Enhanced Mode Alarms

Enhanced Mode alarms offer the user 1024 alarms, which are broken into 4 blocks (except for the MD01 and MD03 panels, which offer 256 total alarms in 4 blocks). The lower the numerical value assigned to the alarm, the higher it's priority. Each block can be addressed to any register within the controller's memory. Each alarm is referenced to a bit in the controller. Whenever a bit goes high, the respective alarm message will be displayed. The features contained within enhanced mode alarms and their functionality are given below. Following these descriptions are two examples of using enhanced mode alarms.

It is strongly suggested to use Enhanced Mode alarms. Compatibility Mode alarms are included in the software only to provide compatibility with older project files. Future releases of the panel's firmware may not support Compatibility Mode alarms.

If the user wishes to use Enhanced Mode alarms and the RDA, they must first disable the Alarms area of the RDA.

? Select *Alarms* from the *Project* menu. This will bring up the define field dialog box shown in Figure 1 (unless the RDA is enabled, in which case the user will be presented with a dialog box in which they can choose between compatibility mode alarms and enhanced mode alarms).

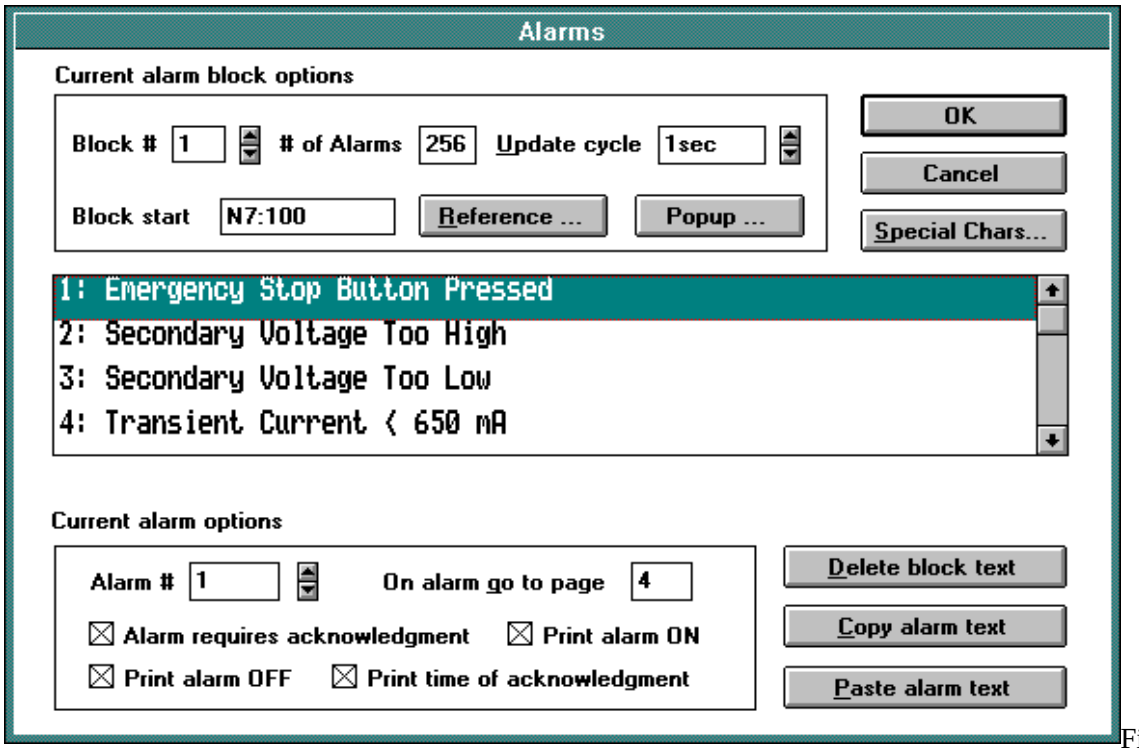

Figure 1

? The *Block #* field allows the user to choose either block 1, 2, 3, or 4.

? The *# of Alarms* field is used to specify how many alarms will be used in a particular block. The software will automatically round off the specified number to a multiple of 16 because the alarms are addressed as words of information.

? The *Update cycle* field allows the user to specify how often the alarms are updated.

? The *Block start address* field allows the user to specify the starting address of the current block. Clicking on the *Address Reference* button will bring up a detailed dialog box for addressing. If the panel is accessing multiple controllers, the user will also have to specify the controller slave ID numbers within this dialog box.

? The *Popup* button allows the user to specify when, or if, the alarm screen will appear on the panel when an alarm occurs.

