

Rev.0

# WEIGHING INDICATOR

# HL30

## MANUAL



**PTM s.r.l.**

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Sistema Qualità Certificato secondo UNI EN ISO 9001:2000



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***Dear Customer,***

*Thank you for the preference you have given to one of our products. We invite you to read this booklet: you will find some useful specifications in order to know, use and preserve as long as possible your new weighing and dosing system.*



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## Features

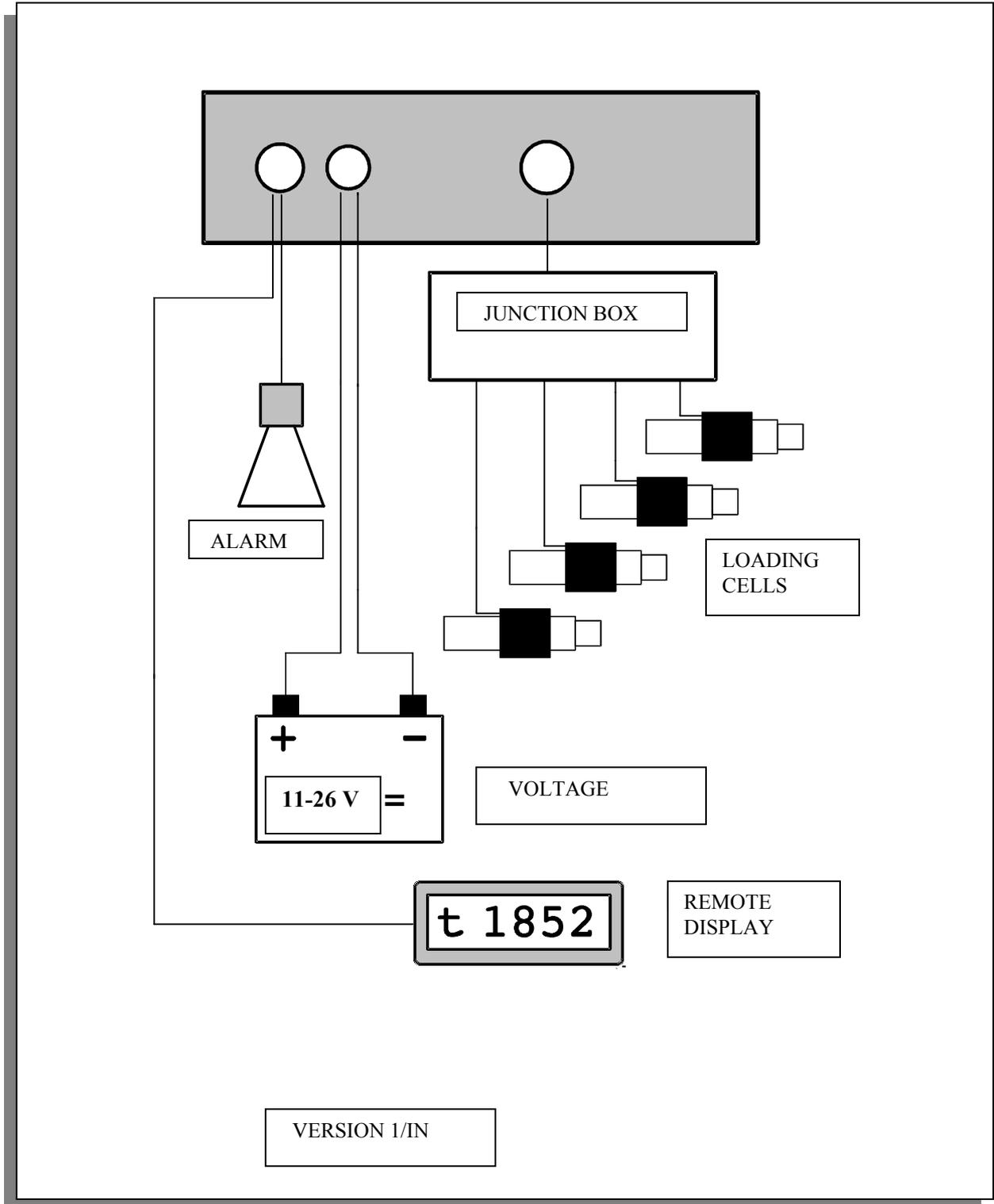
<b>Box:</b>	<i>in pressure die-cast aluminium IP 65</i>
<b>Dimensions:</b>	<i>L 260 x H 160 x P 90 mm</i>
<b>Weight:</b>	<i>3500 gr., more or less</i>
<b>Display:</b>	<i>5 digits, red LED H 55 mm</i>
<b>Keyboard:</b>	<i>with high sensibility membrane</i>
<b>Memory:</b>	<i>EEprom</i>
<b>Resolution:</b>	<i>135.000 dd</i>
<b>Programmable divisions:</b>	<i>kg. 1 - 2 - 5 - 10</i>
<b>Reading Error:</b>	<i>+/- kg.1 referring to kg.10.000</i>
<b>Working conditions</b>	<i>from -20°C to +60°C/ relative humidity 100%</i>
<b>Power supply</b>	<i>from 11 to 26 V dc max. tension peak = 30V dc</i>
<b>Protection against the interferences of Radio-frequency</b>	
<b>Cancellation of interferences due to the power supply</b>	
<b>RS 232 Exit</b>	
<b>Alarm Exit</b>	
<b>Resetting and Calibration can be set through Software</b>	
<b>Signal of low tension</b>	
<b>Direct control of the tension</b>	

