



 **NOTIFIER**[®]
by Honeywell



AM-8200

FIRE DETECTION PANEL

Programming
Manual
Firmware V.1.0

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Do not try to use the control unit and devices connected without reading this manual

DETECTION SYSTEM LIMITS

An alarm or fire detection system can be very useful for the prompt warning of any dangerous event

such as fire. In some cases it can automatically manage events (transmission of messages for room evacuation, automatic fire-extinguishing, TVCC system interface, access route or door blockage, automatic warning to authorities, etc.), but in any case, it does not ensure protection against damages to propriety).

Moreover, each system may not properly operate if it is not installed and maintained according to the manufacturer's instructions.



- It is assumed that the user of this manual has performed a training course and that he knows the applicable rules in force.
- The system and all its components must be installed in an environment having the following features:
 - Temperature: -5 °C , +40 °C.
 - Humidity: 10 % - 93 % (without condensation).
- Peripheral devices (sensors, etc.) which are not perfectly compatible with the control unit may cause damages to the same control unit, and a bad operation of the system in any moment. Therefore, it is essential to only use material which is guaranteed by NOTIFIER and is compatible with its own control units.
- **Please consult NOTIFIER Technical Service for any doubt.**

ATTENTION:

This manual refers to functions available in the software revision indicated on cover.

Current versions are : CPU : V 1.0.614 – LIB: V.1.0.325

GENERAL DESCRIPTION

AM-8200: fire detection panels built in accordance with standards **EN.54.2**, and **EN.54.4**

Multi processor System, Display TFT 7" (800 x 480 with Backlite) 256 colors touch-screen

Detection Lines:

AM-8200 Basic equipment panel is loaded with 2 loop detection lines.

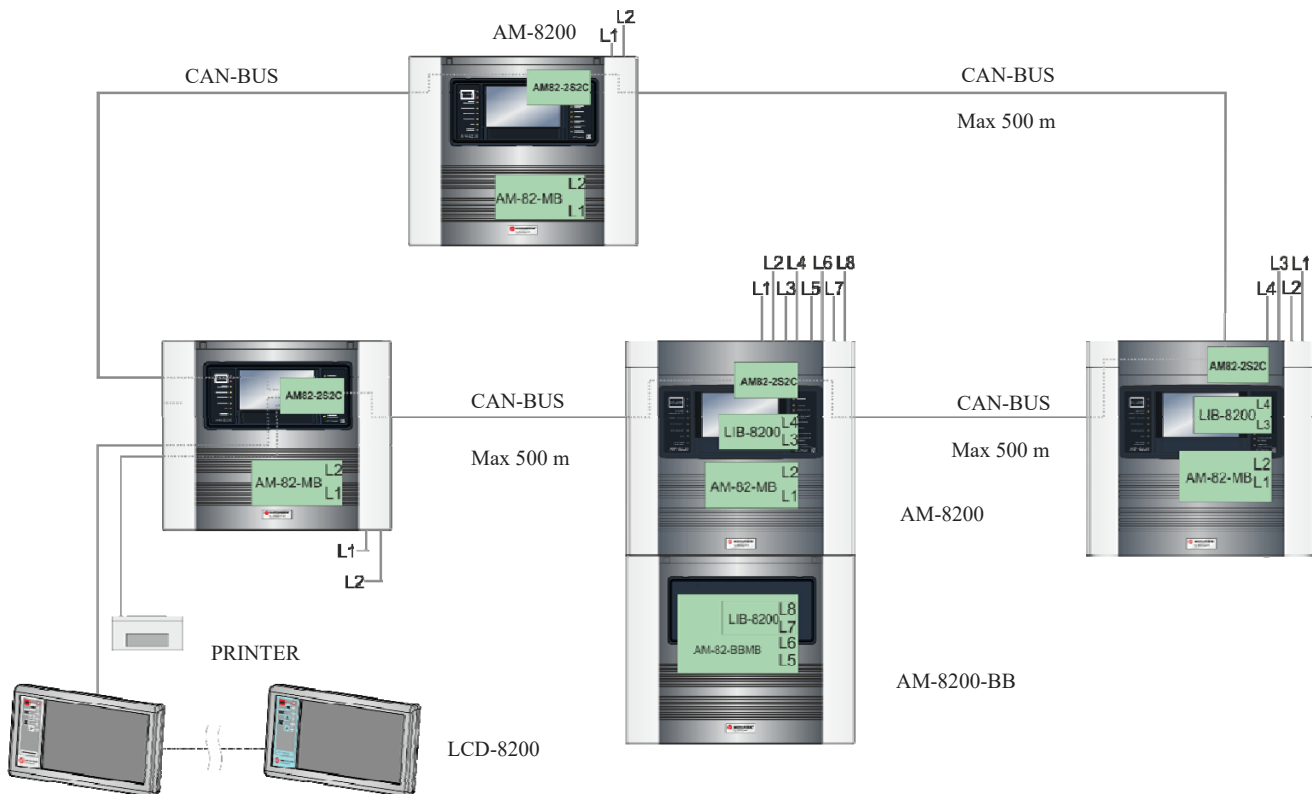
One LIB-8200 card will add 2 loop to basic equipment AM-8200

AM-8200BB Extension box (with an additional 150W PSU) and is loaded with 2 loops (6 loops in total on the AM-8200panel)

With one additional LIB-8200 card in the Extension Box the AM-8200 panel reach 8 loop capability.

Each Loop can be programmed as Advanced Protocol or CLIP compatible.

AM-8200 as 16 Loop network (Node-to-Node max distance: 500m)



DEFINITIONS

LINE: Physical wiring where sensors, addressable manual Call Points, Sirens, addressable input and output modules are connected.

POINTS: they are the addressable sensors and modules that can be connected to Lines.

Hardware Address: the device Physical address (Start address for multi-module devices) on loop.

It is set via the rotary switches or Dip-Switches on the addressable device

It's possible to assign addresses from 1 to 99 on loops programmed in CLIP mode.

On the Loops programmed in ADVANCED mode, the hardware addresses range from 1 to 159.

Multiple modules (eg M-721 = 2-inputs and 1 output) in an ADVANCED loop occupy 1 Hardware Address of 159 and 3 SUB-ADDRESS, one for each module that compose the device.

The same module in a CLIP loop occupies 3 consecutive addresses of 99 available for modules.

SUB-ADDRESS: The sub-address programming is available only for addressable MODULES.

SUB-ADDRESSES are automatically assigned to the individual components of the multiple module, depending on the programmed HARDWARE-TYPE.

Modules with a single input or single output have only one sub-address.

Modules with multiple inputs or multiple outputs have a sub-address for each input and each output.

The maximum number of "sub-addresses" that can be managed for each LIB-8200 (2 loop) is 700 that can be distributed freely on the two loops of the card.

Example 1: 2 x M-721 modules with hardware addresses 1 and 2 will be composed as follows:

M721 - Indirizzo rotary switch = 1		Indirizzo in centrale	M721 - Indirizzo rotary switch = 2		Indirizzo in centrale
1° Input	SUB-ADDRESS=1	1.1	1° Input	SUB-ADDRESS 1	2.1
2° Input	SUB-ADDRESS=2	1.2	2° Input	SUB-ADDRESS 2	2.2
Output	SUB-ADDRESS=3	1.3	Output	SUB-ADDRESS 3	2.3

Example 2: A CMX-10RME (10 OUTPUT) card with address 10 will be programmed.

CMX-10RME – Hardware Address = 10		SUB-address in Panel
1 ^a Output	SUB-ADDRESS 1	10.1
2 ^a Output	SUB-ADDRESS 2	10.2
3 ^a Output	SUB-ADDRESS 3	10.3
4 ^a Output	SUB-ADDRESS 4	10.4
5 ^a Output	SUB-ADDRESS 5	10.5
6 ^a Output	SUB-ADDRESS 6	10.6
7 ^a Output	SUB-ADDRESS 7	10.7
8 ^a Output	SUB-ADDRESS 8	10.8
9 ^a Output	SUB-ADDRESS 9	10.9
10 ^a Output	SUB-ADDRESS 10	10.10

Example 3: a WSS-PR-I02 optical/acoustic device with address 2 will be programmed

WSS-PR-I02 - Address 2		SUB-address in Panel
Sounder	SUB-ADDRESS = 1	2.1
Flash	SUB-ADDRESS = 2	2.2

HARDWARE TYPE-: An identifier identifying the model of the device (both for sensors and for modules)

SOFTWARE TYPE: An identifier identifying the type of device behavior.

It can assume different meanings depending on the model or device type-hardware.

It may indicate device behavior (eg "activates for each fault")

Or it can indicate the type of cabling (eg double balancing, free contact output, etc.)

ZONES: are set of points in same physical area

Used as basic indications as stated in EN 54.2 to identify the position of an event.

500 physical zones in stand alone or in 16 loop network configuration.

2000 physical zones in 128 loop network configuration

A maximum of **32** points can be associated to each zone.

GROUPS: A group is a software set of devices that can be used to program associations between Inputs and Outputs and perform actions triggered by input or alarm events.

400 groups in 16 loop network configuration.

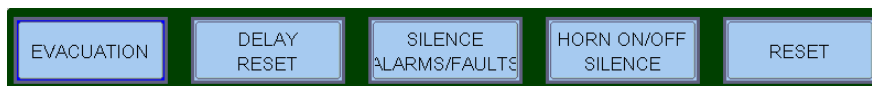
1600 groups in 128 loop network configuration

Groups have no limit in number of points.

FRONT PANEL CONTROLS AND SIGNALLINGS



Keys with dedicated functions



EVACUATION: Command for activating the Siren output and all output modules programmed with Type SW = SND in the absence of alarms and faults.
To do this you need to know the **level 2 password**.

DELAY RESET:

This button is active only in case of alarm if the immediate activation of the Sounder outputs in the exclusions menu has been excluded.
The panel delays the activation of the above-mentioned outputs for the programmed times (Prog\ Sist\ Al. Output Timing).
During the delay time the Active Delay led flashes and it is possible to reset the current delay through the Delay Reset key.

SILENCE BUZZER:

by pressing this key, the operator can silence the Panel buzzer and is enabled to perform a RESET.

SOUNDER ON/OFF SILENCE: This operation **must be done with level 2 password**..

In case of alarm the following devices are activated:

- Sounder Output
- Output modules programmed with SW-Type-ID=**SND**
- the output modules activated for a CBE associations

By pressing this key, you can de-activate the following devices:

- Siren Output
- Output modules programmed through Type-ID **SND** and enabled for silencing
- All output modules activated through CBE associations and enabled for silencing

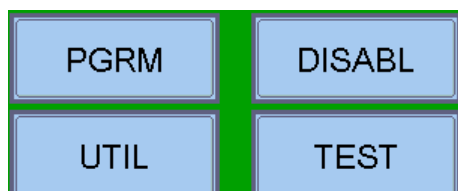
A subsequent pressure of this key will re-activate :

- Siren Output
- Output modules programmed through Type-ID **SND**
- All the output modules de-activated from the previous Silencing

RESET: This operation **must be done with level 2 password**

the pressure of this key clear alarms and faults from memory.
It de-activates the sounder and turns off all light signalling of sensors in alarm.

FUNCTION KEYS in LCD TOUCH SCREEN:



These keys are displayed in the bottom part of the LCD screen.
Activate the corresponding functions.

These functions change according to the selected menus.

Example: in the **system status display**, these keys allow the access to the Programming, Utilities, Exclusion menus or the Test menu.

Keys to use: DURING THE PROGRAMMING or TO ENTER THE PASSWORDS



ARROWS: they are used to perform some selections.

NOTE: pressing and holding one of these keys for more than 1 second, you obtain the key automatic repetition.

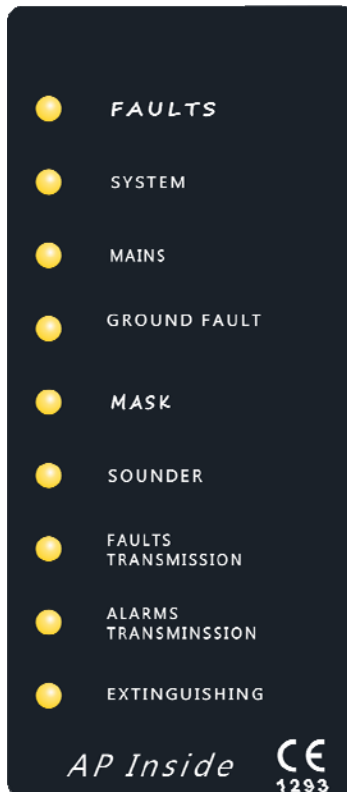


ENTER: after performing a selection, it confirms the entered datum.



ESCAPE: "Back", this is the menu exit function

FRONT PANEL LED INDICATIONS



ALARM (Red):

It flashes if there is at least one device in alarm and it has not been recognized yet. It is permanently lit if all alarm events have been recognized.

REMOTE ALARM (Red):

It is permanently lit if the output towards the fire alarm transmission devices (telephone dial) has been activated.

SILENCE SOUNDER (Yellow):

It is lit after the Sounder Silencing control is performed.

DELAY IN PROGRESS (Yellow):

It is lit if the immediate output activation has been disabled; apply to type C outputs (sounder output) and type E (alarm transmission through telephone dial). Through this disablement, in case of alarm the system delays the above mentioned outputs for the programmed times. During the delay time the led flashes and it is possible to reset the current delay through the "reset delay" key at lev.1.

EVACUATION (Yellow):

It is lit after the evacuation function is performed.

TEST (Yellow):

It is lit during Zone Walk Test

POWER (Green):

It is permanently lit if the control unit is powered (by 230Vac or by batteries charger).

FAULTS (Yellow):

It flashes if there is at least one fault of any type and it has not been recognized yet. It is on if all faults have been recognized

SYSTEM (Yellow):

It is lit if there is at least a system fault (watch dog, CRC memory error, etc.)

POWER SUPPLY (Yellow):

It is lit if there is a power supply Fault.

GROUND FAULT (Yellow):

It is permanently lit when the positive or negative is earthed.

MASK (Yellow):

It is lit when there is at least one Zone or a Point Disabled in the system.

SOUNDER (Yellow):

It is lit if the siren output is disabled. It flashes when the siren output is in Fault condition

FAULTS TRANSMISSION (Yellow):

It is lit if the Fault transmission output is disabled (telephone dial). It flashes when the Fault transmission output is in Fault condition.

ALARMS TRANSMISSION (Yellow):

It is lit if the alarm transmission is disabled (telephone dial). It flashes when the alarm transmission output is in Fault condition

EXTINGUISHING (Yellow):

It is lit if the output towards the automatic fire-fighting system (UDS) is disabled. It flashes when the fire-fighting control output is in Fault condition

USER INTERFACE DESCRIPTION

□ Functions and Access level

Functions	EN.54 Level	Factory default password
Alarm and Faults display	Level 1	none
Alarm and Faults recognition	Level 1	none
Delay Re-set (appropriate button)	Level 1	none
Excluded Zones/Points display	Level 1	none
Exclusions menu	Level 2	22222
Test Menu	Level 2	22222
Utility Menu	Level 3	33333
Programming menu	Level 3a	44444

□ Description of the keyboard operation to enter data in the programming folders:

Through the arrows ◀ ▶ you can enter the adjacent folders (displays)

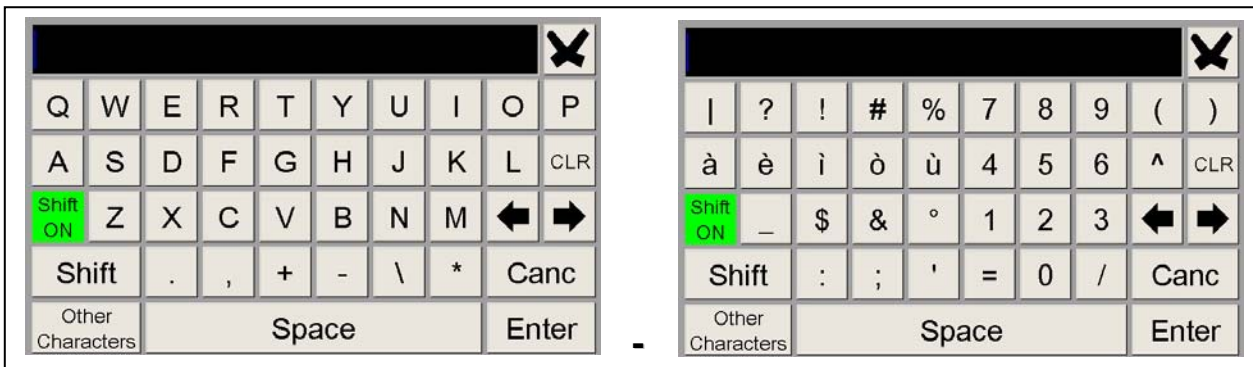
Through the arrows ▲ ▼ you can scroll the fields inside the folder (the selected field is displayed with the characters in REVERSE.)

If the folder has an index field, the first two function keys appear through which you can scroll

The selected field can be changed by entering in editing mode through the enter key ✓.

According to the type of datum there are different editing modes:

- **Text entering (CBE, Labels associated with: devices, zones, etc.)**
To enter the alphanumerical characters use the keyboard on Touch screen
- **“Alpha-Numeric” Keyboard on Touch Screen:**
This keyboards will be available on the Touch Screen when a Programmable Text have to be edit:



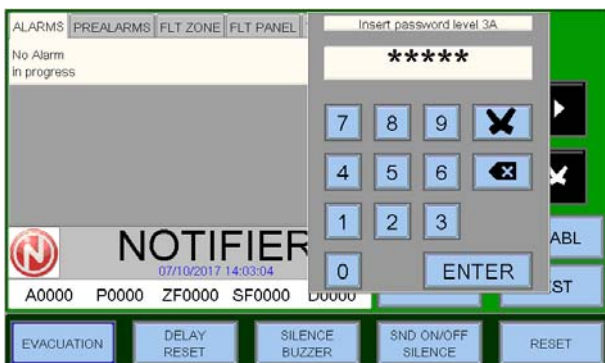
Selections (TYPE-ID, YES, NO, etc..) : type ENTER and through the arrows ▲ ▼ all the selectable labels are scrolled in sequence

The parameter is stored through the enter key, ✓

If you do not want to store the changes use the escape key ✕

To quit the folder system use the escape key ✕

To enter the passwords, when they are requested, use the numeric keyboard that appear on the screen. Confirm the entered password by pressing the **ENTER** key.

