desired value for the upper limit and confirm with .

After the initial setup, any weight placed on the weighing pan is evaluated and the LED lights C1 indicates that the weight is less than the lower limit, the LED lights C2 indicates that the weight is greater than the upper limit while the ignition LEDs C1 and C2 indicates that the weight is within the two values. At the same time, if you have the optional relays, three relays are associated with the three LEDs provide similar outputs.

### 3.7 – Truck scale

#### 3.7.1 – First weighing

By pressing  the weight on the scale is considered first weighing value associated with an identification number of memory which will allow the call at second weighing.

The maximum allowed number of first open weighs (ie operations not closed by a second weighing) is 100.

The print is made using the methods of programming active (type printer: TST1-DEVICE and card type: CARTEL).

#### 3.7.2 - Second weighing

By pressing  the weight on the scale is taken as the second weighing; Therefore, the operator will be asked to enter the ID code memory on the first weighing is carried out with respect to which the calculation of the net weight resulting from the difference between the two weighings.

The calculated value is added to the total currently present in memory, and, if you have activated a commodity code, the same weight is added to the total also related to that product category.

The print is made using the methods of programming active (type printer: TST1-DEVICE and card type: CARTEL).

#### 3.7.3 - Printing single weighing

It is also possible to make a single weighing operation which therefore will not be added to the queue of raw weighted assets.

Pressing the keys and the weight on the scale is added to the total currently present in memory, and, if you have activated a commodity code, the same weight is added to the total also related to that product category.

The print is made using the methods of programming active (type printer: TST1-DEVICE and card type: CARTEL).

#### 3.7.4 - Display queue first weighed

By pressing the  and **F1** key, you can display the identification codes of the memory of the first weigh still open.

To clear the queue of weighted press the button  and confirm with   
Using the  button you can view the entire list.

### 3.7.5 - Reprint Last ticket

It is possible to reprint the last receipt accomplished by pressing the button  for 3 sec. ; will be repeated printing of the last operation: first weighing, or weighing or weighing a single second.

### 3.7.6 - Print Subtotal

At the end of a sequence of weighings, the operator may ask to view and print the subtotal, ie the sum of the weighted up to that time.

If you press and hold for 3 sec. button , appears on the display for 3 seconds the value of the total in memory, and if a printer is connected, the subtotal printing operation is performed according to the programming mode active.

After this the subtotal is reset and its value is added to the total.

### 3.7.7 - Print grand total

The Grand Total is the sum of all SubTotal executed since the last reset of the same.

If you press and hold for 3 sec. button  (with Subtotal = 0) the display will show for 3 seconds the value of the Total General.

If a printer is connected, a receipt is issued according to the programming mode activated.

The operator also has the option to cancel the data displayed, or just to keep it in memory in which case the next Total Partial still be added to the current value.

To proceed with the reset value of the press , while  allows you to exit without resetting.

### 3.7.8 - Print Total article

The third operation of Total that the terminal SW-22 provides the operator, is that of Total for Item, ie the sum of all items divided by code.

Press keys  and  in sequence and prints the total weight of all items with a value other than 0; in this case, the reset request concerns the total of all codes (ENTER = YES; ESC = NO).

### 3.8 - Peak Detection weight

By selecting this mode, you can display the value of a weight (PEAK) detected during weighing. This feature is particularly useful to measure, for example, the breaking load of the materials.

Pressing  and **F1** is enabled the peak display mode ; the display shows the message - PEAK every 5 seconds, alternating the maximum weight reached up to that point.

Pressing  and **F1** again you return to the standard view of the weight on the balance.

### 3.9 - Batch with recipes

Selecting the operating mode "Recipes" you can run an assay with a formula consisting of a maximum of two components.

The maximum number of recipes can be stored is 50.

Press keys  and **Set** in sequence you enter the planning phase of the recipes.

The display shows "r 00"; set the number of prescription to program and confirm with ; set the values in the sequence corresponding to the two components; if a component is not used, set the value to 0.0.

After the inclusion of the second component, the display shows the number of recipe following the current one; press  to confirm or  to terminate.

During the normal operating mode, to select the recipe number to be performed, dial the number from the keypad and confirm with **COD**.

The cycle start command is given by pressing  or closing the first of the two digital inputs of the I / O or serial port using the appropriate command.

The batch can be performed either in LOAD or in DISCHARGE.

At the start of dosing, weight is cleared, close the exits n ° 1 (component 1) and 4 (active dose); the display shows a "d" to indicate the status of dosage. When the NET WEIGHT reaches the threshold value of the output component No. 1 No. 1 opens, if the threshold value of the component No. 2 is greater than zero the display for a few seconds the message COMP-2 and closes the exit n ° 2 and then deactivated to the achievement of the threshold value of the second component.

Subsequently, if the dosing phase took place in the latter discharge is terminated and the 4th exit opens; otherwise it starts the unloading phase: closes the exit n ° 3 and the display shows a "U".

At any moment, the dosage can be paused by pressing the ESC key, closing the input 2 or through a special serial command.

During this state the display will show "PAUSE"; pressing  or  is definitely possible to continue or terminate the batch.

Throughout the dosing phase (LOAD and UNLOAD) output No. 4 remains active.

### 3.10 - Simple Dosage

This operating mode can be useful for filling containers, using only one type of product, automatically if combined with the optional board I / O.

The dosage can be performed either in LOAD or in DISCHARGE.

The start of the dosage can be activated:

By KEYBOARD by setting a weight value confirming with the key ;

from EXTERNAL KEY (input 1 I / O card) if you have already made a dosage keyboard;

By SERIAL PORT by using the appropriate command.

The weight value of the dosage should not exceed the value or the value of the GROSS WEIGHT CAPACITY - GROSS WEIGHT.