### HL30:

- ✘ Management of 15 programmable recipes;
- ✘ Management of 15 components in loading;
- ✘ Management of 15 unloads;
- ✘ Management of final mixing time;
- ✘ Management of every single accumulation for each component and recipe;
- ✘ Management of the names of components and recipes.

**PTM keeps itself the right to modify the features of its products without warning with the purpose to improve the quality.**

# CONNECTIONS



# KEYBOARD



Switching on



Switching off



Zeroing of the tare.  
Total weight recall



Partial setting at zero  
Partial weight recall



Increasing of values



Decreasing of values



Entry in User's menu



Load programming



Unload programming



Load execution



Unload execution



Operation confirmation



Exit



Shift to the left of the cursor



Shift to the right of the cursor

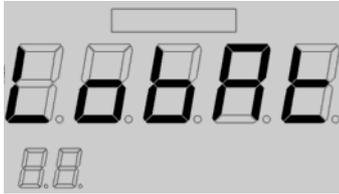


Block of the weight



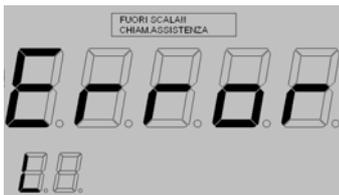
Print of total weight  
Print of partial weight

## MESSAGES OF ERROR

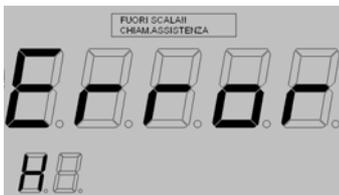


Low supply voltage. Check the battery of the tractor, the connections and the electric system.

In order to control the tension, it is necessary to enter in the special menu, as per explications included in next pages of this instruction manual.



System out of scale with negative and positive values.



Verify the possible causes:

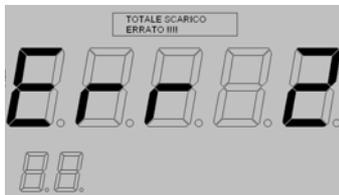
Humidity in loading cells' connections.

The connection cable is either broken or squashed.

The loading cell is broken.

The loading cell has moved in its right position.

### Errors of recipe programming:



Error 2 – It appears in unloading function when the number of programmed animals for unloading is higher than the programmed number for loading



Error 3 – The programmed total weight for the recipe is higher than 99999Kg.

## SAFETY INFORMATION

- ✦ The system works with a tension from 11 to 26 Vdc. Use only this voltage.
- ✦ Never open the protection housing.
- ✦ Let the system be checked immediately, if liquids go in.
- ✦ To disconnect the computer unscrew the connectors. Never pull the cables.
- ✦ For your safety call the technician for the maintenance.