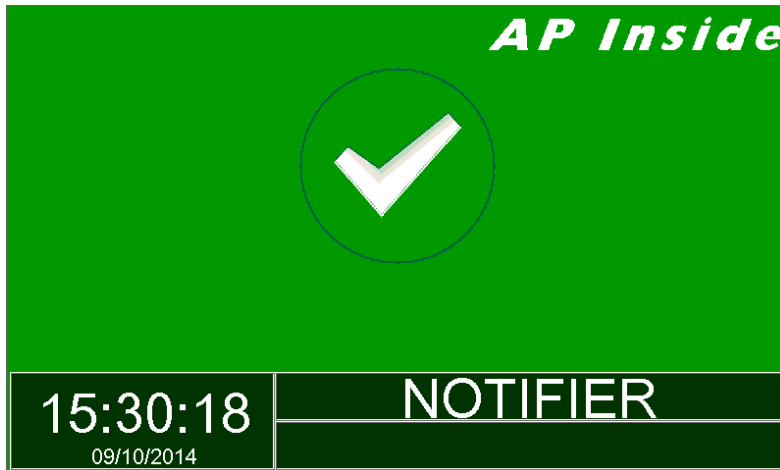


If an invalid password is entered, the following message will be displayed: **“Invalid password!: xxxxx”** where “xxxxx” is a 5-character code

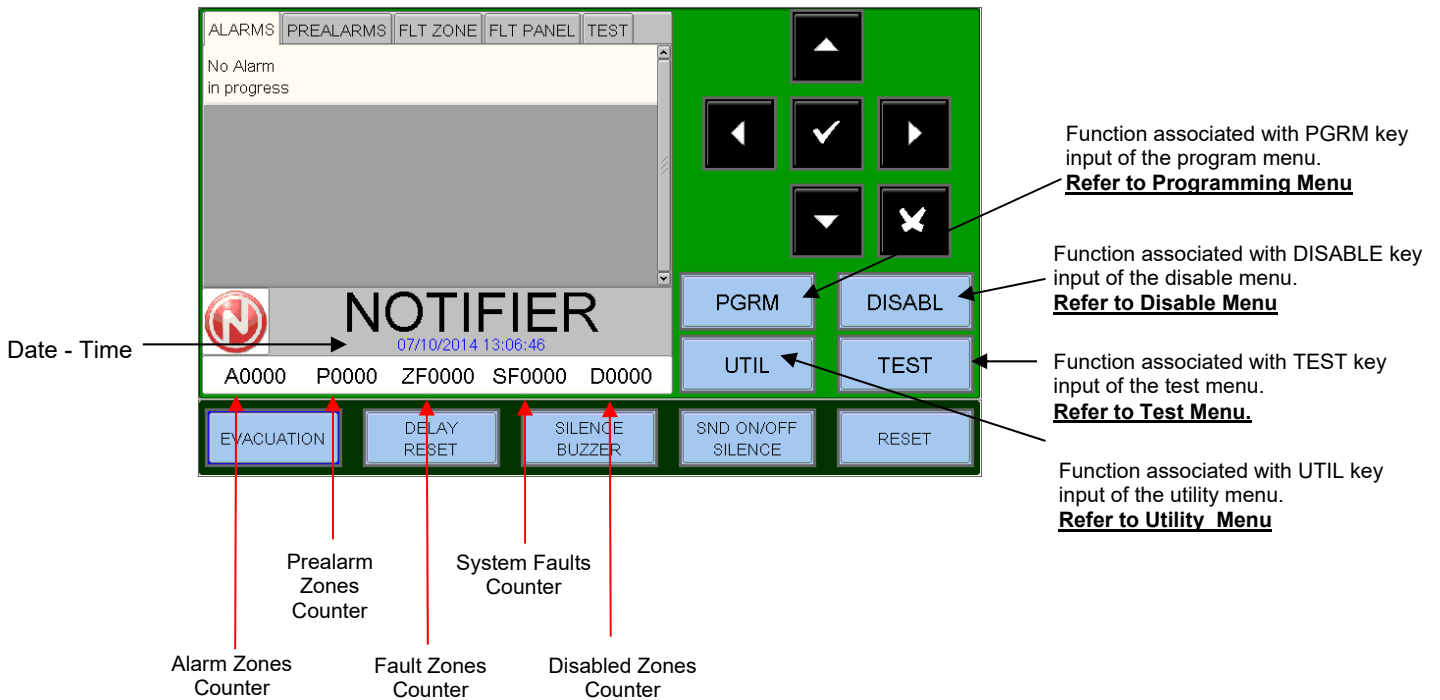
This code is used to obtain the programmed password in case it has been forgotten, by referring to this code to **NOTIFIER technical** servicing.

□ **Normal condition**





The following screen is displayed when the control panel is in **Normal Condition**



If you touch the screen the following screen is displayed



Icons that signals the Panel Conditions

-  - The NOTIFIER brand symbol appears in the absence of alarms and Faults.
-  - If there are **Pre-alarms** the alarm clock symbol is displayed
-  - If there are **Alarms** the Fire symbol is displayed
-  - If there are **Faults** the Triangle symbol is displayed.

N.B. The alarm state override all different type of events in case are both Alarms and Faults present.

□ **Pre-alarm condition**

The following screen appears when the control panel is in the zone pre-alarm condition

- First zone in pre-alarm
- time, date, progressive event
- programmed text for the zone

Any subsequent zones in pre-alarm

Zone Counter in Pre-Alarm

Use the arrow keys \uparrow \downarrow to scroll through the list of pre-alarm zones. By pressing the Enter key \checkmark you will access the list of points in the pre-alarm of the selected zone, with the arrow keys \uparrow \downarrow you can scroll through the list of alarm devices

Zone View Window

Pre-alarm device

Text programmed for the device

□ **Alarm Condition**

The following display appears when the control unit is in condition of zone alarm.

FIRST ZONE IN ALARM

- Date and Time + Event Number ID →
- Text for the Zone

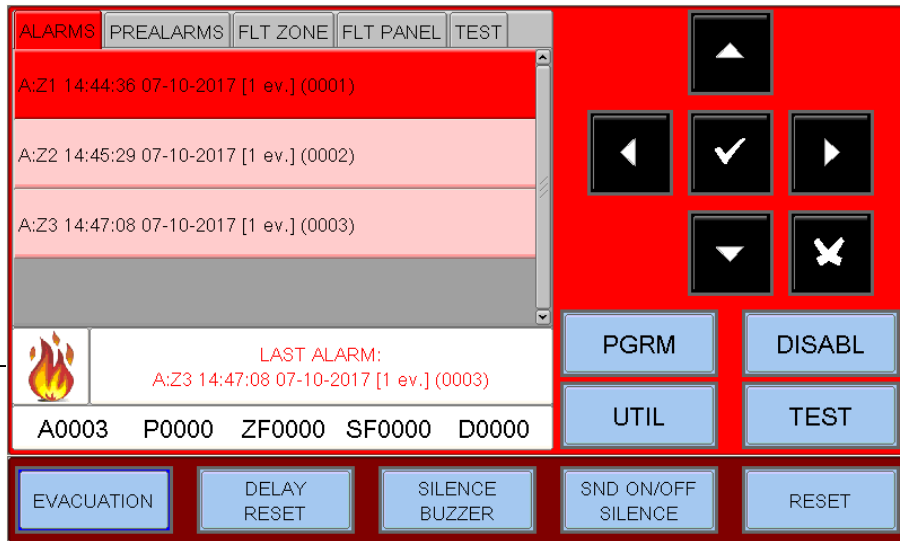
If more zones are in Alarm :

2 ZONES IN ALARM

LAST ZONE IN ALARM

- Date and Time + Event Number ID

Counter for zones in alarm →

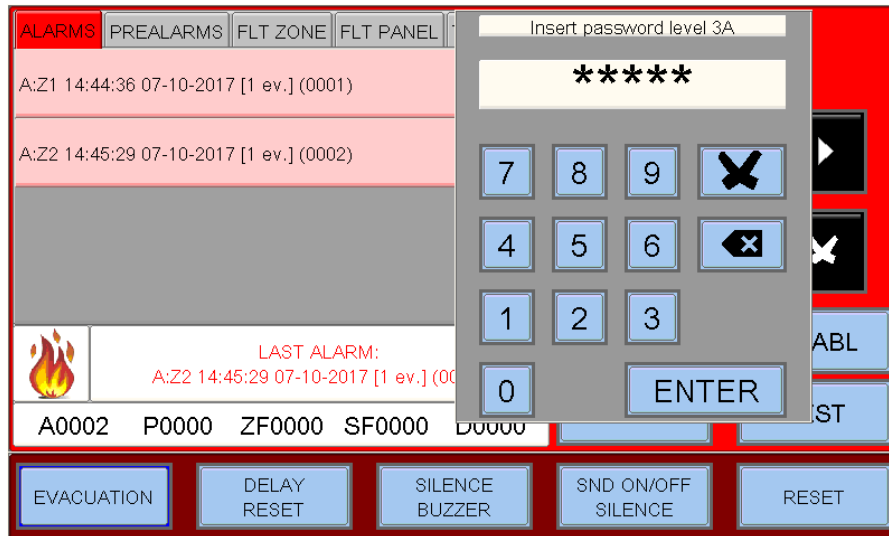


Through the arrow keys ▼ you can scroll the list of the zones containing Faults.

By pressing the enter key ✓ you can access the list of point in alarm of the zone selected on the display, through the arrow keys ▲ ▼ you can scroll the list of the devices in alarm.

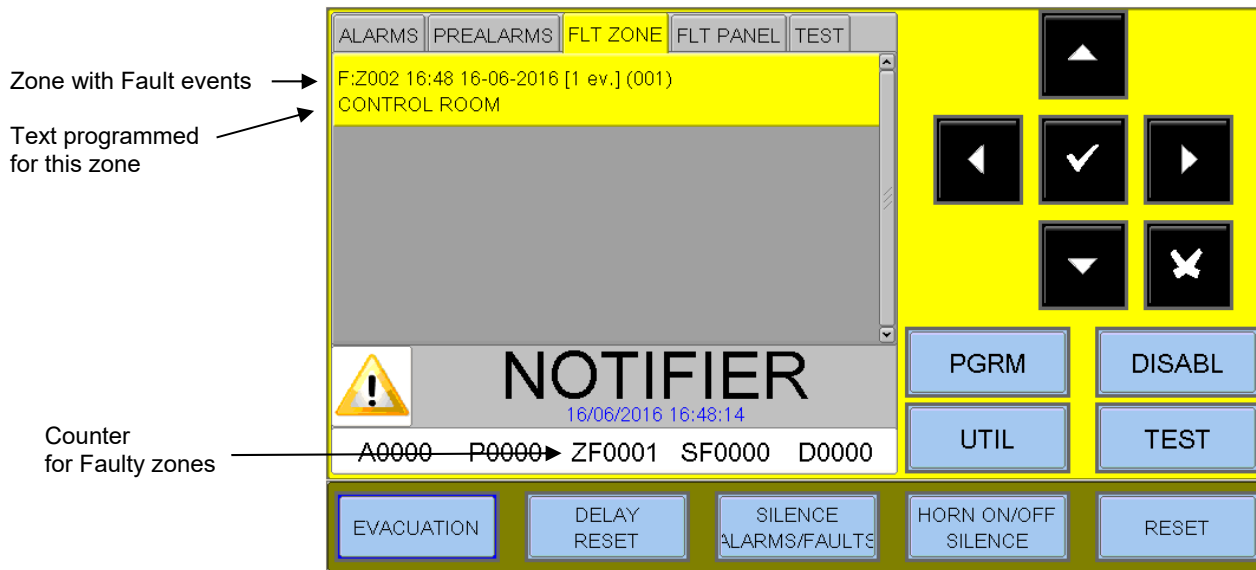
Device in Alarm
D = Detector
M = Module

Text programmed
For this Device



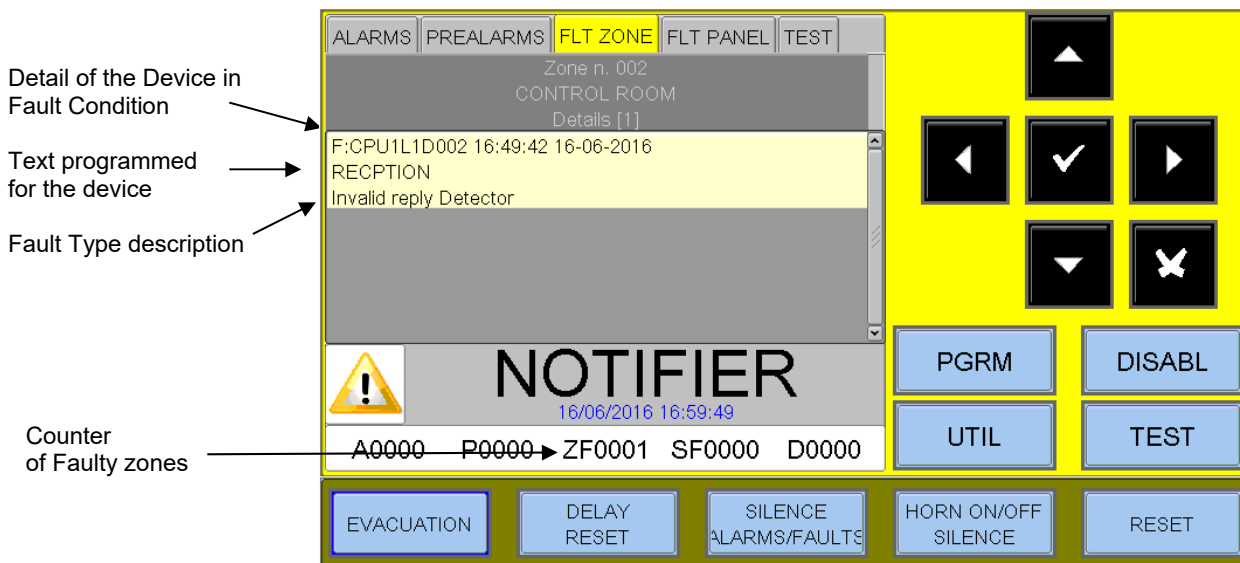
□ Condition with Fault zone events

The following display appears when the control panel is in condition of zone faults. Fault events are also initially displayed for zone



Through arrow keys \uparrow \downarrow you can scroll the list of the Zone Faults.

Through a first pressure of the enter key \checkmark you can display the list of devices with the indication of the point name; refer to the following figure:

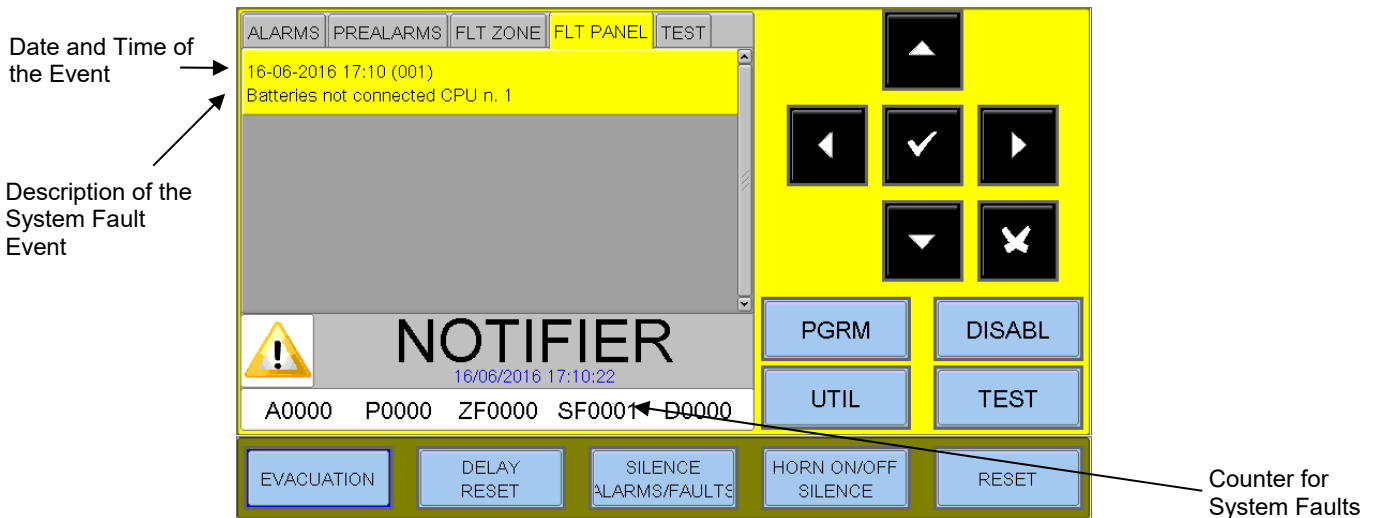


Pressing the escape key \times or leaving the keypad inactive for 30 seconds, you return to the list of faulty areas



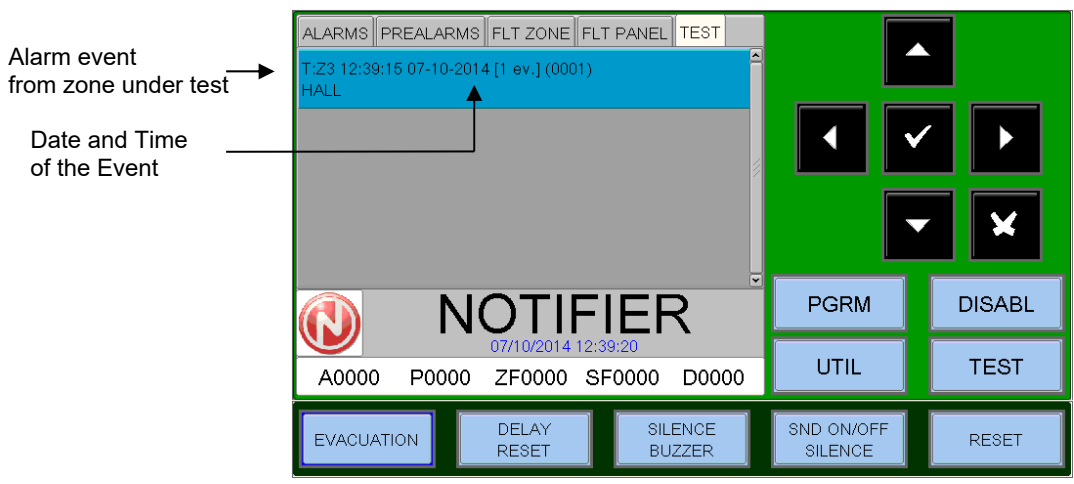
❑ **Condition with System fault events**

The Fault events relevant to the panel are defined as “System Faults” (ex. discharged battery, no mains, etc.). The system Faults are displayed with the maximum detail level.

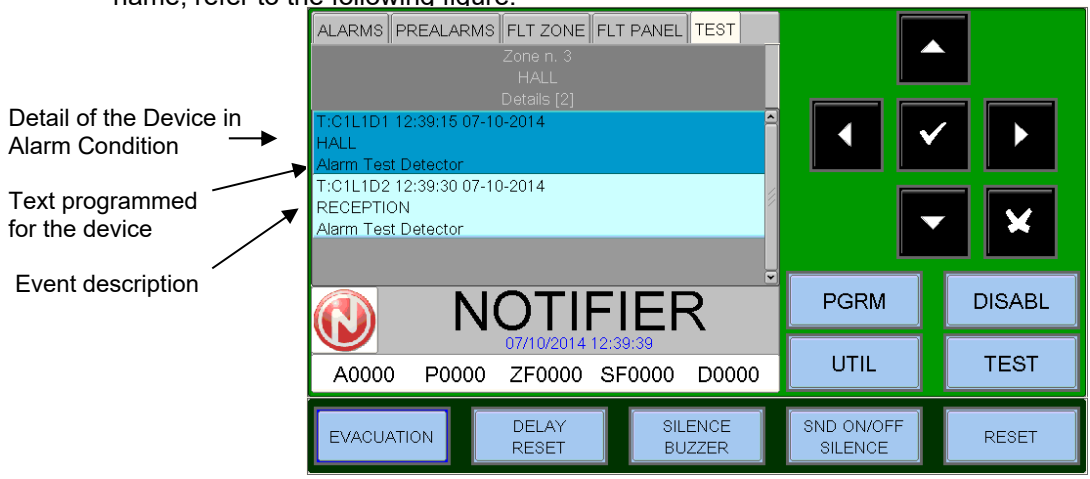


Through arrow keys \uparrow \downarrow you can scroll the list of the System Faults.