#### 3.10.1 Load dosage

At the Start of dosage, any weight on the scale is automatically put into tare, the display shows "d 0.0" to indicate the status of ongoing dosing and close the exits n ° 1, 2 and 4 (card optional I / O).

When the net weight reaches the set threshold value, the display shows "u xx.x" indicating the end of the assay with the amount of product present in the scale, the meter will remain in this position until the balance will not be reduced to zero;

At this point the message "end" and can begin a new cycle of filling.

During the dosing step to load the logic outputs 1 and 2 change state to the achievement of predefined values based on the measurement characteristics of the scale in use and the set value for the assay;

Output 4 remains active for the duration of the dosage, and when the net weight reaches a value measured at -20 divisions compared to the set value the status of outputs 1 and 2 will change from "11" (closed / closed) "10" (closed / open); when the net weight reaches instead a value measured at -10 divisions compared to the set value will switch to "01" (open / closed), until it assumed the status of "00" (open / open) when they reach the 100% of the threshold value.

At this point begins the unloading phase: closes the exit n ° 3 and the display shows a "U".

When the weight back to zero output 4 opens.

#### 3.10.2 Unload dosage

At the Start of dosage, any weight on the scale is automatically put into tare, the display shows "d 0.0" to indicate the status of ongoing dosing and close the exits n ° 1, 2 and 4 (card optional I / O).

In this type of dosage the net weight dosed is subtracted from the scale for which there will be a display of the quantity of dosed product in negative.

When the net weight reaches the set threshold value, the display shows the message "end" and can begin a new cycle of filling.

During the dosing step to the discharge logic outputs 1, 2 and 4 change state to the achievement of predefined values based on the measurement characteristics of the scale in use and the set value for the assay;

Output 1 remains active for the duration of the dosage, and when the net weight reaches a value measured at -20 divisions compared to the set value the status of outputs 1 and 2 will change from "11" (closed / closed) "10" (closed / open); when the net weight reaches instead a value measured at -10 divisions compared to the set value will switch to "01" (open / closed), until it assumed the status of "00" (open / open) when they reach the 100% of the threshold value.

## 4 SYSTEM USER MENU

Press the key "i" to enter the Menu.

### 4.1 DATA: Set Time and Date

The terminal SW22 has a calendar clock automatically increased even in the absence of external power.

At this stage you can change the current date and time.

Press the button  to get the menu shown in the input;

press  on DAY to change the date or move to TIME to change the time.

The instrument displays the values currently stored in the form ddmmyy and hh: mm, press

 to confirm the data displayed or press  key and enter the new value and confirm with 

### 4.2 ECONOM : Energy saving mode

Since the terminal SW21 / SW22 can be equipped optionally with an internal rechargeable battery, at this stage it is possible to program the better off mode / stand-by in order to ensure the greatest possible independence.

In order to protect the battery when the latter is present, you can select the option to sleep in the balance after a period of inactivity.

The choices are:

<RISPAR> Within which you can choose from:

<NONE> Off Auto off

<A-OFF> Auto power off after x minutes of inactivity

<STDBY> Function standby setting to conserve battery power without, however, completely turn off the indicator; after x minutes of inactivity of the scale, the display will show two dashes central flashing. Any pressure on the scale plate allows you to return to normal operation.

Set a value of 0 to disable the feature.

Timer In this step you can set the No. of x minutes of inactivity

### 4.3 C-TOT : Clearing Total Mode

<NUMPES>

<TUTTI>

<T-ART>

<GNP2PE>

<PZ - PES>

### 4.4 TICKET : Ticket selection

<SINGLE> Single ticket; for every weighing operation will be printed a single ticket with these data :

- Header
- n° weighing operation
- Date , Time
- Gross weight, Tare , Net weight

<MULTIP> Multiple ticket; for every weighing operation will be printed only a line with these data :

- n° weighing operation
- Gross weight, Tare, Net weight

The header will be printed only at the beginning of the ticket

<DOUBLE> This option allows to obtain a double copy of a ticket

#### 4.5 HEADER: Ticket Header

It is possible to store three header lines that will be printed at the beginning of the ticket.

It is possible also to choose the kind of the character : normal , double height, bold.

The number of characters depends on the kind of character : 24 chrs for normal type and 12 chrs for the other types.

<WRITE> Input mode. Every character will be input with the ASCII code.  
At the end , insert the code "004".

<CANCEL> Clear stored data.

#### 4.6 BL COD : Code locked

It is possible to lock the numeric code for all the operations till the next change :

<ON> : Locked code

<OFF>: Unlocked code

#### 4.7 SICUR : Administrator Password

The administrator password allows to limit the access to the programming menu.

Input the old password and then the new password

The supervisor password 14556 allows the access in every condition.

#### 4.8 ST-BAR : Bar code printing

It is possible to print an EAN-13 bar code on a single ticket

<ON> : Barcode printing on

<OFF>: Barcode printing off

The EAN-13 code contains:

- N° 1 digit for identification variable weight ( fix char);
- N° 6 digit for identification product code
- N° 5 digit for identification net weight
- N° 1 digit for check-digit

#### 4.9 M-FISC: Reading and Printing Fiscal Memory

This option is enabled only if an optional memory thanks to which each weigh is stored in non-volatile memory accessible only upon explicit request.

The capacity of this memory allows you to store up to 160000 weighed.

##### 4.9.1 REG-F Reading Memory Register

By setting the address of the desired location, (0 to 960000) will display the weight data it contains.

If the lease is still empty the message "NOCODE" And if there are a weighted value is displayed alternately weight saved on the record date.

