logomat

SOFTWARE MANUAL

Editor OPM02
v. 2.1.7

SOFTWARE MANUAL

Rev. 1.00

LOGOMAT S.r.l.

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System requirements

The following table lists the minimum system requirements to install and use **Editor OPM02 v. 2.1.7.**

Hardware/Software	Requisito
Processor	Pentium
RAM	32 MB
Free disk space	16MB
CD-ROM drive	Any speed
Operating system	Windows 98, Windows Me, Windows NT, Windows 2000, Windows XP
Monitor	SVGA (800x600)
Peripherals	Keyboard and mouse

In case the user wants to print messages and settings a printer connected to the PC is needed.

Materials supplied

Materials supplied consist of:

- CD-ROM containing the software installation program
- Software user manual.

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Installation setup

Editor OPM can be executed on Windows 98, Windows Me, Windows NT, Windows 2000, Windows XP (and Windows Vista).

1. Insert Editor OPM CD-ROM in the CD reader.
2. Execute the file **setup.exe** located in the root directory of the installation CD.
3. Follow the instructions to install Editor OPM.

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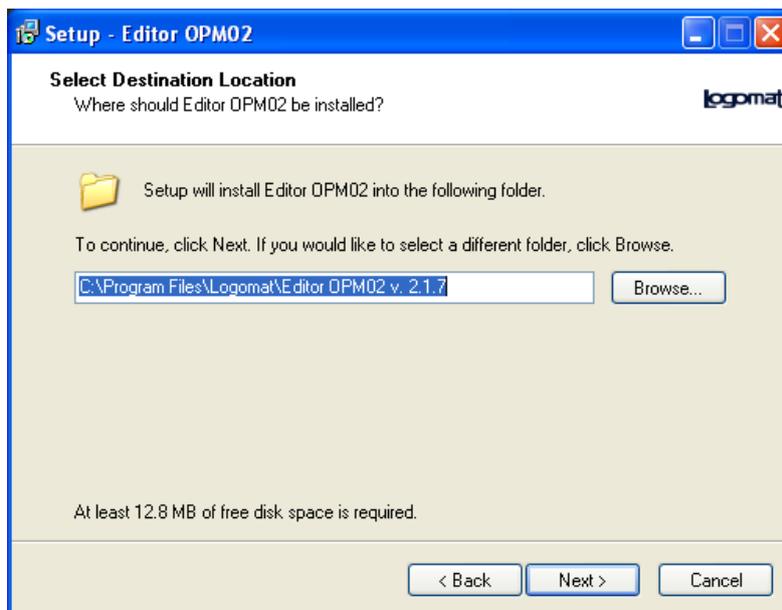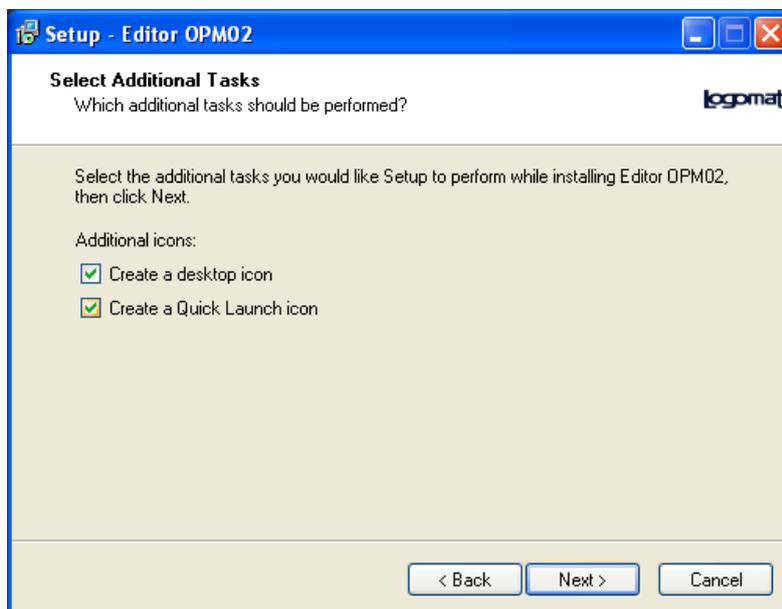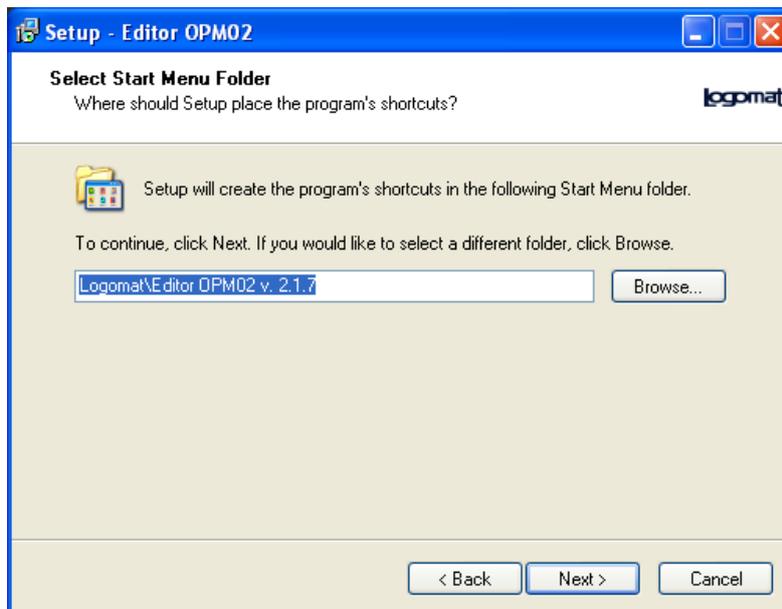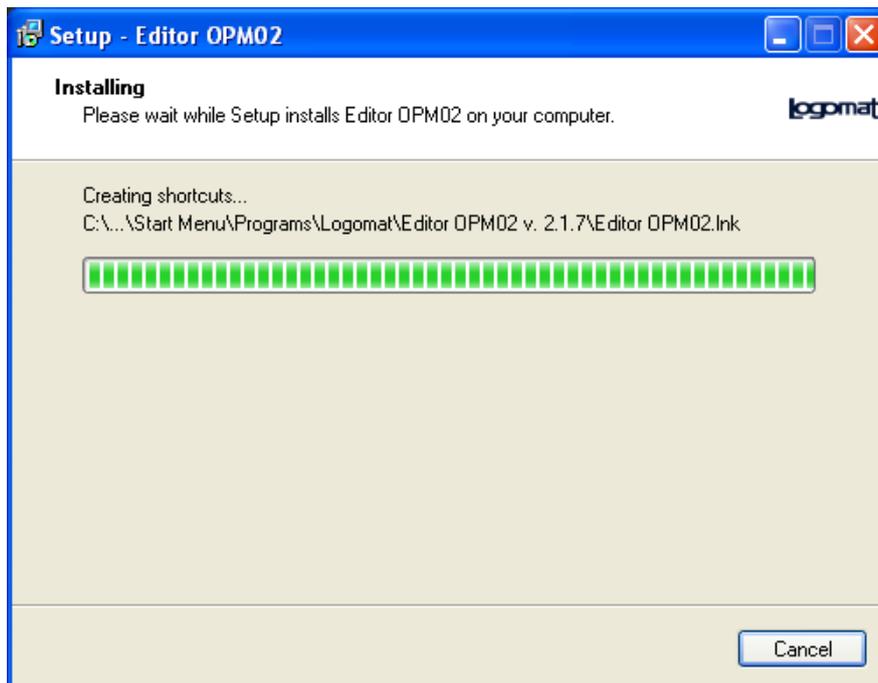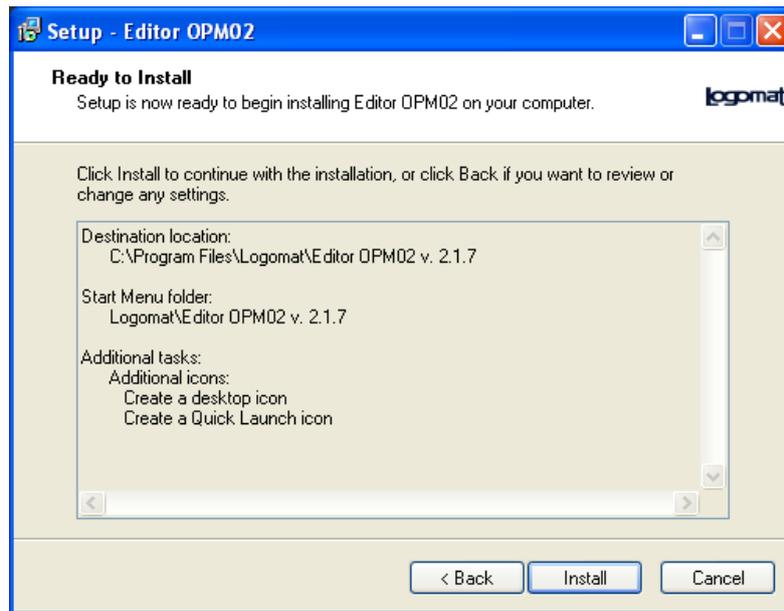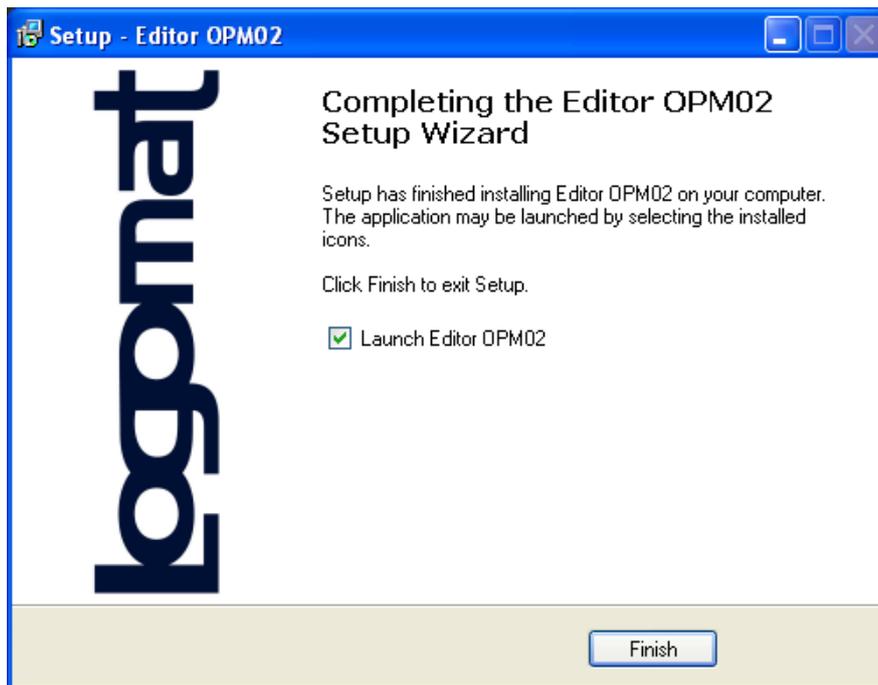
4. At the end of the installation restart the PC.