Condition with alarm events from a zone under Test



Through a first pressure of the enter key \checkmark you can display the list of devices with the indication of the point name; refer to the following figure:



through the arrow keys \uparrow \downarrow you can scroll the list of the tested devices of the zone.

PROGRAMMING MENU


RECOMMENDED SEQUENCE TO PERFORM THE PANEL PROGRAMMING

The following operation sequence is recommended to perform the initial programming of the control unit, to prevent mistakes and consequent loss of time.

The details of each operation are pointed out in the following pages.

- Perform the wiring of the control unit lines and perform the appropriate tests as described in the installation manual before powering the control unit.

- Make some photo-copies of the programming sheet that can be found at the end of this manual and record on these sheets the necessary information for ALL sensors, modules, software zones, CBE and groups.

- From the **Programming** menu select the **“System”** menu.
- Select the **“Line”** item and program the type of connection which has been performed on the installed lines (open line or closed loop).
- From the **Programming** menu select **Point Programming**
- Select the **Auto-Learn** item, and press the enter key  and subsequently enter the number of lines for which the procedure must be started.
*Through this operation all the devices installed on the lines are recognized and loaded in the control unit memory according to their **Hardware TYPE ID** and **with the default data**.*
- At the end of the procedure **check that the devices detected by the control unit during the Auto-Learn are those really installed**, and confirm.
This will **record all data in the Panel memory**.
In any case user can edit and modify the recorded data in case it needs.
- From the **Point Programming** menu select **“Detectors”**
- **Associate the detector with the appropriate zone**
- **Program the detector CBE** (Control by Event action).
- From the **Point Programming** menu select the **“Modules”** item
- Program the **Software Type-ID** (if it is different from the default value assigned)
- **Associate the module with the appropriate zone**
- **Program the module CBE** (Control by Event action).

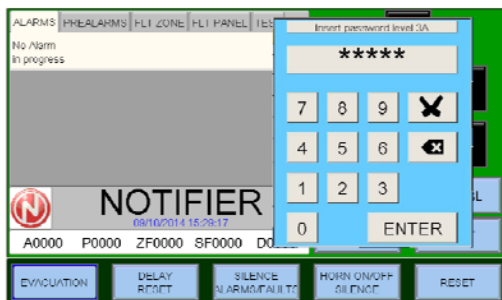
At the end of this programming steps the control unit is ready to manage the Alarm system

Additional details can be added to the mentioned, as for example a text description for each detector, module or zone.

For further information or specific parameters description see the following paragraphs.

Programming menu

By pressing the “**PGRM**” function key you can access the programming menu, to perform the configuration of the system or make changes to the programming.



To access the Programming menu you must enter the Level 3A password (44444 is the default password)

To enter the password, use the keyboard that appears on the screen and press ENTER.

The following screen is displayed:

Refer to **System Menu** section

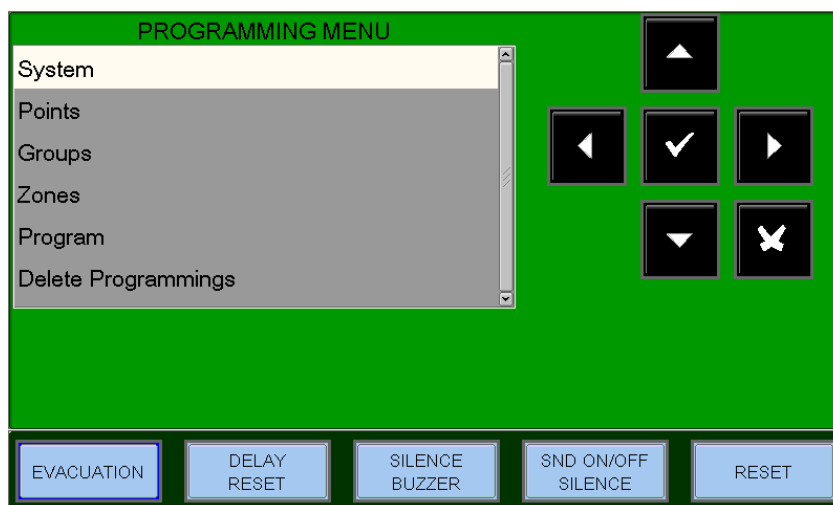
Refer to **Point Programming** section

Refer to **Group Programming** section

Refer to **Zone Programming** section

Refer to **Program** section

Refer to **Delete Programmings** section



□ Programming - System menu

By selecting “**System**” you can configure the configuration parameters which are valid for all the control unit.

Refer to **SYSTEM TYPE** section

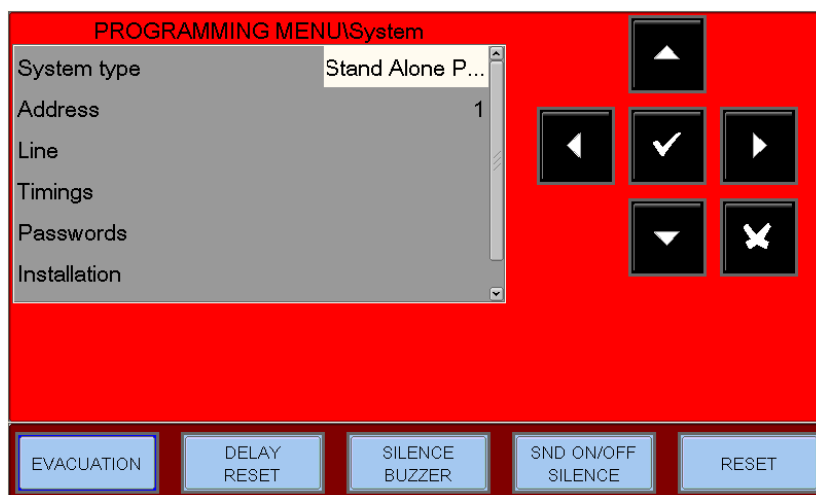
Refer to **System-Address** section

Refer to **System-Line** section

Refer to **System-Timing** section

Refer to **System-Password** section

Refer to **System-Installation** section



- **Programming – System - System TYPE**

This function allows the choice of system Network type as follows:



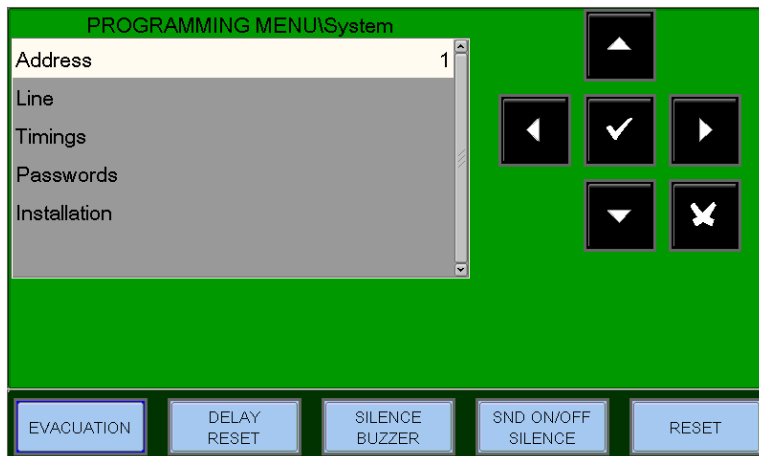
STANDALONE = Single Panel without Network connection with up to 8 lines

NET 16 = Network of Panels with up to 16 lines in total

NET 128 = Network of Panels with up to 128 lines in total

- **Programming – System - System Address**

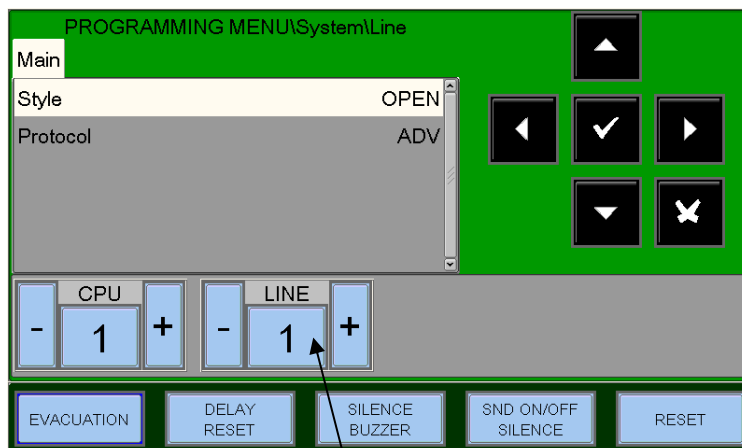
The "Address" entry will assign the panel device number on the CAN-BUS network.



- **Programming – System – LINE**

Style: OPEN LINE, CLOSED LOOP

This function allows to change (in memory) the type of line connection,



Press one of these key to select the **Previous** or **Next** line

Through a first pressure of the enter key  the Line editing function is activated,

Through the arrow keys $\uparrow \downarrow$ select the line style (OPEN - LOOP)
 Press the enter key \checkmark to confirm the programming.

LINE STYLE: Open = Open Line, Closed = Closed Line

Protocol: ADV, CLIP: Configure the type of devices to handle.

- ADV** = Line managed with ADV protocol,
 By selecting ADV the line can also handle up to 30 CLIP devices.
- CLIP** = Line managed with CLIP protocol (99 sensors + 99 modules)

Programming – System - Timings

In this sub-menu are programmed some delay times of the alarm outputs, the delay time for the sensor alarm check, silencing inhibition, etc.

ALARM-OUT TAB

Timing of "Sounder delay" is expressed in seconds, with values from 0 to 600 sec max.

Press the ENTER key to activate the editing function.

Use the arrow keys to enter the data; press enter to confirm the entered data.



Through the arrow keys $\uparrow \downarrow$ select the item which is required to be changed (“Siren” or “Tx Alarm”)
 Through pressure of the enter key \checkmark the editing function is activated.
 Through the arrow keys $\uparrow \downarrow$ or through keyboard the data are entered, by pressing the enter key \checkmark you can confirm entered data.

Sounder activation delay is programmable in seconds (max. 600 sec)

The “Siren” and “TX Alarms” activation delay timings are active only in case of alarm if the immediate activation of the outputs has been excluded in the exclusions menu.

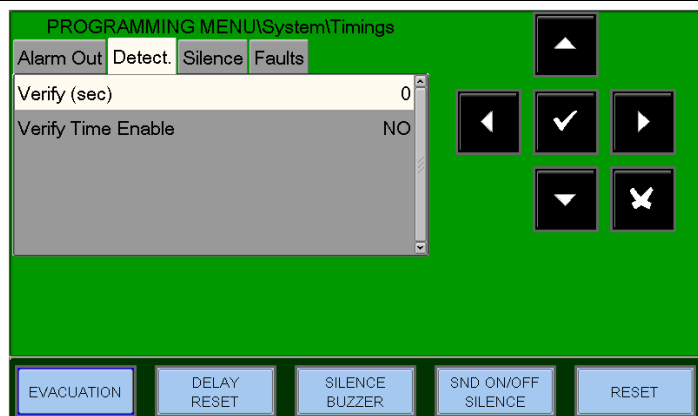
DETECTORS TAB

Press the right Arrow key \rightarrow to change the time of **check for the detectors**:

Detectors verification time allows the control unit to perform a check for all installed sensors, for the set time, before confirming the possible alarm.

Detectors Verification Time is programmable in seconds (Max. 50 sec)

N.B. This function will be effective only on the enabled sensors (refer to the Point Programming menu)



Through the arrow keys ▲ ▼ select the item which is required to be changed (“Check “ or “Check Enabl.”) through pressure of the enter key ✓ the editing function is activated.
Through the arrow keys ▲ ▼ data are entered and through the enter key ✓ entered data are confirmed.

VERIFY ENABLE: selecting “YES” the verification Function is ACTIVE with the programmed verification Time (in seconds)

SILENCE TAB

SELF-SILENCING TIME is the time after which the output modules are reset, after being activated.

Press the right Arrow key ▶ to change the parameters to manage the **Silencing**:

NOTE: the self-silencing function of each output module must be enabled in the Point Programming .

Silence Inhibit time is the time that output modules will remain active without the ability to be Silenced by an operator.

Siren / HORN Type-ID outputs

Silence Inhibition:

Time after activation when is not possible to Silence

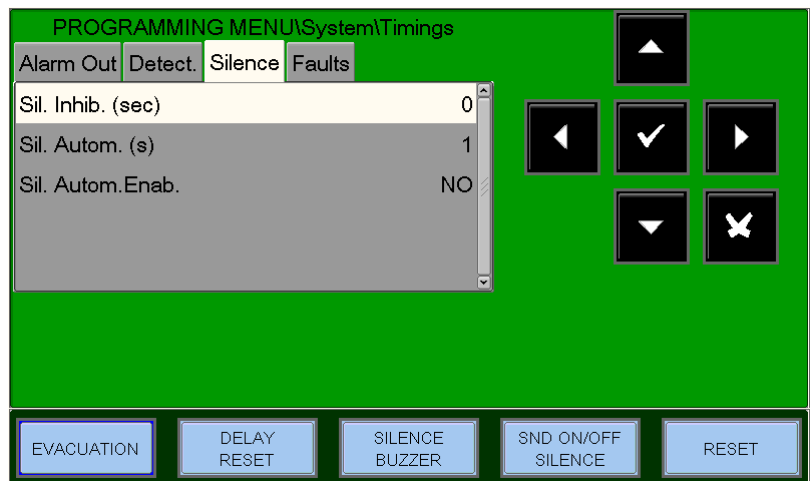
Silence Autom:

Minimum activation time

Silence Autom.Enabl:

Enabling of use the Activation time (otherways outputs are active until Reset)

All timings are expressed in seconds, from a minimum of 0 sec. to a max. of 255 sec.



By pressing the enter key ✓ the editing function is activated.

Through the arrows keys ▲ ▼ data are entered and through the enter key ✓ entered data are confirmed.

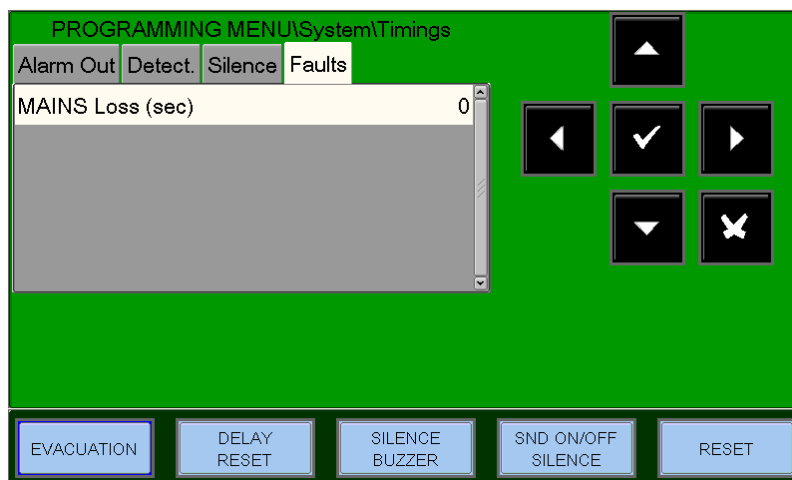
FAULTS signalings timings TAB

Press the right Arrow key ▶ to change the parameters to manage the **Fault signalings** :

- **MAINS FAULT DETECTION TIME** is the minimum time during which Mains Fault is signalled if there is no mains

Mains Loss

Timings are expressed in seconds, from a minimum of 0 sec. to a max. of 300 sec.



Through the arrow keys ▲ ▼ select the item which is required to be changed (“Mains”, “Tx Faults”) by pressing the enter key ✓ the editing function is activated

Through the arrow keys ▲ ▼ data are entered and through the enter key ✓ entered data are confirmed.

- **Programming - System - Password**

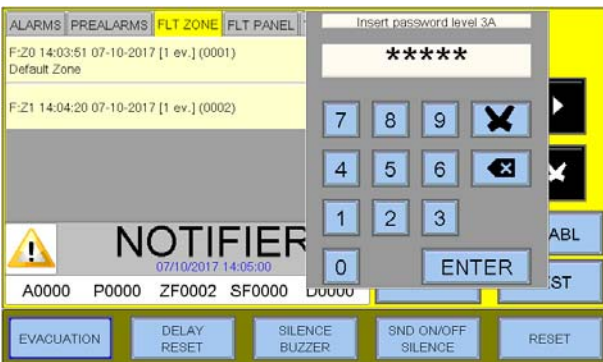
This function allows to change the Password for the three access levels.

Each password consists of 5 numerical characters.

Through the arrow keys ▲ ▼ select the item which is required to be changed.



Press the enter key ✓ to activate the Numeric Keyboard to program the Password.

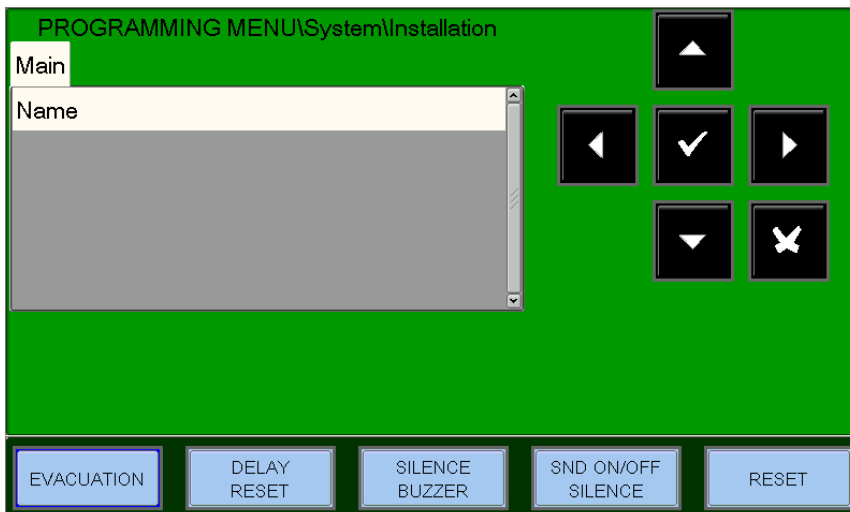



Type the NEW password and hit Enter
Re-type and confirm the password entered.