##### 4.9.2 Memory Print PRINT

Enables printing of all weighing in the fiscal memory. To stop the printing press

## 5 SERIAL COMMUNICATION PROTOCOL

### ON REQUEST COMMUNICATION PROTOCOL

These are the structures of a request from host to SW22 :

*structure 1*

ADDR	CMD	EOT
------	-----	-----

*structure 2*

ADDR	CMD	PARAM	ETX	CHK	EOT
------	-----	-------	-----	-----	-----

where:

<b>ADDR</b>	start transmission character : STX (02 Hex) when the address of SW22 is 0 ; when the address is not 0 it is the sum between character 80 Hex and the value of the address.
<b>CMD</b>	sequence of characters that identify the operation requested to SW22.
<b>PARAM</b>	sequence of characters that gives to SW22 the necessary information for the execution of an operation.
<b>ETX</b>	end character ETX ( 03 Hex ).
<b>CHK</b>	checksum value used by SW22 to verify the correct reception ; this value is the operation XOR between characters ADDR and ETX.
<b>EOT</b>	end transmission character EOT ( 04 Hex ).

### Weight request command

Request :

ADDR	CMD	EOT
02 Hex or (80 Hex + address SW)	N	04 Hex

Answer:

ADDR	CMD	STATUS	NET	TARE	ASW	PCS	COD 1	COD 2	PROGR	ETX	CHK	EOT
------	-----	--------	-----	------	-----	-----	-------	-------	-------	-----	-----	-----

where:

ADDR	start transmission character	1 chr
CMD	command code : character "N"	1 chr
STATUS	SW22 status : O = overload, E = offrange, S = stable weight, M = instable weight	1 chr
NET	net weight	7 chr
TARE	tare	7 chr
AWS	Single average weight ( unit: g )	7 chr
PCS	number of pieces	6 chr
COD 1	numeric code n° 1	6 chr
COD 2	numeric code n° 2	6 chr
PROGR	serial weight number preceded by "P" or "F" if fiscal memory is installed	7 chr
ETX	end character ETX ( 03 Hex )	1 chr
CHK	checksum value	2 chr
EOT	end transmission character EOT ( 04 Hex )	1 chr

All the numeric values are right justified and filled with "space" ( 20 HEX ).  
The decimal separator is "," (2C Hex).

**Example :**

Request :

STX	N	EOT
-----	---	-----

Answer :

STX	N	S	2,450	0,000	0,000	0	000001	000000	F000131	ETX	66	EOT
-----	---	---	-------	-------	-------	---	--------	--------	---------	-----	----	-----

**Last weight value command**

Request :

ADDR	CMD	EOT
02 Hex or (80 Hex + address SW)	M	04 Hex

Answer :

ADDR	CMD	SCALE	NET	TARE	ASW	PCS	COD 1	COD 2	PROGR	ETX	CHK	EOT
------	-----	-------	-----	------	-----	-----	-------	-------	-------	-----	-----	-----

where:

ADDR	start transmission character	1 chr
CMD	command code : character "M"	1 chr
SCALE	scale number "1" or "2"	1 chr
NET	net weight of the last operation	7 chr
TARE	tare	7 chr
AWS	Single average weight ( unit: g )	7 chr
PCS	number of pieces	6 chr
COD 1	numeric code n° 1	6 chr
COD 2	numeric code n° 2	6 chr
PROGR	serial weight number preceded by "P" or "F" if fiscal memory is installed	7 chr
ETX	end character ETX ( 03 Hex )	1 chr
CHK	checksum value	2 chr
EOT	end transmission character EOT ( 04 Hex )	1 chr

The field "NET" is justified and filled with "space" ( 20 HEX ); The decimal separator is "," (2C Hex)

The first character of the field "PROGR" is always "P" if the fiscal memory is not installed; the remaining 6 characters are right justified and filled with "0" (30 Hex) (ex.: "P000099").

**Example :**

Request :

STX	M	EOT
-----	---	-----

Answer :

STX	M	1	22,5	2,5	0,000	0	000001	000000	F000131	ETX	16	EOT
-----	---	---	------	-----	-------	---	--------	--------	---------	-----	----	-----

Answer for truck scale mode:

ADDR	CMD	SCALE	NET	TARE	GROSS	MODE	ID	COD1	COD2	PROGR	ETX	CHK	EOT
------	-----	-------	-----	------	-------	------	----	------	------	-------	-----	-----	-----

where:

ADDR	start transmission character	1 chr	
CMD	command code : character "M"	1 chr	
SCALE	scale number "1" or "2"		1 chr
NET	net weight		7 chr
TARE	tare	7 chr	
GROSS	gross weight or last weight	7 chr	
MODE	weight mode (S: single; I: in ; U: out ) followed by "-" (2D Hex)		2 chr
ID	ID weight code (zero if single weight)	4 chr	
COD 1	numeric code n° 1		6 chr
COD 2	numeric code n° 2		6 chr
PROGR	serial weight number preceded by "P" or "F" if fiscal memory is installed		7 chr
ETX	end character ETX ( 03 Hex )	1 chr	
CHK	checksum value	2 chr	
EOT	end transmission character EOT ( 04 Hex )	1 chr	

The fields MODE and ID are always in the form "X-IDYY" where "X" represents the weight mode : "S", "I" and "U", while "YY" represents the ID Code.