At the first program start, the user has to communicate to Logomat S.r.l. the "authorization key" to obtain the program activation code. The request can be made by phone (english speaking staff will answer), fax or E-mail.

The authorization code is made up of 24 digits/letters. If the program is closed a new code will be generated at the next program start. The program activation code, provided by Logomat S.r.l., allows the software to run only on the PC for which the code was requested.

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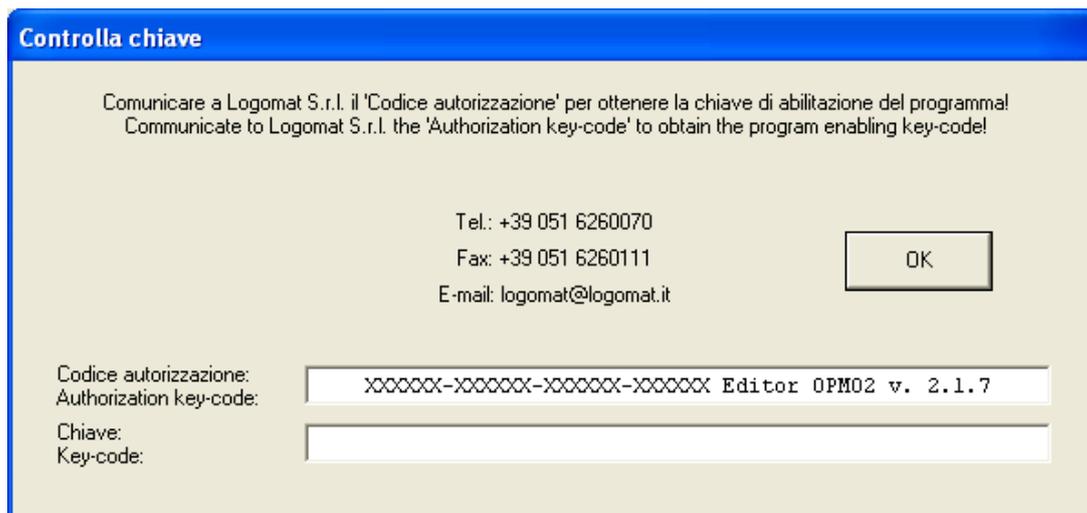
In case the "OK" button is pressed after entering a wrong or empty key the following message is shown:

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Program startup

Start the program from Start or Start\Programs\Logomat\Editor OPM v. 2.1.x.
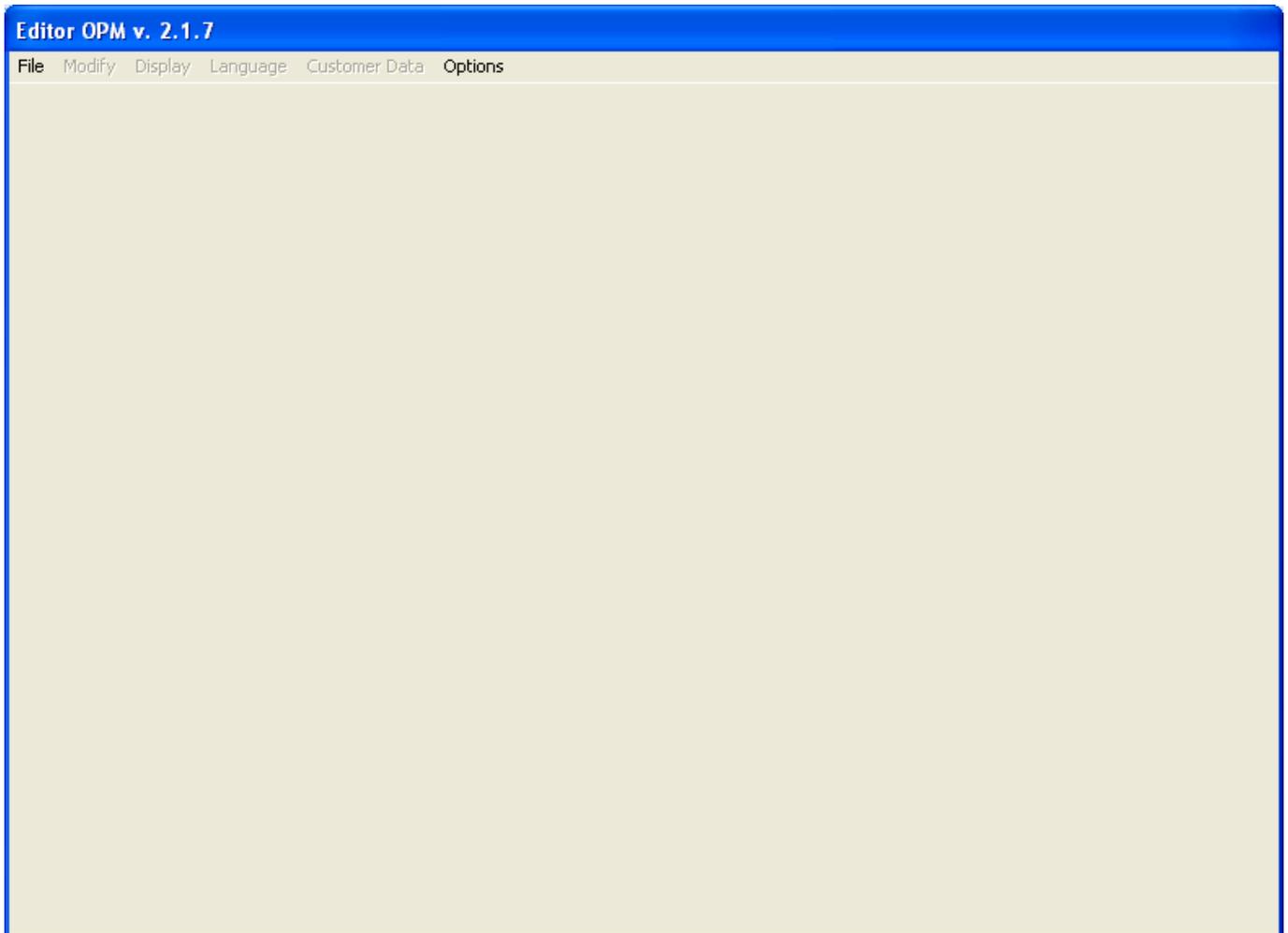
The program startup window looks like a grey window where the only active button is *"File"*.

