



# **CONSUMPTION CONTROLLER**

## **INSTRUCTION MANUAL**

### **SUPERVISOR AND USER MODE**



## CONTENT

|                                                                                    |           |
|------------------------------------------------------------------------------------|-----------|
| <b>1. GENERAL INSTRUCTIONS TO USE THE KEYPAD .....</b>                             | <b>5</b>  |
| <b>2. USER MODE .....</b>                                                          | <b>6</b>  |
| <i>Step 1. User identification .....</i>                                           | <i>6</i>  |
| <i>Step 2. Vehicle identification .....</i>                                        | <i>7</i>  |
| <i>Step 3. Vehicle mileage introduction .....</i>                                  | <i>7</i>  |
| <i>Step 4. Predetermination introduction .....</i>                                 | <i>8</i>  |
| <i>Step 5. Supply starting .....</i>                                               | <i>8</i>  |
| <i>Step 6. Supply end .....</i>                                                    | <i>8</i>  |
| <i>Step 7. Supply ticket .....</i>                                                 | <i>9</i>  |
| <b>3. SUPERVISOR MODE .....</b>                                                    | <b>10</b> |
| 3.1. SUPERVISOR mode access .....                                                  | 10        |
| 3.2. SUPERVISOR mode menu .....                                                    | 10        |
| 3.2.1. SUPERVISOR mode / REGULARIZATION .....                                      | 10        |
| 3.2.2. SUPERVISOR mode / IDENTIFIERS .....                                         | 11        |
| 3.2.3. SUPERVISOR mode / LANGUAGE .....                                            | 11        |
| 3.2.4. SUPERVISOR mode / SUPERVISOR MENU .....                                     | 11        |
| 3.2.4.1. SUPERVISOR mode / SUPERVISOR Menu / CONFIGURATION LIST .....              | 12        |
| 3.2.4.2. SUPERVISOR Mode / SUPERVISOR Menu / USERS .....                           | 12        |
| 3.2.4.2.1. SUPERVISOR Menu / USERS / NEW .....                                     | 12        |
| 3.2.4.2.2. SUPERVISOR mode / SUPERVISOR menu / USERS / DELETION .....              | 13        |
| 3.2.4.2.3. SUPERVISOR mode / SUPERVISOR menu / USERS / LIST .....                  | 14        |
| 3.2.4.2.4. SUPERVISOR mode / SUPERVISOR menu / USERS / COUNTERS .....              | 14        |
| 3.2.4.1.4.1. SUPERVISOR menu / users / counters / LIST .....                       | 14        |
| 3.2.4.1.4.2. SUPERVISOR menu / users / counters / RESET .....                      | 15        |
| 3.2.4.3. SUPERVISOR mode / SUPERVISOR menu / VEHICLES .....                        | 15        |
| 3.2.4.3.1. SUPERVISOR mode / SUPERVISOR menu / VEHICLES / NEW .....                | 15        |
| 3.2.4.3.2. SUPERVISOR mode / SUPERVISOR menu / VEHICLES / DELETION .....           | 16        |
| 3.2.4.3.3. SUPERVISOR mode / SUPERVISOR menu / VEHICLES / LIST .....               | 16        |
| 3.2.4.3.4. SUPERVISOR mode / SUPERVISOR menu / VEHICLES / COUNTERS .....           | 17        |
| 3.2.4.3.4.1. SUPERVISOR menu / vehicles / counters / LIST .....                    | 17        |
| 3.2.4.2.4.2. SUPERVISOR mode / SUPERVISOR menu / vehicles / counters / RESET ..... | 17        |
| 3.2.4.4. SUPERVISOR mode / SUPERVISOR menu / SERVICES .....                        | 18        |
| 3.2.4.3.1. SUPERVISOR mode / SUPERVISOR menu / SERVICES / PENDING .....            | 18        |
| 3.2.4.4.2. SUPERVISOR menu / SERVICES / SETTING PARAMETERS .....                   | 18        |
| 3.2.4.4.3. SUPERVISOR mode / SUPERVISOR menu / SERVICES / TOTALIZER .....          | 19        |
| 3.2.4.4.4. SUPERVISOR mode / SUPERVISOR menu / DATE / HOUR .....                   | 19        |
| 3.2.4.4.5. SUPERVISOR mode / SUPERVISOR menu / PC CONNECTION .....                 | 20        |
| 3.2.5. SUPERVISOR mode / TECHNICAL MENU .....                                      | 20        |
| 3.2.5.1. SUPERVISOR mode / TECHNICAL MENU / CALIBRATION .....                      | 20        |
| 3.2.5.2. SUPERVISOR mode / TECHNICAL MENU / INITIALIZATION .....                   | 21        |
| 3.2.5.3. SUPERVISOR mode / TECHNICAL MENU / CONSOLE .....                          | 22        |
| 3.2.5.4. SUPERVISOR mode / TECHNICAL MENU / PRODUCTS .....                         | 23        |
| 3.2.5.5. SUPERVISOR mode / TECHNICAL MENU / TANKS .....                            | 23        |
| 3.2.5.6. SUPERVISOR mode / TECHNICAL MENU / HOSES .....                            | 24        |
| 3.2.6. SUPERVISOR mode / DATA EXCHANGE (only via iButton) .....                    | 24        |
| <b>4. THE PRINTER .....</b>                                                        | <b>25</b> |
| <b>Appendix A .....</b>                                                            | <b>26</b> |
| <b>Appendix B .....</b>                                                            | <b>27</b> |
| <b>5. CONFORMITY DECLARATION .....</b>                                             | <b>28</b> |



## 1. GENERAL INSTRUCTIONS TO USE THE KEYPAD

The kit has a keypad of 14 keys distributed as it is shown below:



In general the numeric keys will be used for the access and data code typing, both in user and supervisor mode.

When the kit is waiting for the value typing, where it is possible a value with a decimal, you have to press the key <▼> as a decimal.

During the data typing, you have to use the key <▲> to delete the last typed character.

The key <OK> will be used to confirm the typed data or the selected options.

In supervisor mode, the keys <▲> and <▼> will be used to select one of the different options shown in the menus.

The <EXIT> key will be used to cancel the action that is being carried out or the current menu, and to go back to the last display.

## 2. USER MODE

The user mode is the mode that the kit allows making a supply to an authorized user.

Depending on the kit configuration, it will be necessary to make some or every one of the following steps so that a supply is completed:

### Step 1. User identification

According to the kit configuration, this step is made through the following options:

#### *Identification by key:*

- If the kit has been configured for user identification by key, the display will show the following message as well as the date and the hour:

PASS IDENTIFIER

The user must put the identification key in its place and keep it in this position until the kit recognizes it, making a brief 'beep'.