Single weight example

STX	M	1	1047,5	55,0	1102,5	S-	ID 0	000001	000000	F000133	ETX	65	EOT
-----	---	---	--------	------	--------	----	------	--------	--------	---------	-----	----	-----

First weight example

STX	M	1	0,0	0,0	1306,0	I-	ID 2	000001	000000	F000133	ETX	79	EOT
-----	---	---	-----	-----	--------	----	------	--------	--------	---------	-----	----	-----

Second weight example

STX	M	1	251,0	1306,0	1055,0	U-	ID 2	000001	000000	F000134	ETX	75	EOT
-----	---	---	-------	--------	--------	----	------	--------	--------	---------	-----	----	-----

### Weight operation command

Single weight request:

<b>ADDR</b>	<b>CMD</b>	<b>EOT</b>
02 Hex or (80 Hex + address SW)	P	04 Hex

Positive answer from SW22:  
(Storage weighing performed)

negative answer from SW22:  
(Storage weighing not performed)

ADDR	CMD	ACK	EOT
------	-----	-----	-----

ADDR	CMD	NACK	EOT
------	-----	------	-----

ACK is chr 06 Hex

NACK is chr 15 Hex

### First Weight operation command ( Only for weigh bridge )

First weight request:

<b>ADDR</b>	<b>CMD</b>	<b>MODE</b>	<b>EOT</b>
-------------	------------	-------------	------------

02 Hex or (80 Hex + address SW)	P	I	04 Hex
---------------------------------	---	---	--------

Positive answer from SW22:  
(Storage weighing performed)

negative answer from SW22:  
(Storage weighing not performed)

ADDR	CMD	MODE	ID	ACK	EOT
------	-----	------	----	-----	-----

ADDR	CMD	NACK	EOT
------	-----	------	-----

ID is the two characters ID weight Code  
ACK is chr 06 Hex

NACK is chr 15 Hex

### Second Weight operation command ( Only for weigh bridge )

Second weight request:

ADDR	CMD	MODE	ID	EOT
02 Hex or (80 Hex + address SW)	P	U	YY	04 Hex

ID is the two characters ID weight Code

Positive answer from SW22:  
(Storage weighing performed)

negative answer from SW22:  
(Storage weighing not performed)

ADDR	CMD	MODE	ID	ACK	EOT
------	-----	------	----	-----	-----

ADDR	CMD	MODE	ID	NACK	EOT
------	-----	------	----	------	-----

ACK is chr 06 Hex

NACK is chr 15 Hex

### Scale selection command

Request :

ADDR	CMD	SCALE	EOT
02 Hex or (80 Hex + address SW)	BIL	1 o 2	04 Hex

Positive answer from SW22:  
(Scale selection performed)

negative answer from SW22:  
(Scale selection not performed)

ADDR	CMD	SCALE	ACK	EOT
------	-----	-------	-----	-----

ADDR	CMD	SCALE	NACK	EOT
------	-----	-------	------	-----

SCALE is the number of platform to be selected.

ACK is chr 06 Hex

NACK is chr 15 Hex

### Fiscal memory weight value Command

Request :

ADDR	CMD	MEM	EOT
02 Hex or (80 Hex + address SW)	F	XXXXXX	04 Hex

Positive answer from SW22:  
(fiscal memory installed)

negative answer from SW22:  
(fiscal memory not installed)

ADDR	CMD	MEM	NET	STX	CHK	EOT
------	-----	-----	-----	-----	-----	-----

ADDR	CMD	NACK	EOT
------	-----	------	-----

where:

ADDR	start transmission character	1 chr
CMD	command code : character "F"	1 chr
MEM	fiscal memory code number	6 chr
NET	net weight stored in fiscal memory at location MEM	7 chr
ETX	end character ETX ( 03 Hex )	1 chr
CHK	checksum value	2 chr
EOT	end transmission character EOT ( 04 Hex )	1 chr

*The field "NET" is right justified and filled with "space" ( 20 HEX ); The decimal separator is "," (2C Hex)*

*The field MEM is right justified and filled with "space" ( 20 HEX ).*

### Zero Command

Request :

ADDR	CMD	EOT
02 Hex or (80 Hex + address SW)	Z	04 Hex

Positive answer from SW22:  
(Zero performed)

ADDR	CMD	ACK	EOT
------	-----	-----	-----

ACK is chr 06 Hex

Negative answer from SW22:  
(Zero not performed )

ADDR	CMD	NACK	EOT
------	-----	------	-----

NACK is chr 15 Hex

### Tare Command

Request :

ADDR	CMD	PARAM	ETX	CHK	EOT
02 Hex or (80 Hex + address SW)	T	Tare value	03 Hex	checksum	04 Hex

Where :

ADDR	start transmission character	1 chr
CMD	command code : character "T"	1 chr
PARAM	Tare value	7 chr
ETX	end character ETX ( 03 Hex )	1 chr
CHK	checksum value	2 chr
EOT	end transmission character EOT ( 04 Hex )	1 chr

*The field PARAM ( Tare value ) must be right justified and filled with "space" ( 20 HEX ).*

*If "PARAM" is filled with SPACE ( 20 Hex ) SW22 execute the autotare command.*

*To clear a set tare value, transmit a command with the tare value equal to 0.*

Positive answer from SW22:

ADDR	T	ACK	EOT
------	---	-----	-----

ACK is chr 06 Hex

Negative answer from SW22:

ADDR	T	NACK	EOT
------	---	------	-----

NACK is chr 15 Hex

Set Tare example :

STX	T	15,6	ETX	6A	EOT
-----	---	------	-----	----	-----

Autotare command example :

STX	T		ETX	74	EOT
-----	---	--	-----	----	-----

**Start Batch command ( Only for Batch mode )**

Request :

ADDR	CMD	PARAM	ETX	CHK	EOT
02 Hex or (80 Hex + address SW)	DOSE1 or 2	Weight or formula	03 Hex	checksum	04 Hex

Where :

ADDR	start transmission character	1 chr
CMD	Command Code : "DOSE" + scale number "1" or "2"	5 chr
PARAM	Batch value ( SW22 in batch mode ) or formula number ( SW22 in formula Mode )	7 chr
ETX	end character ETX ( 03 Hex )	1 chr
CHK	checksum value	2 chr
EOT	end transmission character EOT ( 04 Hex )	1 chr

The batch value or the formula number must be right justified and filled with "space" ( 20 HEX ).