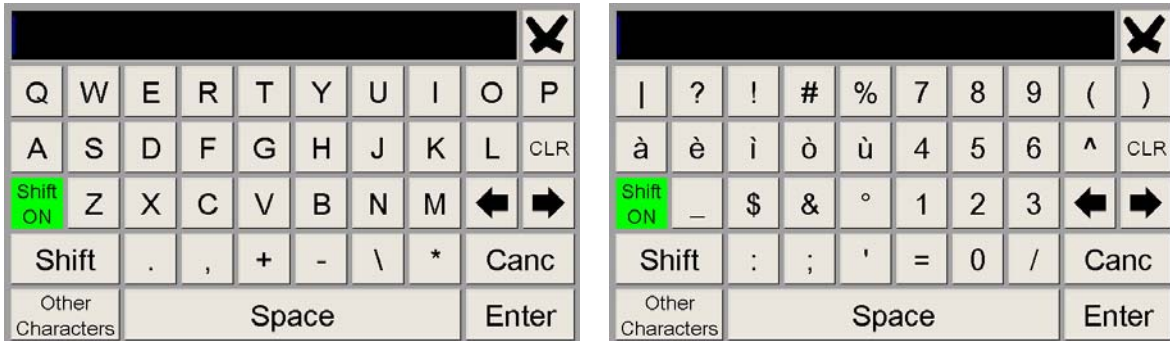
System programming : Installation

This function allows to enter a programmable text for the Panel.

This text can have a **maximum of 32 characters** and is displayed on the screen in the absence of alarms and faults (Normal Condition)



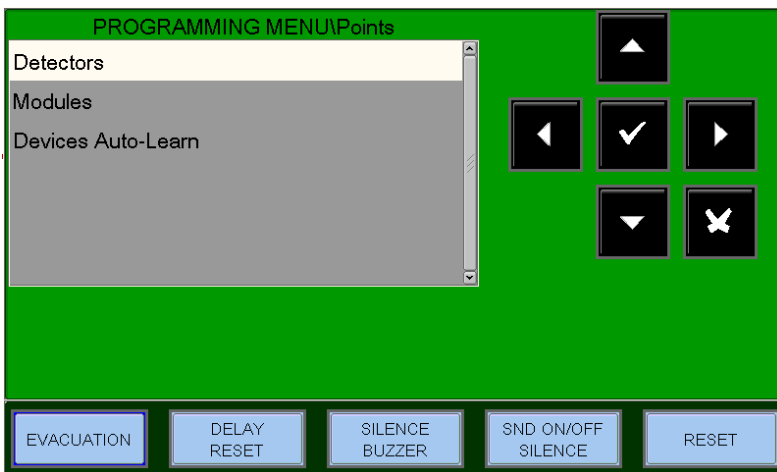
To enter the system name press the enter key  and use the alphanumeric **keyboard** to enter the text.



At the end press the **Enter** key to store the text.



• Programming - Points

From the Programming menu by selecting the “Points” item is displayed the following screen, where you can manually configure each type of addressable device on field (Detectors or Modules).



DETECTORS

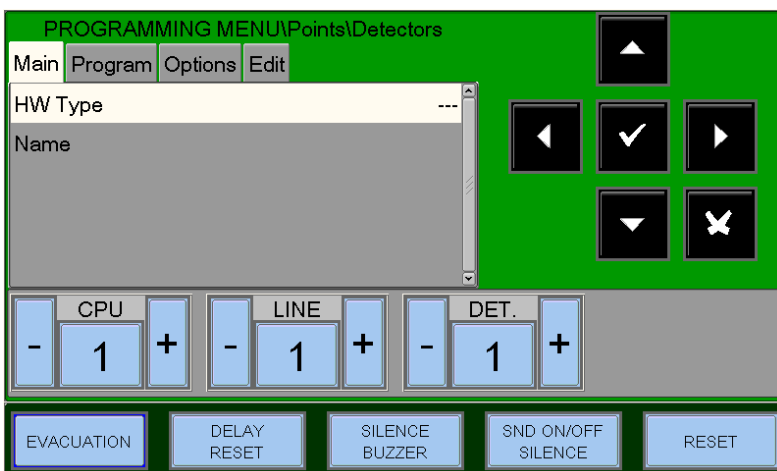
By selecting “**DETECTORS**” and by confirming the selection through the enter key  you enter the programming procedure for Addressable Sensors.

This procedure is composed of 4 programming folders (to access the folders use the arrow keys  )

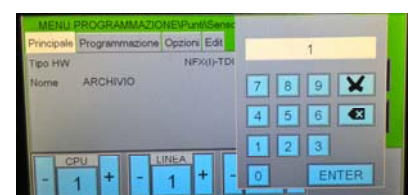
The display shows by default the first device of the first line.

To select another device use the function keys “- LINE” “+ LINE” (Lines) and “- DET” “+ DET” (detectors)

Detectors MAIN TAB (HW-Type ID and Text associated with the Detector)



Tap "DET" Number to open the following window, from which you can directly enter the number of the sensor to be programmed without using the "+" and "-" keys.



Valid Types for ADVANCED Protocol Detectors

HW TYPE_ID	DEVICE TYPE
NFX(I)-OPT	Photo Smoke det. NFXI-OPT
NFX(I)-TFIX58	Thermal det. NFXI-TFIX58
NFX(I)-TFIX78	Thermal det. NFXI-TFIX78
NFX(I)-TDIFF	Thermal Rate of Rise det. NFXI-TDIFF
NFX(I)-SMT2	Combined detector NFXI-SMT2
NFX(I)-SMT3	Combined detector NFXI-SMT3
IRX-751CTEM	Combined detector IRX-751CTEM-W SMART4
NFX(I)-BEAM	Addressable Beam NFXI-BEAM
NFX(I)-BEAM-T	Addressable Beam NFXI-BEAM
NRX- OPT	Agile Photo Det. wireless NRX- OPT
NRX-TFIX58	Agile Thermal det wireless NRX-TFIX58
NRX- TDIFF	Agile Thermal Rate of Rise det. wireless NRX- TDIFF
NRX- SMT3	Agile Combined detector wireless NRX- SMT3

Valid Types for CLIP Protocol Detectors

HW TYPE_ID	DEVICE TYPE
PHOT	Smoke optical detector
ION	Smoke ionization detector
THER	Thermal detector
PINN	“Laser” High sensitivity Smoke detector
OMNI	“Omni Sensor” Detector

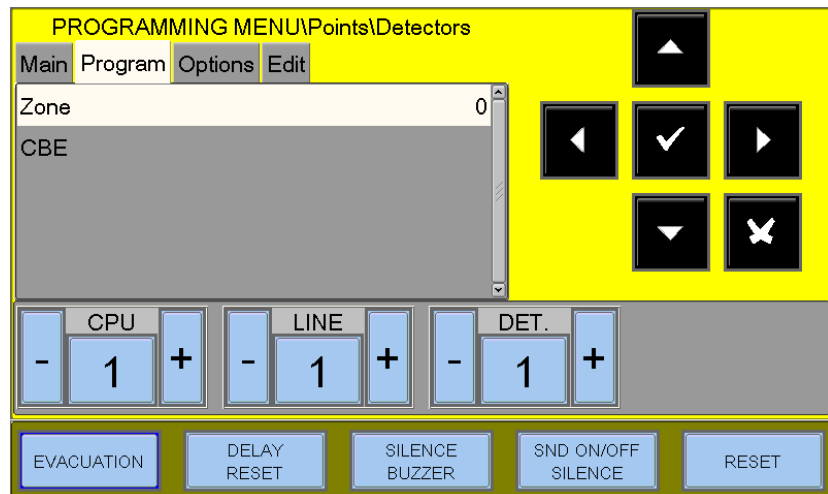
Detectors PROGRAM TAB. (Progr. of CBE Equations, Zone association)

CBE for this point:

If a CBE is already programmed it's displayed here, other ways the “CBE” text is displayed as show.

Zone Number

Associated to this Detector



Program Zone associated to Detector

Points are assigned to a Zone for a proper display of the alarm location.

Max number of Zones in the system is 500.

To assign the “Zone” number in this folder to the device select the item through the arrow keys ▲ ▼

Then press the enter key ✓

and use the arrow keys ▲ ▼ to change the zone number.

At the end press the enter key ✓ to confirm the datum.

CBE = Control By Events

Are the programming instructions that set the actions associated with a point event.

See the relative **CBE Programming Appendix** at the end of this manual for a description more in detail.

To change the "CBE" field in this folder select the parameter through the arrow keys $\uparrow \downarrow$, press the enter key \checkmark .



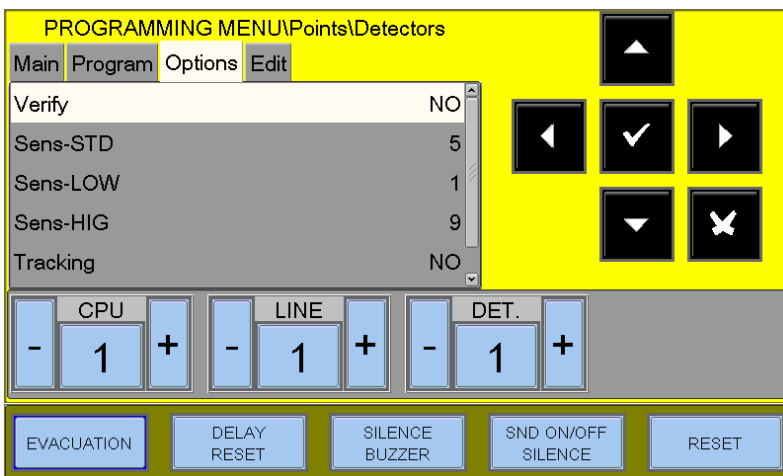
CBE for this point:

If a CBE is already programmed it's displayed here, other ways the field is empty as show.

Use the alphanumerical keyboard to enter the data at the end, press the **ENTER** key on the keyboard screen to confirm.

Detector OPTION TAB (progr. of Verification, Sensitivity, Daytime/Night, Tracking and Led Blink)

To change one or several parameters in this folder select the parameter through arrow keys $\uparrow \downarrow$ (the characters of the selected field are in Reverse), press the enter key \checkmark and use the arrow keys $\uparrow \downarrow$ to change the parameter; at the end press the enter key \checkmark to confirm the datum.



Verify:

By programming "YES" the control unit is allowed to perform a check on the sensor, for the time fixed in the Timing programming, before confirming the possible alarm.

Sensor sensitivity programming

Default values:
 Standard sensitivity = 5
 Low sensitivity = 1
 High sensitivity = 9

Tracking

By enabling the **tracking** option when the device exceeds the alarm threshold the control unit activates the following indications.

- Output modules associated through CBE
- Buzzer
- Control unit siren output
- Alarm point indication on the display

When the point returns in normal state the **output modules associated through CBE return idle**, while the following signaling are still active:

- Buzzer

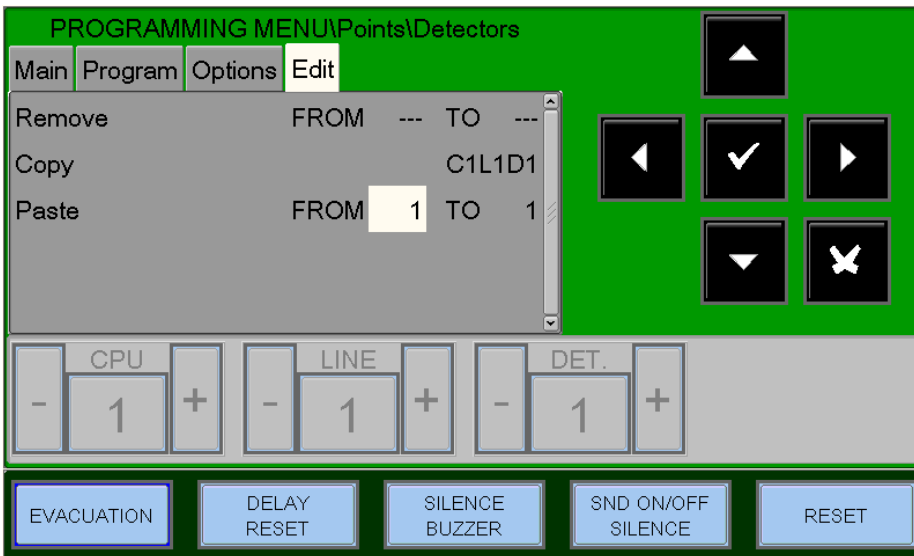
- Control unit siren output
- Alarm point indication on the display

The reset procedure must be performed to clear all signaling.

Led-Blink:

By selecting “NO” in the” Led Blink” function, the flashing of the led on the sensor is disabled during the line interrogation. This function can be used in some environments such as hospitals, hotels, etc.

Detector EDIT TAB (common for all sensors which allows to remove and copy points from... to...)



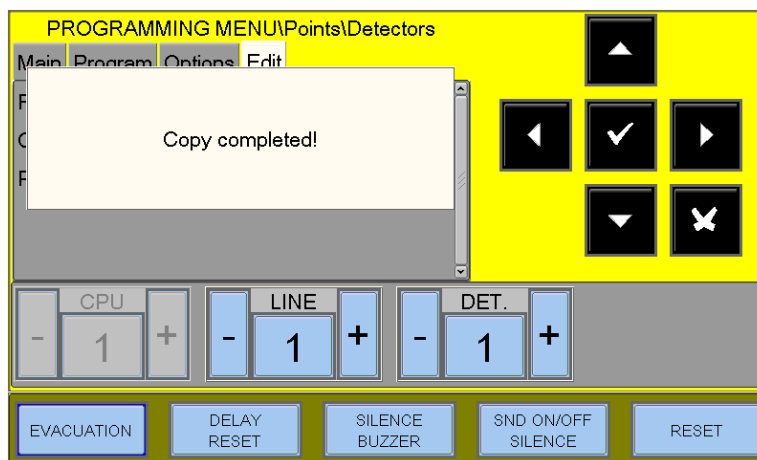
This TAB allows the programming of block of points sharing the same programming
 It can be used if the points have consecutive addresses and have common parameters.

The “**Remove From ...to**” function allows to eliminate from the control unit programming an entire consecutive block of points, by entering the start and end addresses.

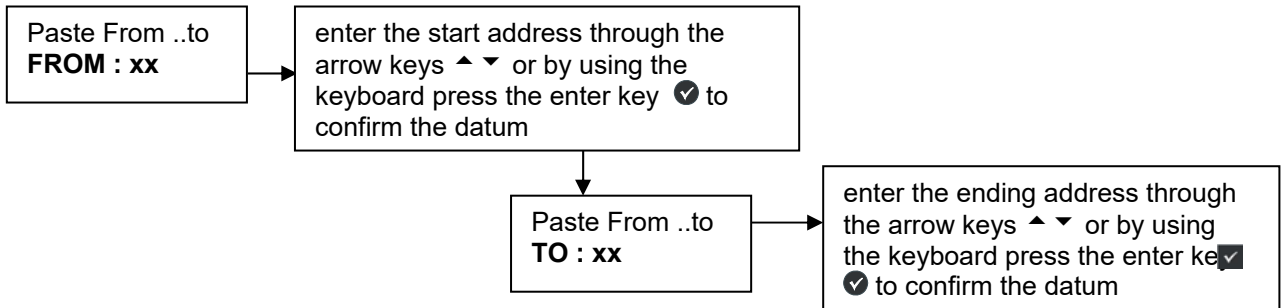
The **Copy** and **Paste** functions allow the programming of the block points and can be used if the devices of the same line have consecutive addresses and common parameters.

The procedure to perform the block programming is the following:

- ❑ **Select a device** from which the parameters must be copied (HW-Type ID, CBE, etc.).
- ❑ Perform the “**Copy**” control to save all the parameters of the previously selected device (with the exception of the number of “**Zone**” to which “**000**” is assigned) , in a memory support area.
- ❑ When this operation has been performed it is signaled on the display with:



- Perform the “**Paste From ...to**” control for the programming of block points as indicated:



Example of programming of a CLIP sensor with HW-Type-ID “OMNI” SDX-751-TEM

First TAB (Progr. of Type ID and text associated with the sensor)

PROGRAMMING MENU \Points\Detectors

Main Program Options Edit

HW Type OMNI

Name

HW Type ID

Programmable text max. 32 Char.

CPU 1 LINE 1 DET. 1

EVACUATION DELAY RESET SILENCE BUZZER SND ON/OFF SILENCE RESET

Second TAB (Progr. of CBE Equation, Zone association)

PROGRAMMING MENU \Points\Detectors

Main Program Options Edit

Zone 1

CBE (G1)

Numero di zona associata

Equazione CBE

CPU 1 LINE 1 DET. 1

EVACUATION DELAY RESET SILENCE BUZZER SND ON/OFF SILENCE RESET

Third TAB (Progr. of Check, Al. Level, Daytime/night, Tracking and Led Blink)

PROGRAMMING MENU \Points\Detectors

Main Program Options Edit

Verify NO

Alarm Lev. LEV. 4

Tracking NO

Led-Blink YES

OMNI Radio CLIP NO

ALARM LEVEL	Corresponding Percentage of Obscuration inside the Sensor Chamber
ALARM 1	1% ft
ALARM 2 - COMP.AUT.	1% -2% ft
ALARM 3	2%ft
ALARM 4 - COMP.AUT.	2% - 3.5% ft (Default)
ALARM 5	3.5% ft

CPU 1 LINE 1 DET. 1

EVACUATION DELAY RESET SILENCE BUZZER SND ON/OFF SILENCE RESET

N.B. : The "heat only" mode is activated automatically if we have programmed the "Day / Night" function to the zone associated with the SDX-751-TEM sensor

Example of programming of a CLIP sensor with HW-Type-Id “PINN” PINNACLE 7251

First TAB (Progr. of Type ID and Text associated with the sensor)

HW Type_ID

Programmable text max. 32 Char.