- If the identifier is not one of the authorized identifiers, the kit will show the following message during some seconds:

IDENTIFIER  
NOT VALID

and after this time it will go back to the initial display.

- If, on the contrary, the identifier is known as an authorized identifier, the kit will show the following message:

TYPE PERSONAL CODE:

The user must type its PIN or personal code, composed of 4 digits, and confirm with the key <OK>.

If the typed code is not correct, the kit will ask for the code typing again. If the user types an incorrect code three times, the user will have to pass again the identifier.

If the identification has been correct, the kit will pass to the following step.

#### *Identification by PIN:*

- If the kit has been configured for user identification by PIN code, the display will show the following message as well as the date and the hour:

PRESS A KEY

- Pressing any key, it will appear the following message on the display:

TYPE PERSONAL CODE:

The user must type its PIN or personal code, composed of 4 digits, and confirm with the key <OK>.

If the typed code is not correct, the kit will ask for the code typing again. If the user types an incorrect code three times, the user will have to pass again the identifier.

If the identification has been correct, the kit will pass to the following step.

#### *Without user identification*

- If the kit is configured to work without user identification, this step will not be made. The position starting of the kit will be that described in the step 2.

## Step 2. Vehicle identification

According to the kit configuration, this step is made through the following options:

### *Identification by key:*

- If the kit has been configured for vehicle identification by key, this will start with the following message in the display:

PASS IDENTIFIER

- The user must put the identification key of the vehicle in its place and keep it in this position until the kit recognizes it, making a brief 'beep'.

If the identifier is not one of the authorized identifiers, the kit will show the following message during some seconds:

IDENTIFIER  
NOT VALID

and after this time the kit will ask for the identifier again.

This can be repeated up to three times, and then the kit will reinitiate the service authorization process.

If the identification has been correct, the kit will pass to the following step.

### *Identification by numerical code:*

- If the kit has been configured for vehicle identification by numerical code, the display will show the following message:

TYPE THE VEHICLE  
CODE:

- The user must type the vehicle code. This code is composed of any combination from 1 to 5 digits, and it is confirmed with the key <OK>.

If the typed code is not correct, the kit will ask for the code typing once again.

If the user types an incorrect code three times, the user will have to pass again the identifier.

If the identification has been correct, the kit will pass to the following step.

### *Without vehicle identification:*

- If the kit is configured to work without vehicle identification, this step will not be made.

### *Identification by vehicle assignment:*

- If the user identified in the Step 1 has an assigned vehicle, this step will not be made. The vehicle that the user has assigned will be identified in the service authorization.

## Step 3. Vehicle mileage introduction

If the identified vehicle has activated the consumption control, the kit will show the following message:

TYPE  
KILOMETRES:

or the message:

TYPE  
HOURS:

as it is defined the vehicle when it is entered.

The user must type the value that the odometer or the vehicle hour counter has when the service is made. Once the value is typed, the user must confirm it with the key <OK>.

#### **Step 4. Predetermination introduction**

Depending on the kit configuration, it is possible to be asked to preset the fuel quantity that you want to supply. In this case, the display will show the following message:

TYPE AMOUNT  
PRESET:

If the user really wants to preset a volume, he will have to type the quantity, and confirm it with the key <OK>.

It is possible to type a value of litre fraction or the volume unit which you are working with, typing the decimal with the key <▼>. If the user does not want to preset the supply volume, he will have to press the key <OK>.

It is important to point out the accuracy of the supplied volume will depend on the installation of the required valves to reduce or cut the flow in the right moment.

#### **Step 5. Supply starting**

At this moment, the display will show the following message:

SERVICE  
AUTHORIZED

The user has to take the nozzle off. Then, the pump motor will start, and the display will change showing the supply volume through big size numerical digits.

The shown quantity resolution, in tenth or hundredth of litres, or the volume unit which is working with, will depend on the kit configuration.

#### **Step 6. Supply end**

The supply finishes with the pump motor stop, and this can happen because of any of the following causes (the first that happens):

- The user hangs up the nozzle.
- It has passed some time without passing liquid equal to that configured in the parameter 'seconds without pulses'.
- The supply has achieved the configured volume in the parameter 'maximum amount'.
- The supply has taken an equal time than that configured in the parameter 'maximum time'.

The display will show the value reached in the supply during the next 60 seconds after the supply end. After this time, the kit will return to the start situation of the service authorization.

If it is necessary to start a new identification before the described time passes, the user will have to pass the identifier or press a key, depending on the configured identification mode.

## Step 7. Supply ticket

If the kit is connected to a ticket printer, it is possible to print a supply ticket similar to the model shown below.

The way to print this ticket depends on the value of the parameter 'ticket edition' in the definition of the user that has made the service.

- ⇒ If it is defined as 'Yes', the user will not have to make any action, and the kit will automatically print the ticket.
- ⇒ If it is defined 'by request', the user will be able to choose to print or not to print the ticket.
  - If he wants to print the ticket, he will have a determined time to pass again the identification key or type his PIN code, depending on the identification mode, and ask for the ticket printing.  
The value, in seconds, of this time is that configured in the parameter 'ticket request seconds'.  
If the user lets this time pass and he is identified again, the kit will understand that he wants to start a new identification.
- ⇒ Finally, if the user is defined with the parameter 'ticket edition' as 'No', the user will not be able to print the ticket.

|                     |          |
|---------------------|----------|
| COMPANY NAME        |          |
| Address             |          |
| Town                |          |
| NIF                 |          |
| 07/05/2011          | 11:09:55 |
| NUMBER:             | 5564     |
| USER:               | 345      |
| VEHICLE:            | 233      |
| KILOMETRES:         | 122334   |
| PRODUCT:            | DIESEL A |
| QUANTITY:           | 34.02    |
| PRICE:              | 0,850    |
| TOTAL:              | 28.92    |
| TAX (18%):          | 5.21     |
| Amount:             | 34.13    |
| THANK YOU VERY MUCH |          |

This shown ticket model is the complete ticket. The edited data will depend on the system configuration.

So, i.e., the first and last lines are free texts; the Kilometres line will or will not be shown depending on whether the vehicle has or has not activated the consumption control; or the lines related with the amount will be only shown if the price per litre or the volume unit which is working with has a different value of zero.

### 3. SUPERVISOR MODE

The Supervisor mode is the mode where the kit allows the authorized person (from now on, SUPERVISOR) to make all the configuration system operations, as well as to get the stored data.

According to the kit configuration, this mode can show the different menus and options that will be described in this manual.

#### 3.1. SUPERVISOR mode access

The SUPERVISOR is identified as any other user. If the system is configured for user identification through identification key + PIN, there will be a key that the kit will identify as the SUPERVISOR that, along with the associated PIN, will give access to this mode. Otherwise, if the kit is configured for the user identification through PIN, there will be a PIN associated to the SUPERVISOR.