Positive answer from SW22:  
(batch started)

ADDR	DOSE1 o DOSE2	ACK	EOT
------	---------------	-----	-----

ACK is chr 06 Hex

Example :

STX	DOSE1	150,000	ETX	04	EOT
-----	-------	---------	-----	----	-----

Negative answer from SW22:  
(batch not started)

ADDR	DOSE1 o DOSE2	NACK	EOT
------	---------------	------	-----

NACK is chr 15 Hex

**Stop / Restart Batch Command**

Request :

ADDR	CMD	EOT
02 Hex or (80 Hex + address SW)	DREST or DKEEP or DSTOP	04 Hex

Where :

ADDR	start transmission character	1 chr
CMD	"DREST" to Pause the batch "DKEEP" to Restart the Batch "DSTOP" to Stop the Batch	5 chr
EOT	end transmission character EOT ( 04 Hex )	1 chr

Positive answer from SW22:

ADDR	CMD	ACK	EOT
------	-----	-----	-----

Negative answer from SW22:

ADDR	CMD	NACK	EOT
------	-----	------	-----

ACK is chr 06 Hex

NACK is chr 15 Hex

**Zero Calibration Command**

Request :

ADDR	CMD	EOT
02 Hex or (80 Hex + Address SW)	CALZ1 or CALZ2	04 Hex

Where :

ADDR	start transmission character	1 chr
CMD	Command Code : "CALZ" + scale number "1" or "2"	5 chr
EOT	end transmission character EOT ( 04 Hex )	1 chr

Positive answer from SW22:  
(Zero calibration performed)  
performed)

Negative answer from SW22:  
(Zero calibration not  
performed)

ADDR	CALZ1 o CALZ2	ACK	EOT
------	---------------	-----	-----

ADDR	CALZ1 o CALZ2	NACK	EOT
------	---------------	------	-----

ACK is chr 06 Hex

NACK is chr 15 Hex

**Offset Calibration Command**

Request :

ADDR	CMD	PARAM	ETX	CHK	EOT
02 Hex or (80 Hex + Address SW)	CALW1 or CALW2	weight	03 Hex	checksum	04 Hex

Where :

ADDR	start transmission character	1 chr
CMD	Command Code : "CALW" + scale number "1" or "2"	5 chr
PARAM	calibration weight value	7 chr
ETX	end character ETX ( 03 Hex )	1 chr
CHK	checksum value	2 chr
EOT	end transmission character EOT ( 04 Hex )	1 chr

*The calibration weight value must be right justified and filled with "space" ( 20 HEX ).*

Positive answer from SW22:  
(Offset calibration performed)  
performed)

Negative answer from SW22:  
(Offset calibration not  
performed)

ADDR	CALW1 or CALW2	ACK	EOT
------	----------------	-----	-----

ADDR	CALW1 or CALW2	NACK	EOT
------	----------------	------	-----

Offset calibration example:

STX	CALW1	150,000	ETX	00	EOT
-----	-------	---------	-----	----	-----

**CONTINUOUS TRANSMISSION PROTOCOL**

The data structure transmitted by SW22 in continuous mode is :

ADDR	CMD	STATUS	NET	TARE	ASW	PCS	COD 1	COD 2	PROGR	ETX	CHK	EOT
------	-----	--------	-----	------	-----	-----	-------	-------	-------	-----	-----	-----

where:

ADDR	start transmission character	1 chr
CMD	command code : character "N"	1 chr
STATUS	SW22 status :	
	O = overload, E = offrange, S = stable weight, M = instable weight	1 chr
NET	net weight	7 chr
TARE	tare	7 chr
AWS	Single average weight ( unit: g )	7 chr
PCS	number of pieces	6 chr
COD 1	numeric code n° 1	6 chr
COD 2	numeric code n° 2	6 chr
PROGR	serial weight number preceded by "P" or "F" if fiscal memory is installed	7 chr
ETX	end character ETX ( 03 Hex )	1 chr
CHK	checksum value	2 chr
EOT	end transmission character EOT ( 04 Hex )	1 chr

All the numeric values are right justified and filled with "space" ( 20 HEX ).  
The decimal separator is "," (2C Hex).

Transmission example :

STX	N	S	2,450	0,000	0,000	0	000001	000000	F000131	ETX	66	EOT
-----	---	---	-------	-------	-------	---	--------	--------	---------	-----	----	-----

The frequency of the transmission is depending from the Refresh weight Frequency through the Filter value parameter :

Filter value	Refresh weight frequency	Transmission frequency	Interval
0 / 1 / 2	50 Hz	25 Hz	40 ms
3 / 4 / 5	25 Hz	12,5 Hz	80 ms
6 / 7	12 Hz	6,25 Hz	160 ms
8 / 9	6 Hz	3,125 Hz	320 ms

Defaul Filter value : 3

## WEIGHT TRANSMISSION PROTOCOL

Striking the key "PRINT" , SW22 will transmit these data set depending on the selected mode :

Standard mode :

ADDR	CMD	SCALE	NET	TARE	ASW	PCS	COD 1	COD 2	PROGR	ETX	CHK	EOT
------	-----	-------	-----	------	-----	-----	-------	-------	-------	-----	-----	-----

where:

ADDR	start transmission character	1 chr
CMD	command code : character "M"	1 chr
STATUS	SW22 status :	
	O = overload, E = offrange, S = stable weight, M = instable weight	1 chr
NET	net weight	7 chr
TARE	tare	7 chr
AWS	Single average weight ( unit: g )	7 chr
PCS	number of pieces	6 chr

COD 1	numeric code n° 1	6 chr
COD 2	numeric code n° 2	6 chr
PROGR	serial weight number preceded by "P" or "F" if fiscal memory is installed	7 chr
ETX	end character ETX ( 03 Hex )	1 chr
CHK	checksum value	2 chr
EOT	end transmission character EOT ( 04 Hex )	1 chr

*The field "NET" is justified and filled with "space" ( 20 HEX ); The decimal separator is "," (2C Hex)*

