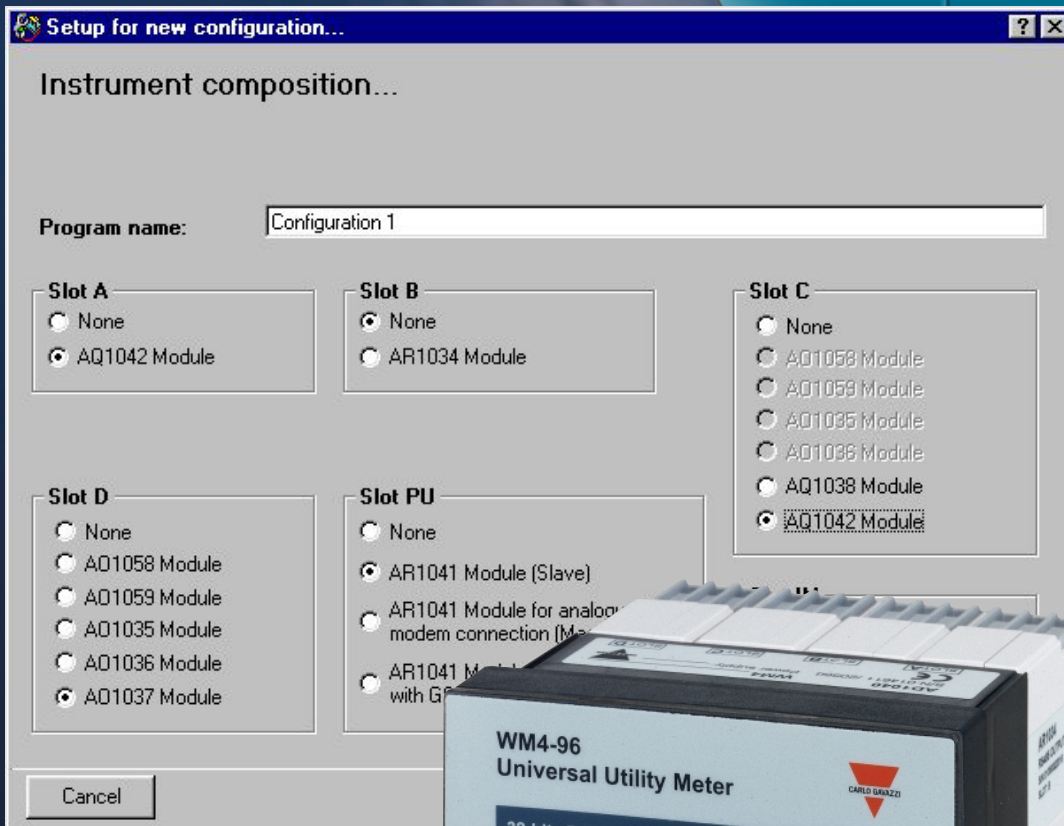


# WM4Soft Remote

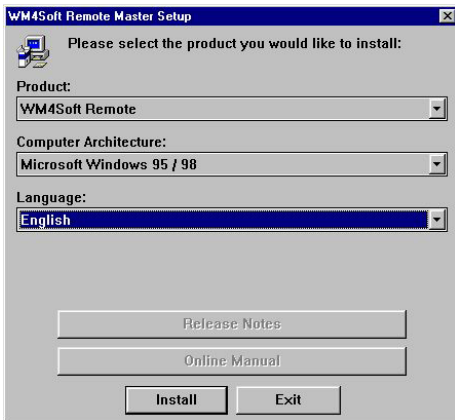
## INSTRUCTION MANUAL




Control



## Installing WM4Soft Remote



When the CD-ROM is inserted in the drive, the installation software is automatically executed (the CD-ROM drive is to be enabled) and the dialog box on the left is displayed. If the setup will not run, select “explore CD ROM” and manually execute the application double clicking the icon  MSetup.exe . Then, choose the operating system and the desired language from the drop-down menus (see figure on the left). Press “Install” to carry on with the installation following the instructions given in the following dialog boxes.