#### 3.2. SUPERVISOR mode menu

To go into the SUPERVISOR mode, first you have to press the key <OK> without dropping it, press the key <▼> at the same time. Once the SUPERVISOR (PIN 0220) is correctly identified, the display will show the following menu:

```
SUPERVISOR MODE
>REGULARIZATION
  IDENTIFIERS
  LANGUAGE
  PC DISCONNECTION (only with the enabled PC connection)
  SUPERVISOR MENU (disabled PC connection)
  TECHNICAL MENU
  DATA EXCHANGE (only with the enabled PC connection via iButton)
```

The desired option will be chosen pressing the keys <▲> and <▼> until the pointer > points to the option. Then press the key <OK>.

The different options are described below:

##### 3.2.1. SUPERVISOR mode / REGULARIZATION

This option allows adjusting the level shown by the kit to the real level that there is in the tank. Because of some differences in the accuracy of some instruments, which are used to count the entered and supplied liquid, it is possible that there can be some maladjustments between the shown value by the kit and the measured value. This option allows making a "regularization" of this level. If it is selected, it will appear a list with as many tanks as there are stated in SUPERVISOR MODE / TECHNICAL MODE / CONSOLE / TANK NUM.

Once it is selected one of the tanks that there are available, it is shown the following display:

```
REGULARIZ. LIQUID X
CURRENT QUANTITY:
```

The kit will wait that the current litre (or the volume unit which is working with) number is typed. Once the quantity is typed and confirmed with the key <OK>, the kit will have this value as the current tank level. If

the typed quantity is higher than the defined value in SUPERVISOR MODE / TECHNICAL MENU / TANKS / CAPACITY, the operation will not be made and the kit will show the following message:

OPERATION  
NOT MADE

### 3.2.2. SUPERVISOR mode / IDENTIFIERS

This option allows the code reading that an identifier has. Once selected, the display shows the following message:

PASS IDENTIFIER

The kit will wait the user places the identifier on its site. If the identifier is usable, the kit will read its code, and it will show it in the last line of the display.

Pressing the key <EXIT>, it will be shown again the SUPERVISOR MODE menu.

### 3.2.3. SUPERVISOR mode / LANGUAGE

It defines the language that the display text will be displayed in this console.

Select the language you want and pressing the key <EXIT> you will go back to the SUPERVISOR MODE menu.

### 3.2.4. SUPERVISOR mode / SUPERVISOR MENU

This SUPERVISOR MODE section is that really allows the system data contribution and recovery.

This option is not always visible. If the kit is controlled from a computer, this menu will not be accessible to avoid the possibility of typing data to the system from two different sources, the computer program, and the own kit keypad. In this case, in this menu position, it will appear the PC DISCONNECTION option. Selecting it and accepting it, it will appear again the SUPERVISOR MENU.

This menu has the following structure:

#### SUPERVISOR MENU

##### CONFIGURATION LIST

|          |                                       |               |                       |
|----------|---------------------------------------|---------------|-----------------------|
| USERS    | NEW<br>DELETION<br>LIST<br>COUNTERS   | LIST<br>RESET | ONE USER<br>ALL USERS |
| VEHICLES | NEW<br>DELETION<br>LIST<br>COUNTERS   | LIST<br>RESET | ONE USER<br>ALL USERS |
| SERVICES | PENDANT<br>PARAMETERIZED<br>TOTALIZER |               |                       |

DATE / HOUR

PC CONNECTION

#### **3.2.4.1. SUPERVISOR mode / SUPERVISOR Menu / CONFIGURATION LIST**

This option shows the current kit configuration. A parameter of this configuration, which exactly shows whether a printer is or is not enabled in the system, will point out where the list will be seen. If the printer is enabled, the list will be printed. If, on the contrary, it is not enabled, the configuration will be only shown on the display.

The system configuration is divided into Console Configuration, Product Configuration, Tank Configuration, and Hose Configuration, containing each one of these divisions some configuration parameters.

This option does not allow modifying these parameters; these can be only displayed. In the section of the SUPERVISOR MODE, in the TECHNICAL MENU, each one of these parameters can be modified and in this section each parameter is explained.

#### **3.2.4.2. SUPERVISOR Mode / SUPERVISOR Menu / USERS**

This menu groups the functions to keep the authorized user file as well as their own counter.

Each user is characterized by his user number as well as by a series of data and options that depend on the system configuration and the user profile. These are described below:

- **Number:** It is a number that characterizes the user, and it will be unique. It is valid any value among 1 and 99999.
- **Identifier:** It is the code that the identifier has assigned to the user. It only has relevance if the identification is made through key.
- **Personal code:** It is a code of 4 digits associated to the user. It is essential both if the identification is made by key+PIN and only by PIN.
- **Assigned vehicle:** In configurations where the user and the vehicle are identified there can happen that a determined user is **always** refuelling the same vehicle and **only** that vehicle. In this case, it is possible to assign that vehicle to the user so that, when the user is identified, the system does not ask for the vehicle. The supply is automatically attributed to the assigned vehicle. The vehicle has to be registered so that this vehicle can be assigned to a user.
- **Monthly limit:** It is possible to assign a supply limit to each user. This limit is specified in litres (or the volume unit which is working with) and it has a period of a natural month. If you assign a limit to one user, this will not be able to supply more liquid than that limit during a natural month. This limit will be automatically started the first day of each month.
- **Ticket edition:** The kits that have printer can print a supply ticket. The way to have this ticket is an own parameter of each user, and it can have the following values:
  - Yes: The ticket will be automatically printed once the supply is finished,
  - No: The ticket will not ever be printed.
  - By request: If the user wants the service ticket, he has to be identified again when the supply has been already finished. If the identification is made in the shortest time that is marked by the parameter '*Ticket request*', the system will print the ticket. If the identification is made after this time, the system will start a new service.

Once you log in the SUPERVISOR Menu, and after to the Users, the following four options are shown:

##### **3.2.4.2.1. SUPERVISOR Menu / USERS / NEW**

This option allows entering a new user in the system. Selecting this option, the display will show the following message:

TYPE USER NUMBER:

Type the new user number. Then confirm it with the key <OK>, and the system will check that this number is not assigned to another user. If so, the display will show the following message during a brief time:

THIS USER  
EXISTS

returning to the previous state.

If the typed number is correct, and the system is configured for the user identification by key, the display will show the following message:

PASS IDENTIFIER

waiting for the reading of the new assigned user key.