? The alarm messages can be scrolled through by using the scroll arrows located to the right of the alarm message list box. To create or edit a message, either click on the desired value or use the *Alarm #* field to select the value and then enter the message. Special characters may be added to the message by clicking on the *Special Chars* button. This will bring up a dialog box (shown in Figure 3-4) in which the user can select the character(s) to be used by double clicking on them or by single clicking on them and pressing *Select.* After confirming the operation, the characters will appear in the last position the cursor was in before entering the special characters dialog box.

? The *On alarm go to page* field can be used to make the panel jump to a specified page whenever the alarm is activated. The user will need to program a key in Alarm Mode in the Keyboard Macro Editor using the following elementary macro commands in sequence: Acknowledge Alarm (if required), Go to Alarm Page, Page Mode. Whenever the alarm occurs, the panel will switch to the alarm screen. The user can implement the arrow keys to select the proper alarm and press the key that was programmed in the Keyboard Macro Editor to take them to the correct page.

? The *Alarm requires acknowledgment* field can be selected if it is desired to have the operator press a key to acknowledge that the alarm is active. Once the alarm is activated, the panel will enter Alarm Mode and display the currently active alarms. The operator must acknowledge the alarm by pressing the ENTER key for a few seconds. Pressing the CLEAR key will return the user to operation mode. Note, however, that *it is still necessary to reset the proper alarm bit*.

? By selecting *Print alarm ON*, *Print alarm OFF*, or *Print time of acknowledgment*, the user can have the specific alarm data printed via a serial printer.

? The familiar Windows™ features cut, copy, and paste are also available for use in editing the alarm messages. If you have several alarm messages that are similar, you can use the *Copy alarm text* and *Paste alarm text* features to copy messages and then make any necessary changes. Simply select which messages to copy by highlighting them. If you want to copy several messages that are in successive order, click on the first one and drag the mouse down

until the last one is highlighted and release the mouse button. If you have several messages to copy that are not in successive order, hold down the *Ctrl* key, click on each of the messages that you want to copy, and release the *Ctrl* key. All of these methods will copy the text into Windows' Clipboard. Next, highlight the alarm message number where you want to paste the first message and click on *Paste alarm text* to copy the messages. You can also use a Windows based text editor, such as Notepad, to create a list of alarm messages. To do this, place each alarm message on a separate line. Use the copy function of the editor to copy the text to the Clipboard. Then use the *Paste alarm text* feature as previously described to paste the alarm messages into the project file.

Example 1:
Assume a user is using a Siemens Simatic TI 435. They want to use alarms that begin at V7377 (a word) for their particular controller. Their alarm messages and their respective locations in the controller are as follows:

Alarm Location in the Controller	Alarm Message
V7377 - Bit 0	Pressure too high
V7377 - Bit 1	Temperature too high
V7377 - Bit 2	Pressure too low
V7378 - Bit 1	Temperature too low

*Keep in mind that each alarm message is referenced to a **BIT** in the controller.*

1. Once the user has Designer set up for their particular panel and controller, the enhanced mode alarms can be accessed by choosing Alarms from the Project menu. The define field dialog box will appear, allowing the user to specify the starting address for the alarms. In this example, the alarms begin at memory location V7377.

2. The alarm list box is located beneath the Current alarm block options box. This list box is where the alarm messages are entered. Each numeric value corresponds to a bit. For example, since the alarms begin at V7377, the numeric value 1 in this list box corresponds to the address V7377 - bit 0. The numeric value 2 in this list box corresponds to the address V7377 - bit 1, and so on. In a similar nature, the numeric value 17 corresponds to V7378 - bit 0 (since these are word locations and there are 16 bits in a word).

3. The numeric values in the list box and their corresponding alarm messages would be as follows:

   1: Pressure too high
   2: Temperature too high
   3: Pressure too low
   18: Temperature too low

The define field dialog box should resemble the one shown in Figure 2.