**It is recommended to save all current jobs and close all open applications before installing WM4Soft.**

## Uninstalling WM4Soft Remote



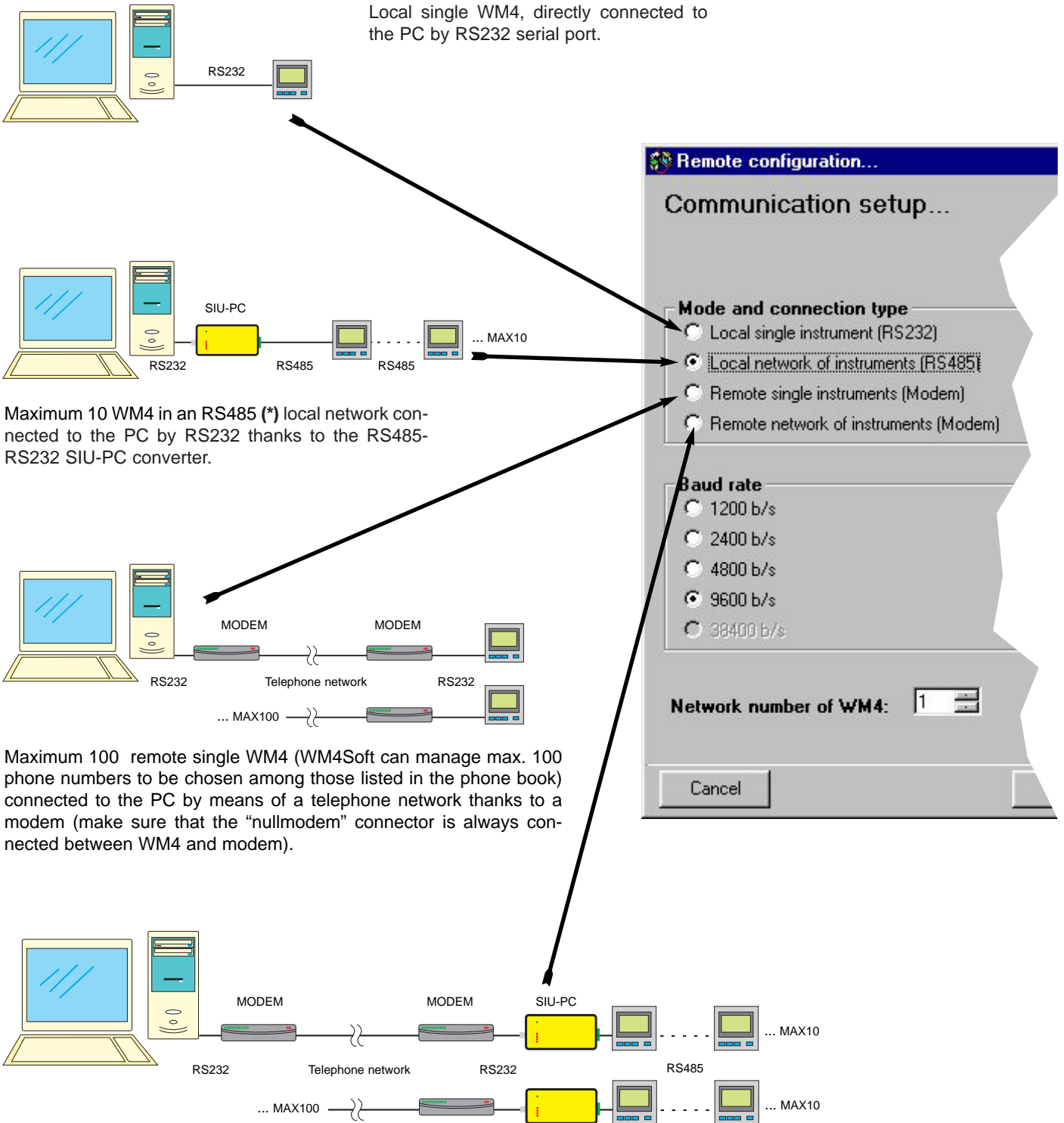
Select “Uninstall WM4Soft” to start the guided uninstallation of WM4Soft.

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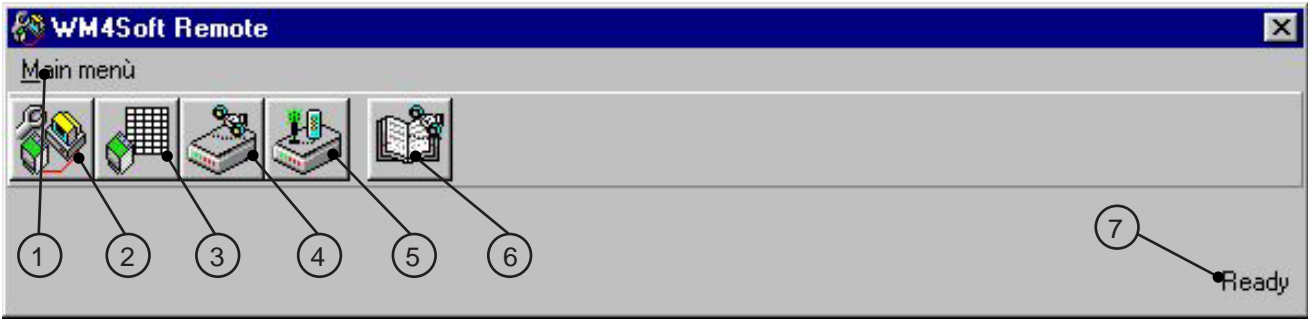
## THE SOFTWARE IN BRIEF

WM4Soft Remote has been developed to program WM4-96 and its various functions. In order to do this, it's necessary to transfer data from the PC to the instrument by means of RS232 or RS485 (\*): it is therefore necessary to carry out the correct choice so that the PC connects correctly with the instrument, depending on the situation, as shown in the following figure:



(\*) In the RS485 communication, if the converter for the serial connection (RS232/RS485) model SIU-PC 85 is used, the connection to the bus must necessarily be done with 4 wires.

## MAIN MENU CONFIGURATION



### 1- Drop-down menu of the functions.

**2- Programming of WM4-96 and relevant transmission:** it allows to pre-set the programming of the instrument and then send it to the instrument itself.

**3- Reading of instantaneous variables:** it allows to read the instantaneous variables directly on the PC to which the instrument is connected.

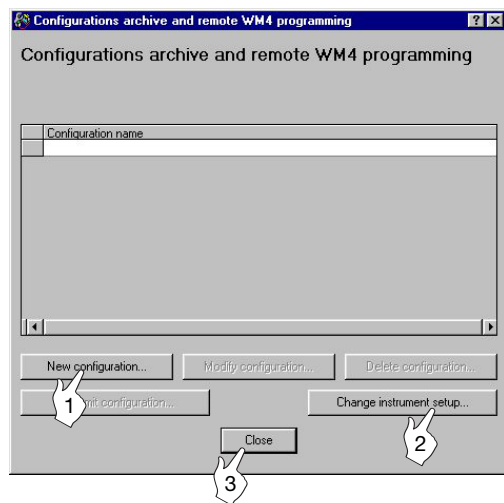
**4- Automatic configuration of analogue modem:** it allows the automatic configuration of the analogue modem used for the communication with the instruments.

**5- Automatic configuration of GSM modem:** it allows the automatic configuration of the GSM modem used for the communication with the instruments.

**6- Management of the phone book:** it allows the management of the contact names and relevant phone numbers; moreover, it's possible to set the dialling properties.