Once the key is recognized, or directly, in the event that the system is configured for the user identification by PIN, the display will show the following message:

TYPE PERSONAL CODE:

Once the PIN assigned to the new user is typed and confirmed through the key <OK>, the display will show the following message:

TYPE ASSIGNED  
VEHICLE:

waiting the typing of the vehicle number assigned to the new user. If the typed number does not match with any already authorized vehicle, the display will show the following message during a brief time:

THIS VEHICLE DOES NOT  
EXIST

returning to the previous state.

If the user must not have any assigned vehicle, press the key <OK> without typing any value.

Then the display will show the following message:

TICKET EDITION  
> YES  
NO  
BY REQUEST

waiting the selection of the supply ticket printing mode.

Once this process is finished, the display will show the following message:

DONE INPUT

This will confirm the end of the user registering process.

#### **3.2.4.2.2. SUPERVISOR mode / SUPERVISOR menu / USERS / DELETION**

This option allows unregistering one authorized user. Selecting this option, the display will show the following message:

TYPE USER NUMBER:

waiting the typing of the user number to delete. Once it is confirmed by the key <OK>, the system will check if this number matches with one authorized user. If the user number does not exist, the display will show the following message during a brief time:

THIS USER DOES NOT  
EXIST

returning to the previous state.

If the typed number corresponds to an authorized user, the display will show the following message:

DELETED USER

confirming the user deletion.

#### **3.2.4.2.3. SUPERVISOR mode / SUPERVISOR menu / USERS / LIST**

This option allows listing the authorized users. If the system has not enabled any printer, the list will be shown on the display in the following way:

```
172    0000C6B9FE
1267    46772
1000.0    786.89
21345.78    1
```

By order, the shown data are: User number, Identifier, PIN code, assigned vehicle, counter, and ticket edition mode (0=No, 1=Yes, 2=Request).

Through the keys <▲> and <▼> it is possible go through the user file, seeing a different user each time.

If the printer is enabled, the list will have the following form:

| USER LIST  |             |      |          |  |  |
|------------|-------------|------|----------|--|--|
| 07/05/2011 |             |      | 09:52:21 |  |  |
| 172        | 0000C6B9FE  | 1267 | 46772    |  |  |
|            | 21345.78    |      | 1        |  |  |
| 556        | 0000D4556AC | 1677 | *****    |  |  |
|            | 115.99      |      | 2        |  |  |

By order, the shown data are: User number, Identifier, PIN code, assigned vehicle, counter, and ticket edition mode (0=No, 1=Yes, 2=Request).

#### **3.2.4.2.4. SUPERVISOR mode / SUPERVISOR menu / USERS / COUNTERS**

The counter is a totalizer assigned to each user, where their supplied quantities are gathered. In the more basic kit application, where there is not any printer or software connection, the counters offer the possibility to know the supplied liquid quantity by each user.

Selected this option, it appears a menu with the following options:

##### **3.2.4.1.4.1. SUPERVISOR menu / users / counters / LIST**

This option allows listing the value of the counters associated with each one of the users. The list, display, or printer application will depend on the parameter '*Printer Enabling*'. If it is enabled, the list will be directed to the printer. If not, it will appear on the display. Anyway it is possible to see the number of each authorized user along with the value of its counter. At the end of the list it appears the sum value of all the counters.

Through the keys <▲> and <▼>, it is possible to go through all user file, seeing the counter of each user.

The list format is the following:

| USER COUNTERS |          |
|---------------|----------|
| 07/05/2011    | 13:42:11 |
| 785           | 2678.90  |
| 13465         | 457.02   |
| 3444          | 8977.67  |
| 78            | 312.89   |
| -----         |          |
| TOTAL         | 12426.48 |
| QUANTITY:     | -----    |

#### 3.2.4.1.4.2. SUPERVISOR menu / users / counters / RESET

So that the counters operation is useful, it is essential to reset them, that is to say, to put them to zero, each time it may be necessary.

It is possible to choose two options:

- Reset the user counter, where it is necessary to select the user to whom you want to put at zero his counter, and
- Reset the counter of all users. With this action the counters of all them will be put at zero.

#### 3.2.4.3. SUPERVISOR mode / SUPERVISOR menu / VEHICLES

This menu groups the functions to keep the authorized vehicle file so as its own counter.

Each vehicle is characterized by its vehicle number as well as by a series of data and options that depend on the system configuration and the vehicle profile. These are described below:

- **Number:** It is a number that characterizes the vehicle, and it will be unique. It is valid any value among 1 and 99999.
- **Identifier:** If the vehicle identification is made by identification key, this parameter will take the code of the assigned vehicle key. If the identification is made through numeric code, this parameter will have the numeric code assigned to the vehicle. In this case, any code, among 1 and 99999, is valid.
- **Mileage control:** Each vehicle can or cannot have activated the mileage control. If this control is activated, the system will ask for the kilometres (or hours) that have covered the vehicle in the moment of the supply. The control can be made by kilometres or hours, according to the counter that has the vehicle. The system will treat in the same way one case or the other, with the only difference that the consumption will be in litres (or the volume unit which is working with) per 100 kilometres (with the kilometre control) or litres per hour (with the hour control).

Once you enter to the SUPERVISOR Menu, and after to the Vehicles, the following four options are shown:

##### 3.2.4.3.1. SUPERVISOR mode / SUPERVISOR menu / VEHICLES / NEW

This option allows logging in a new vehicle in the system. Selecting this option, the display will show the following message:

TYPE THE NUMBER OF  
VEHICLE:

Type the new vehicle number. Then confirm it with the key <OK>, and the system will check that this number is not assigned to another vehicle. In affirmative case, the display will show the following message during a brief time:

THIS VEHICLE DOES  
EXIST

returning to the previous state.

If the typed number is correct and the system is configured for the vehicle identification by key, the display will show the following message:

PASS IDENTIFIER

waiting for the reading of the new assigned vehicle key.

If, by the contrary, the system is configured for the vehicle identification by numeric code, the display will show the following message:

TYPE THE VEHICLE  
CODE:

Once the code is assigned to the new vehicle and confirmed with the key <OK>, the display will show the following message:

MILEAGE CONTROL  
0 = WITHOUT CONTROL  
1 = KILOMETRES  
2 = HOURS

waiting for the selection of the mileage control type for the new vehicle, through the key <0>, <1>, or <2>.

Once this process is finished, the display will show the following message:

DONE INPUT

This will confirm the end of the vehicle input process.

#### **3.2.4.3.2. SUPERVISOR mode / SUPERVISOR menu / VEHICLES / DELETION**

This option allows unregistering one authorized vehicle. Selecting this option the display will show the following message:

TYPE THE NUMBER OF  
VEHICLE:

waiting the typing of the vehicle number to delete. Once it is confirmed by the key <OK>, the system will check if this number matches with one authorized vehicle. If the vehicle number does not exist, the display will show the following message during a brief time:

THIS VEHICLE DOES NOT  
EXIST

returning to the previous state.