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1. Introduction

The present chapter provides some introductive information about the OPM02 display programming software, giving also an overview on the software main function.

1.1. Preliminary information

The OPM02 management software is an application developed by Logomat to provide the operator a valid support to create and manage any machine alarm that can be displayed.

The software allows the user to:

- Create a new list of the messages displayed.
- Create a messages list basing on an already existing one.
- Set buttons, selectors, contraves and timer.
- Create and manage counters.

1.2. Messages

The messages shown on the display can be of 3 different types:

- Alarm messages.
- System messages.
- Help messages.

Alarm messages can be set by any user. During the programmation these messages are shown on the display depending on the input signals (see the display user manual). A message can have one or more corresponding messages in other languages up to a maximum of 8 languages.

There are 128 alarm messages available.

System messages are automatically shown on the display when certain conditions occur. These messages can be set only by an authorized user, as their management is protected with a key code. A message can have one or more corresponding messages in other languages up to a maximum of 8 languages.

There are 128 system messages available.

Help messages are used by the operator to get information about the alarm or system message displayed. These messages are displayed only if requested by the operator (using the HELP button). Each message can have one or more corresponding messages in other languages up to a maximum of 8 languages.

There are 128 help messages available.

1.3. Buttons/Selectors/Contraves/Timer

Besides displaying messages OPM02 can manage up to 16 buttons, 2-3-4 positions selectors, contraves and timers.

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1.4. Counters

L'OPM02 can manage several counting signals up to a maximum of 8 counters. The value of the counters can be shown into the messages.

1.5. Menu

OPM02 has menu items to allow displaying its status or setting production parameters.

There are two types of menus:

- Standard menu.
- Customized menu.

Standard menus are always present and allow displaying languages, selectors and counters. Information provided can be changed basing on the user's needs or simply consulted.

Customized menus are set basing on the customer's needs.

2. Creating and modifying display messages

This chapter explains how to insert, modify and manage the messages displayed on the OPM02.

Messages are divided in:

- Alarm messages.
- System messages.
- Help messages.

2.1. Alarm messages

Alarm messages are text messages displayed on the OPM02 basing on the external signals received (see OPM02 user manual).

2.1.1 Creating alarm messages

Choose **File>New** to create a new alarm message.

The window "*Choose a language*" will be displayed (Fig. 2)

Fig. 2

Choose the languages for the display messages among the available ones.

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ⓘ Note: the number of languages that can be chosen is less or equal to 8

Languages to be included can be selected by clicking twice on their name. It is also possible to select a single language and then include it by clicking the ⟩⟩ button.

In case an unwanted language is inserted, exclude it by double-clicking its name in the list "*Selected languages*" or select it and then click the ⟨⟨ button.

After selecting all the desired languages, clicking the button OK brings back to the window "*Editor OPM02*" (Fig. 3), in which new tools to display and manage messages are available.
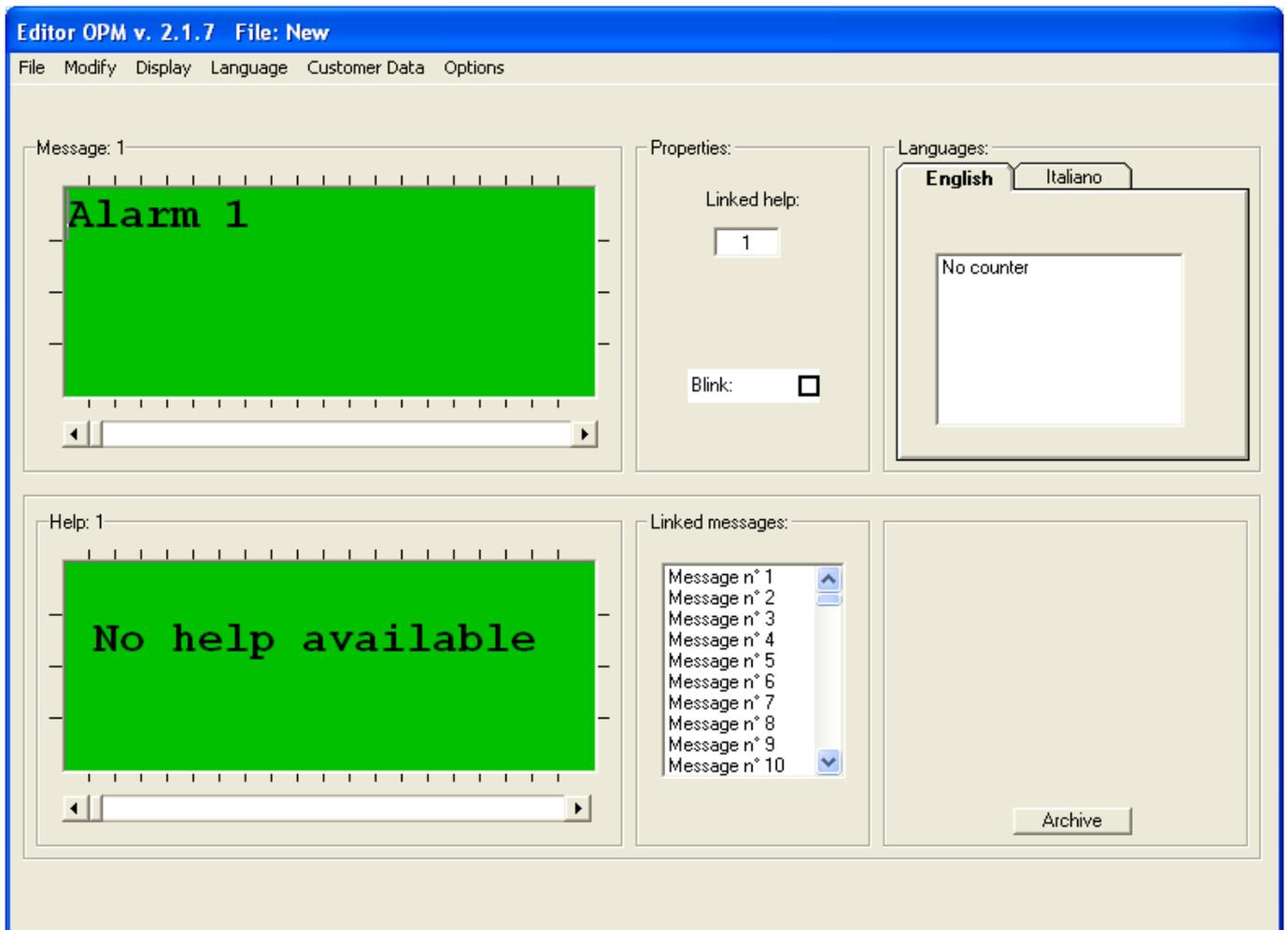

Fig. 3

Clicking the Cancel button in fig. 2 brings back to the window "*Editor OPM v. 2.1.x*" seen in Fig. 1.

Clicking the Archive button in Fig. 3 allows opening a previously saved file from which existing messages can be copied.

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2.1.2 Modifying alarm messages

Alarm messages can be edited by directly typing into the window *"Message"* (Fig. 4).

Fig. 4
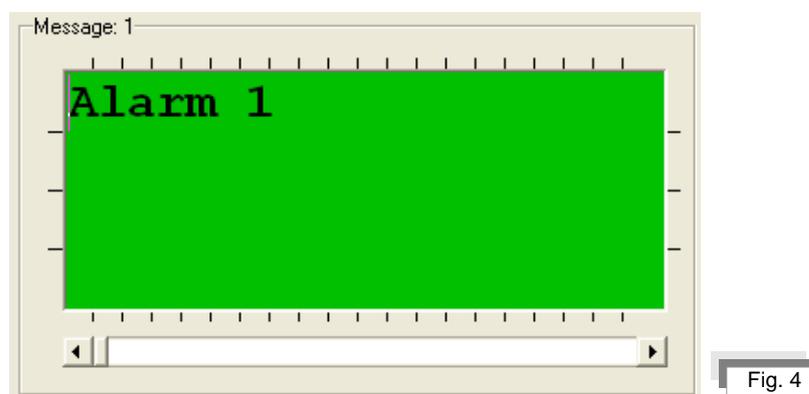
Enter the text in correspondence of the cursor position. The text can be centered by double-clicking into the window.