**7- Software status:** in case of errors during the execution, its description will be displayed.

## PROGRAMMING WM4-96

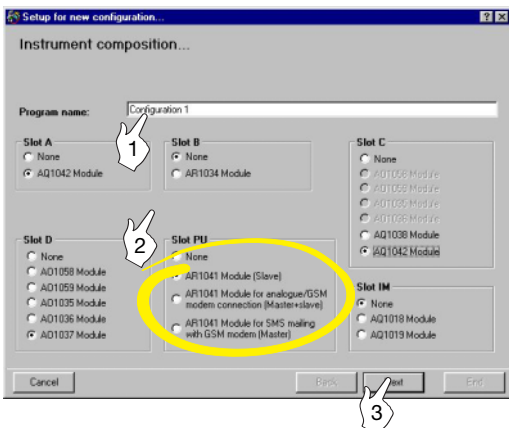


WM4Soft Remote manages a configuration archive, which can be recalled at any time. At the beginning, as soon as the software is installed, this archive is empty.

**[1]** Click “New configuration” to start the programming procedure of WM4-96.

**[2]** It allows to load from WM4-96 the pre-existing programming and to modify it, if required.

**[3]** The dialog box is closed without any modifications.



### INSTRUMENT COMPOSITION...

**[1]** Enter the name to be given to the configuration for WM4-96 that is to be carried out.

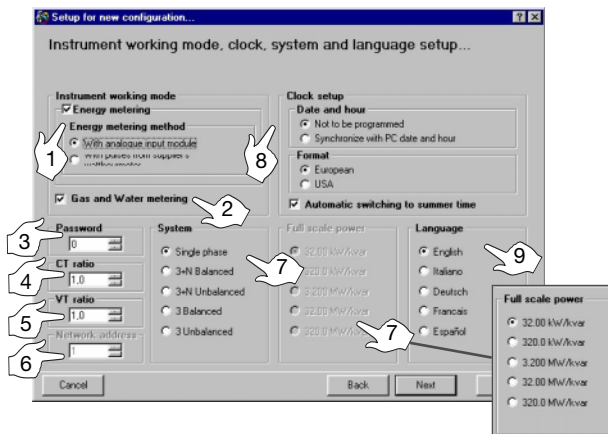
**[2]** Select the modules installed in the instrument with relation to the slot. The name and position of the modules is indicated on the label of the module itself. As far as the AR1041 module is concerned, if it is present, it's necessary to specify the operation mode as described below:

“**AR1041 Module (Slave)**”: WM4-96 is only enabled to the data-download on request of the user;

“**AR1041 Module with analogue or GSM modem (Master+Slave)**”: the WM4-96 is enabled to the data download, on request, and to the SMS transmission in case of alarm activation;

“**AR1041 Module with GSM module for SMS (Master)**”: WM4-96 is only enabled to the transmission of SMS messages. To carry out the data download, it is necessary to use the RS485 serial module.

**[3]** Click the “Next” button to proceed with the configuration of WM4-96.



## INSTRUMENT WORKING MODE, CLOCK AND LANGUAGE SETUP

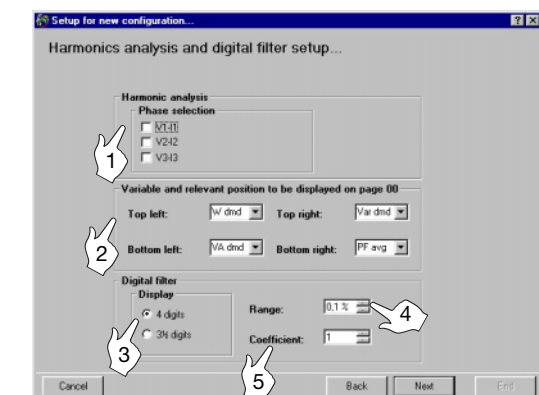
- [1] Enables the energy metering. Select the metering method: with analogue input modules (AQ1018, AQ1019) or digital input modules.
- [2] Enables the gas and water metering.
- [3] Select the password to access the programming menus of WM4-96.
- [4] Select the value of the current transformer ratio. Example: if the primary of the CT (current transformer) has a current of 300A and the secondary of 5A, the CT ratio corresponds to 60 (obtained carrying out the following calculation:  $300/5$ ).
- [5] Select the value of the voltage transformer ratio. Example: if the connected VT primary (voltmeter transformer) is 20kV, and the secondary is 100V, the VT ratio corresponds to 200 (obtained carrying out the following calculation:  $20000/100$ ).
- [6] Select the serial address of the instrument if it is part of a network of instruments.
- [7] Select the type of electrical system. If you have not selected the measuring inputs (AQ1018, AQ1019), the dialog box "full scale power" is activated instead of the "system" dialog box. Choose the most appropriate full scale.

- [8] Select the options for the clock of WM4-96. If "Not to be programmed" is selected, then the clock will not be programmed; if the hour is to be selected, select "Synchronize with PC date and hour", the clock will be programmed with the date and hour present in the PC. To automatically obtain the switching to summer time and viceversa, select "Automatic switching to summer time".
- [9] Select the language of the instrument menus.

## DIGITAL INPUT WORKING MODE SETUP

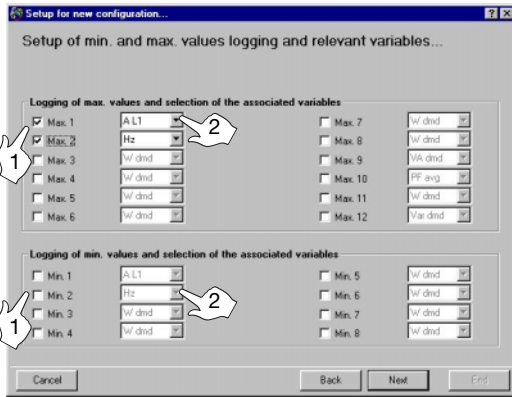
- [1] Enable A1 digital input (input channel 1 of the digital input module installed in the A slot of the WM4-96);
- [2] Enable the working mode of A1 digital input as: "Gas meter" or "kWh-Meter"
- [3] Set the value of the input pulse for the gas meter (pulse/m<sup>3</sup>. Ex. by entering the value 10: 10 input pulses will be necessary for the instrument to count 1 m<sup>3</sup>).
- [4] Enable digital input A2 (input channel 2 of the digital input module installed in slot A of the WM4-96);
- [5] Choose A2 digital input mode: "Water meter", "Day-time tariff, night tariff of the gas meter" or "kvarh-" meter.
- [6] Select the value of the input pulse for the water meter (pulse/m<sup>3</sup>; if you enter the value 10, 10 input pulses will be necessary for the instrument to count 1m<sup>3</sup>).
- [7] Enable C1 digital input, kWh meter (input channel 1 of the digital input module installed in slot C of WM4-96), C2 kvarh meter (input channel 2 of the digital input module installed in slot C of WM496): tick the relevant box;
- [8] Set the value of the input pulse (pulse/kWh, kvarh, ex.: enter the value 10: 10 input pulses will be necessary because 1kWh, 1kvarh is counted).