*The first character of the field "PROGR" is always "P" if the fiscal memory is not installed; the remaining 6 characters are right justified and filled with "0" (30 Hex) (ex.: "P000099").*

Standard mode transmission example:

STX	M	1	22,5	2,5	0,000	0	000001	000000	F000131	ETX	16	EOT
-----	---	---	------	-----	-------	---	--------	--------	---------	-----	----	-----

Weigh bridge mode transmission example

ADDR	CMD	SCALE	NET	TARE	GROSS	MODE	ID	COD1	COD2	PROGR	ETX	CHK	EOT
------	-----	-------	-----	------	-------	------	----	------	------	-------	-----	-----	-----

where:

ADDR	start transmission character	1 chr
CMD	command code : character "M"	1 chr
SCALE	scale number "1" or "2"	1 chr
NET	net weight	7 chr
TARE	tare	7 chr
GROSS	gross weight or last weight	7 chr
MODE	weight mode (S: single; I: in ; U: out ) followed by "-" (2D Hex)	2 chr
ID	ID weight code (zero if single weight)	4 chr
COD 1	numeric code n° 1	6 chr
COD 2	numeric code n° 2	6 chr
PROGR	serial weight number preceded by "P" or "F" if fiscal memory is installed	7 chr
ETX	end character ETX ( 03 Hex )	1 chr
CHK	checksum value	2 chr
EOT	end transmission character EOT ( 04 Hex )	1 chr

*The fields MODE and ID are always in the form "X-IDYY" where "X" represents the weight mode : "S", "I" and "U", while "YY" represents the ID Code.*

Single weight example

STX	M	1	1047,5	55,0	1102,5	S-	ID 0	000001	000000	F000133	ETX	65	EOT
-----	---	---	--------	------	--------	----	------	--------	--------	---------	-----	----	-----

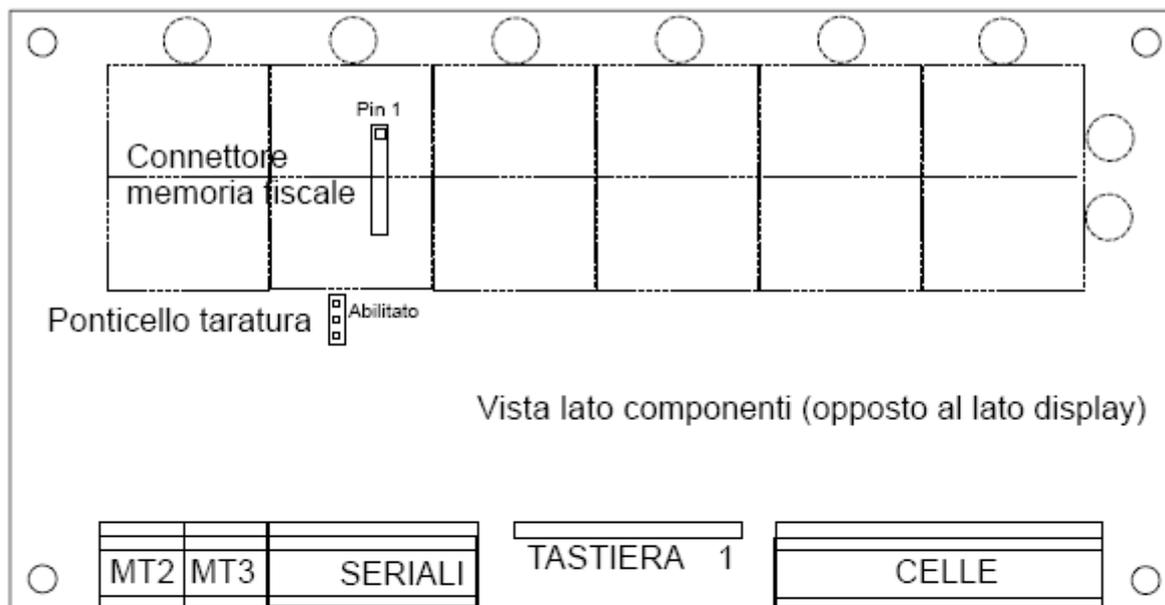
First weight example

STX	M	1	0,0	0,0	1306,0	I-	ID 2	000001	000000	F000133	ETX	79	EOT
-----	---	---	-----	-----	--------	----	------	--------	--------	---------	-----	----	-----

Second weight example

STX	M	1	251,0	1306,0	1055,0	U-	ID 2	000001	000000	F000134	ETX	75	EOT
-----	---	---	-------	--------	--------	----	------	--------	--------	---------	-----	----	-----

## 6 CONNECTIONS



MT2 1 +Alimentazione 7.5Vdc  
2 -Alimentazione

MT3 3 +Batteria 6V ext.  
4 -Batteria

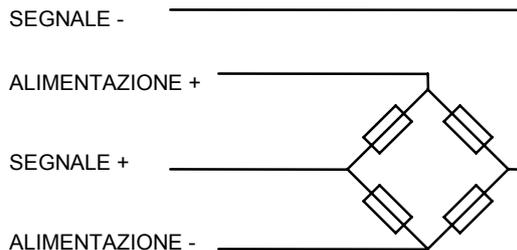
SERIALI  
5 TX1 RS232  
6 RX1 RS232  
7 TX0 RS232  
8 RX0 RS232  
9 GND

CELLE  
10 -Alimentazione  
11 +Alimentazione  
12 +Reference  
13 -Reference  
14 -Segnale1  
15 +Segnale1  
16 +Segnale2  
17 -Segnale2