Text can be deleted in several ways:

- Using the *"Backspace"* button, which deletes the text typed at the left of the insertion cursor
- Using the button *"Del"* which, in the same way as Backspace, deletes the text one char at a time rightwards starting from the insertion cursor

It is also possible to delete text blocks after selecting them using the cursor, by clicking with the mouse on the text start point and dragging the cursor to the end of the selection or by clicking and, while pressing the *"Shift"* button, clicking again at the end point of the selection. Then press the *"Del"* button to delete the selected text.

The whole text can be selected through the menu item **Modify>Select all**.

Text can be copied into the "Clipboard". The clipboard is a Windows standard feature and is a system memory area which temporarily stores data (see Windows documentation for more details about Clipboard).

To copy a text into the Clipboard select it and then choose the menu item **Modify>Copy** (or the keys Ctrl + C), then move the cursor in the position in the document where to copy the Clipboard content and choose **Modify>Paste** (or keys Ctrl + V). To move a text just use the menu item **Modify>Cut** instead of **Modify>Copy**. Move the cursor in the proper position and select **Modify>Paste**.

Use the arrow keys and the navigation keys ("Home" and "End") to move into the text.

The message cannot be longer than 4 lines with a maximum of 20 characters per line.

If more than 4 lines are inserted the text background becomes red and moving to another message is not allowed until the problem is solved.

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2.1.3 Scrolling alarm messages

Scroll through the 128 alarm messages available using the scroll bar (Fig. 5) located under the messages window.

Fig. 5

Another way to scroll the messages is using the keys "*Page up*" and "*Page down*", which will scroll the messages one by one.

The number of the message currently displayed in the display box is always indicated besides the "*Message*" indication (Fig. 6)

Fig. 6

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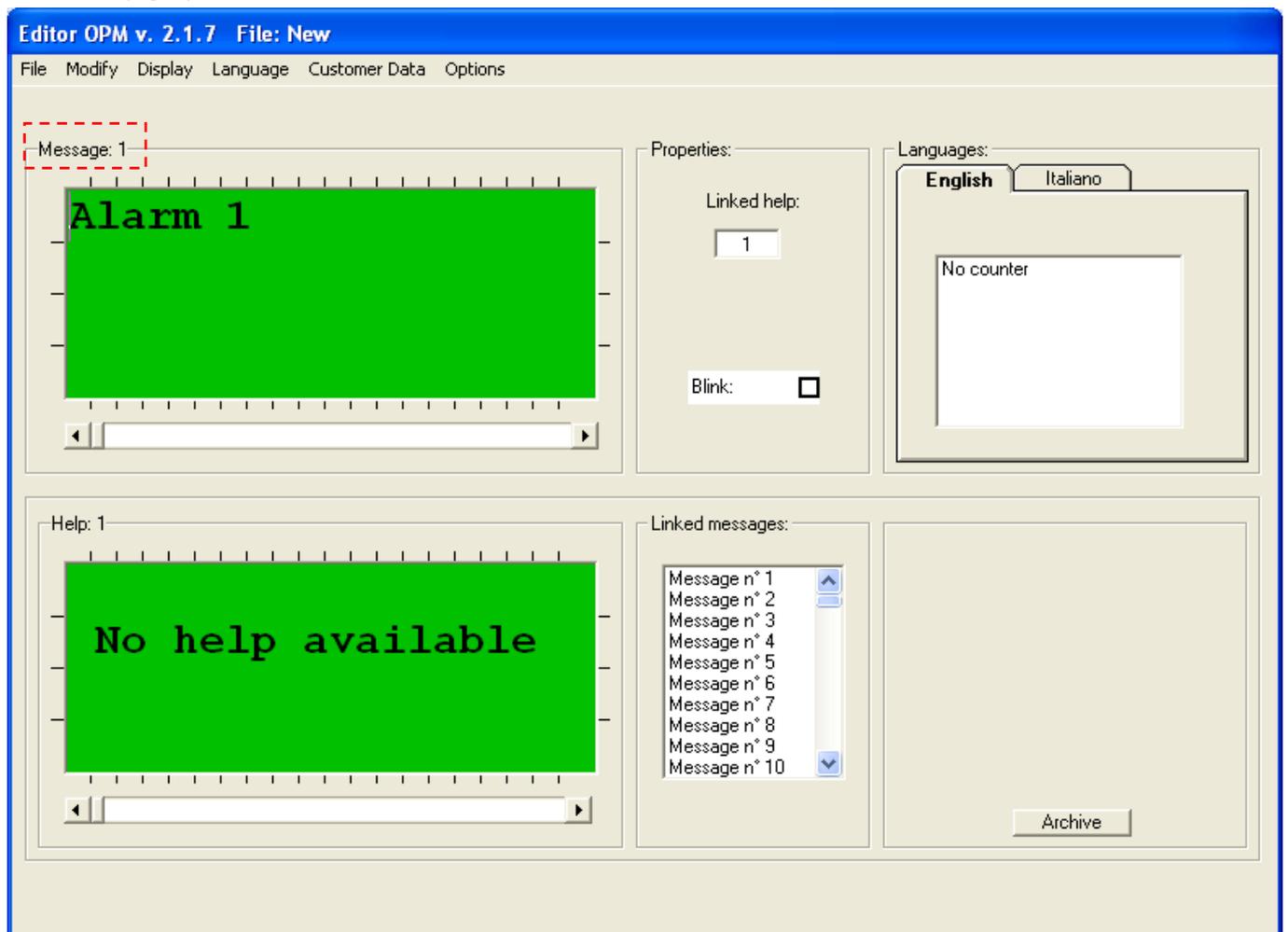
2.2. System messages

System messages are shown on the display when certain particular conditions occur (see OPM02 user manual).

The configuration of these messages is subject to the insertion of an access key, using the menu item *Display>Complete Menu*. Only Logomat S.r.l. is authorized to use this functionality.
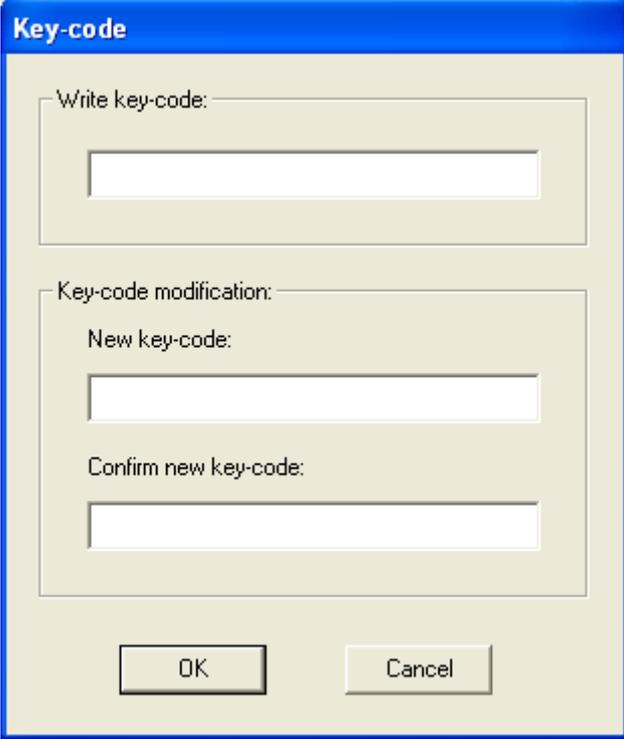
Fig. 7

IMPORTANT!

The first system message (Message 129), which can be normally displayed and modified even in the incomplete menu, is the presentation message i.e. the message shown for 2 seconds when the display is powered on.

It usually indicates the name of the factory where the machine was produced.

System messages numbers go from n.129 to n. 256.

2.2.1 Creating system messages

When creating alarm messages, system messages in the selected languages are automatically loaded (see "*Creating alarm messages*").

2.2.2 Modifying system messages

System messages can be modified by typing directly into the "*Message*" window (Fig. 4).

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All the explanations about managing the text in the section "*Modifying alarms messages*" are valid for system messages too.

2.2.3 Scrolling system messages

Scroll through the 256 alarm and system messages available using the scroll bar (Fig. 5) located under the messages window (Fig.5).

All the explanations about scrolling the messages in the section "*Scrolling alarms messages*" are valid for system messages too.

2.2.4 Alarm or system message blinking

System or alarm messages can be set to be blinking when they are shown on the display.