Second TAB (Progr. of CBE Equation, Zone association)

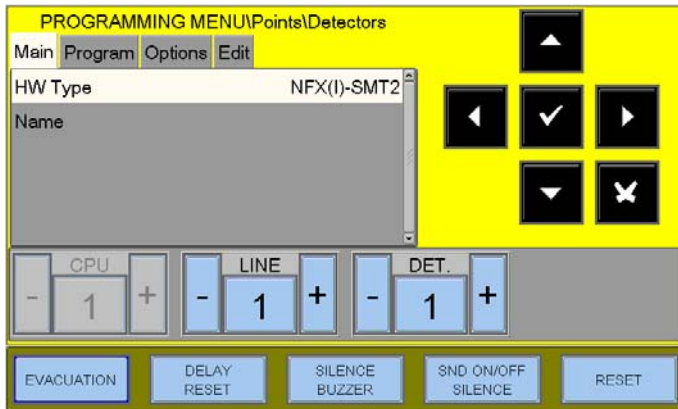
Third TAB (Progr. of Check, Al. Level, Daytime/night, Tracking and Led Blink)

Sensibility

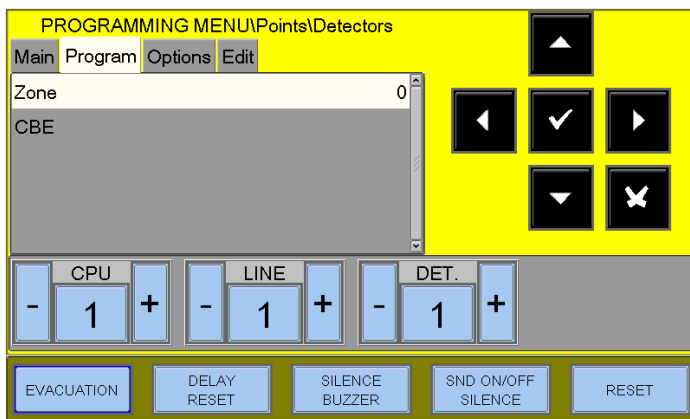
Value	Corresponding Percentage of Obscuration inside the Sensor Chamber
1	2% ft (default for Sens.-LOW)
2	1,5% ft
3	1% ft
4	0,5% ft
5	0,2% ft (default for Sens.-STD)
6	0,1% ft
7	0,05% ft
8	0,03% ft
9	0,02% ft (default for Sens.-HIG)

Example of programming of NFXI-SMT2

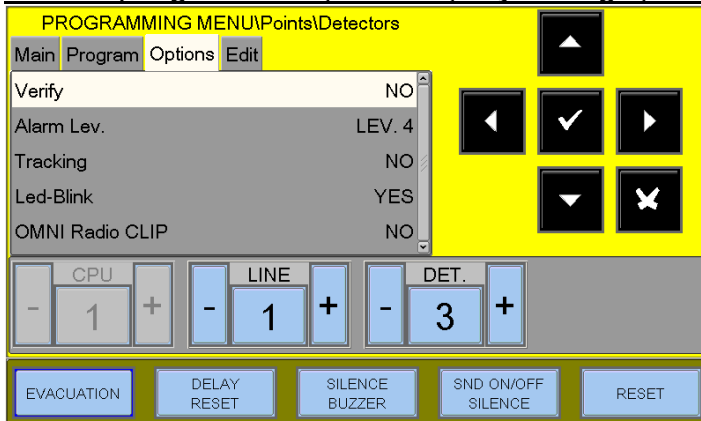
First TAB (Progr. of HW-Type ID and Text associated with the sensor)



Second TAB (Progr. of CBE Equation, Zone association)



Third TAB (Progr. of Check, Al. Level, Daytime/night, Tracking and Led Blink)

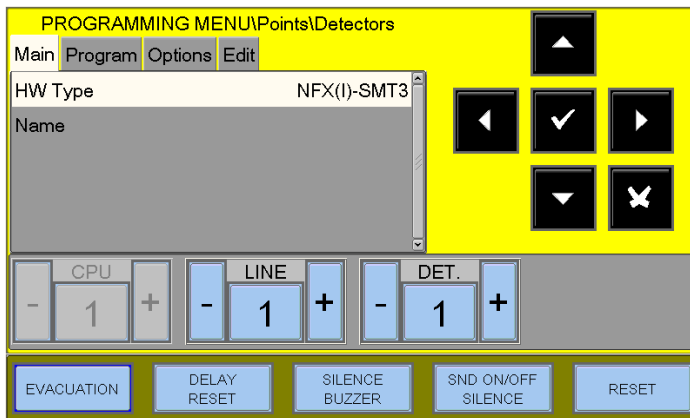


ALARM LEVEL	Corresponding Percentage of Obscuration inside the Sensor Chamber
ALARM 1	1% ft
ALARM 2 - COMP.AUT.	1% -2% ft
ALARM 3	2%ft
ALARM 4 - COMP.AUT.	2% - 3.5% ft (Default)
ALARM 5	3.5% ft

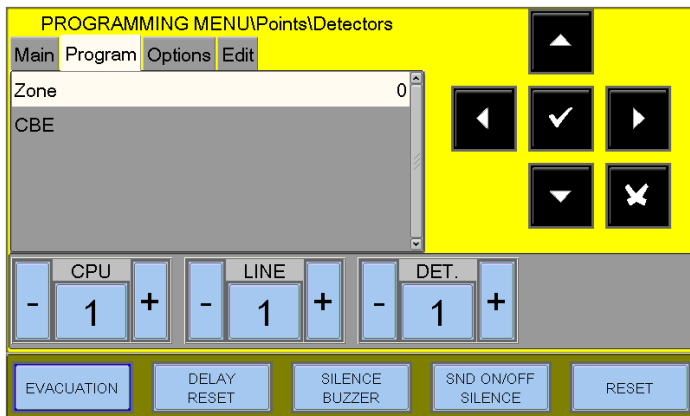
N.B. : The "heat only" mode is activated automatically if we have programmed the "Day / Night" function to the zone associated with the NFXI-SMT2 sensor

Example of programming of NFXI-SMT3

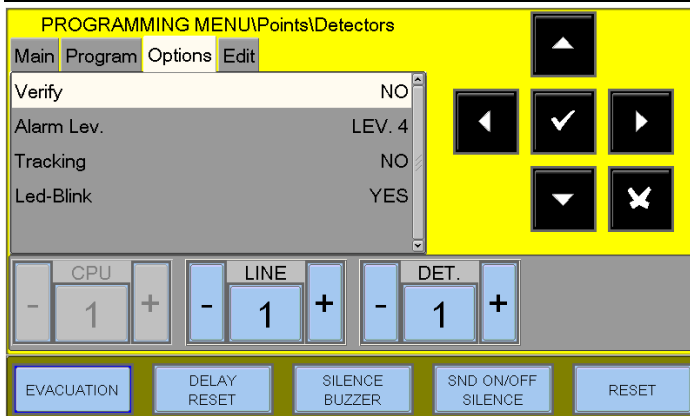
First TAB (Progr. of HW-Type ID and Text associated with the sensor)



Second TAB (Progr. of CBE Equation, Zone association)



Third TAB (Progr. of Check, Al. Level, Daytime/night, Tracking and Led Blink)



Alarm level	Percentage of Obscuration inside the Sensor Chamber
LIV. 1	1% ft. No Delay
LIV. 2	2% ft. . No Delay
LIV. 3	3%ft or Delay 45 " *
LIV. 4	3% ft or delay from 45 " to 90 " * (Default)
LIV. 5	3% ft or delay more than 90 " *

* The delay counter is initialized when the smoke level exceeds 0.75% / ft

N.B. : The "heat only" mode is activated automatically if we have programmed the "Day / Night" function to the zone associated with the NFXI-SMT3 sensor

Example of programming of IRX-751CTEM-W (SMART 4)

First TAB (Progr. of HW-Type ID and Text associated with the sensor)

PROGRAMMING MENU\Points\Detectors

Main Program Options Edit

HW Type IRX-751CTEM

Name

CPU 1 LINE 1 DET. 1

EVACUATION DELAY RESET SILENCE BUZZER SND ON/OFF SILENCE RESET

Second TAB (Progr. of CBE Equation, Zone association)

PROGRAMMING MENU\Points\Detectors

Main Program Options Edit

Zone 1

CBE (G1)

CPU 1 LINE 1 DET. 1

EVACUATION DELAY RESET SILENCE BUZZER SND ON/OFF SILENCE RESET

Third TAB (Progr. of Check, Al. Level, Daytime/night, Tracking and Led Blink)

PROGRAMMING MENU\Points\Detectors

Main Program Options Edit

Verify NO

Alarm Lev. LEV. 4

Tracking NO

Led-Blink YES

CPU 1 LINE 1 DET. 1

EVACUATION DELAY RESET SILENCE BUZZER SND ON/OFF SILENCE RESET

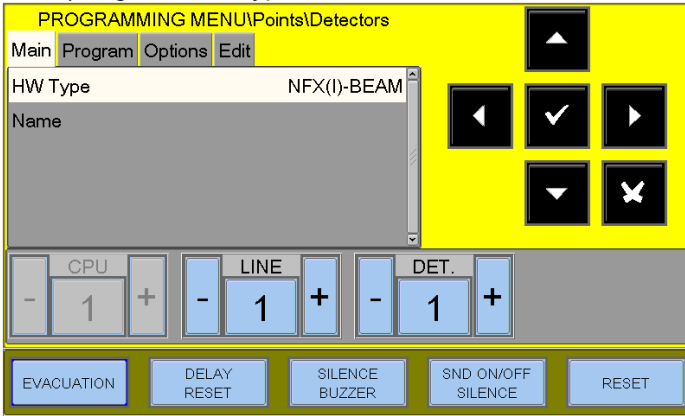
Alarm level	Percentage of Obscuration inside the Sensor Chamber
LIV. 1	1%/ft smoke or CO concentration more than 45 ppm. No Delay
LIV. 2	2%/ft smoke . No Delay
LIV. 3	3%/ft smoke . No Delay
LIV. 4	3%/ft smoke or max delay of 10 minutes from Smoke detectional rilevamento del fumo * (Default)
LIV. 5	4%/ft smoke or max delay of 10 minutes from Smoke detection *

* The delay counter is initialized when the smoke level exceeds 0.75% / ft

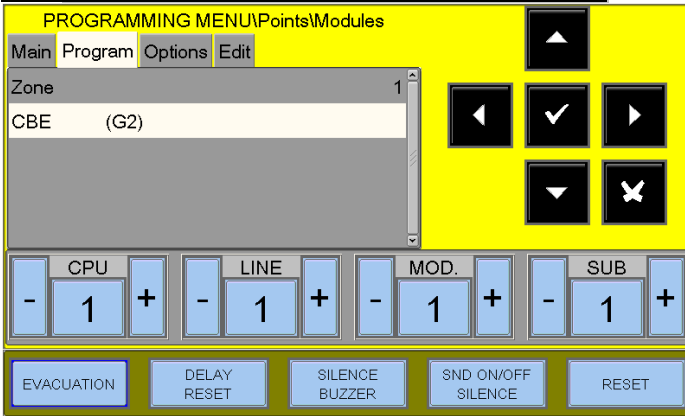
N.B. : The "heat only" mode is activated automatically if we have programmed the "Day / Night" function to the zone associated with the IRX-751CTEM-W (SMART 4)

Example of programming of "BEAM" NFXI-BEAM

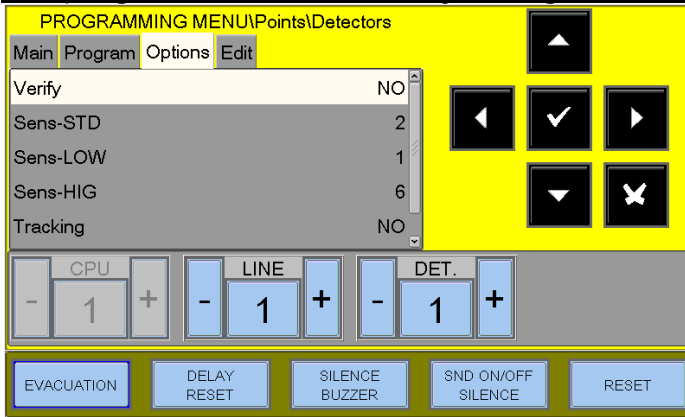
TAB (Progr. of HW-Type ID and Text associated with the sensor)



TAB (Progr. of CBE Equation, Zone association)



TAB (Progr. of Check, AI. Level, Daytime/night, Tracking and Led Blink)



Sensitivity (STD, LOW, HI)

Value	Percentage of Obscuration	Display NFXI BEAM
6	25% m	25
5	30% m	30
4	40% m	40
3	50% m	50
2	Variable from 30% m to 50% m (default for Sens-STD) (Note*)	A1
1	Variable from 40% m to 50% m (Note*)	A2

* The beam detector has two levels of variable sensitivity.

When one of these two levels is selected, the detector will automatically adjust the sensitivity using a software algorithm that selects the optimum sensitivity as a function of the installation environment.

Sensitivity is continually updated within the limits shown in Chart 1.

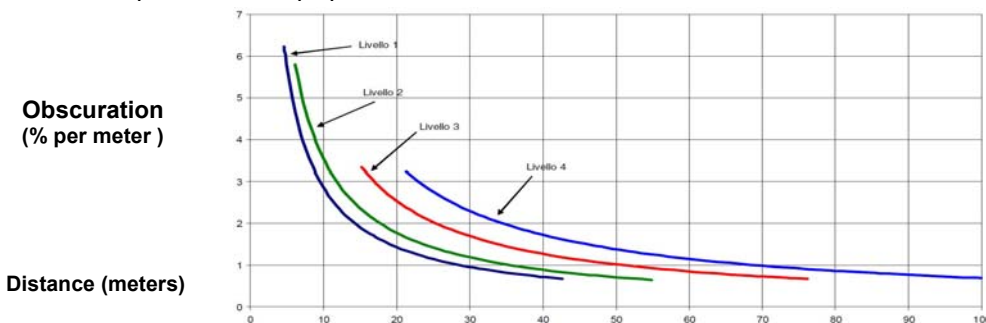



Chart 1
Sensitivity (% m depending on distance). (Smooth distribution of smoke for any distance between the detector and the reflective panel)

MODULES

By selecting the “**Modules**” item and confirming the selection through the enter key  you enter the programming procedure.

This procedure is made up of 4 programming folders (to access the folders use the arrow keys  )

The display shows by default the first device of the first line.
Use the function keys to select another device.

INPUT MODULES:

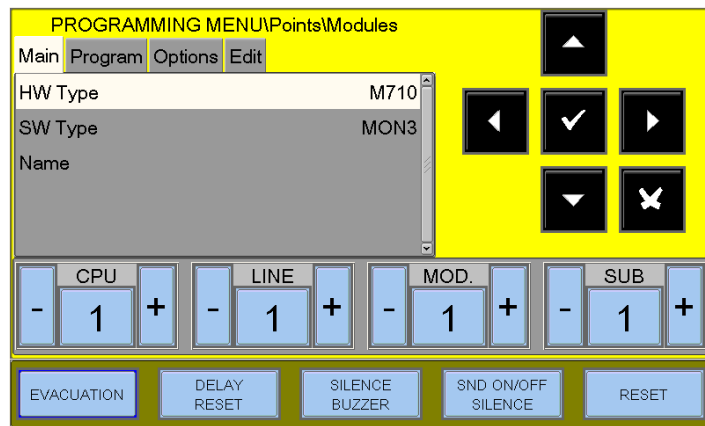
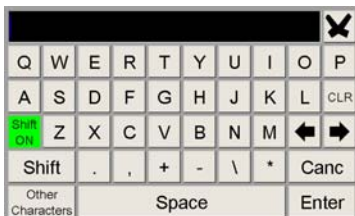
TAB (Progr. of HW-Type ID and reading associated with the module)

The display shows by default the first device of the first line.
Use the function keys to select another device.

HW type : Module Model

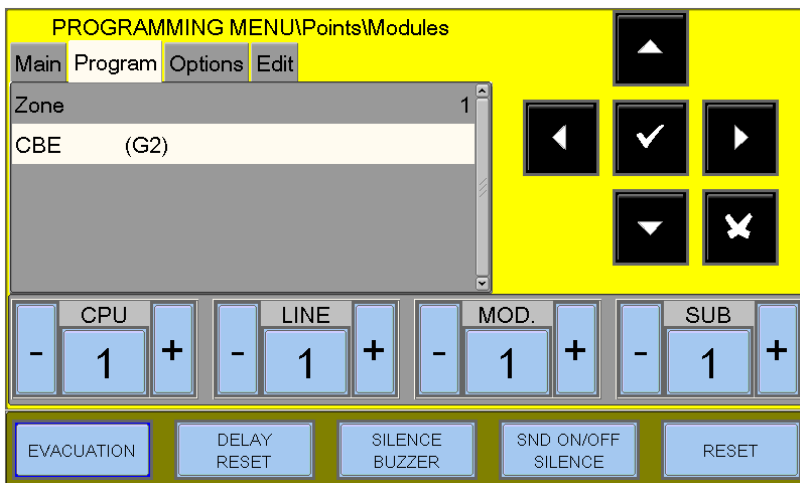
SW Type ID
(Refer to the SW Type ID Table)

Name:
Programmable Text max. 32 char.



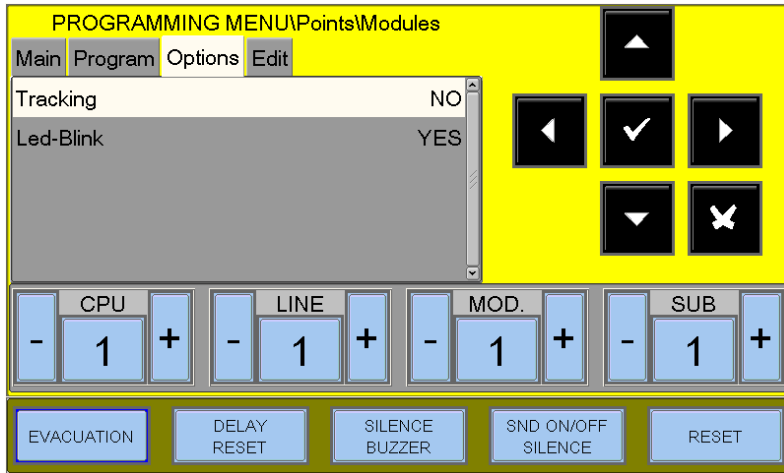
Press key -MOD
to program the
previous Module

Progr. TAB (Progr. of CBE Equation, Zone association)



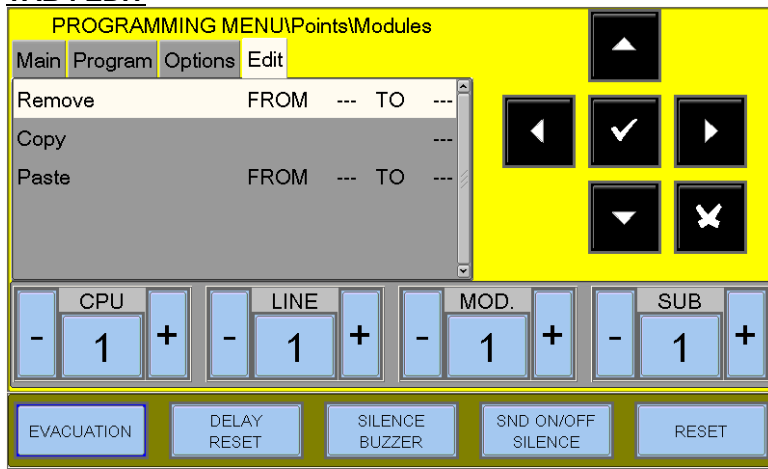
For a description of “**How-to**”
operate and the description of
CBE and **Zone** field, please
refer to Sensor programming
screen before detailed.