**Inputs C1 and C2 are not available** if you have chosen the energy metering to be carried out by means of the analogue input module.



## PAGE 00

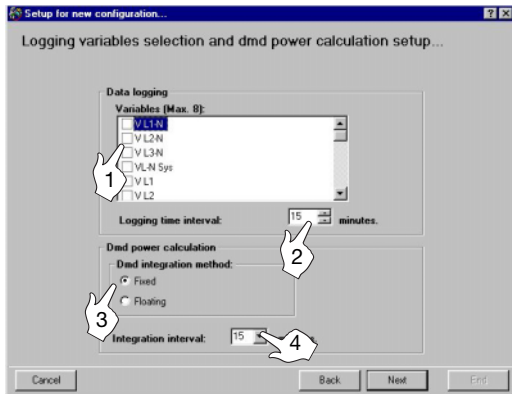
- [1] Enables the harmonic analysis on the selected phases: tick the relevant boxes to select the desired phases.
- [2] Select the type of variable that you want to display on WM4-96, on page 00.
- [3] Select the number of digits (relevant to the max number that can be displayed).
- [4] Select the value of the "Range" factor of the digital filter.
- [5] Select the value of the "Coefficient" factor of the digital filter.



### SETUP OF MIN/MAX VALUES: LOGGING AND RELEVANT VARIABLES...

This dialog box allows the user to associate some variables to the automatic logging of min and max values (from max1 to max12 and from min1 to min8).

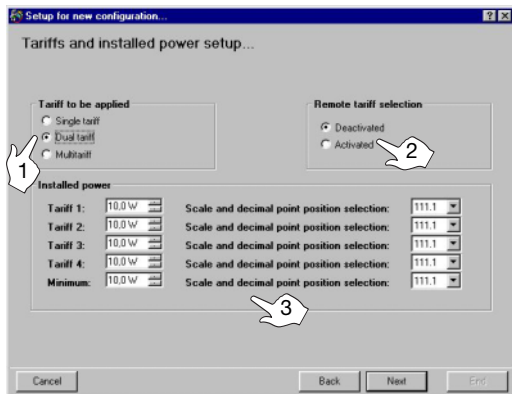
- [1] Select the data to be logged by clicking the relevant check box.
- [2] Select the variable to be logged among those available in the drop-down list that will appear clicking the arrow.



### LOGGING VARIABLES SELECTION AND DMD POWER CALCULATION SETUP

This dialog box allows to enable which variables are to be logged (Max8) in the data logging of WM4-96 and the modes of this operation.

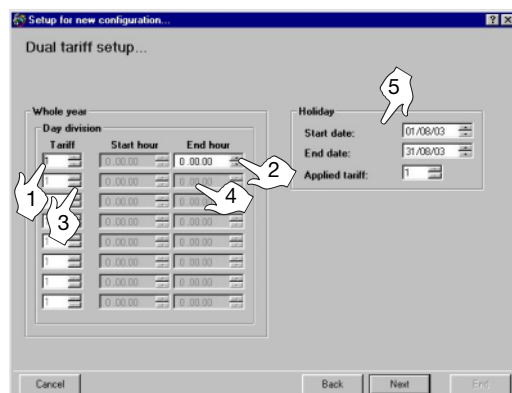
- [1] Select the variables to be logged (Max8) ticking the relevant check box.
- [2] Select the value of the logging time interval (from 1 to 60 min.).
- During the measure, the instrument takes samples of the selected variables every 200ms approx., at the expiry of the set time interval, the instrument calculates the average of the samples and carries out the data logging. The **historical value** will therefore be guaranteed to be highly accurate.
- [3] Select the dmd (W-VA-var) calculation method between FIXED and FLOATING.
- [4] Choose the integration time (in minutes).



### TARIFFS AND INSTALLED POWER SETUP

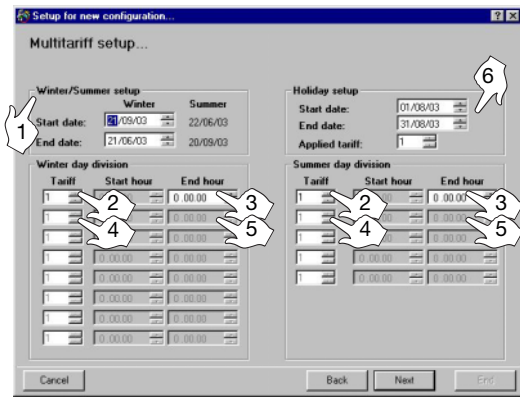
This function allows the user to choose the type of management of the energy meters.

- [1] Select the type of tariff to be applied. "Single tariff": the energy meters are set according to a single tariff which is the same for the whole year. "Dual tariff": the energy meters are set with 4 different tariffs per day and two time periods per year (whole year/holidays). "Multitariff": the energy meters are set with up to eight time periods per day (4 different tariffs) and three time periods per year (WINTER, SUMMER AND HOLIDAYS).
- [2] Select if the remote tariff selection by means of digital inputs is to be activated or deactivated. It can be activated only if the digital input modules are inserted in slot A and C.
- [3] Set the value of the installed power corresponding to each tariff.