If the typed number corresponds to an authorized vehicle, the display will show the following message:

DELETED VEHICLE

confirming the user deletion.

#### **3.2.4.3.3. SUPERVISOR mode / SUPERVISOR menu / VEHICLES / LIST**

This option allows listing the authorized vehicles. If the system has not enabled any printer, the list will be shown on the display in the following way:

174 0000C1086A  
K 167560 1

By order, the shown data are: User number, Identifier, Mileage control (K = Kilometres, H = Hours, N = without control), current kilometres (or hours), and fuel type.

Through the keys <▲> and <▼>, it is possible go through the vehicle file, seeing a different vehicle each time.

If the printer is enabled, the list will have the following form:

| VEHICLE LIST |            |          |
|--------------|------------|----------|
| 07/05/2011   |            | 12:12:43 |
| 173          | 0000C1036A |          |
| K            | 167560     | 1        |
|              |            |          |
| 5345         | 00003EDF12 |          |
| N            | 0          | 1        |

By order, the shown data are: User number, Identifier, Mileage control (K = Kilometres, H = Hours, N = without control), current kilometres (or hours), and fuel type.

#### **3.2.4.3.4. SUPERVISOR mode / SUPERVISOR menu / VEHICLES / COUNTERS**

The counter is a totalizer assigned to each vehicle, where their supplied quantities are gathered. In the more basic kit application, where there is not any printer or software connection, the counters offer the possibility to know the supplied liquid quantity by each vehicle.

Once selected this option, it appears a menu with the following options:

##### **3.2.4.3.4.1. SUPERVISOR menu / vehicles / counters / LIST**

This option allows listing the value of the counters associated with each one of the vehicles. The list, display, or printer application will depend on the parameter '*Printer Enabling*'. If it is enabled, the list will be directed to the printer. If not, it will appear on the display. Anyway it is possible to see the number of each authorized vehicle along with the value of its counter. At the end of the list it appears the sum value of all the counters.

Through the keys <▲> and <▼>, it is possible to go through all vehicle file, seeing the counter of each vehicle.

The list format is the following:

| VEHICLE COUNTERS |           |          |
|------------------|-----------|----------|
| 07/05/2011       |           | 08:12:55 |
|                  | 85        | 2678.90  |
|                  | 3215      | 12457.02 |
|                  | 211       | 10.67    |
| -----            |           |          |
|                  | TOTAL     | 15146.59 |
| -----            |           |          |
|                  | QUANTITY: |          |
| -----            |           |          |

##### **3.2.4.2.4.2. SUPERVISOR mode / SUPERVISOR menu / vehicles / counters / RESET**

So that the counters operation is useful, it is essential to reset them, that is to say to put them to zero, each time it may be necessary.

It is possible to choose two options:

- Reset the vehicle counter, where it is necessary to select the vehicle to which you want to put at zero its counter, and
- Reset the counter of all vehicles; with this action the counters of all them will be put at zero.

### 3.2.4.4. SUPERVISOR mode / SUPERVISOR menu / SERVICES

This option allows the visualization of the supplies stored in the kit memory. This memory has a determined supply number according to the controller model. If a kit is specified to store a maximum of 500 services, its memory will always have the information of the last 500 done services. When a new supply must be stored, this will occupy the position of the oldest stored supply.

The visualization of this information is made through lists obtained in the printer connected to the kit.

Once you enter to the SUPERVISOR Menu, Services, there are two options:

#### 3.2.4.3.1. SUPERVISOR mode / SUPERVISOR menu / SERVICES / PENDING

This option allows making the supply list from the last time it was made a list of this type.

When you make a list *by pending*, the system will mark the shown services, and these will not be printed again.

This way of listing allows printing a list that "links" with the last list.

The list has the following format:

| PENDING SERVICE LIST |            |          |        |
|----------------------|------------|----------|--------|
| 07/04/2011           |            | 09:52:21 |        |
| 1345                 | 07/04/2011 | 08:34:51 | 1      |
| 2123                 | 16489      | 239.69   | 0.876  |
| 556                  | 07/04/2011 | 13:54:00 | 1      |
| 3450                 | 0          | 115.99   | 0.876  |
| 14                   | 07/04/2011 | 18:36:11 | 1      |
| 423                  | 189652     | 25.55    | 0.876  |
| TOTAL QUANTITY:      |            |          | 381.23 |
| TOTAL AMOUNT:        |            |          | 333.96 |

Where, from top to bottom, there are the following data:

Heading of the list, date, and hour of the list.

Supplies: Each service is seen by order: the user number, the date, the hour, the supplied product, the vehicle number, the kilometres (or hours), the supplied volume and the price per litre (or the volume unit which is working with).

Totals. At the end of the list it appears the total quantity and the total of amounts of the listed services.

#### 3.2.4.4.2. SUPERVISOR menu / SERVICES / SETTING PARAMETERS

This option allows getting a list of supplies that comply with certain conditions. The origin of this list is the whole stored supplies in the kit memory, and the conditions are the supply date, the user that made the supply and his vehicle. These conditions can be freely set one by one or combining them.

So, it is possible to obtain a list of the done supplies between two dates or the supplies done by a certain user or those that were assigned to a vehicle in concrete. Combining the three conditions it will be possible, i.e., if a user supplies a vehicle in concrete in a certain day.

Once this option selected, the display will show the following message:

INITIAL DATE:  
/ /

The system will wait the date typing from the services will be selected. The used format will be DDMMYYYY, and it will be confirmed with the key <OK>. If the date is confirmed in blank, the list will select the services from the first stored.

Then the display will show the following message:

FINAL DATE:  
/ /

The system will wait the date typing until which the services will be selected. The format used will be DDMMYYYY, and it will be confirmed with the key <OK>. If the date is confirmed in blank, the list will select the services up to the last stored service.

Then the display will show the following message:

USER:

The system will wait the user number typing from whom the services will be selected. It will be confirmed with the key <OK>. If the user is confirmed in blank, the list will select the services of any user.

Then the display will show the following message:

VEHICLE:

The system will wait the vehicle typing from which the services will be selected. It will be confirmed with the key <OK>. If the vehicle is confirmed in blank, the list will select the services of any vehicle.