Select the alarm or system message to be set as blinking. In the "*Properties*" box (Fig. 8) check the check-box "*Blink*".

Fig. 8

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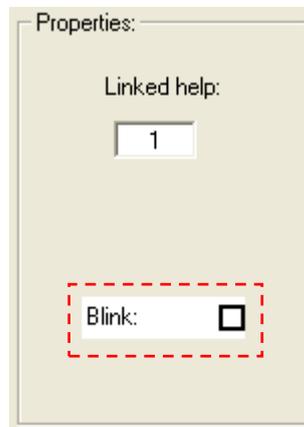
2.3. Help messages

Help messages are text messages that the operator recalls using the "Help" button to get explanations about the system or alarm message displayed.

2.3.1 Creating help messages

When creating alarm messages, help messages in the selected languages are automatically loaded too (see "*Creating alarm messages*").

2.3.2 Modifying help messages

Modify help messages by typing directly into the "*Help*" window (Fig. 9).
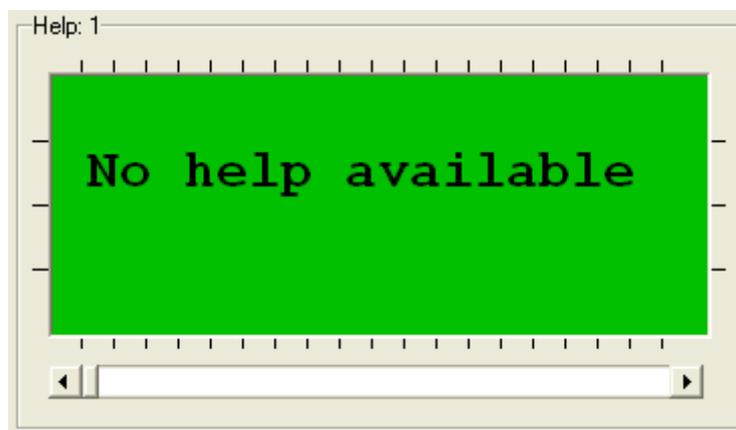
Fig. 9

All the explanations about managing the text in the section "*Modifying alarm messages*" are valid for help messages too.

2.3.3 Scrolling help messages

Scroll the 128 help messages using the scroll bar (Fig. 10) located under the help messages window.

Fig. 10

All the explanations about scrolling the messages in the section "*Scrolling alarm messages*" are valid for help messages too. If the complete menu is enabled, the number of help messages available is 256.

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2.3.4 Associating a help message

A help message can be associated to an alarm or system message. Select the alarm or system message to which the help message has to be associated. In the *"Properties"* tab (Fig. 11) digit into the *"Associated help"* box the corresponding number of the help message to associate.

Fig. 11

Select the associated help message to see from the list *"Associated messages"* (Fig. 12) the list of the system or alarm messages to which the help message is associated.
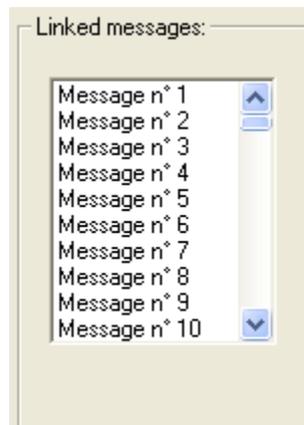
Fig. 12

Use the vertical scroll bar to scroll the alarms list.

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2.4. Messages language

Change the messages language in order to see or modify them in the various languages by selecting the respective language tab in the "*Languages*" section (Fig. 13).
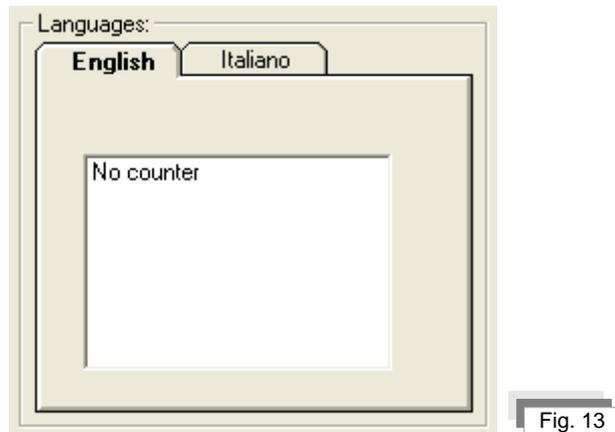
Fig. 13

In the example shown in Fig. 13 the only languages are Italian and English.

The alarm, system and help messages will be shown in the selected language.

2.4.1 Adding a language

To add a language, select the menu item **Language>New language**. The window "*Choose language*" (Fig. 14) allows selecting one or more languages among the listed ones, as previously explained in the section "*Creating alarm messages*".

Fig. 14

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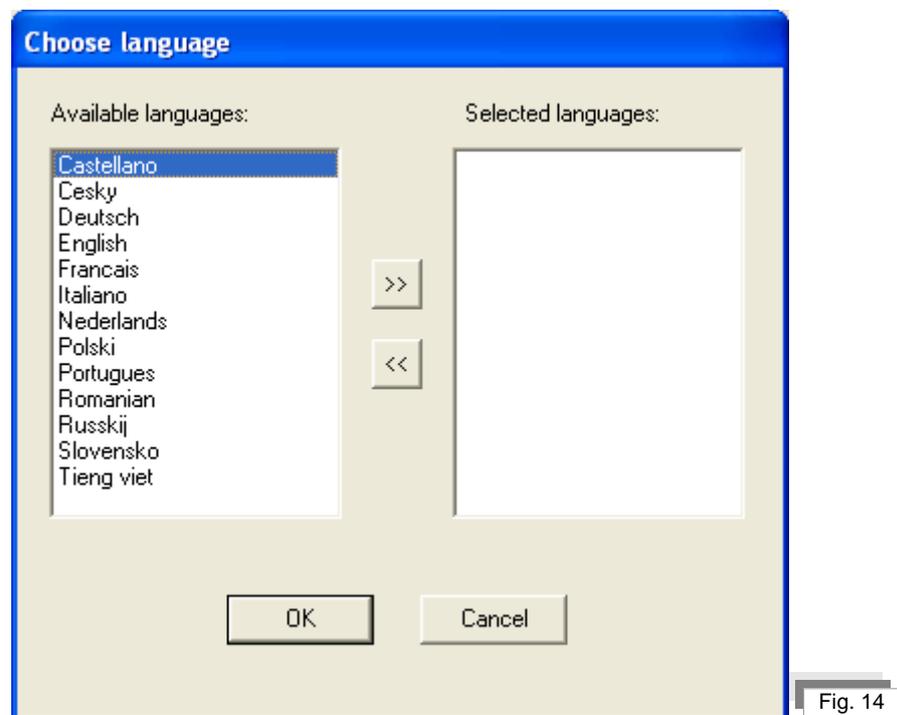
Remember to update the menu Counters and Selectors, as the settings for the new languages will be copied basing on the first language inserted.

2.4.2   Deleting a language

To delete a language select the menu item **Language>Cancel language**. The window "*Cancel language*" (Fig. 15) allows deleting one or more language among the listed ones.

Fig. 15

A language can also be deleted by double-clicking its name; this operation will delete the language from the list shown. Pressing the button [OK] will remove definitely the languages no more present in the list.

Pressing the button [Cancel] in the Fig. 2 brings back to the "*Editor OPM*" window in Fig. 1 without deleting any language.

3. Selectors - counters - menu

This chapter explains how to set and use the following tools:

- Selectors
- Counters
- Menu

3.1. Buttons/Selectors/Contraves/Timer

Besides working as a display, OPM02 has function keys (see OPM02 user manual) to create buttons or selectors with two, three or four positions.

> OPM02 can have a maximum of 16 buttons, selectors, contraves and timers.

Selectors-Timers

Description	Pos. 1 Out=0	Pos. 2 Out=1	Pos. 3 Out=10	Pos. 4 Out=11	Key input	Output	Type
Carton	OFF	ON				1,6	2

OK   Cancel

Italiano

English

3.1.1 Setting buttons/selectors/contraves/timer

Access the selectors list through the menu item **View>Selectors-Timers**. The "*Selectors-Timers*" window (Fig. 16) allows setting the buttons/selectors/contraves/timers.

The following parameters can be set: description, positions descriptions, key input, output address and selector type.

3.1.2 Description of button/selectors/contraves/timer

Type the button/selector/contraves/timer description in the column "*Description*".

The description is also shown in the selectors list (see the section "*Lists*" *for* details*)*.