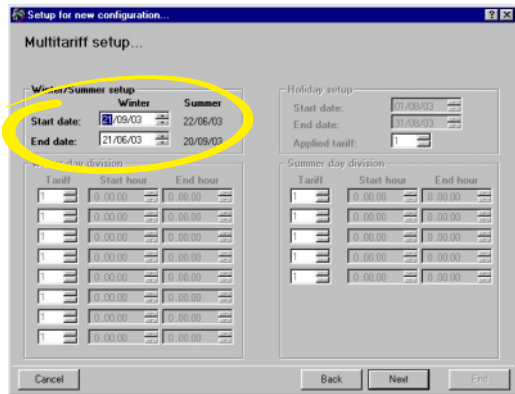
### DUAL TARIFF SETUP

- [1] Select the reference tariff.
- [2] Select the Start Hour and the End Hour of the time period. The Start Hour of the following tariff is automatically displayed in the gray box of the second time period.
- [3] Select the tariff of reference for the second time period.
- [4] Select the end hour of the second time period. Proceed in the same way until the required number of time periods is reached (max. 8 time periods).
- [5] Programme the Holiday period: set the start and the end date as well as the relevant applied tariff.



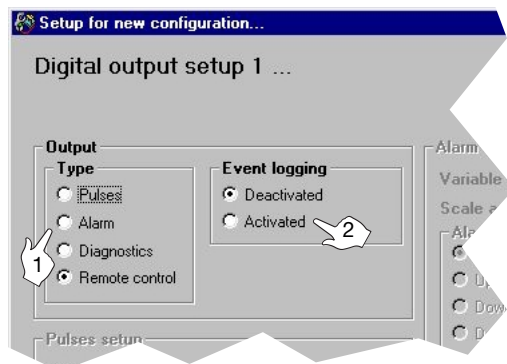
## MULTITARIFF SETUP

- [1] Select the duration time of the winter and summer time period, enter the start date and the end date of the winter time period. The Summer time period will be calculated automatically as a consequence.
- [2] Select the reference tariff.
- [3] Select the End Hour of the time period. The Start Hour of the following tariff is automatically displayed in the gray box of the second time period.
- [4] Select the reference tariff for the second time period.
- [5] Select the end hour for the second time period. Proceed in the same way until the required number of time periods is reached (max 8 time periods).
- [6] Programme the Holiday period: set the start and the end date as well as the relevant tariff to be applied.



## MULTITARIFF SETUP WITH DIGITAL INPUTS

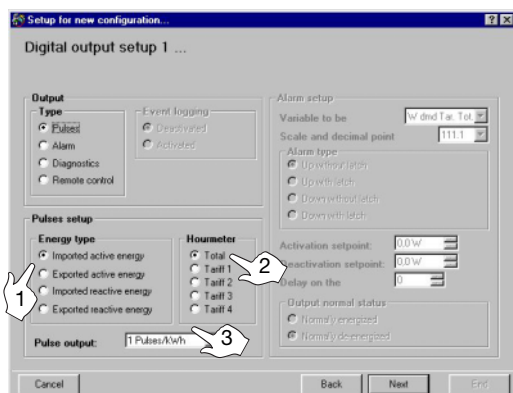
If "remote tariff selection: activated" has been selected, then only the "Start date" and "End date" of the winter/summer period need to be saved, as shown on the left.



## DIGITAL OUTPUT SETUP

- [1] Select the digital output mode:
  - "Pulses": sets the parameters for the pulse output. It's possible to retransmit the total or partial energy by means of pulses. Selecting one of the available tariffs, the pulse output will be activated only when metering the energy referred to the selected tariff.
  - "Alarm": allows the user to activate a static or a relay output when an alarm condition is detected.
  - "Diagnostics": in a 3-phase system, unbalanced load with neutral, this function checks the presence of the neutral connection. If the connection to the neutral is not detected, an alarm is activated.
- [2] Selects whether the event logging in the WM4-96 is to be activated or deactivated.
- "Remote control": makes it possible to control the digital outputs by

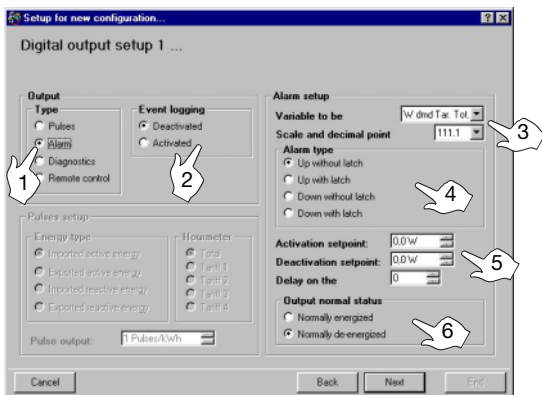
means of the RS485/RS232 serial port instead of using the instrument. The outputs can be activated by means of a PC or PLC by means of specific commands.



## DIGITAL OUTPUT SETUP: PULSES

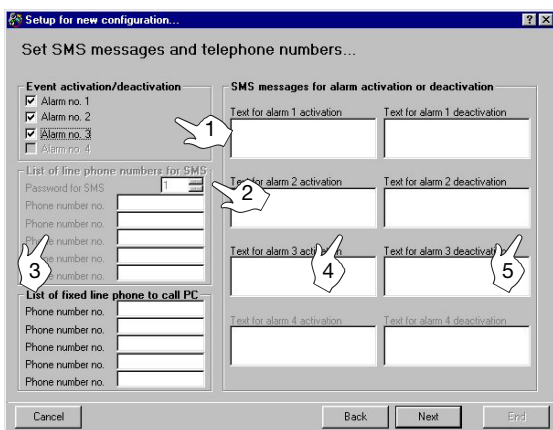
- [1] Chooses the type of energy to be retransmitted by means of pulses.
- [2] Selects the type of meter to be retransmitted by means of pulses.
- [3] Selects the pulses amount (that is: how many pulses are needed for 1 kWh?).