Option TAB (Progr.of Tracking and Led Blink)



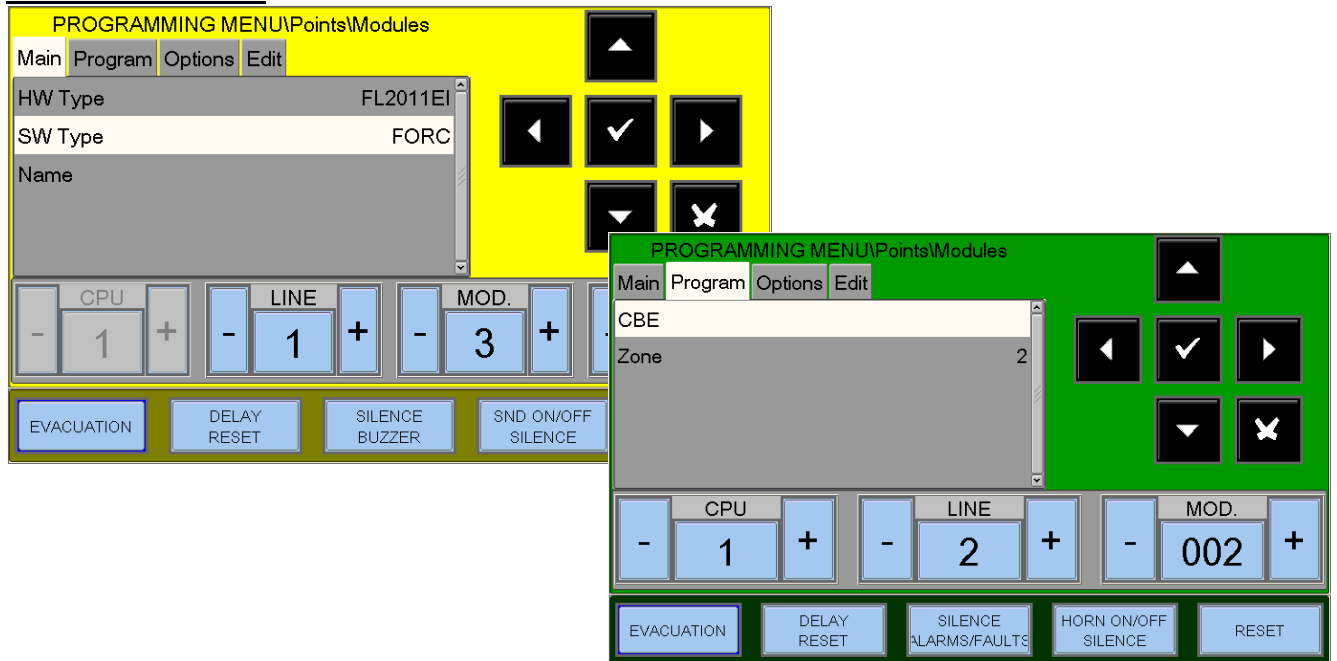
For a description of “How-to” operate and the description of **Tracking** and **Led-Blink** field, please refer to Sensor programming screen before detailed.

TAB : EDIT



For the instructions “how-to” operate refer to “POINT Programming procedure” as this part is the same for Modules.

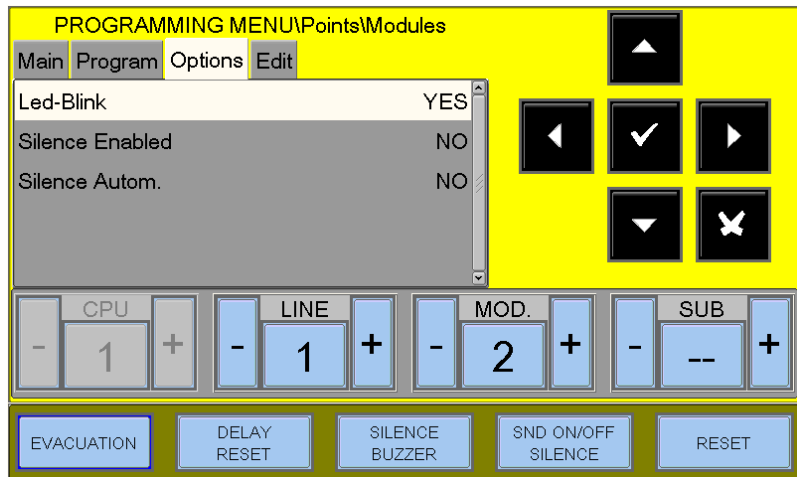
OUTPUT MODULES:



Main and Program TAB are the same as Input Modules

TAB or Option (Progr. for disabled Silencing, Test enabling and Led Blink)

Led on device enabled to blink
 Enable manual silence
 Enable self - silence



FAAST

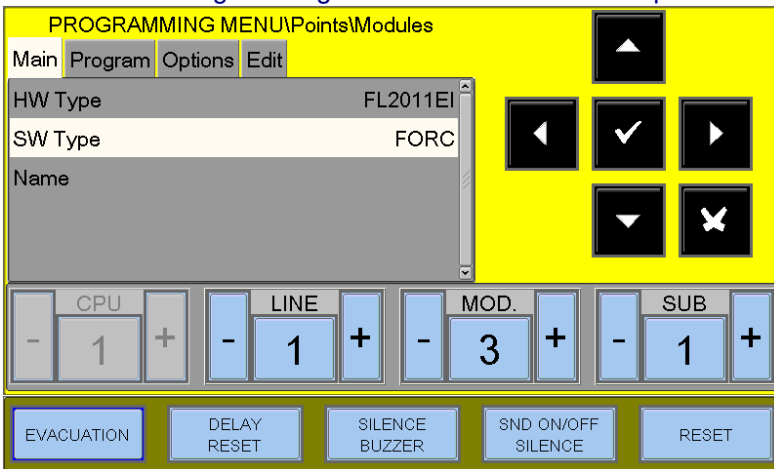
FL2011EI - It has a single channel available with a smoke laser detector

FL2012EI - It has a single channel available with two smoke detectors in a common room for combined detection.

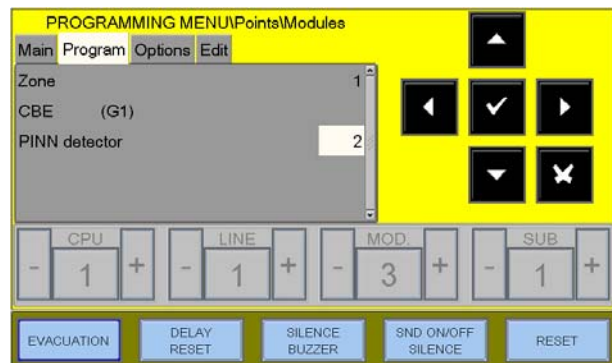
FL2022EI - It has two channels available with two smoke detectors with separate chambers. (One sensor for each channel.)

The TABs of the FAAST units are displayed as follows:

The Main and Programming TABs are similar to the output modules



Laser sensor address (Pinnacle) installed inside the FAAST



Programming TAB for FL2012EI

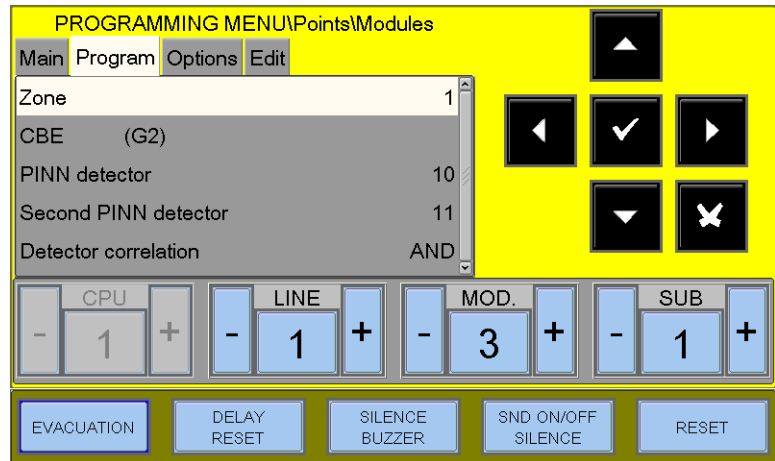
Associated zone number

CBE Equation

Addresses of the first and second laser sensors (Pinnacle) installed inside the suction detection unit.

Sensor Correlation.

The user can choose whether the suction unit will activate its alarm signal in case of AND or OR by the 2 Pinnacle sensors installed.



Third TAB or Option (Progr. for disabled Silencing, Test enabling and Led Blink)

Led-Blink

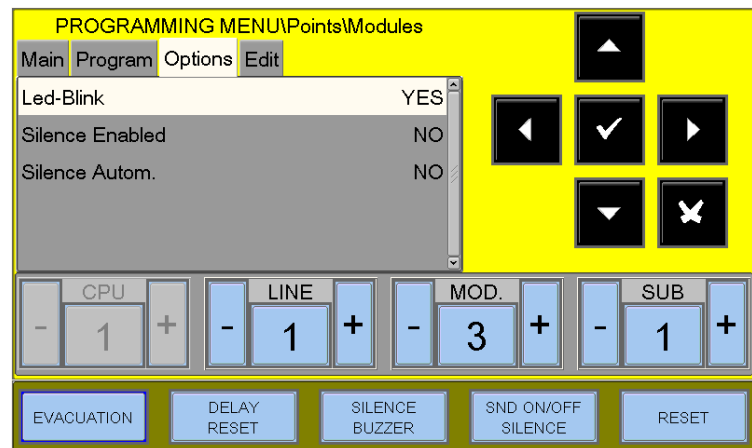
Enable LED flashing of the field device

Silence Enabled

Enable manual Silence

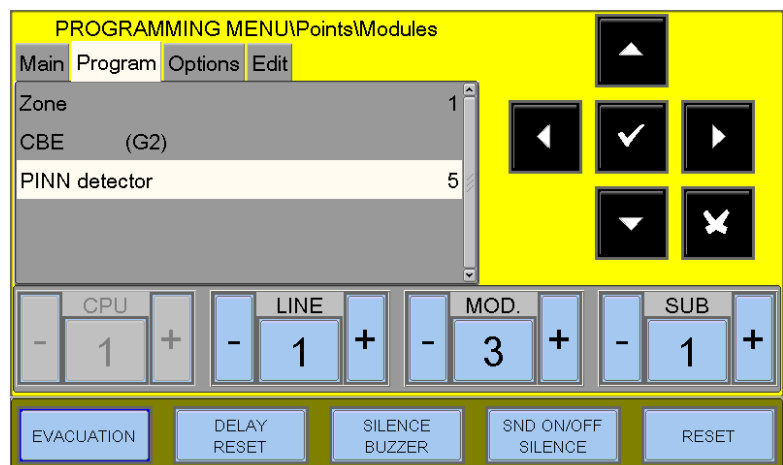
Automatic Silence

Enables auto-reset



Programming TAB for FL2022EI

Programming for this device is as for FL2012EI with the difference that sub-addresses 1 and 2 are used.



NRXI-GATE (Gateway for wireless System).

Tabs **Main** and **Program**

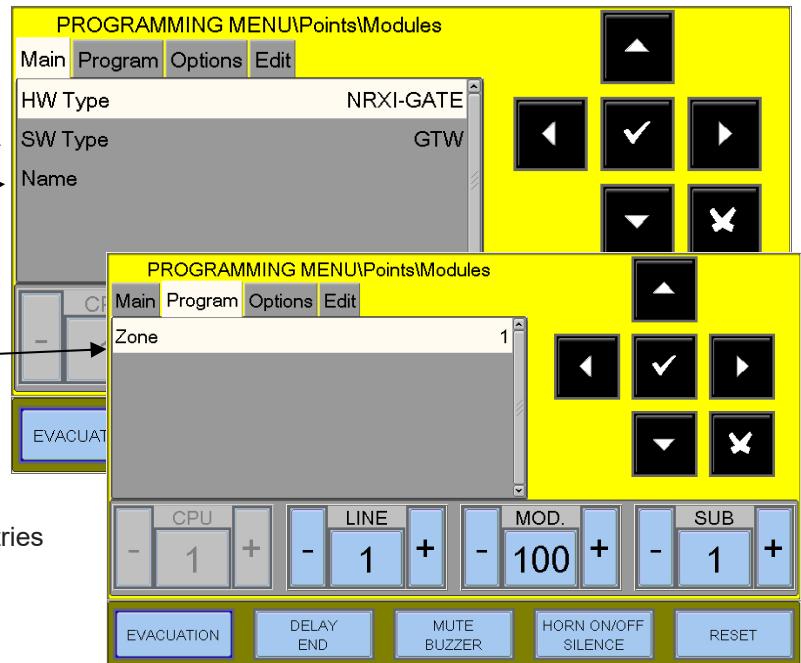
HW Type →

SW Type →


Programmable Text max. 32 char. →

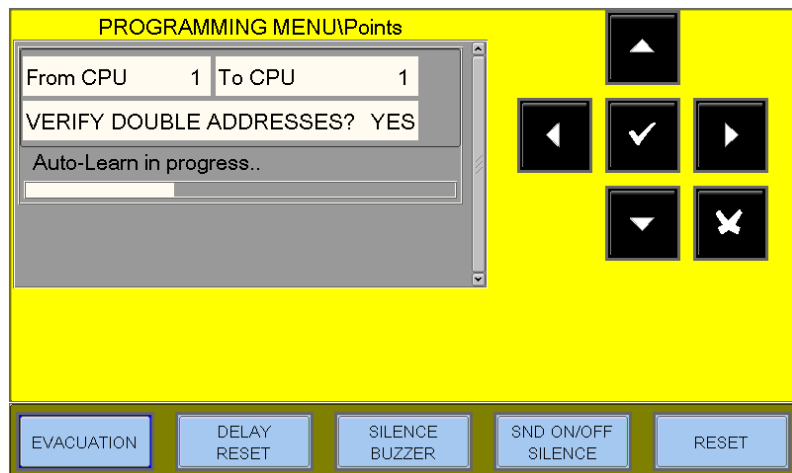
Zone associated to this Module →

The **Options** Tab does not contain any entries programming.



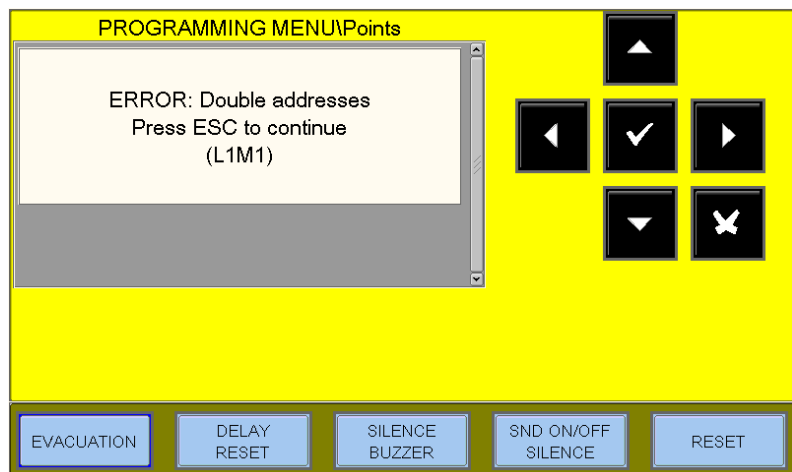
Auto-learn (automatic detection of installed devices):

From the Points menu, by selecting the “**Auto-Learn**” item and confirming the selection through the enter key  you enter the self-programming procedure of the devices installed on the line.

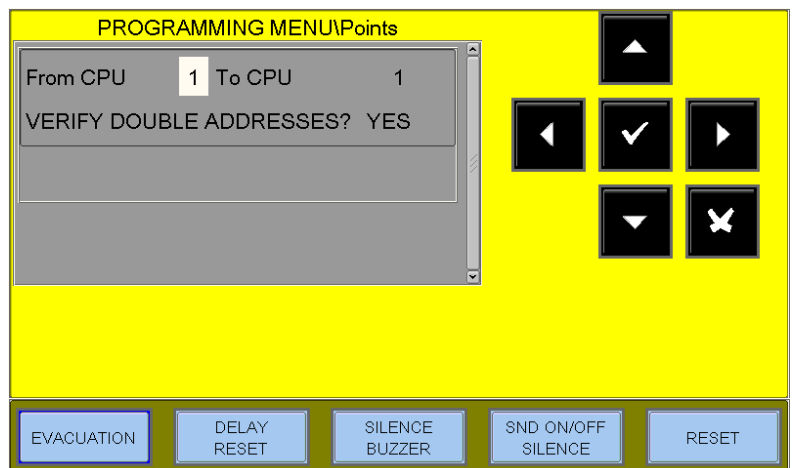


Verify Double Address: YES

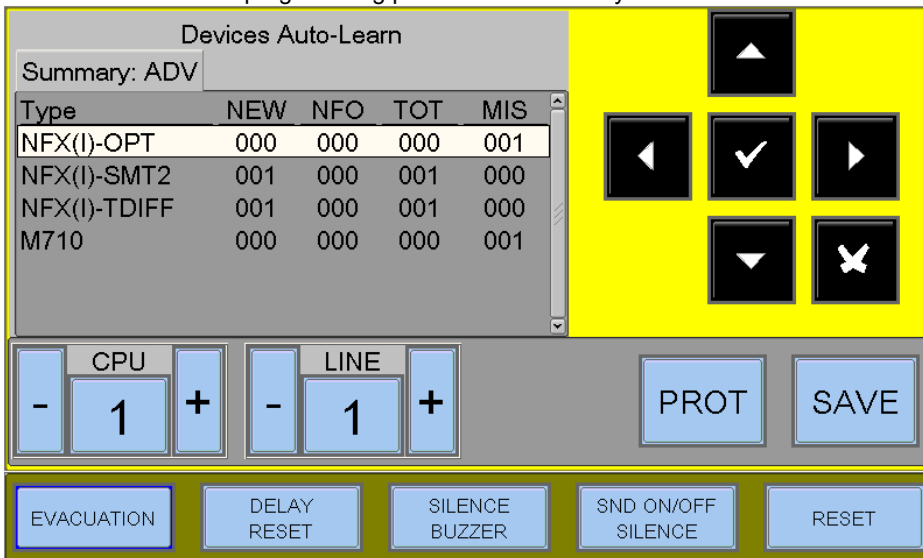
By selecting YES, panel will check for more than one device programmed with same address in a line.



When several devices programmed with the same address are found, the message shown in the figure is displayed with the indication of the address. The user will be able to identify the devices with the same address through the activation of the relevant leds.



At the end of the Auto-programming procedure a summary of the devices found on the line is displayed



Where:

TYPE = Type of devices found (see table above)
NEW = New device found
NFO = Devices previously programmed but not coherent with what was detected during the Auto-Learn procedure
TOT = total of devices detected on the line (NEW + NFO + correctly programmed devices.)
MIS = Devices previously programmed but not detected during the Auto-Learn

The **SAVE** control saves the devices detected during the Self-Learn according to the following mode:

- **NEW and NFO are** initialized through the default data.
- **MIS** are removed
- The correctly programmed devices keep the current programming

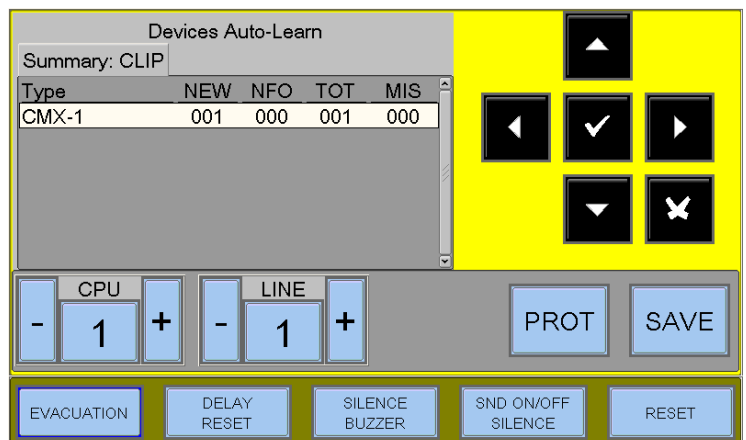
The data relevant to the initialized devices can be subsequently changed by entering the point programming procedure.