3.1.3 Positions description

Enter the descriptions of the positions of the button or the selector.
The contraves and the timers do not require entering any position description.
Type the text directly into the columns "Pos. 1", "Pos. 2", Pos. 3" and "Pos. 4".
This text indicates the current position of the button or the selector. To create a 2-positions selector, just fill the columns "Pos. 1" and "Pos. 2" in the line corresponding to the selector. To create a 3-positions selector, fill the columns "Pos. 1", "Pos. 2" and "Pos. 3" in the line corresponding to the selector. Follow the same logic for a 4-positions selector.

The total text length resulting from the combination of "*Description*" and the position text cannot be greater than 18 characters. Spaces are automatically added to align to right the selectors positions values.

3.1.4 Key input

The key input is the hardware input (see OPM02 user manual) to which a signal disabling the selector status change is sent.
The selector has no limitations in case this key is not present.

Accepted values are:

- Inputs from 2.0 to 2.7
- Inputs from 3.0 to 3.7
- Inputs from 5.0 to 5.7
- Inputs from 6.0 to 6.7

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3.1.5 Output address

The output address is the hardware output (see OPM02 user manual) to which the button, selector or contraves status signal is sent.

For selectors with 3 or 4 positions and for contraves from 5 to 254 positions, the first address of the output necessary to code the value of the button, selector or contraves is indicated. The positions successive to the starting one are used basing on the bits number necessary to code the value of the selector or the contraves.

For a 6-positions contraves 3 bits/outputs are necessary to code the position value, as 8 different values can be represented with 3 bits using the binary coding (2^3=8). They can't be used for any other button, selector or contraves.

Accepted values are:

- Outputs from 1.0 to 1.7
- Outputs from 4.0 to 4.7
- Outputs from S00.0 to S00.7
- Outputs from S01.0 to S01.7
- Outputs from S02.0 to S02.7
- Outputs from S03.0 to S03.7

Timers use the following values instead of real physical "outputs":

- T000
- T010
- T020
- T030
- T040
- T050
- T060
- T070

3.1.6 Type

Type indicates the way the program works like basing on what is written in the respective line.

A type can have the following values:

- 1 for buttons.
- from 2 to 4 for a selector with 2 to 4 positions.
- from 5 to 254 for a contraves with 5 to 254 positions.
- from 1 to 254 for the scale bottom for the timers in hundredths/tenths/seconds/minutes according to the PLC program.

A button value is mono-stable, as it changes and remains constant as long as the "Enter" button is pressed.

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Press the "Enter" button to change the status of selectors, contraves and timers until you get the desired status selected.

3.1.7 Selectors language

Enter the descriptions of buttons, selectors, contraves and timers for all the languages used in the project, selecting then the tab having the name of the desired language in the windows "Selectors-Timer" (Fig. 16).

3.2. Counters

Some input signals on the OPM02 carry data about events occurring repeatedly, such as speed, times an all the events that can be counted (see the display user manual). These events can be monitored using the OPM02 counters.

Counters can be displayed into the messages text by double-clicking the counter description into the windows in the *"Languages"* tab. This operation will make the text [C0X] to be displayed in the insertion position defined by the cursor position in the text. X indicates the number of the counter. For example, [C01] corresponds to the numeric value stored in the first counter. OPM02 substitutes this text with the numeric value of the counter it refers to. The text entered occupies the number of characters specified in the field "Digits No." of the window *"Counters"*, for example: [C01 _ _ _] for a 3 digits counter.

> ⓘ OPM02 can have up to 8 counters. **If a counter is deleted all the messages texts referring to the deleted counter, in all the languages, will have to be modified manually.**

Fig. 17

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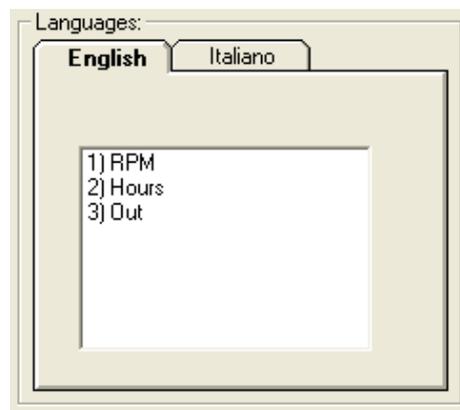
3.2.1 Setting counters

Access the counters list through the menu item **Display>Counters**. The window "*Counters*" (Fig. 18) allows configuring the counters.

The parameters that can be set are: counters description, digits number, resettable, key input, input address and counter type.

Counter description	No. digits	Resettable	Key input	Counting input	Counter type
RPM	5	0		2,1	60
Hours	6	0		2,2	H00
Out	8	1		C00,0	C0
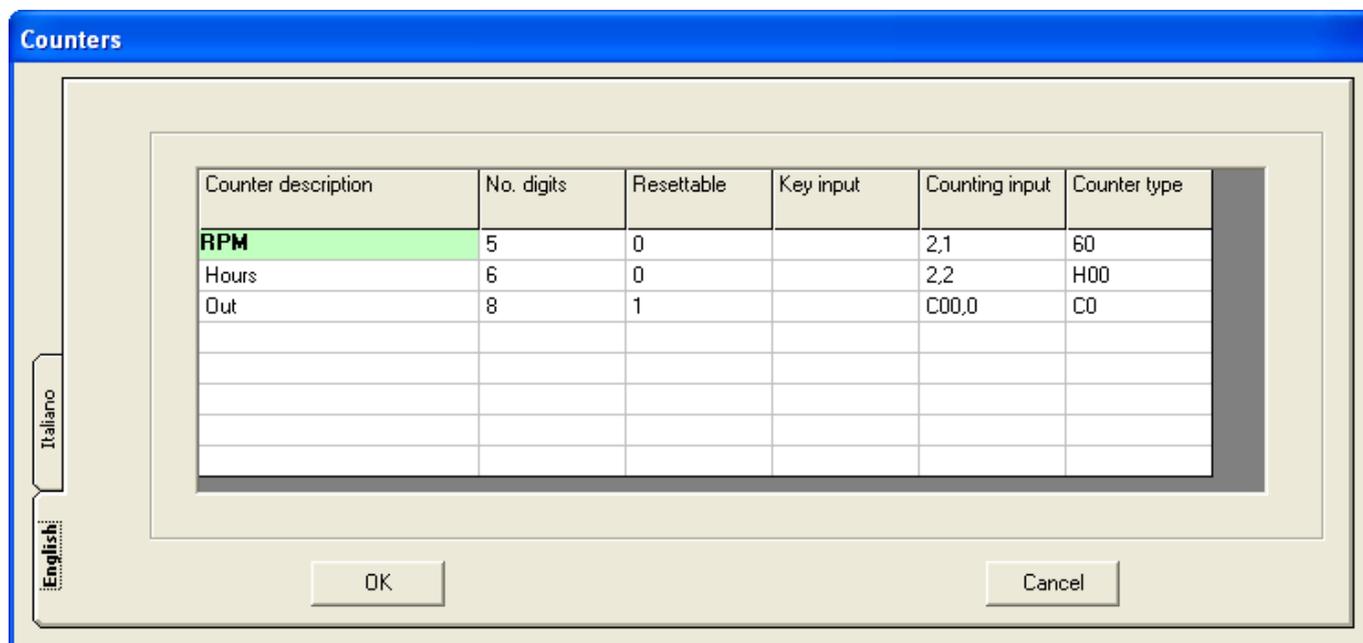
Fig. 18

3.2.2 Counters description

An alphanumeric description can be assigned to the counters.

Type the text directly into the column "*Counters description*" in the line corresponding to the desired counter.

> ℹ The total length of the text cannot exceed 18 characters.

3.2.3 Digits No.

The number of digits indicates the maximum number of digits that can be shown on the display. For example, if the maximum number to be displayed is "99999" the number of digits to choose is 5.

The digits number for the counters goes from a minimum of 5 to a maximum of 10 digits, which means a maximum reachable value of 4.294.967.296.

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3.2.4   Resettable

The value "Resettable" of a counter has to be set to "1" for the operator to be able to reset the counter value.

This operation will add the counter to the menu *"Counters Reset"*.

Accepted values are:

- 0 Not resettable
- 1 Resettable

3.2.5   Key input

The key input allows disabling or enabling the reset of a resettable counter using an external signal, usually generated by a key selector.

The counter will have no limitations in case this key is not set.

Accepted values are:

- Inputs from 2.0 to 2.7
- Inputs from 3.0 to 3.7.
- Inputs from 5.0 to 5.7.
- Inputs from 6.0 to 6.7.