## DIGITAL OUTPUT ALARM SETUP

- [1] Selects the working mode for the digital output.
- [2] Selection of activation or deactivation of the event logging of WM4-96.
- [3] Selects the variable to be checked. Click the pointer of the “Variable to be (controlled)” drop-down menu. Selects the scale and decimal point. Click the pointer of the “Scale and decimal point” drop-down menu.
- [4] Selects the alarm type: selecting the “up-alarm” the alarm is activated when the selected variable increases above the activation set-point. “Down-alarm” the alarm is activated when the selected variable decreases below the activation set-point; “with latch” the alarm will remain active until it is recognized by means of the “F” button.
- [5] **Activation setpoint:** the alarm is activated when the variable increases above this value. **Deactivation setpoint:** the alarm is deactivated when the variable decreases below this value. **Delay on the activation:** selects the minimum delay of the event on the alarm activation.
- [6] Chooses the normal status of the output. **Normally energized:** the output is normally energized and it’s de-energized in case of alarm. **Normally de-energized:** the output is normally de-energized and it’s energized in case of alarm.



## SET SMS MESSAGES AND TELEPHONE NUMBERS

If the “AR1041 module with modem... (Master)” in the window “Instrument composition” has been selected, the above window will appear to enable the setup of the alarm messages to be sent to the phone numbers typed in the relevant list. If GSM modem for SMS messages has been selected, it is possible to send messages to mobile phones, by selecting analogue or GSM modem, these messages could be sent to “fixed network” numbers and they will be displayed on PC by means of a special software (which is not yet available).

- [1] Select which alarms or events are activated to send SMS messages.
- [2] Select a 3-digit password for the identification of WM4-96 when an SMS is received or some information are requested.
- [3] List of line phone numbers for SMS: type the phone numbers to which the messages are to be sent.
- [4] SMS messages: type the messages to be sent when the alarms are

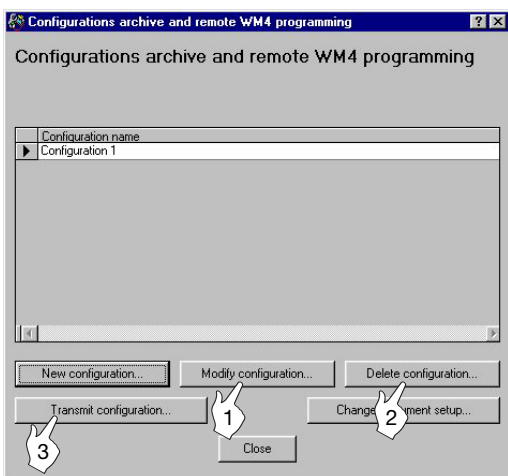
activated (there’s a max number of characters available terminated which the user will not be allowed to continue typing the messages).

- [5] SMS messages: type the messages to be sent when the alarms are deactivated (there’s a max. number of characters available terminated which the user will not be allowed to continue typing the message).



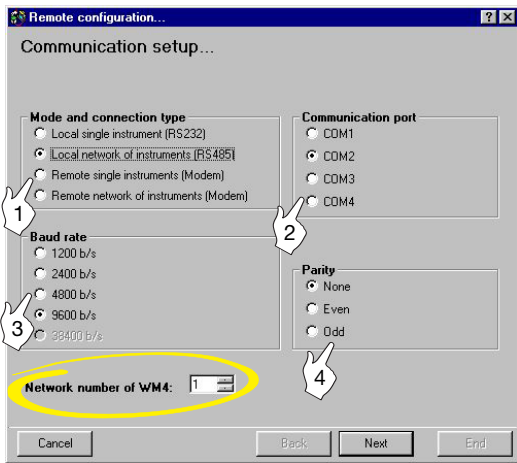
## END OF THE CONFIGURATION

After the configuration of all the WM4-96 parameters, press the key “End”. The new configuration will be added to the list of the configurations archive, where you can select it and transmit it to the instrument.



## TRANSMITTING THE CONFIGURATION

- [1] Modify the configuration selected in the list.
- [2] Delete the configuration selected in the list.
- [3] Transmit the configuration selected in the list.



## COMMUNICATION SETUP

[1] Choose the mode and connection type (see also “WM4Soft remote” shortcut on page 4). If “Local network of instruments (RS485)” has been selected, then also the network address of the WM496 with which the communication will take place is to be indicated and the kind of parity to be selected.

[2] Only if “Local single instrument (RS232)” or “Local network of instruments (RS485)” have been selected, then also the communication port of the PC with which the communication will take place is to be indicated.

[3] Only if “Local Single Instrument (RS232)” or “Local network of instruments (RS485)” has been chosen, select the “baud rate”.

[4] Only if “Local network of instruments (RS485)” has been chosen, select the type of “Parity”.

If “Local network of instruments (RS485)” has been chosen, type the number of WM4’s present in the network, as shown in the figure on the left.

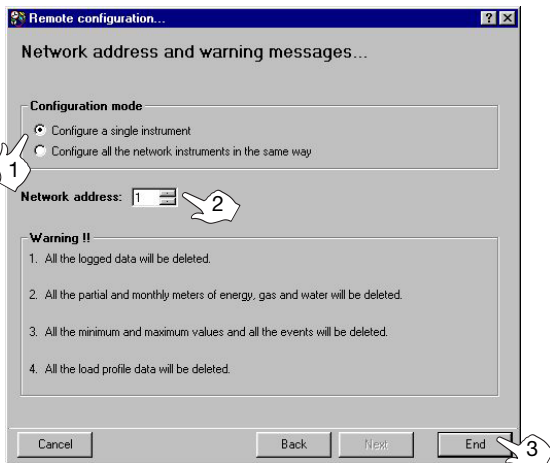


## SELECTION OF TELEPHONE NUMBER AND SETTING OF DIALING PROPERTIES

If in the “Communication Setup” dialog box the option “modem” has been selected, then also the telephone numbers/s to be dialled by WM4Soft for the modem connection with the WM4’s will have to be selected.