### ATTENTION!

**Do not use high-pressure water devices to wash the scale**

## DIGIT CHECK



- ✗ To enter in the function regarding digit check you have to keep pressed the keys   at the same time. They have to be pressed for about 10 seconds until the simultaneous switching on of all digits in the display.
- ✗ After that all digits will be switched off and each digit will be singularly lighted in order to see relevant working.
- ✗ If one or more digits are faulty, please contact PTM service.
- ✗ At the end of this operation the scale will return automatically to menu of "Total weight".

## FUNCTIONING OF SYSTEM

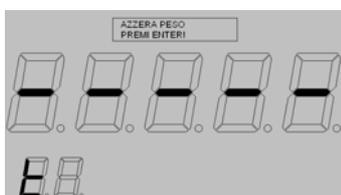
### Switching on and balancing



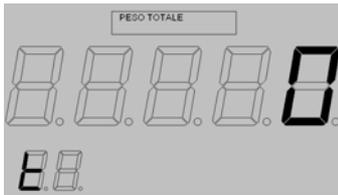
Push key  to switch on the scale. After the message of welcome it will reach automatically the menu of "Total weight".



Keep pressed  for about 3 seconds until the appearance of the request for the setting at zero of the system.



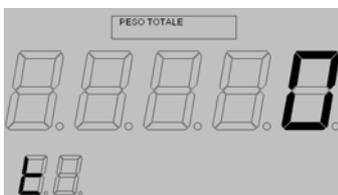
To confirm the operation you have to press the key , or  to cancel it.



After the visualization of the dashes on the display the system will balance itself and it will return automatically to the menu of "Total weight".

## WORKING WITH PROGRAMMING OPERATIONS

### Programming of load



Press key  from menu of "Total weight" in order to reach the menu for the selection of recipe number to programme.



Through the keys   it is possible to modify the flashing numeric character. If you want to move yourself laterally from a character to another, use the following arrows  .

When you have reached the number of wished recipe, push  to

confirm and to pass to the setting of the animals quantity. Press  to cancel the operation and to go out.



Now the user can set the animals, for which the mixing will be prepared. It is possible to insert until 999 animals. At the end of the

operation confirm through ,

after that you can continue with the programming of the components. To cancel and go out, push



As per the quantity of animals, it will be possible to set the quantity for all components in recipe being settable in sequence. You can insert until 99,9Kg for every component per animal. Furthermore,

by pressing the key  the user can choose a name for the component (this operation will be described in one of the next

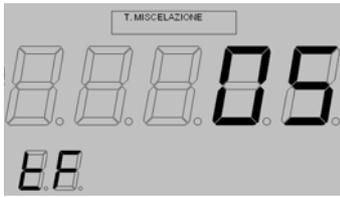
paragraphs). Run through the list of the components with 

 and confirm your choice through  and the system will return to the setting of component quantity.

As soon as you have set a component, press  to pass to the



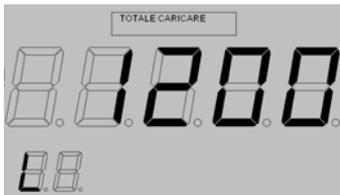
next. On the contrary, push  to reach directly the setting for the final mixing time.



At the end of the setting of components, by pressing  the system will pass automatically to the definition of the final mixing time. It is possible to set until 60 minutes with the same procedures

previously described. Push  to pass to the total mixing

visualization, or push  to go out from the programming and to return to the menu of total weight.



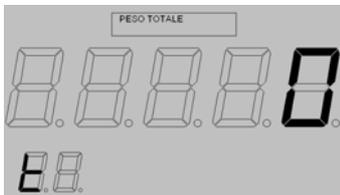
After that it will be displayed the total of the mixing. Push  to pass to the visualization of the portion for each animal, or push

 to go out from the programming and to return to the menu of total weight.

At the end, it will be displayed the portion for each animal. Press  or  to finish the programming and in order to return to the menu of total weight.



## *Programming of the Unload*



Press the key  in the menu of total weight to reach the menu of the selection of the number of the recipe to programme.

With the key  and  it is now possible to modify the

flashing digit, and with key  and  it is possible to move laterally from a digit to another.

When the displayed digit does correspond to the recipe to be

programmed press the key  to confirm the data and pass to the setting up of the number of the animals for each unload. To cancel and to go out press



Now, following the same procedure of the selection of the number of the recipe, it will be possible to insert for each unload the number of animals to feed with the scheduled ration. You can insert until number 999, but, however, it could not be higher than the total of animals programmed for the load. At the end of the load

programming press  to pass to the next setting up, otherwise

press  to go out and to return to the menu of total weight.