3.2.6   Input address

The input address is the hardware input (see OPM02 user manual) on which the counting signal is received.

Accepted values are:

- Inputs from 2.0 to 2.7
- Inputs from 3.0 to 3.7.
- Inputs from 5.0 to 5.7.
- Inputs from 6.0 to 6.7.

For hour-counters and speed counter.

- PLC program memories from C00,0 to C00,7.

For counters. These addresses represent the byte C00,X of the PLC program. In case no PLC program is installed C00,X represents the address 2,X. (for example, C00,2 means 2,2)
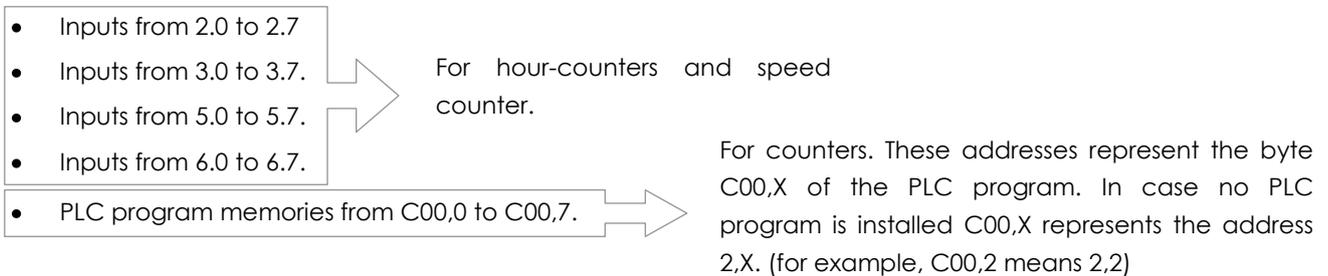
3.2.7   Counter type

A counter can be a production counter, a speed counter or an hour-counter.

A production counter allows counting pulses, coming from the inputs previously described, whose logical values don't change at an excessive speed (see OPM02 user manual).

A speed counter converts a series of input pulses into a numeric value indicating the machine speed basing on the ratio used to obtain the pulses.

An hour counter records the presence of an input signal and converts it in time values.

The counter type can have the following values:

- 15 for speed counters with an input ratio of 15 teeth
- 30 for speed counters with an input ratio of 30 teeth

- 60 for speed counters with an input ratio of 60 teeth
- H00 and H01 for hour-counters
- C0 ÷ C7 for production counters

3.2.8 Counters language

The counters language can be changed by selecting the tab with the name of the preferred language in the window "*Counters*" (Fig. 18).

3.3. Menu

Menus consist of a list of information or macros to execute machine functions that can be displayed through OPM02. There are 2 types of menu:

- Standard menu
- Customized menu

Standard menus are always present and allow displaying languages, selectors and counters. Data available can be modified or just consulted.

Customized menus are configured by the Customer basing on his needs.

3.3.1 Setting menus

Access to the menus list through Display>Menu in the window "Menu" (Fig. 19) where menus can be configured.

The following menus are shown:

- Menu n.1   Selectors
- Menu n.2   Menu
- Menu n.3   Counters
- Menu n.4   Reset counters
- Menu n. 5   Languages
- Menu n. 6   (internal)
- Menu n. 7   (internal)
- Menu n. 8   (internal)
- Menu n. 9   (internal)

The parameters that can be set are: list flag, key input and menu items descriptions.

> ⓘ Selecting menu 1 (Selectors), 3 (Counters), 4 (Counters reset), 7 or 8 will show the following message: "Reserved menu. Accessible only by enabling the complete menu".

Fig. 19

3.3.2 List flags

The list flags in the base version cannot be changed, as their management is reserved to a user having special permissions.

3.3.3 Key input

The key input is the hardware input (see OPM02 user manual) to which a signal is sent that disables using the menu item.

Accepted values are:

- Inputs from 2.0 to 2.7

- Inputs from 3.0 to 3.7

- Inputs from 5.0 to 5.7

- Inputs from 6.0 to 6.7

3.3.4   Menu items description

Menu items can be modified for each language used.

 Type the text directly into the column indicating the language and in the line corresponding to the desired item.

The total length of the text cannot exceed 18 characters.

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4. Data transmission

Editor OPM02 can communicate with OPM02 through a serial communication. The communication can be managed through the window "Communication with OPM02" (Fig. 20) which can be accessed through *File>Data Transmission>OPM02 <==>PC*, depending whether the data transfer is from OPM02 to PC or vice versa.
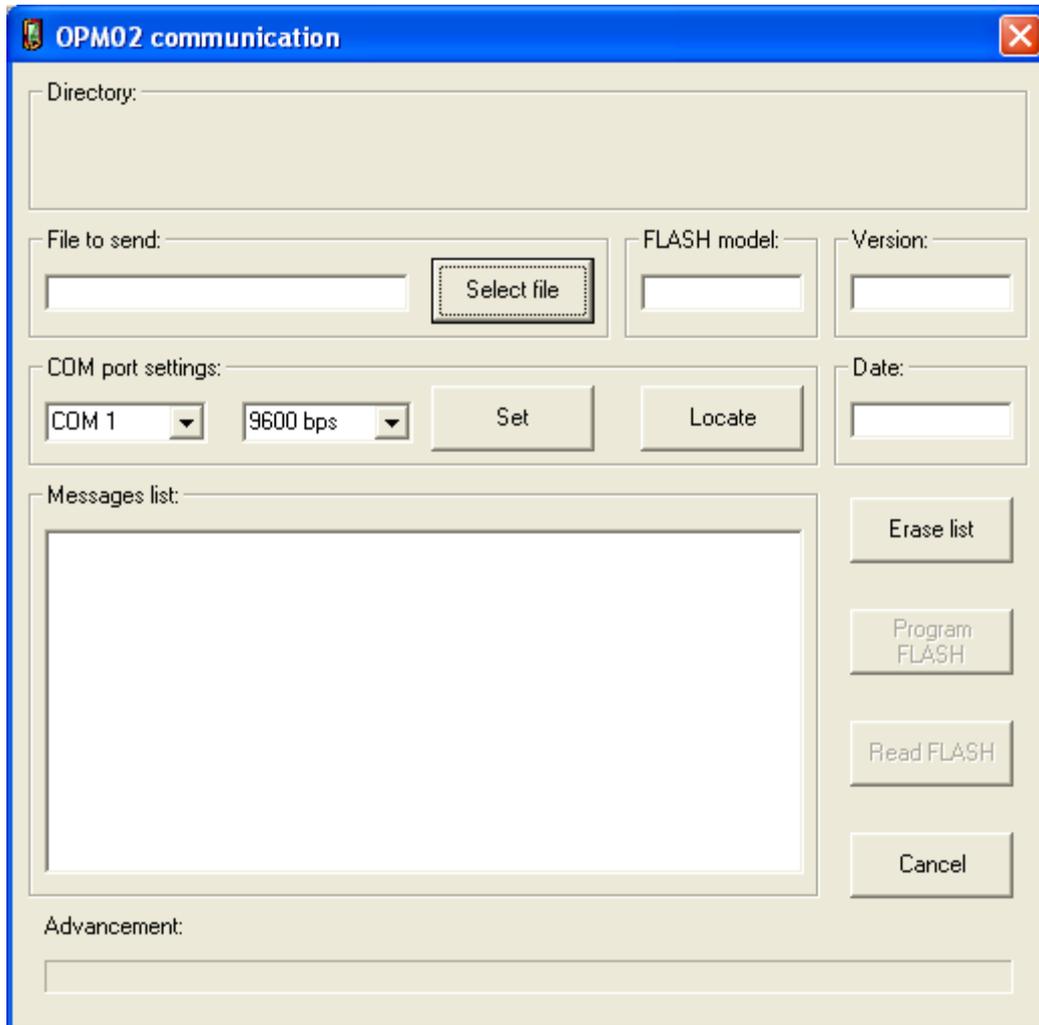

Fig. 20

4.1. File selection

The button [Select file] allows selecting the file to send to the display.

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4.2. Serial communication setting

To enable transmission/receipt on the OPM02, enter the OPM02 menu and select the item "*Data transmission*".

Once the item is selected, OPM02 starts to transmit on the serial port a data sequence necessary to be acknowledged by the PC it is connected to.

Using the [Locate] button the program detects the serial port of the PC being used to receive the data.

Once data are received and the serial port connected to OPM02 is identified, a check signal is sent to OPM02 to stop it sending its identification data.