When this process ended, it will be printed a list with the following format:

| PARAMETER SERVICE LIST |            |          |        |
|------------------------|------------|----------|--------|
| 07/04/2011             | 09:52:21   |          |        |
| INITIAL DATE:          | 02/05/2011 |          |        |
| FINAL DATE:            | *****      |          |        |
| USER:                  | 1456       |          |        |
| VEHICLE:               | ***        |          |        |
| -----                  |            |          |        |
| 1456                   | 02/04/2011 | 08:34:51 | 1      |
| 2123                   | 56489      | 189.67   | 0.876  |
| -----                  |            |          |        |
| 1456                   | 03/04/11   | 18:54:00 | 1      |
| 3450                   | 0          | 105.67   | 0.876  |
| -----                  |            |          |        |
| 1456                   | 05/04/11   | 13:36:11 | 1      |
| 423                    | 189652     | 45.90    | 0.876  |
| -----                  |            |          |        |
| 1456                   | 07/04/11   | 21:24:5  | 1      |
|                        | 5          |          |        |
| -----                  |            |          |        |
| 2123                   | 56788      | 201.37   | 0.876  |
| -----                  |            |          |        |
| TOTAL QUANTITY:        |            |          | 542.61 |
| -----                  |            |          |        |
| TOTAL AMOUNT:          |            |          | 475.33 |
| -----                  |            |          |        |

where, from top to bottom, there are the following data:

Heading of the list, date, and hour of the list.

Parameters of the selection. In this case the list corresponds to the services done the day 07/04/2011 until the last memorized day, by the user number 1456 on any vehicle.

Supplies: Each service is seen by order: the user number, the date, the hour, the supplied product, the vehicle number, the kilometres (or hours), the supplied volume and the price per litre (or the volume unit which is working with).

Totals. At the end of the list, it appears the total of litres and the total of amounts of the listed services.

#### **3.2.4.4.3. SUPERVISOR mode / SUPERVISOR menu / SERVICES / TOTALIZER**

It informs about the total supplied quantity by the kit from its starting.

#### **3.2.4.4.4. SUPERVISOR mode / SUPERVISOR menu / DATE / HOUR**

This option allows adjusting the clock of real time that the kit has. Selecting it, the display shows the following display:

DATE

CURRENT 08/04/2011  
NEW / /

In this point, you have to type the correct type, and after the key <OK>. The used format is DDMMYYYY. If the shown date is correct, it is possible to maintain it pressing the key <OK> directly. If it is typed an incorrect date, the system will not modify the current date, but it will not inform about this fact.

Once completed the date regularization, the kit will show the following message:

HOUR

CURRENT 13:06:43  
NEW : :

In this point the correct hour will be typed followed by the key <OK>. The used format is HHMMSS. If the shown hour is correct, it is possible to maintain it pressing the key <OK> directly. If it is typed an incorrect hour, the system will not modify the current hour, but it will not inform about this fact.

#### **3.2.4.4.5. SUPERVISOR mode / SUPERVISOR menu / PC CONNECTION**

Choose the option that you want to connect with the PC:

VIA IBUTTON  
VIA CABLE RS485  
VIA EXTERNAL ETHERNET  
VIA GSM  
VIA BUILT-IN ETHERNET

### **3.2.5. SUPERVISOR mode / TECHNICAL MENU**

Once it is entered the correct PIN (by defect 2002), the display will show the following menu:

> CALIBRATION  
STARTING  
CONSOLE  
PRODUCTS  
TANKS  
HOSES

Under this menu there are grouped some functions that allow to maintain and know the level of liquid in the installation tanks.

#### **3.2.5.1. SUPERVISOR mode / TECHNICAL MENU / CALIBRATION**

This option allows the meter calibration. The kit has built in an automatic electronic calibration process that means it passes a known amount of liquid through the meter; the kit "counts" the pulses generated by the meter. Once the liquid has passed, it will be indicated to the kit the passed amount with which the kit can calculate the relation that there is between the pulses and the volume. Independently of this system, the kit has also built in the traditional system of the whole factor, as it will be described below.

*Procedure:* Accepting the CALIBRATION option, after putting the pointer and pressing the key <OK>, the kit will start the pump (independently of the nozzle position) and will show the following message on the display:

SUPPLY KNOWN AMOUNT  
AND PRESS OK

In this point, you have to fill a recipient with a known volume. The best option is to use a homologated decilitre. Once the recipient is filled, press the key <OK>, and the kit will stop the pump and show the following message:

TYPE SUPPLIED  
AMOUNT:

where you must type the supplied volume. Remember that there is the possibility to type in decimals. Consult the General Instructions to use the keypad.

Once typed this amount and confirmed with the key <OK>, the display will show the following message:

NEW FACTOR FFFFFF

OK = ACCEPT  
EXIT = REJECT

where FFFFFF is the new calculated factor of calibration, and it represents the number of hundred thousandth of litres (or the volume unit which is working with) that the count will be increased by each received pulse, having the option to accept the new value through the key <OK> or reject it through the key <EXIT>.

If the kit has not noticed any pulse or the typed quantity has been equal at 0, it will not be possible to make the calculation and the shown message will be:

CALIBRATION PROCESS  
ERROR

OK = ACCEPT

Pressing the key <OK> you will return to the display of the SUPERVISOR MODE and the calibration factor will not be modified.

If the new factor has been calculated, once it is accepted, the display will show the following message:

PROTECT FACTOR?

OK = YES  
EXIT = NO

With the affirmative answer, it is achieved that the new factor is not altered by a value that can get from a possible communication of the control software installed in a computer. So the factor value "is protected". If, on the contrary, it is answered in negative, the factor will be modified by the received communication of the software. This protection only affects to the described case. It is not valid when a recalibration is made from the controller.

It is possible to cancel the calibration process pressing the key <EXIT> at any moment. The display will return to the SUPERVISOR MODE.

### **3.2.5.2. SUPERVISOR mode / TECHNICAL MENU / INITIALIZATION**

Through this option it is possible to initialize the different data files of the system, or what it is the same to eliminate the information that the kit has. Please, **act with extreme caution on this option because once some of the files are initialized, it will not be possible to recover this information.**

Once this option selected, it will appear a menu with the following options:

USER FILE  
VEHICLE FILE  
SERVICE FILE  
CONFIGURATION FILE  
ALL

Selecting any of them, the kit will show the following message:

CONFIRM  
INITIALIZATION

Confirm with the key <OK> to make effectively the operation or through any other key to exit of it.

The effect of making an initialization on each one of these files is the following:

USERS: All the authorized users will be eliminated.

VEHICLES: All the authorized vehicles will be eliminated.

SERVICES: All the stored services will be eliminated.

CONFIGURATION: It will be loaded a system configuration by defect. This configuration can be consulted in the APPENDIX A.

Selecting the option ALL, it will be made an initialization of each one of the four files.