The **PROT (Protocol)** control can display the table of devices for one of the two possible protocols: **CLIP** or **ADV**

Sample screen for CLIP detectors.

Important Note:

On Each Line, can be installed a max number of 30 devices using CLIP protocol.

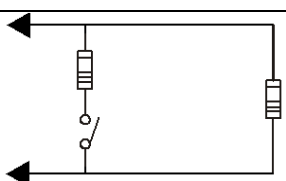
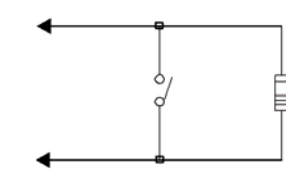
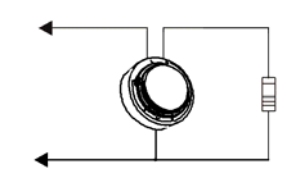
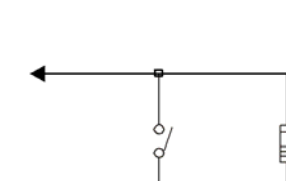
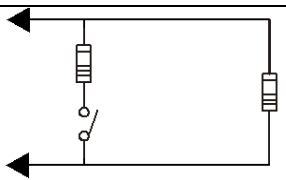
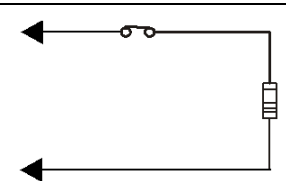


Summary of HW Type-ID for Modules (displayed after an Auto-Program)

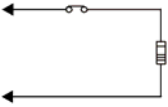
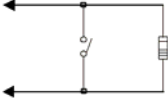
HW Type_ID	Description
WMSS	WM Sounder + Flash
WMSB	WM Flash
WMS	WM Sounder
DBSS	Base with Sounder + Flash
DBS	Base with Sounder
WCP5A	Outdoor Call Point
MCP5A	Indoor Call Point
UDS	UDS-3N (CLIP only)
ALW1	PSU ALW1
NRXI-GATE	Gateway NRXI-GATE
NRX-WPC	Call Point radio NRX-WPC
NRX-REP	Repeater radio NRX-REP
NFXI-RM6	Module 6 OUT (not controlled)
NFXI-MM10	Module 10 IN NFXI-MM10
MMX2E	Module IN conventional zone MMX2 (CLIP)
MMX-1	Module IN (CLIP)
MCX-55ME	Module 5 IN 5 OUT (not controlled)
MCX-55M	Module 5 IN 5 OUT (not controlled) (CLIP)
M721	Module 2 IN 1 OUT (not controlled)
M720	Module 2 IN
M710CZR	Module di IN IS
M710CZ	Module IN conventional zone
M710	Module IN
M701-240 (-DIN)	Module OUT (240V)
M701	Module OUT
MMX-10ME	Module 10 IN MMX-10ME
MMX-10M	Module 10 IN MMX-10M (CLIP)
FL2022EI	FAAST 2 channels
FL2012EI	FAAST 1 channels 1 sensor
FL2011EI	FAAST 1 channels 2 sensors
CMX-1	Module OUT (CLIP)
CMA22	Module 2 IN 2 OUT (2° out supervised)
CMA22C	Module 2 IN 2 OUT (2° out supervised)
CMA11E	Module 1 IN 1 OUT (supervised)
CMA11	Module 1 IN 1 OUT (supervised) (CLIP)
CMX-10RME	Module 10 OUT relay
CMX-10RM	Module 10 OUT relay (CLIP)

Summary of SW Type-ID for modules


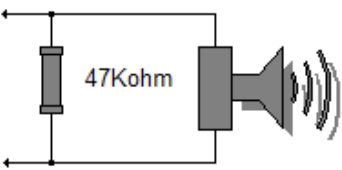
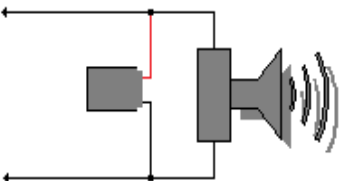


INPUT MODULES

CONNECTION TYPE	SW Type_ID	TYPE OF DEVICE
	MON3	Input module Input module used for N.O. contacts (Connection in conformity with EN54 rule).
	MON	Input module used for N.O. contacts or any device Not compliant to EN 54
	SCON	MMX-2 input module (obsolete module) Input module used for 4- wire conventional smoke detectors not detected during the self-programming. N.B.: this type has a reset time which is longer than the modules programmed as "MONITOR"
	SCO2	It is valid for the M710E-CZ and M710E-CZR module for the connection of conventional sensors It is automatically detected during the self-programming
	NONA	Input module Input module used to interface with N.O. contact, with alarm when It is closed. The activation of a "NONA" type module, does not generate an Alarm condition, that is: - the alarm LED is not on - "APND" or "GPND" type modules do not activate. Only output modules coupled to CBE are activated
	STAT	Input module used like the NONA device, but each state change is activated by the buzzer, for one second.
	PULL	Same as MON3; in addition, the "MANUAL BUTTON" reading appears
	GTW	AGILE WIRELESS GATEWAY NRXI-GATE
	NCMN	Input module used to check the N.C. inputs When the line is off, an alarm is indicated In case of line short circuit, a FAULT is indicated

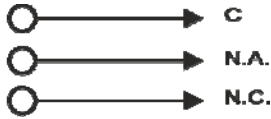
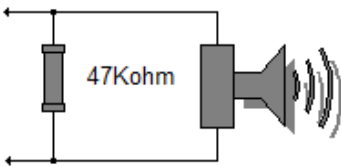
INPUT MODULES FOR GENERAL SERVICES

CONNECTION TYPE	SW Type_ID	TYPE OF DEVICE
	MTRB	Input Module used as a Tamper signaling. Through an alarm input it signals a breakdown
	MACK	Input module used to perform remote ACK (pulse)
	MTAC	Input module used to perform remote SILENCING (pulse)
	MRES	Input module used to perform remote RESET (pulse)

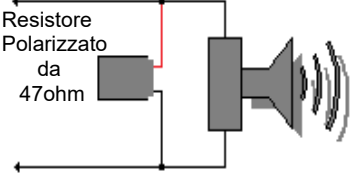


OUTPUT MODULES

CONNECTION TYPE	SW Type_ID	TYPE OF DEVICE
	FORC	Relay output module with potential free contacts.
	CON	Output module with supervision of the line of command devices.
	CONV	Output module with supervision of the line of controlled devices (VdS standard compliant).
	GSND	Software type dedicated to the following HW types (sirens addressed): WMSS, WMS, WMS, DBSS, DBS
	GSTR	Software Type dedicated to the following HW types (Directional Flashes): WMSS, WMSB,, DBSS

OUTPUT MODULES FOR GENERAL SERVICES

CONNECTION MODE	SOFTWARE TYPE_id	DESCRIPTION
	PWRC	FORC Output module used to temporarily interrupt power supply, during SYSTEM RESET, for the 4- wire conventional smoke sensors, powered by a remote power supply. N.B.: this type SHALL NOT be programmed for the SILENCING
	GPND	FORC output module activated at each alarm or Fault It is reset by ACK.
	APND	FORC output module activated at each alarm. It is reset by ACK
	GAC	FORC output module activated at each alarm. It is reset by RESET.
	TPND	FORC output module activated at each fault. It is reset by ACK or through the Fault RESET
	GTC	FORC output module activated at each fault. It is reset by RESET.
	TRS	FORC output module activated at each FAULT. It is only reset through the Fault RESET.
	ZFLT	FORC output module activated at each FAULT in the zone where is associated. It is only reset through <Fault removing from the zone
	ZDIS	Output module activated in case of exclusion of a point or a zone.
	MAINF	Output module (non supervised output) activated when a MAINS Fault is present
	REM	FORC output module activated from a remote command (supervisory SW)
	GAS	CON output module activated at each alarm. It is reset by RESET.
	GTS	CON output module activated at each fault. It is reset by RESET.
	ZFLTC	Output module activated in case of zone fault to here is associated
	MAINFC	Same as MAINF but supervised output
	REMC	CON output module activated from a remote command (supervisory SW)

N.B.: the output modules used for the above-mentioned functions, do not accept CBE.

CONNECTION MODE	SOFTWARE TYPE_id	DESCRIPTION
	GASV	CON output module activated at each alarm. It is reset by RESET. (Complies to VdS 2489).
	GTSV	CON output module activated at each fault. It is reset by RESET. (Complies to VdS 2489).
	ZFLTV	Output module activated in case of zone fault to here is associated (Complies to VdS 2489).
	MAINFV	CON output module activated in case of Power Supply Fault (Complies to VdS 2489).
	REMV	CON output module activated from a remote command (supervisory SW) (Complies to VdS 2489).
	SND	Software type_ID only for the following Models: WMSS, WMS, WMS, DBSS, DBS activated at each alarm , follow the Sounder Output status
	STR	Software type_ID only for the following Models: WMSS, WMSB,, DBSS activated at each alarm , follow the Sounder Output status

CLIP ONLY SW-Type-ID for UDS units

For UDS panels, two specific SW types are available, UDS1 and UDS2.

UDS units are reminded that they can be installed starting from the beginning of the decade, excluding the decade from 0 to 9; occupy from a minimum of 2 up to a maximum of 6 addresses.

The basic installation, compatible with UDS-1N (now obsolete) units, occupy the first two addresses to which the SW Type UDS1 is assigned; the operation is only allowed on the first address but is automatically extended to the second address.

In the following four addresses you can individually install the optional modules that were introduced with the UDS-2N unit, to do so, simply enter the SW Type UDS2.

With the new UDS-3 unit remember that having 2 channels per unit, you can program up to 4 addresses with Type SW UDS1 and 8 with Type SW UDS2 divided into two decades.

For a detailed description of the functionality associated with UDS unit interfaces consult their manuals.

For UDS modules, the following specific indications are obtained:

Indirizzo	Type-ID	Segnalazioni e descrizione
1° Address	UDS1	
2° Address	UDS1	
3° Address	UDS2	"UDS General Fault"
4° Address	UDS2	"UDS Extinguishing Lines fault"
5° Address	UDS2	"UDS Local Disable Condition"
6° Address	UDS2	"UDS Mains Loss 230Vac"


Removing UDS Units (All)

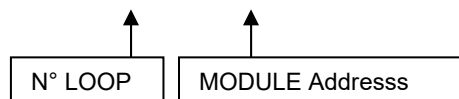
By setting Type-ID = NONE on the first address, the UDS is completely removed (including optional UDS2 modules optionally installed).

This is also the only system to remove UDS1 Type IDs; otherwise the UDS2 Type IDs can be removed individually.

UDS event fault message connected to AM-8200.

UDS-3 with "Excluded" zone, the control panel will report the following:

- Yellow LEDs "Exclusions" and "Exting.Command" lit
- The symbol  on the status icon of the control panel
- The list of system exclusions is displayed
"DISAB LXX UDS XXX"



General fault on the UDS-3 panel, the panel will report the following:

- Yellow "FAULT" LED blinking.
- The symbol on the status icon of the panel.
- "General UDS LXXMXXX Fault" is displayed
where XXX is the third address assigned to the modules in the UDS-3 panel.

If the UDS-3 panel line fault, the following will be displayed:

- Yellow "FAULT" LED blinking.
- The symbol on the status icon of the control panel.
- "UDS LXXMXXX Shutdown Line Fault" appears on the display where XXX is the fourth address assigned to the UDS-3 panel modules.

230Vac mains failure on the UDS-3 panel, the following will be displayed:

- Yellow "FAULT" LED blinking.
- The symbol on the status icon of the control panel.
- The display shows "General UDS LXXMXXX Fault" where XXX is the third address assigned to the UDS-3 panel modules.
- The display shows "Power failure of the UXXXXXXXX module" where XXX is the sixth address assigned to the modules in the UDS-3 panel.

GROUPS Programming menu

A group is a set of software devices that can perform associations.

When a sensor or a module (which belong to the group) are in alarm, the group activates.

If an output module is a member of the same group, it will be activated.

This procedure is composed of 3 programming folders where to enter data is applied the editing function previously described in the paragraph: description of the keyboard operation to enter data paragraph.

The AM-8200 control unit has 400 groups, which can be programmed as:

Direct activation group. It activates what is contained in its CBE equation.

It is activated by direct Inputs/Groups (which have the Group in their CBE equation).

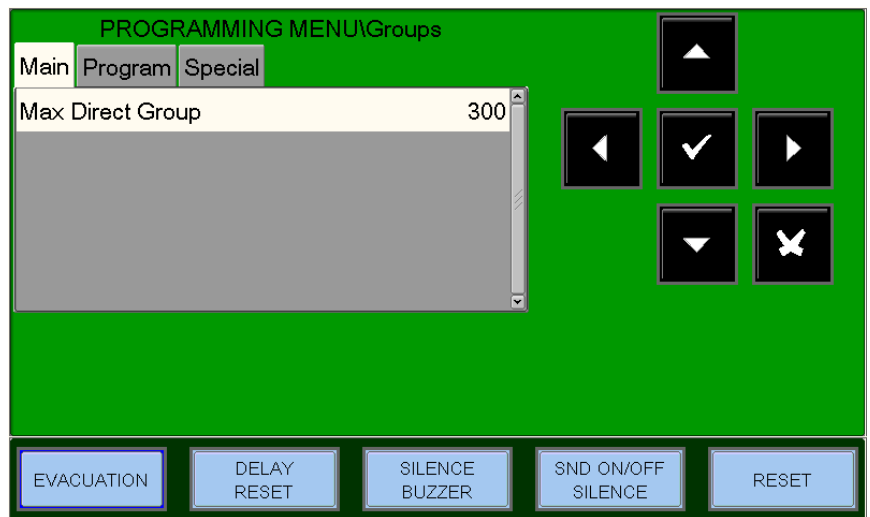
Reverse activation group. It is activated by its CBE equation.

It activates Reverse Output/Groups (which have the Group in their CBE equation).

NOTE : One Reverse group can be the “sum” of several Direct groups. This way an activation can be triggered by many groups

TAB Progr. of the maximum limit of the direct action Group number)

Enter the maximum number of direct activation Group



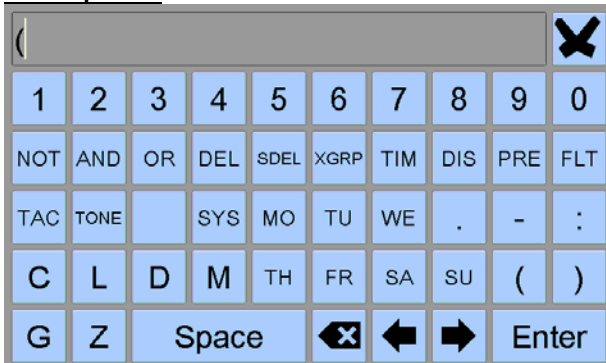
TAB Progr. of CBE. associated with the Group)



- GROUP to program the Previous group

+GROUP to program the Next group

CBE equation



Use the alphanumerical keyboard to enter the data at the end, press the **ENTER** key on the keyboard screen to confirm.

CROSS ALARM

The parameter "**Cross Alarm.**" is valid if the group is associated in a CBE with the "**XGRP**" operator.

NO = the group is active only when a thermal sensor (a detector with HW-type-id "**THER**") and an optical sensor (a detector with HW-type-id "**PHOT**") associated with the group are in alarm.

YES = the group is active when two devices (sensors or input modules) associated with the group are in alarm.
This is the Default value.

Example of use for reverse Groups:

**Have to program an OR of 16 groups
BUT
Memory is not enough !
SO
Program 2 Reverse Groups each with the CBE listing 8 Direct Groups
Then program on the Output module a CBE that sum the 2 Reverse groups**

G301 = Reverse Group
G302 = Reverse Group

G301=OR(G1G2 G3 G4 G5 G6 G7 G8)
G302=OR(G9 G10 G11 G12 G13 G14 G15 G16)

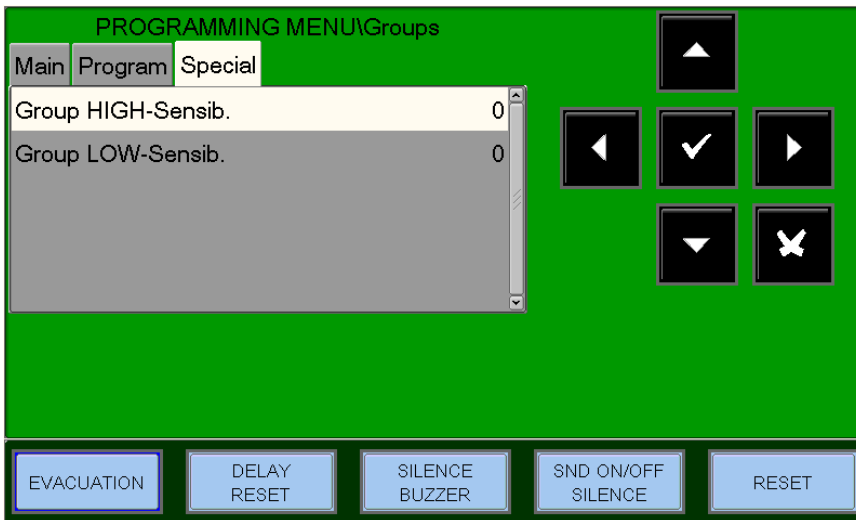
L01M01=CBE=OR(G301 G302)

(Progr of . High and low sensitivity Groups

HIGH AND LOW SENSITIVITY GROUPS

Can be defined as two groups (to be chosen among the inverse ones available), for which a CBE equation must be programmed, by using the **TIM** operator, to make them active only during a set time. These groups are respectively defined as: High Sensitivity Groups and Low Sensitivity Groups. The purpose of this option is to make all installed sensors operate in control unit at high or low sensitivity when the relevant groups are active (this will result in the DAYTIME/NIGHT function).

Note: The "Thermal Only" working mode for detectors with HW-Type_ID "OMNI" and "NFXI-SMT2" is active automatically when the group defined as "Low sensibility" is active.



Example: **G301 = TIM (-- 18.00 08.30)** CBE of the high sensitivity group
G302 = TIM (-- 08.30 18.00) CBE of the low sensitivity group

For the Zones to which this function is to be coupled the parameter “**Daytime/Night = YES** ”(refer to **Zone programming**) must be programmed. In this way the system automatically associates the high and low sensitivity groups, so that the following two time bands are obtained:

Daytime band (low sensitivity) from 8.30 to 18. (the sensitivity values assumed by the detector are those programmed in the “**Sens-Low**” item in the option folder).