[1] Click the contact to select it. The phone number of the contact will be shown in the “Number to be dialed” box below the list of contacts.

[2] For any further information on the contact selection and the dialing properties refer to page 12.



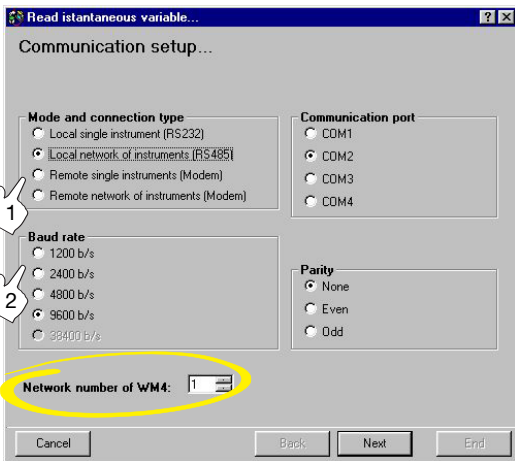
## NETWORK ADDRESS AND WARNING MESSAGES

[1] Select whether to configure a single instrument in the (local or remote) network: “Configure a single instrument”; proceed as follows:

[2] Type the address of the required instrument or set all instruments present in the (local or remote) network with the same configuration: “Configure all the network instruments in the same way”.

[3] End this configuration procedure starting the configuration transmission to WM4-96.

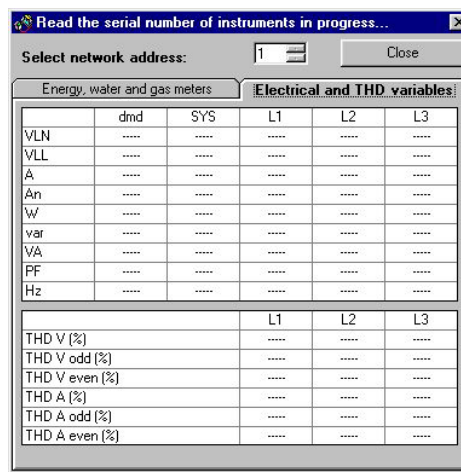
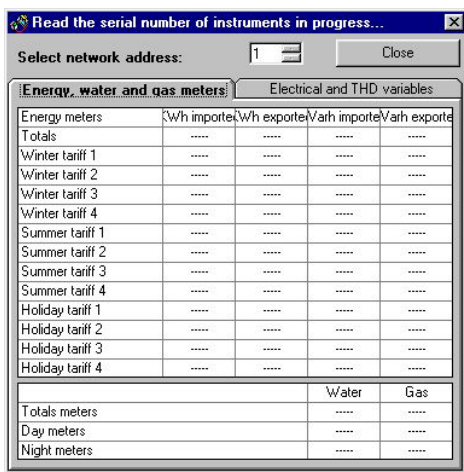
## DOWNLOAD OF INSTANTANEOUS VARIABLES



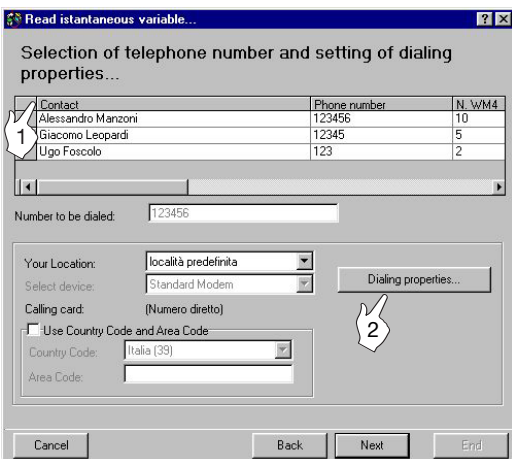
It allows to read in real time all the variables divided into two pages: one dedicated to the instantaneous variables and one dedicated to the meters. After clicking the “Function” button on the main menu bar, make the communication setup.

**[1]** Select the “Mode and connection type” (see also “WM4SOFT remote in brief” on page 4. If the “Local network of instruments (RS485)” of WM4-96 has been selected, then also the network address of the WM4-96 with which the user wants to communicate will have to be selected as well as the type of “Parity”.

**[2]** Only if “Local single instrument (RS232)” or “Local network of instruments (RS485)” have been selected, then also select the serial “Communication port” of the PC.



After clicking the “End” button at the end of the communication setup, the window on the left (“Read the serial number of instruments in progress...”) will be shown and the communication with the instrument will start in order to allow the user to read the variables.



## SELECTION OF TELEPHONE NUMBERS AND SETTING OF DIALING PROPERTIES

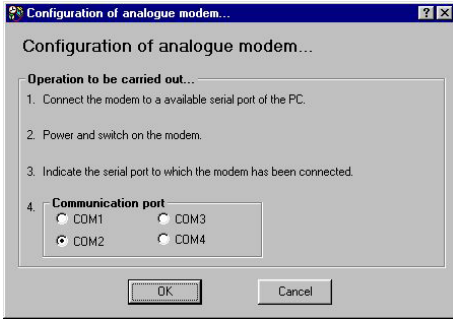
If the option “modem” has been selected in the “Communication setup” dialog box, then also the telephone number to be dialled by WM4Soft for the modem connection with WM4-96 will have to be selected among those available in the “Contact” list.

**[1]** Click the contact to select it. The phone number of the contact will be shown in the box “Number to be dialed” below the list.