### **3.2.5.3. SUPERVISOR mode / TECHNICAL MENU / CONSOLE**

This part of the configuration allows modifying the parameters that refer to the console operation. These parameters are:

⇒ USER IDENTIFICATION: It shows the way in which will identify the users. The available options are:

- *Without identification*: where the system will only identify the vehicle not the user.
- *By PIN*: the PIN (Personal Identification Number) is a code of four digits.
- *By identification key + PIN*: where each user has assigned an identification key plus a code of four digits.

⇒ VEHICLE IDENTIFICATION: It shows the way in which will identify the vehicles. The available options are:

- *Without identification*: where the system will only identify the user not the vehicle.
- *By identification key*: where each vehicle has assigned an identification key.
- *By numeric code*: where each vehicle has assigned a numeric code among 1 to 99 999.

⇒ PREDETERMINATION: This parameter allows or do not allow enabling the predetermination (preset) in the supplies. For more information consult the section *Predetermination Introduction* of the USER MODE.

⇒ SUPERVISOR ID.: It is the identifier code of the SUPERVISOR as long as the system is configured for the user identification by identification key + PIN. If not, it is irrelevant.

⇒ SUPERVISOR PIN: It is the PIN code associated to the SUPERVISOR.

⇒ PRODUCT NUMBER: It is the number of products the installation can supply.

⇒ TANK NUMBER: It is the number of tanks the installation has.

⇒ HOSE NUMBER: It is the number of available hoses in that console.

- ⇒ LCD HEADING: It is a text of 20 characters, freely editable, that will appear in the first line of the display while the kit is in the waiting state.
- ⇒ PRINTER: It specifies if the printer is or is not enabled.
- ⇒ L1 PRINTER: It is text of up to 32 characters, freely editable, that will appear in the first line of the ticket.
- ⇒ L2 PRINTER: It is text of up to 32 characters, freely editable, that will appear in the second line of the ticket.
- ⇒ L3 PRINTER: It is text of up to 32 characters, freely editable, that will appear in the third line of the ticket.
- ⇒ L4 PRINTER: It is text of up to 32 characters, freely editable, that will appear in the fourth line of the ticket.
- ⇒ L5 PRINTER: It is text of up to 32 characters, freely editable, that will appear in the last line of the ticket, after all the supply data. This text will be shown in a centred position respect to the paper width.
- ⇒ TICKET REQUEST SECONDS: It is the time in seconds that a user has to identify himself again, after finishing the supply, to obtain the ticket if that user has defined the parameter of *ticket edition* as *by request*.
- ⇒ ADDRESS: It is a number among 1 to 15 that represents the address of that console into a possible console network connected to the same port of a computer. In this network, each one of the consoles must have an own address that do not have any other of the other consoles.
- ⇒ HIDING 300 ml: The display does not show the first supplied 300 ml.
- ⇒ TAX DECIMALS: It allows entering up to 4 decimals.
- ⇒ PRICE DECIMALS: It allows entering up to 4 decimals.
- ⇒ TOTAL DECIMALS: It allows entering up to 4 decimals.
- ⇒ HOSE SELECTOR: It must be always selected the NO option, even though there are connected 2 hoses.

#### **3.2.5.4. SUPERVISOR mode / TECHNICAL MENU / PRODUCTS**

This part of the configuration allows modifying the parameters that refer to the products that the installation can supply. These parameters are:

- ⇒ NAME: It is the name of the product. This name will appear in the ticket that the kit will print at the end of the supply if the kit has a printer.
- ⇒ SALE PRICE: It is the price per litre (or the volume unit which is working with) of the product. The kit will print a valued ticket if this parameter is different from 0. Otherwise, the ticket will not have any reference to the transaction amount.
- ⇒ TAX: It is the percentage that will be applied to the total transaction amount, understanding it as the supplied litres (or the volume unit which is working with) multiplied per the Sale Price, in concept of taxes.

#### **3.2.5.5. SUPERVISOR mode / TECHNICAL MENU / TANKS**

This part of the configuration allows modifying the parameters that refer to the tanks that have the products that the installation can supply. These parameters are:

- ⇒ **PRODUCT:** It is the number of the product that the tank has.
- ⇒ **CAPACITY:** It is the tank capacity, in litres or the volume unit which is working with.

### **3.2.5.6. SUPERVISOR mode / TECHNICAL MENU / HOSES**

This part of the configuration allows modifying the parameters that refer to the hoses controlled by this console. These parameters are:

- ⇒ **GENERATOR TYPE:** It allows selecting the type of pulse generator for that hose. It is possible to select among:
  - generators of 2 180° phased out channels
  - generators of 2 90° phased out channels
  - generators of 1 channel
- ⇒ **RESOLUTION:** It is the resolution with which the supplied volume, through this hose, must be shown, in the kit display. It is possible to select a resolution of tenth of litre or hundredth of litre (or the volume unit which is working with).
- ⇒ **FACTOR:** It represents the resolution of the system composed of the meter set plus the pulser.

The value of this parameter can be calculated in the following way:

$$\text{Factor} = 100000 / (\text{meter turns per litre} * \text{pulses of the generator per turn})$$

This factor will be divided by two in the event that the type of selected generator has two 180° phased out channels.

Remember that the kit allows an automatic calibration that avoids making the calculation of this factor, as it is described in the section SUPERVISOR MODE / TECHNICAL MENU / CALIBRATION.

- ⇒ **FACTOR PROTECTION:** If this option is activated, the stored factor in the kit will not be altered by the parameters passed through the communication from the control software. It is an option to take into account in the hydraulic systems where it is not possible to calculate a whole fix factor and where the calibration must be done in an automatic way. Please, consult the SUPERVISOR MODE / TECHNICAL MENU / CALIBRATION for more details.
- ⇒ **TANK:** It is the number of the tank from which that hose is supplying liquid.
- ⇒ **SECONDS W/O PULSES:** It is the time, in seconds, during which the kit will have an active supply without a liquid pass. Once this time passes, the kit will finish the service.
- ⇒ **MAXIMUM QUANTITY:** It is the maximum volume, in litres (or the volume unit which is working with), that the kit will allow supplying in one go. Once this amount is achieved, the kit will finish the service.
- ⇒ **MAXIMUM TIME:** It is the maximum time, in seconds, that the kit will have active a supply. Once this time passes, the kit will finish the service.

### **3.2.6. SUPERVISOR mode / DATA EXCHANGE (only via iButton)**

It allows exchanging data with the iButton, both writing and reading.

## 4. THE PRINTER

The controller is equipped with a thermal printer of 32 columns with an automatic built-in cut, in order to print tickets and lists.

The adequate paper for this type of printers is thermal paper with a width between 56 and 57 mm. It is advisable to use paper of quality to obtain a good printing and prevent damages to the printer mechanical system.