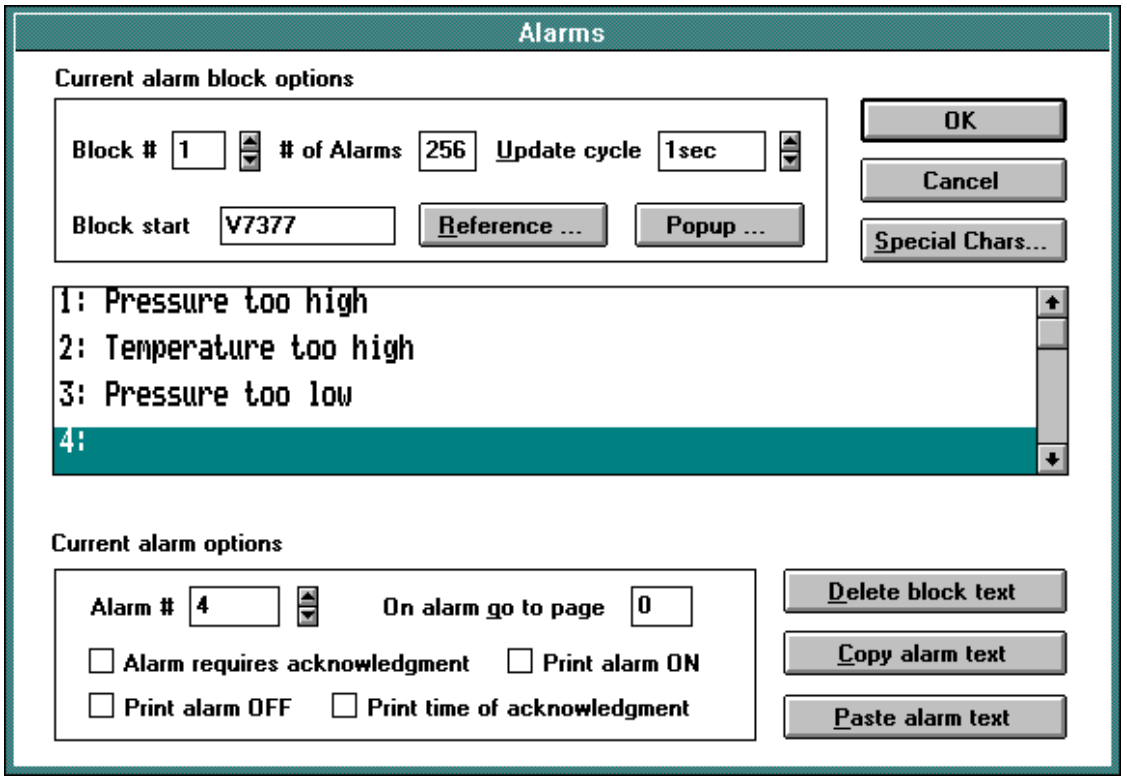

Figure 2

Example 2:
Assume a user wants the panel to go to page 3 whenever alarm 1 is active. Assume that the alarm requires acknowledgment.

1. Select *Alarms* from the *Project* menu.

2. Make sure that all of the alarm data is entered correctly, as far as the alarm message and the beginning address of the alarm block.

3. Enter a 1 in the *Alarm #* field. Following this, enter a 3 in the *On alarm go to page* field and click on OK.

4. Select *Keyboard Macro Editor* from the *Project* menu. Assume that the F1 key is to perform the function of acknowledging the alarm and going to page 3. The dialog box shown in Figure 3 is a representation of how this key should be configured.

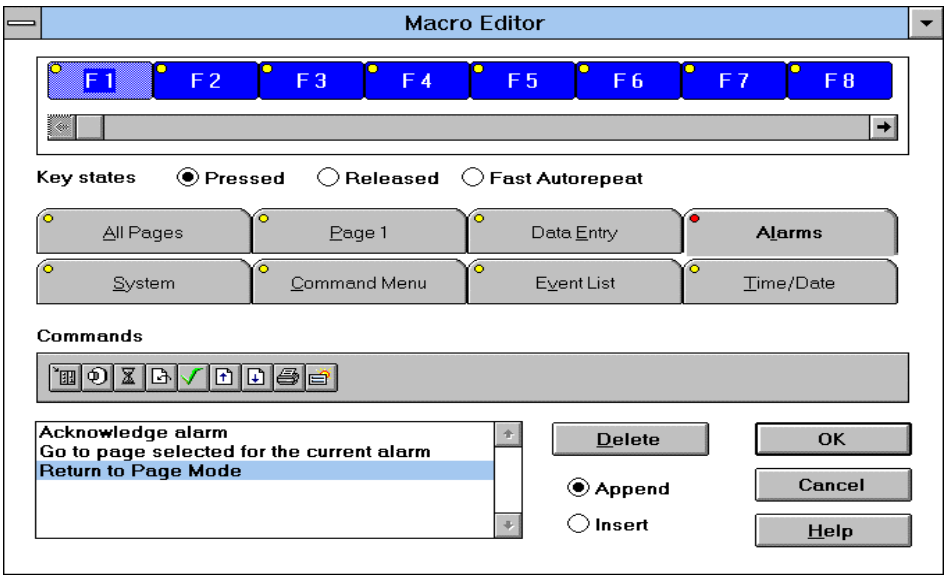

Figure 3

5. Keep in mind that the alarm bit must still be reset. This may be done by including the macro command 'Write to Controller' to the above complex macro and clearing the proper alarm bit.

Technical assistance may be obtained :
In North America EXOR at 1-513-874-4665
In Europe EXOR Italy at +39 045 - 8779068