## Loading Operations



Press the key  in the menu of total weight to reach the menu of the selection of the number of the recipe to execute.



Select the number of wished recipe by using the keys  and  to modify the flashing digit, and the keys  and  to move laterally from a digit to another. After setting the number of



recipe press  to start the load of the first component, or press



 to go out. It will be displayed the programmed weight to load and as the weight increases on the scale, displayed weight will consequently decrease till 0. When making 85% of the load a warning device will start with an intermittent ring. The flashing frequency of the ring will be growing progressively when reaching the loading operation fulfilment. When reaching the programmed weight the acoustic signal will be continuous for about 4 seconds. When reaching the wished loading weight, in case of manual

passing of the component, press the key  to continue with the next component. In case of automatic load of the component the scale, when ending the ring of the warning device, will proceed automatically with the next programmed load.



At the end of the loading of all components, it will be calculated, if duly programmed, the time of the final mixing. As soon it ends the alarm will ring and the scale will stop the loading execution and will return to the menu of the total weight. If said time is not programmed, when finishing the load operation of all components, the scale will return automatically to the display related to total

weight.

### **Block of the weight**



During the component load, just to avoid any weight oscillation due to movements, it is possible to block the weight by pressing the key

. When the weighted is blocked the numbers will flash and on the display LCD will appear the inscription "LOAD BLOCKED".

To restore the normal functioning press the key .

### **Restore of initial weight**

It is possible to restore the initial loaded weight, in order to be able to re-load the programmed quantity, by keeping pressed the key  for about 2 seconds during the load.



### **Visualization of the total weight**

At any time of the load it is possible to see the total quantity which has been weighted by the scale. 

### **Interruption of the unload**

To interrupt the unload of the component at any time keep pressed the key  for about 3 second. After that the scale will return to the menu of the total weight.

### **Unload operations**



Keep pressed the key  to plan the scale to unload and to start relevant operations.



Select the number of wished recipe by using the keys  and  to modify the flashing digit and pressing the keys  and  to move from one digit to another. After setting the number of recipe press  to start with the load of the first component,

otherwise press  to go out.



It will be displayed the weight of the first programmed unload and as weight decreases on the scale, displayed weight will consequently decrease till 0. When making 85% of the unload a warning device will start with an intermittent ring. The flashing frequency of the ring will be growing progressively when reaching the loading operation fulfilment. When reaching the programmed weight the acoustic signal will be continuous for about 4 seconds.

When reaching the wished unloading weight, in case of manual passing of the component,

press the key  to continue with the next component. In case of automatic load of the component the scale, when ending the ring of the warning device, will proceed automatically with the next programmed unload.

When finishing all unloads, stated in the recipe, the scale will return to the screen of total weight.

### **Block of the weight**



During the unload, just to avoid any weight oscillation due to movements, it is possible to block the weight by pressing the key

. When the weight is blocked the numbers will flash and on the display LCD will appear the inscription "UNLOAD BLOCKED".

To restore the normal functioning press the key .

### **Restore of initial weight**

It is possible to restore the initial unloaded weight, in order to be able to re-load the programmed quantity, by keeping pressed the key  for about 2 seconds during the unload.



### **Visualization of the total weight**

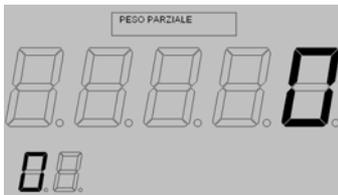
At any time of the load it is possible to see the total quantity which has been weighted by the scale. 

### **Interruption of the unload**

To interrupt the unload of the component at any time keep pressed the key  for about 3 second. After that the scale will return to the menu of the total weight.

# **WORKING WITHOUT PROGRAMMING**

## **Load Operations**



Press the key  to plan the scale to load the component and start the relevant dosage.

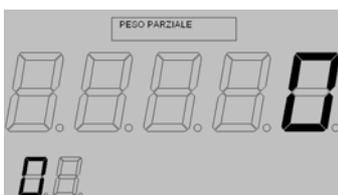


When reaching the wished weight to load press again the key  in order to be able to start with dosage of another component. Repeat said operation for all components to load.