Use the button [Locate] only if the number of the PC serial port connected to OPM02 is unknown; if the number of the port is known use the [Set] button. After "detecting" or "setting" the serial port number, the program detects the type of EEPROM (FLASH model) installed on the OPM02, the firmware and the transmission software versions installed on the OPM01. If available, pressing the [Locate] button shows the firmware version release date.

Pressing the button [Set] sets the serial port using the data defined in the boxes "*Set serial port*", i.e.:

- Serial port
- Transmission speed

If no answer is received from the display there may be a connection problem or a data misalignment between PC and OPM02.

Pressing the button [Set] presumes that the OPM02 is connected to the right serial port and is in "*Data transfer*" mode. If not, a procedure starts to "realign" the transmission between PC and OPM02; this procedure is executed every time there is a transmission error during a reading or a programming session.

In order to re-synchronize the display up to 255 synchronization characters (which is the maximum length of a data block that can be transmitted to OPM02) are sent. As bytes are sent every tenth of second it takes a maximum of 25,5 seconds to complete the realignment procedure.

If the communication is not re-established after these operations there may be a hardware problem. Check the connections and that OPM01 is in "*Data transfer*" mode.

ⓘ   Remember to set the communication speed at 9600 bps.

4.3. Programming and reading

After setting the communication it will be possible to read from and write to the Flash Eprom. Reading data does not change the EPROM content, while writing erases the EPROM content.

4.3.1 EEPROM reading

Press the button [Read FLASH] (Read FLASH) to read the display EPROM content. These data are sent to the program to modify the messages and are recorded in a file.

ⓘ   The button [Read FLASH] (Read FLASH) is enabled only after detecting an OPM02 connected to the system.

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If during the reading there are transmission errors the program will try to restore the connection by sending proper control and realignment codes.

When the reading is complete the software remains waiting for another read or write.

4.3.2 EEPROM writing

Press the button [Program FLASH] (Program FLASH) to:

- Erase EEprom in 10 seconds
- Send 64 bytes block to program the Eprom

The scroll bar indicates the programmation advancement.

If during the writing there are transmission errors the program will try to restore the connection by sending proper control and realignment codes.

When the writing is complete the software remains waiting for another read or write.

4.4. Erase list

The button [Erase list] deletes the content of the messages display box.

4.5. Back to Editor OPM

The button [Cancel] brings back to Editor OPM.

4.6. General information

The upper right section of the window " *OPM02 Communication*" (Fig. 21) shows into three separate fields the Eprom FLASH model, the software version and the software programmation date.
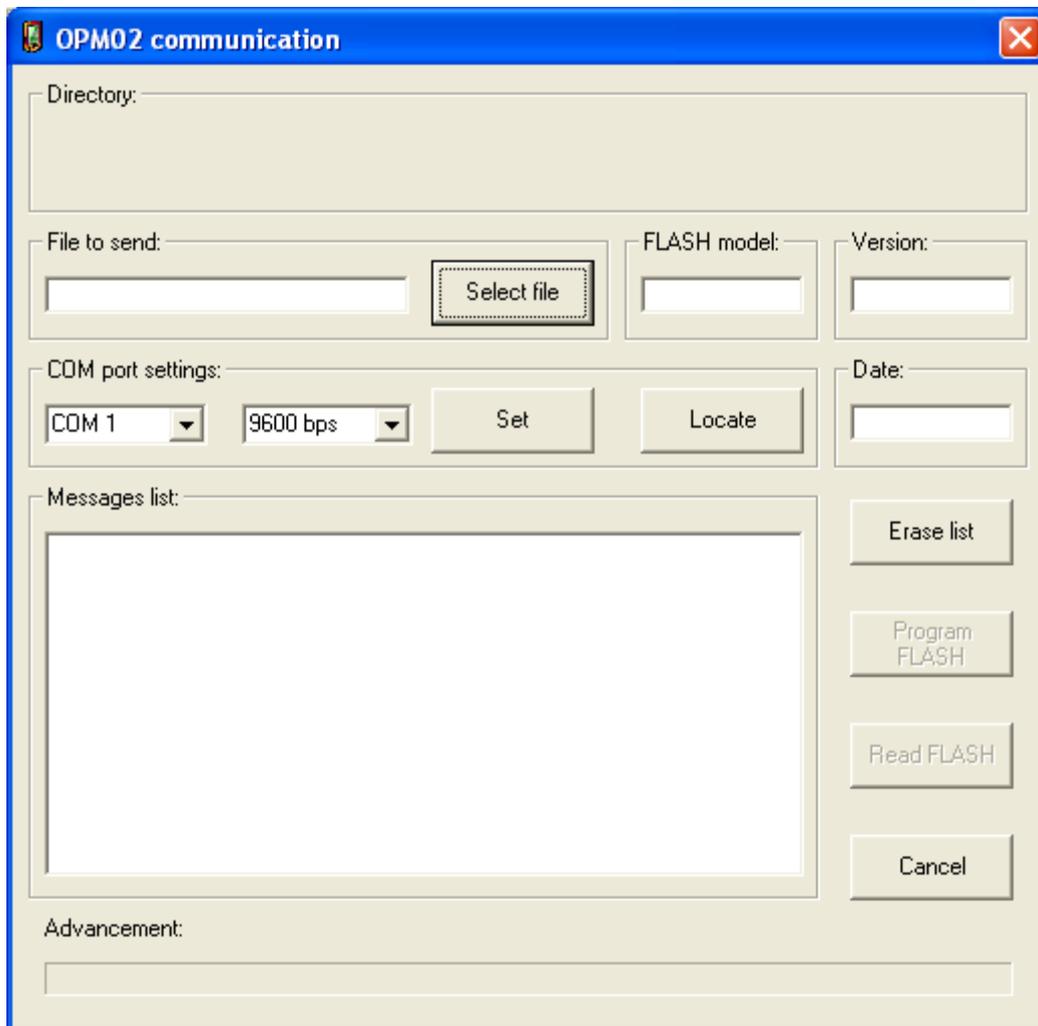

Fig. 21

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5. Customer data

The window "*Customer data*" (Fig. 22) allows viewing and modifying data regarding:

- Customer
- File name
- Machine name
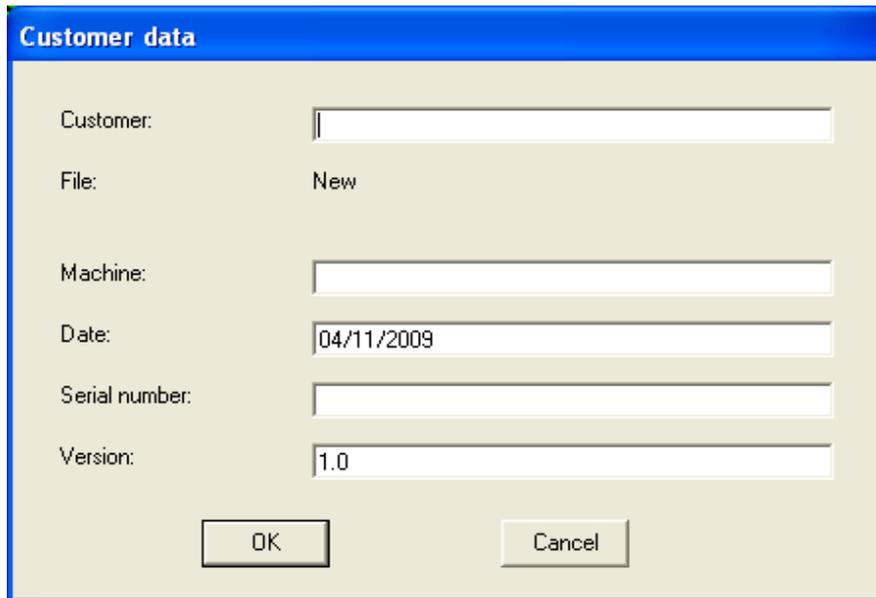- Last update date
- Matriculation number
- Version

Fig. 22

6. Sending updates to the customer

Copy into a floppy disk the following files:

- *.BIN (renamed "DISOPM.BIN")
- WCOM1.EXE
- WCOM2.EXE
- CLEAR.BIN
- C0LOADF2.BIN

ⓘ The last 4 files are located in the directory "*PROGROPM* ".

The customer will have to perform the following operations:

1. Connect the OPM02 to the PC serial port
2. Set the OPM02 in data transfer mode
3. Execute the program WCOM1.EXE if the display is connected to serial port COM1 or WCOM2.EXE if it is connected to serial port COM2.