### 6.1 – Platform connections ( Max. 2 )

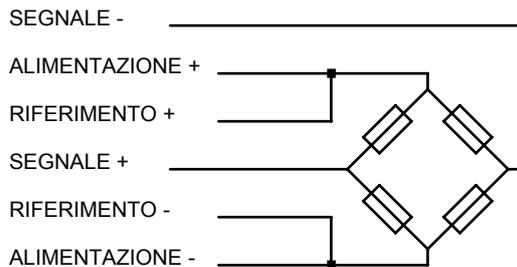
#### CONNESSIONE A 4 FILI

- 10 : EXC- ALIMENTAZIONE -
- 11 : EXC+ ALIMENTAZIONE +
- 12 : REF+ Cortocircuitare con morsetto 11.
- 13 : REF- Cortocircuitare con morsetto 10.
- 14 : SIG- SEGNALE - ( ptf. N° 1 )
- 15 : SIG+ SEGNALE + ( ptf N° 1 )
- 16 : SIG + SEGNALE + ( ptf. N° 2 )
- 17 : SIG - SEGNALE - ( PTF. N° 2 )

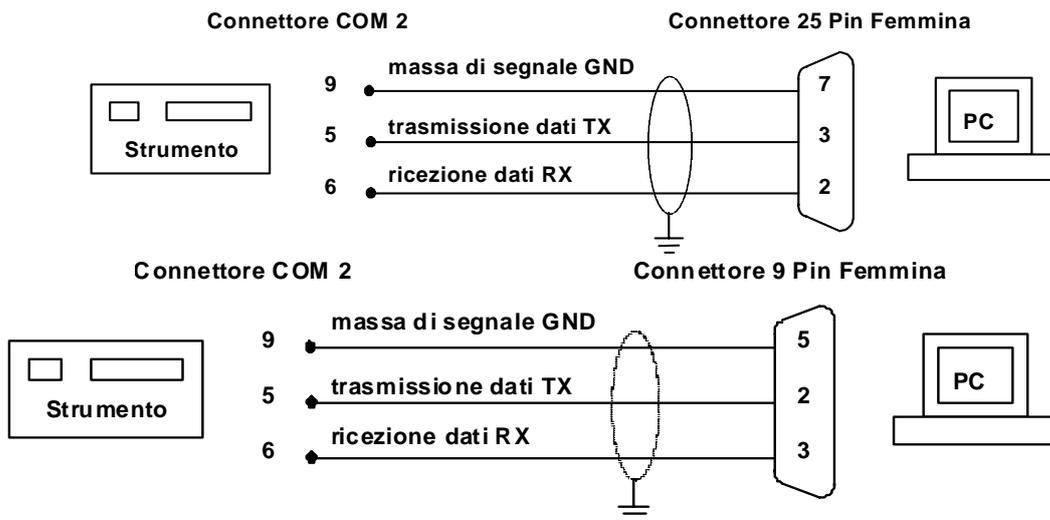


#### CONNESSIONE A 6 FILI

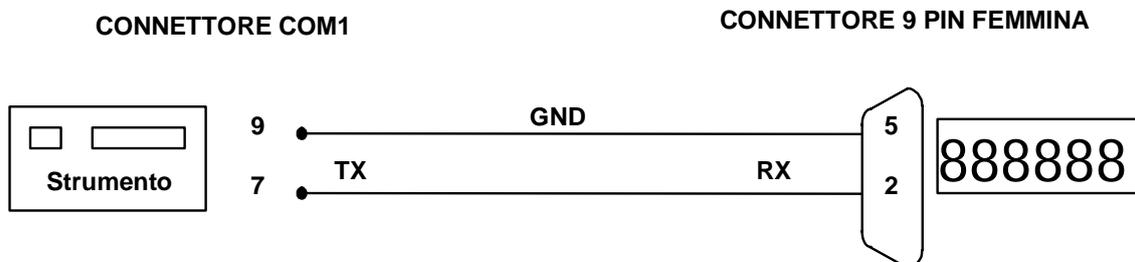
- 10 : EXC- ALIMENTAZIONE -
- 11 : EXC+ ALIMENTAZIONE +
- 12 : REF+ REFERENCE +
- 13 : REF- REFERENCE -
- 14 : SIG- SEGNALE - ( ptf. N° 1 )
- 15 : SIG+ SEGNALE + ( ptf N° 1 )
- 16 : SIG + SEGNALE + ( ptf. N° 2 )
- 17 : SIG - SEGNALE - ( PTF. N° 2 )