At the end of the load operations press the key  to finish and to return to the menu of the total weight.

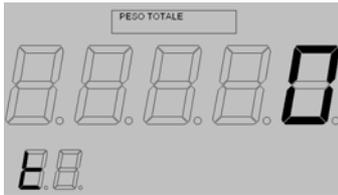
## **Unload operations**



Press the key  to plan the scale to unload the first planned quantity, then proceed with the unloading.

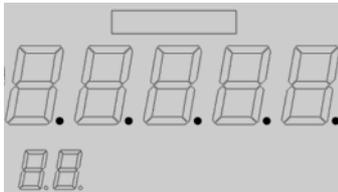


When reaching the wished weight to unload press again the key  in order to be able to start with the next unload. Repeat said operation when unload of mixing is required.



At the end of the unload operations press the key  to finish and to return to the menu of the total weight.

## Users' Meny



Press the key  to enter in the functions of the user's menu. On the display the points will be lighted, whereas on top of the LCD display it is possible to see the submenu to come in. To run the

submenu list press the keys  and .

The submenus at your disposition are the following:

- ✗ AUTO PASSING;
- ✗ ACCUMULATIONS;
- ✗ RECIPES NAMES;
- ✗ COMPONENTS NAMES;
- ✗ CONTRAST;
- ✗ BATTERY;
- ✗ CLOCK.

To enter in the selected submenu press the key  or  if you want to go out and return to the menu of total weight.

## AUTO PASSING



In this menu it is possible to choose among Automatic Passing or Manual Passing of the Component. That is to say, at the end of the load or unload into processing, after the ring of the warning advice for 4 seconds, in case of automatic passing the scale will automatically proceed with the next phase, otherwise it will be necessary to wait for the operator who will have to press the proper

key to continue the operations. In order to modify the setting press the key ,

after that use the arrows  and  to pass from Automatic to Manual. To go out without confirming

any choice press the key ,

whereas, with the purpose to confirm the effected setting up and to go out, press the key .

## ACCUMULATIONS



In this menu it is possible to show the accumulation of what it has been really dosed in all load operations, evidencing singularly the quantity for each component in each recipe. To change the number

of the components use the keys  and ,

whereas, with the purpose to change the number of the recipe, use the keys  and .

It is possible to reset the value of each single component by keeping pressed for 3 second the key ,

otherwise, with the purpose to completely reset all the recipe, keep simultaneously pressed for the 3 seconds the keys  and . To go out from the menu press the key .

## RECIPES NAMES

In this menu it is possible to set out the name of each recipe available in the system considering the use of maximum 20 characters. Through the keys  and  it is possible to run the recipes list.

In case of modification of the name of a recipe it is enough to press the keys  and  to move the cursor in the right position where to insert the character and press the keys  and  to modify the character itself.

At the end of the settings press the key  to return to the main menu.

## COMPONENTS NAMES

In this menu it is possible to set out the name of each component available in the system considering the use of maximum 20 characters. 10 names are pre-set, however, they can be modified by the user at any time. Through the keys  and  it is possible to run the components list.

In case of modification of the name of a component it is enough to press the keys  and  to move the cursor in the right position where to insert the character and press the keys  and  to modify the character itself.

At the end of the settings press the key  to return to the main menu.

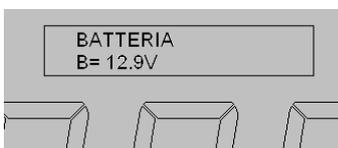
## CONTRAST



In this menu it is possible to regulate the LCD display's contrast which is placed above the digits. The regulation can be varying from +10 (high contrast) to -10 (low contrast). To modify the setting

use the keys  and . To go out without confirming any choice press the key , whereas, with the purpose to confirm the effected setting up and to go out, press the key .

## BATTERY



In this menu it is possible to check the correct tension of the scale's alimentation. In LCD display it is stated the Volt value (for ex. B=

12.5V). To go out from the menu press the key .

## Clock



In this menu it is possible to see and modify the date and time of the system. Entering in the menu it will be displayed on the LCD

display the present date and hour and press the key  to modify one of them. The cursor will flash on the position related to the day.