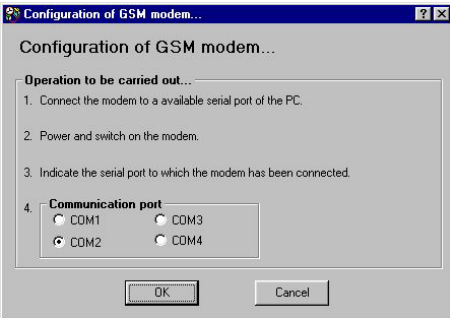
**[2]** For further information on the contact management and the dialing properties, see page 12.

Proceed with the configuration, clicking the “next” button.

## AUTOMATIC CONFIGURATION OF ANALOGUE MODEM AND GSM



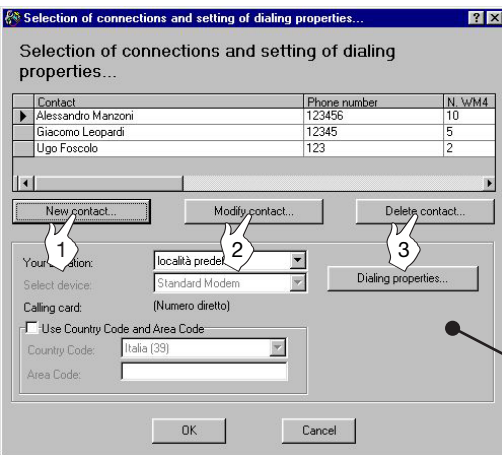
**Automatic configuration of analogue modem:** this useful function allows the automatic configuration of the analogue modem. Follow the instructions shown on the window, then verify that the connections related to the communication between modem and PC are correct and finally click the "OK" button. The modem is configured so that the best configuration occurs with WM4-96.



**Automatic configuration of GSM modem:** this useful function allows the automatic configuration of the GSM modem. Follow the instructions shown on the window, then verify that the connections related to the communication between modem and PC are ok and finally click the "OK" button.

The modem is configured so that the best configuration occurs with WM4-96.

## CONTACT MANAGEMENT



**Selection of connections and setting of dialing properties:**

this function allows the management of the contact list: create new contacts, modify them or remove them from the contact list, easily clicking the related buttons.

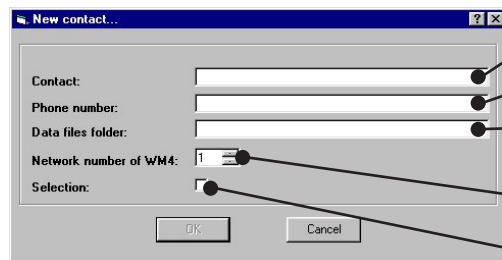
**[1] New contact...:** enter a new contact in the list.

**[2] Modify contact...:** modify the data of the selected contact.

**[3] Delete contact...:** delete the selected contact.

Set the dialling properties in detail and decide whether to use them or not when dialling the phone numbers (see dialling properties on the following page).

**The set properties relate to the dialling of all numbers present in the list.**



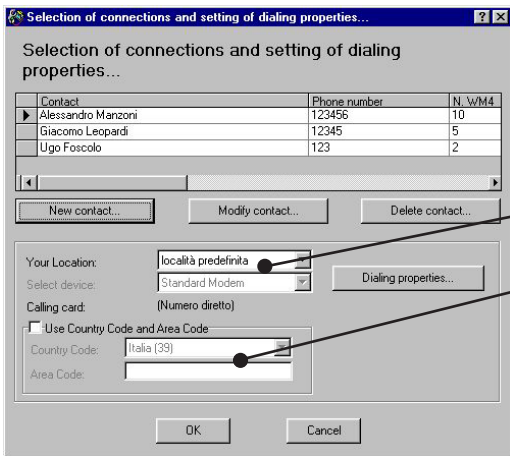
Enter the name of the contact

Enter the telephone number referred to the contact (without the international code).

Enter the name of the folder where all the files of the data downloaded by WM4 will be saved.

Enter the number of WM4's located on the network referred to the above mentioned phone number.

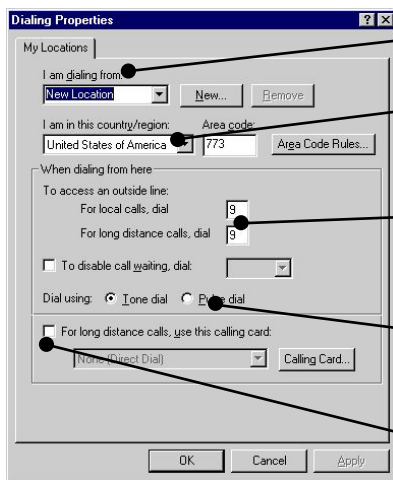
If selected, WM4Soft will dial this contact when the operating mode "automatic data download" will be enabled.



Select the location chosen in the dialing properties.

If selected, it enables the dialing by means of calling card; type the data referred to the calling card being used.

## DIALLING PROPERTIES



List the currently selected locations. To select a new location, click "New".

Specify the area code (international code) of the selected country. Type the code in the relevant box.

In the first box, type the number/s to be dialled in order to access an outside line for local calls (e.g.: "0" or "9"). In the second box write the number/s to be dialled to access an external line for trunk calls (e.g. "8"). If no number is needed to access an external line, leave the boxes empty.

Specify the dialling type to be used. Choose the pulse dialling only if it is the only one available.

If it is selected, it specifies the phone card and the access number, to be used when you call from this location (specified in the dialog box "I am dialling from").

**If it is selected, the calling card will be used every time the user is calling from this location (specified in the box "I am dialling from") and with any software installed in the computer.**



## INTERNET

The technical literature relevant to our range of products is already available on our WEBSITE, from which it is also possible to download our "demo" software for the energy management.

<http://gavazzi-automation.com/ac/index.htm>

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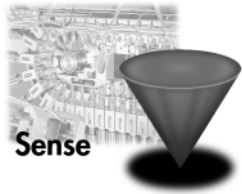
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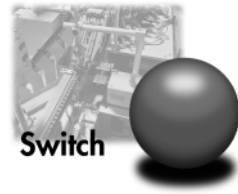
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