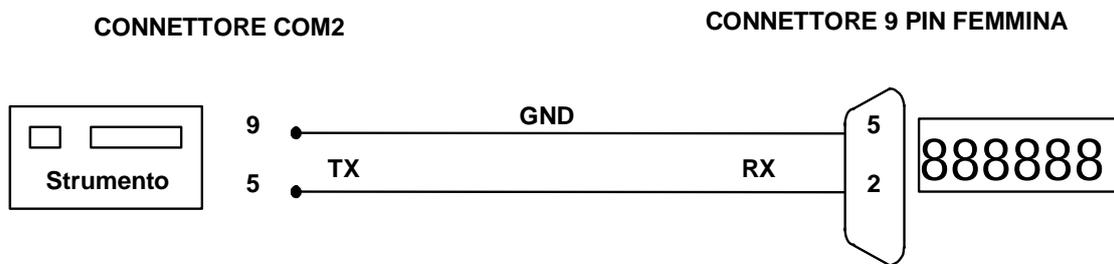


### 6.2 – Serial RS232 Connection for PC

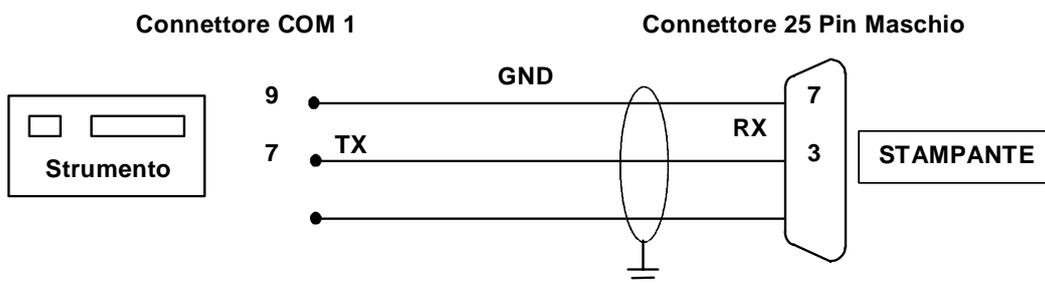


### 6.3 – Serial RS232 Connection for weight repeater R60 - R20

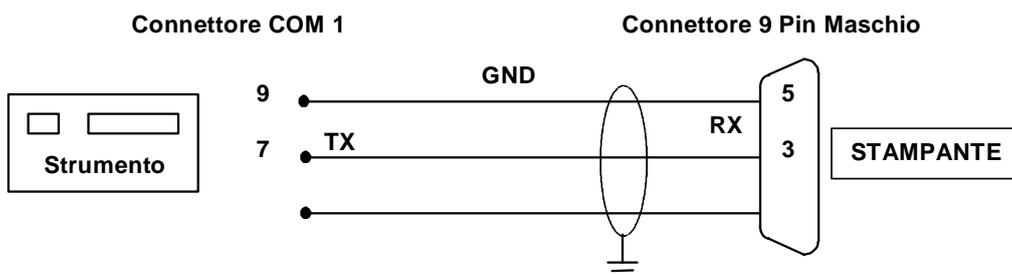




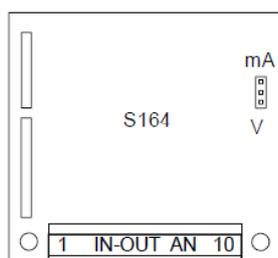
**6.4 – Serial RS232 Connection for printer EPSON TMU295 and LX300**



**6.5 – Serial RS232 Connection for label printer Zebra GK420 and printer PLUS SA**

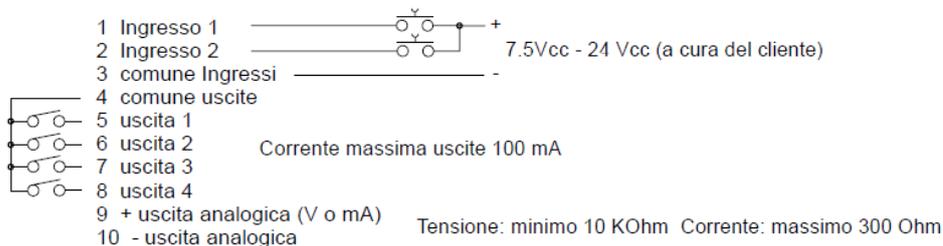


**6.6 – Option card I/O**



Ponticello di selezione tra V e mA dell'uscita analogica

**MORSETTIERA**



Per l'uscita analogica utilizzare cavo schermato (schermo a terra).

## 8 – ASCII CODE TABLE

32 = SPACE	33 = !	34 = "	35 = #	36 = \$
37 = %	38 = &	39 = '	40 = (	41 = )
42 = *	43 = +	44 = ,	45 = -	46 = .
47 = /	48 = 0	49 = 1	50 = 2	51 = 3
52 = 4	53 = 5	54 = 6	55 = 7	56 = 8
57 = 9	58 = :	59 = ;	60 = <	61 = =
62 = >	63 = ?	64 = @	65 = A	66 = B
67 = C	68 = D	69 = E	70 = F	71 = G
72 = H	73 = I	74 = J	75 = K	76 = L
77 = M	78 = N	79 = O	80 = P	81 = Q
82 = R	83 = S	84 = T	85 = U	86 = V
87 = W	88 = X	89 = Y	90 = Z	91 = [
92 = \	93 = ]	94 = ^	95 = _	96 = `
97 = a	98 = b	99 = c	100 = d	101 = e
102 = f	103 = g	104 = h	105 = i	106 = j
107 = k	108 = l	109 = m	110 = n	111 = o
112 = p	113 = q	114 = r	115 = s	116 = t
117 = u	118 = v	119 = w	120 = x	121 = y
122 = z	123 = {	124 =	125 = }	126 = ~

**ODECA s.r.l.**  
**Via Dell'Industria, 20**  
**21044 - CAVARIA - VA -**



**DICHIARAZIONE DI CONFORMITA'**  
*Declaration of conformity*

**Lo strumento per pesare a funzionamento non automatico**

The non-automatic Weighing instrument

<b>Fabbricante:</b> Manufacturer:	<b>ODECA srl</b>
<b>Tipo/Modello:</b> Type/Model:	<b>SW21</b>

**al quale si riferisce la presente dichiarazione,**  
**è conforme alla/e seguente/i norma/e o documento/i normativo/i :**  
*to which this declaration refers to,*  
*conforms with the following standard(s) or other regulations document(s) :*

**Conformità CE / CE Conformity :**

\* Direttiva CEE 89/336 sulla Compatibilità Elettromagnetica  
 Norme Europee EN 55011 , EN 50082-1  
*89/336 EU EMC Directive adopted European Standard EN 55011 , EN50082-1*  
 \* Direttive CEE 73/23 e 93/68 sulla sicurezza elettrica in bassa tensione.  
 Norma Europea EN 61010-1  
*73/23 and 93/68 EU Directives regarding low voltage electrical safety.*  
*Adopted European Standard EN 61010-1*

**Altre Norme e Direttive / Other Directives and Standards :**

(° ) Direttiva CEE 90/384 , Requisiti metrologici per strumenti per pesare a funzionamento non automatico. Norma Europea EN 45501.  
 (°) *90/384 EU Directive, Metrological aspects of non-automatic weighing instruments.*  
*Adopted European Standard EN45501: 1992*  
 (°) Solo se è presente il marchio "M" / *Only if "M" mark is applied*

**Odeca s.r.l.**

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