Press the keys  and  to modify the value. To confirm and to pass to the next value

press the key . Repeat this procedure afterwards for all the coming values (month, year, hour, minutes and seconds). After the setting of the seconds the display will show you the date

and the time with the introduced changes. To go out from the menu press the key .



## **WARRANTY**

PTM production represents the expression of the most advanced technology in the field of dosing and weighing systems. Employed materials are of the highest qualitative level present in the market. Each device, before leaving our laboratories, is submitted to foreseen checks and control tests. Things being so we are able to guarantee the systems to be free from defects in material and factory workmanship for a period of 24 months from purchase date. However, during warranty period, PTM engages itself to freely repair or replace the faulty spare-parts charging only the labour and carriage charges. Warranty has to be considered on "Free PTM Visano headquarter" basis.

### **Conditions:**

This warranty does **not cover**:

- ✘ Damages caused during transport or movement of the goods, since products are furnished on ex works loaded basis.
- ✘ Costs and risks of transport related, directly or indirectly, to warranty of the product. It is also referring to the carriage from assistance centre to customer and vice versa.
- ✘ Periodical controls, handlings and reparations or replacements of spare parts, due to normal wear and tear of time.
- ✘ Accidental breakages, due to incorrect use or carelessness.
- ✘ Costs born by PTM Assistance centres for modifications or necessary interventions said to adapt the product to specific technical or security needs, or in order to adhere the rules of the different Countries, as well as for all charges to be born to match products with modified operatives conditions which occurred after relevant delivery.
- ✘ Violation, cancellation, removal of identification label which is always stuck on our products.
- ✘ Damages to this product due to carelessness, falls, displacements, incorrect use and because of following reasons:
  - Missing use of the product for its own normal purposes or in case of improper use and handling of the products and so not in conformity with PTM instructions at this matter.
  - Not observance of installation and use instructions or use in contrast with security or technical rules in force in the Country where the product has to be used.
  - Reparations made by people or assistance centres not duly authorised by PTM.
  - Accidents or consequences due to theft of vehicle transporting PTM product, acts of vandalism, thunderbolts, fire, humidity, liquid infiltrations, inclemency of the weather.
  - Addition or integration in device neither furnished nor recommended by PTM, failing expressed written agreement.
  - Use for a different purpose than what the product is destined.

To get the warranty acknowledgement it is necessary to keep a document which is fiscally valid and proving the date of purchase.

This warranty does not prejudice customer's rights duly reserved by the Law as well as the national rules still into force, not even prejudice customer's rights towards the seller coming from purchase and sale contract. In case of lack of a national law this warranty will be the only and mere customer's protection and, neither PTM nor its distributor will be responsible for any accidental or in direct damage, for the violation of any implicit or explicit warranty of this product.



## **DECLARATION OF CONFORMITY**

The included products satisfy the requirements of the Directive 89/336 EEC.

Manufacturer's name            **P T M S.r.l.**  
Manufacturer's address        **Via per Isorella 22A 25010 Visano BS ITALIA**

### ***DECLARES THAT THE FOLLOWING PRODUCTS***

Product name                **Electronic weighing system**  
Model                         **HL 30**

### ***IN ACCORDANCE WITH EMC SPECIFICATION BASED ON THE FOLLOWING RULES***

-EN 61000-6-3 (2002)

EN 55022 (1999) **IRRADIATED EMISSION CLASS B**

EN 55022 (1999) **LEADED EMISSION CLASS B**

-EN61000-6-1 (2002)

IEC 61000-4-2 (1996) **Electrostatics discharging** STANDARD B

IEC 61000-4-3 (2003) **Irradiated fields** STANDARD A

IEC 61000-4-4 (2006) **Quickly Transistor/Burst** STANDARD B

IEC 61000-4-5 (1997) **Pulses/Surges** STANDARD B

IEC 61000-4-6 (1997) **Interferences caused by radio frequency fields**  
**STANDARD A**

#### **SIGNAL AND SUPPLY LINES: DIRECT CURRENT**

The products have been tested under a typical configuration.

**VISANO 02-05-2006**

**Compliance Engineer**  
**Ing. Vittorio Michelotti**

*Vittorio Michelotti*