### HOW TO REPLACE THE PAPER ROLL BY A NEW ONE:

- 1- Open the upper door that covers the printing system.
- 2- Raise the cutter. This turns by its upper shaft.
- 3- Remove the finished roll and put the new one.
- 4- Put the beginning of the new roll by the lower printer groove. You have to make a clean and perpendicular cut on the paper.
- 5- The printer has an automatic charging system that will pick up the paper when its sensor detects it. Leave that the mechanical system freely takes the paper.
- 6- If it is necessary to take over the paper because it is not correctly entering, it is possible to raise the printing heading through a lever that is placed on the printer left. Once this lever is liberated, it is possible to move the paper to be centred. As soon as the lever is down, the printer will pick up some centimetres of paper.
- 7- Pass the paper through the groove of the cutter.
- 8- Finally, close de door.

## Appendix A

The configuration by defect is that the kit has (approx.) when it goes out from the factory or after an initialization. This configuration is the following:

### CONSOLE CONFIGURATION:

|                         |                   |
|-------------------------|-------------------|
| User identification:    | PIN               |
| Vehicle identification: | Numeric code      |
| Predetermination:       | Not enabled       |
| Supervisor identify.:   | 000000000000      |
| PIN Supervisor:         | 0220              |
| Product number:         | 1                 |
| Tank number:            | 1                 |
| Hose number:            | 1                 |
| LCD heading:            | GK-7 CONTROLLER   |
| Language:               | Spanish           |
| Printer:                | Not enabled       |
| L1 Printer:             |                   |
| L2 Printer:             |                   |
| L3 Printer:             |                   |
| L4 Printer:             |                   |
| L5 Printer:             |                   |
| Ticket requ. Seconds:   | 15                |
| Address:                | 1                 |
| Communication media:    | w/o communication |

### PRODUCT CONFIGURATION:

#### PRODUCT 1

|             |          |
|-------------|----------|
| Name:       | DIESEL A |
| Sale price: | 0.000    |
| Tax:        | 0        |

### TANK CONFIGURATION

#### TANK 1

|           |       |
|-----------|-------|
| Product:  | 1     |
| Capacity: | 10000 |

### HOSE CONFIGURATION

#### HOSE 1

|                     |                            |
|---------------------|----------------------------|
| Tank:               | 1                          |
| Resolution:         | 1/100                      |
| Generator type:     | 2 channels at 180°         |
| Divisor Factor:     | approx. 500 <sup>(1)</sup> |
| Factor Protection:  | Not protected              |
| Seconds w/o pulses: | 90                         |
| Maximum amount:     | 1000                       |
| Maximum time:       | 600                        |

*(1) This value can be changed depending on its calibration from factory.*

## Appendix B

The system of GK-7 supply kit control is complemented with a communication and management software under WINDOWS system; it powers the kit features and it is complemented with a plenty of options. The use of this software allows, among others, the user and vehicle definition through names and number plates instead of numbers, and this makes easier the data identification. The done and received supplies by the program will be saved in the PC without limit, allowing all type of requests showed in wide displays or in printed lists.

It will be possible to know the details of the kilometres covered by the vehicles and their consumption in percentage.

The stock control will allow knowing the level in each tank and the liquid value that it has.

A whole operator management allows leaving only the part of the program where each person is responsible of it.

The accumulated data by the system are exportable in files with .txt format and even in EXCEL format to be processed and directly viewed in a spreadsheet.

These are only some examples of the options that this software is offering. Please, do not hesitate to ask to your distributor one DEMO if you are interested in knowing more about its features.

So that the software can manipulate all this information, the data has to arrive at it. Here it is necessary a communication media that makes possible this transference. You can choose among any of these:

**VIA IBUTTON:** It is a special memory key with the same format as the identification user and vehicle keys. Through a special reader connected to the computer, this can write information to this key about the authorized users and vehicles that later will be read by the kit through its own reader. In the same way, the kit will write information related to the memorized supplies and this information will be read from the key by the program.

It is a very adequate system when it is not possible to have the infrastructure required to use other media, described below. This system has a capacity limit, and it is only useful for kits that save 200 services in its memory.

**VIA RS485 CABLE:** This media uses the series kit outlet, under the RS485 regulation, that allows the cable lengths up to 1,200 metres. The used cable is a cable of 4 threads of 0.25 or 0.50 mm<sup>2</sup> of screened cable. Along with the computer it is installed an RS485 / RS232 converter to be able to go into the series computer port.

**VIA ETHERNET:** This communication media is a computing net, and the kit is another member of that net. For this it is installed a SERIES ETHERNET converter along with the kit, connected, by one side, to the kit port and, by the other side, to the net. In the computer it will be installed a specific software that will create a virtual COM port that will allow assigning that created port to the converter address. The net cable line must comply with the necessary specifications to allow the communication at 100 Mb.

**VIA GSM:** This media allows you to make the communication using the GSM mobile phone net. For it, it will be installed a GSM MODEM connected to the series kit port. The program will make a phone call through the computer MODEM to the phone number of the SIM card placed in the GSM MODEM, and the communication will be established. This system allows covering any distance with the only requirement that there is GSM range in the point where the controller is installed.

## 5. CONFORMITY DECLARATION

Manufacturer:

TOT COMERCIAL SA  
Partida Horta d'Amunt, s/n  
25600 BALAGUER (Lleida) SPAIN

DECLARES:

Under its own responsibility that the following machine:

**Own Consumption Controller**

Mark: **GESPASA**

Model:



**Serial no.**

It is in accordance with the following Directives of the European Parliament and the Council: "2006/42/EC of 17 May 2006 on machinery", "2006/95/EC of 12 December 2006 on the harmonisation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits", and "2004/108/EC of 15 December 2004 on the approximation of the laws of the Member States relating to electromagnetic compatibility and repealing Directive 89/336/EC", and it has been manufactured according to the below harmonized regulations:

|                                |                                                                                                                                                         |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>UNE-EN ISO 12100-1:2004</b> | Safety machinery. Basic concepts, general principles for design<br>Part 1: Basic terminology, methodology (ISO 12100-1:2003)                            |
| <b>UNE-EN 60204-1:2007</b>     | Safety of machinery. Electrical equipment of machines<br>Part 1: General requirements (IEC 60204-1:2005, modified)                                      |
| <b>UNE-EN 55014-1:2008</b>     | Electromagnetic compatibility. Requirements for household appliances, electric tools and similar apparatus<br>Part 1: Emission                          |
| <b>UNE-EN 55014-2/A1:2002</b>  | Electromagnetic compatibility. Requirements for household appliances, electric tools and similar apparatus<br>Part 2: Immunity. Product family standard |

Balaguer (Lleida), April 2011

Andrés Pané  
President