Night band (high sensitivity) from 18. to 8.30. (the sensitivity values assumed by the detector are those programmed in the “**Sens-High**”item in the option folder).

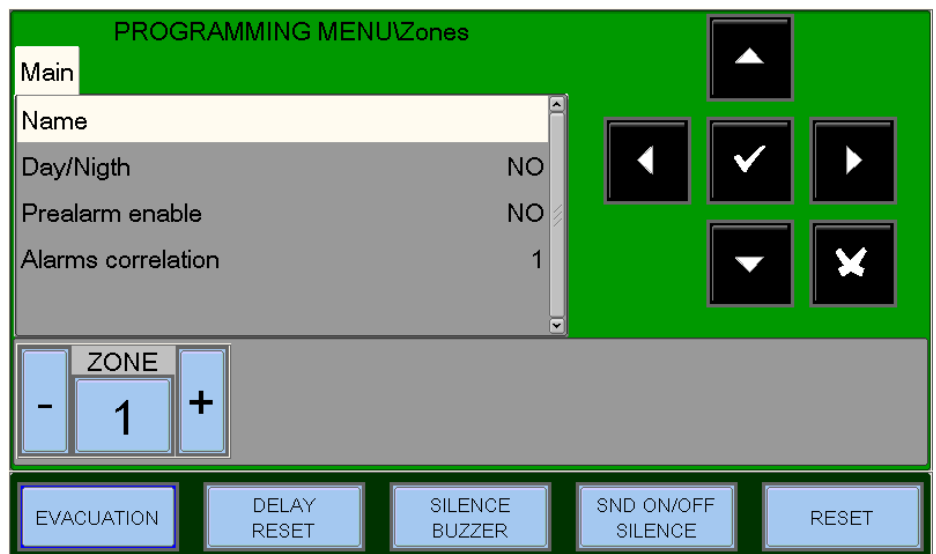
❑ ZONE programming Menu

By selecting the “**Zones**” sub-menu you can enter a descriptive text to be associated with the selected zone.

The control unit locates by default on the first zone.

Name:
 Programmable text for the ZONE
 max. 32 characters
 To enter the Text press the enter key ✓ to enter the editing function

Through the alphanumerical keyboard enter the zone name at the end press the enter key ✓ to store the datum.



Day / Night : YES/NO

Setting "YES" this Zone will use the programmed HI-LOW sensitivity Groups (refer to HIGH AND LOW SENSITIVITY GROUPS above) to switch to LOW sensitivity during DAY and to HIGH sensitivity during the Night .

Prealarm enable: YES/NO.

This feature enables viewing and managing pre-alarm for sensors assigned to the zone

Alarm Correlation - Indicates the number of alarm devices assigned to the zone to activate the siren outputs associated with this zone.

Example:

Zone 1 Alarm Correlation = 3

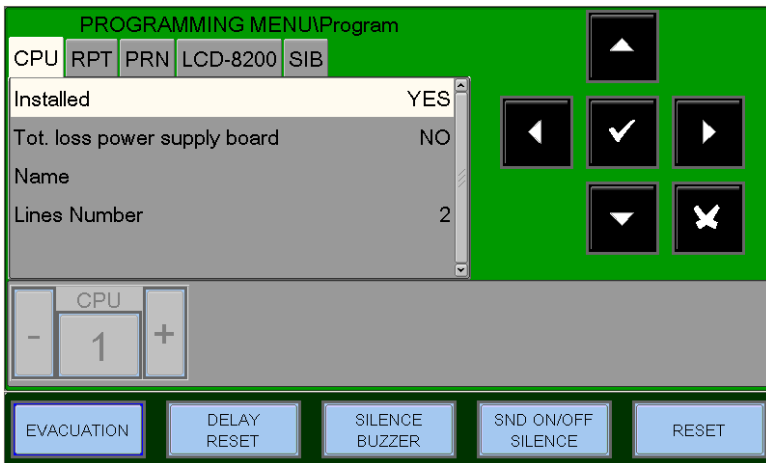
and in the "Utilities / Parameters / Specials / Sirens" menus you have programmed the entry "Active sirens on correlation" = SI

you will have to activate at least 3 Zone 1 devices to activate the siren output and all programmed SND type modules associated with this zone.

Programming - CONFIGURATION menu

This function allows the configuration of the panel units connected to the Can-Bus Network.

- CPU and Loops



To modify the programmings, press the enter key ; use the arrow keys to change the parameter; at the end press the enter key to confirm.

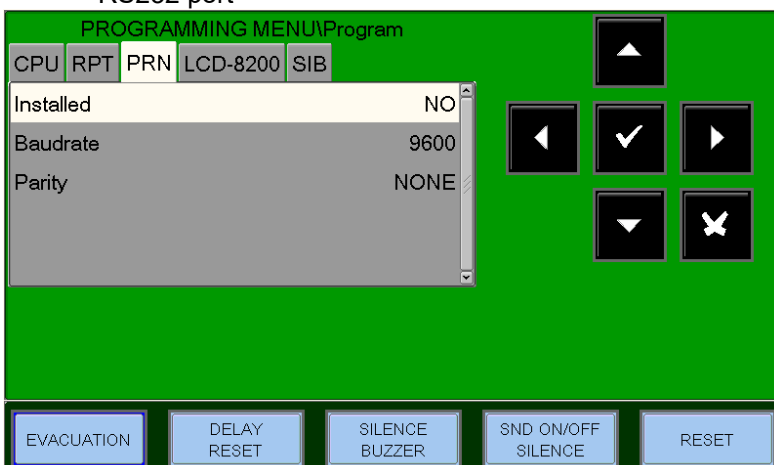
- CanBus RPT

Programming the presence on the CAN-BUS network of the **AM2-BST-C** card (amplifier for CAN-BUS line).
N.B. : Up to 8 AM2-BST-C cards can be installed on the CAN-BUS network



- **PRN (Printer Interface Presence Programming)**

This function allows you to configure the presence of the interface for connecting a serial printer to RS232 port



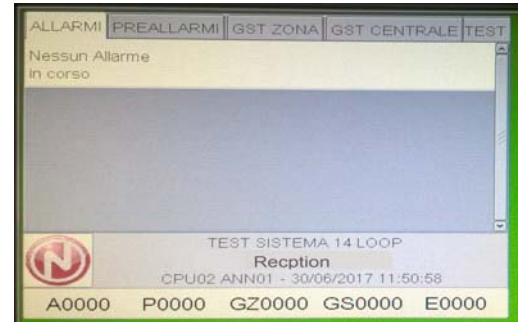
- **LCD repeaters**

This function allows to set the LCD-8200 model in the control unit.



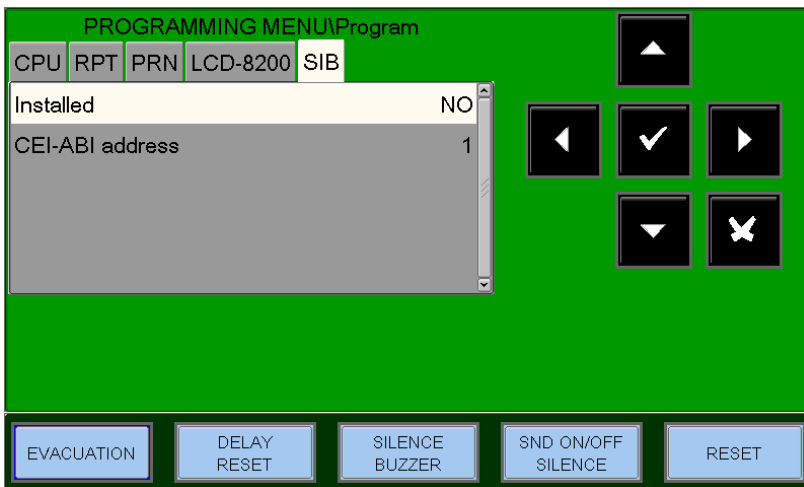
Press key – LCD or + LCD
to program the **previous/next LCD terminal**

This feature allows you to enter a programmable TEXT of max.32 characters, which is displayed on the LCD-8200 as the example



- **SIB**

This function allows you to configure the presence of the interface and the address of the SIB-8200 interface.



To modify the programmings, press the enter key ;
use the arrow keys to change the parameter;
at the end press the enter key to confirm.

Programming – Delete Programmings

This function will restore all Default programming (**NO NETWORK**):



By pressing the Enter key all system data in the non-volatile memory of the control panel will be erased

UTILITY MENU

By selecting **UTIL** from the display of the system state screen you can access the Utility menu, which includes some functions generally used by servicing personnel

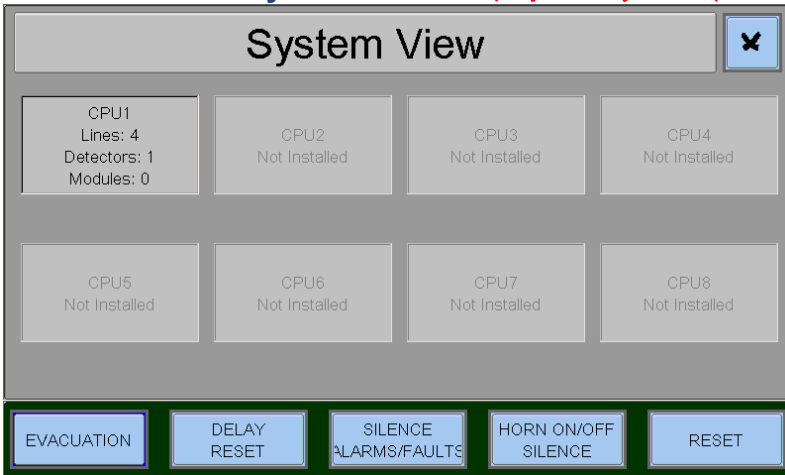
To access the menu, enter the Level 3 Password (**33333** is the default password).

To enter the password consult the editing function previously mentioned in the paragraph description of the keyboard operation to enter data.

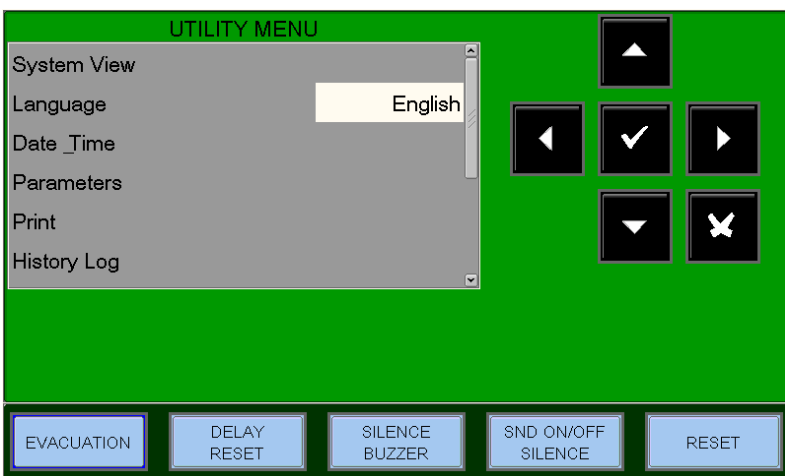
The following menu is displayed:



- **UTILITY –System View:** displays the system cpu configuration.



- **UTILITY - Language:** Is possible to select between languages.



- **UTILITY - Date and Time** This function allows to program the time and date of the control unit.

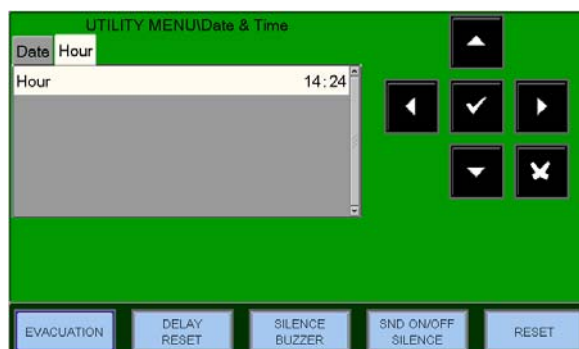
- **Date**



To change values in “Date and Time” programming Form use the arrows ◀ ▶ to select the field to be changed (the characters of the selected field are white on dark background).

Use the arrow keys ▲ ▼ to change the datum; at the end press the enter key ✓ to store the datum.

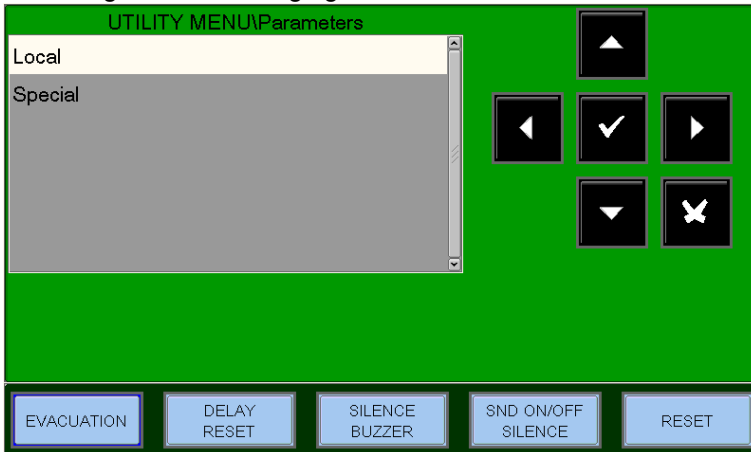
- **Hours**



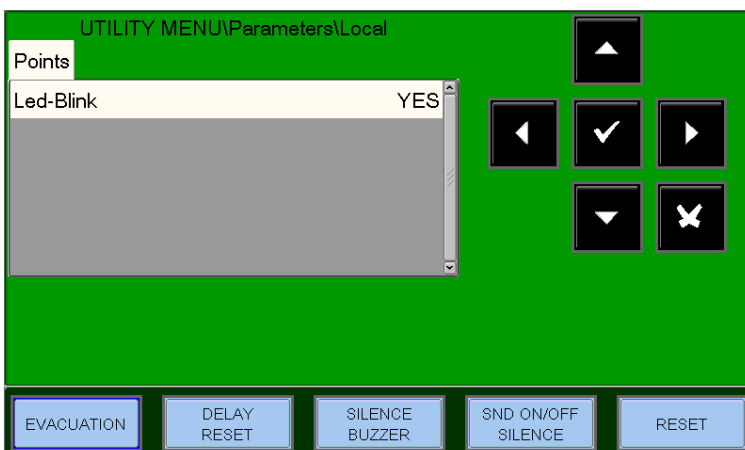
Use the arrows ◀ ▶ to select the Hours form press the enter key ✓
 To change values in “Hours” programming Form use the arrows ◀ ▶ to select the field to be changed (the characters of the selected field are white on dark background).
 Use the arrow keys ▲ ▼ to change the datum; at the end press the enter key ✓ to store the datum.

Parameters

By selecting the “Parameters” item, you can perform the configuration of the local and special parameters according to the following figure



- **Local Parameters**



By selecting “NO” in the “Led Blink” function the led flashing is disabled for **all the points** installed during the line interrogation. This function can be used in some environments such as hospitals, hotels, etc.
N.B. The disabling of the led flashing can also be performed for each point (refer to the Sensor and Module programming paragraphs)

To change the “Led Blink “ function press the enter key ✓; use the arrow keys ▲ ▼ to change the functions; at the end press the enter key ✓ to confirm.

- **Special Parameters**

This procedure is composed of 5 programming folders .

1. **Progr. of DRIFT WARNING FUNCTION**



To change the “Drift warning” function press the enter key ✓; use the arrow keys ▲ ▼ to change the parameter; at the end press the enter key ✓ to confirm.

DRIFT WARNING - By enabling this function, the control unit generates a signalling when the sensor exceeds 70% of the alarm threshold for more than 5 minutes.

This signalling can be used as a warning to perform a cleaning of the sensor optical chamber. This function is a general enable parameter valid for all the control unit points. The DRIFT WARNING function does not replace the maintenance request signalling, which in any case is always enabled. It is signalled when a sensor detects, for more than 36 consecutive hours, a value higher than 80 % of the alarm threshold.

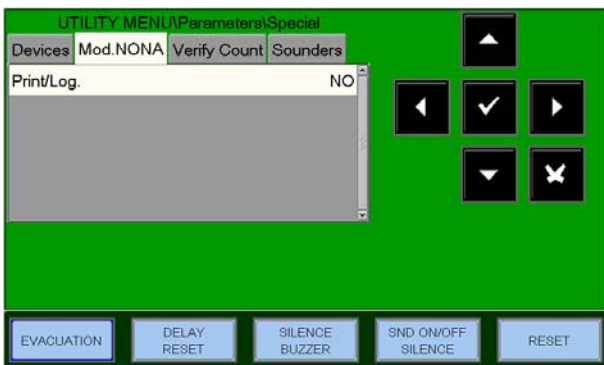
Serial number check

By enabling this function, the central unit during self-recognition stores the serial number (which is unique) of the devices present on the lines and is used to control the replacement of field sensors or modules, resulting in an invalid fault message .

Detectors Prealarm threshold

Programmable FROM 30% ÷ 99% (Default 70%)

2. Enabling display & log in History File the events of modules with SW-Type-ID: NONA



By selecting “NO” the print and storage in historical file of events in alarm from the input modules programmed with Type-ID “NONA” is disabled

To change the function press the enter key use the arrow keys to change the parameter; at the end press the enter key to confirm .

3. Change of the line reliability parameters



Enter the parameter to signal the fault for invalid answer (expressed in number of interrogation polling on the line) Default value = 05

Enter the parameter to signal Type ID erroneous fault (expressed in number of interrogation polling on the line). Default value = 08

Enter the parameter to signal the off circuits fault, (expressed in number of interrogation polling on the line). Default value= 10

Enter the parameter to signal a fault for low chamber value (expressed in number of interrogation polling on the line). Default value= 20

Enter the parameter to signal the maintenance breakdown, (expressed in minutes) Default value = 216

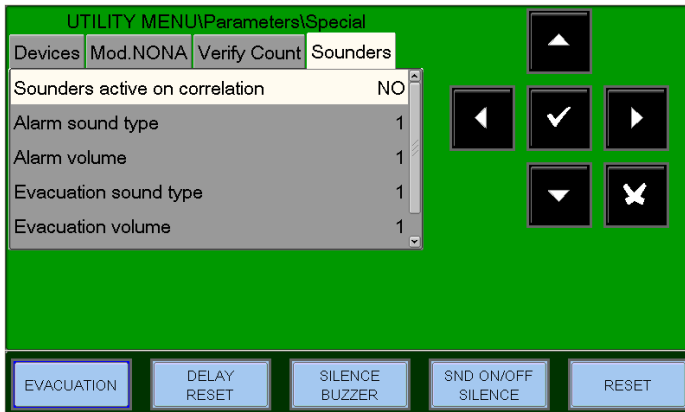
To change one or several parameters in this folder select the parameter through the arrow keys (the characters of the selected field are in Reverse), press the enter key and use the arrow keys to change the parameter; at the end press the enter key to confirm the datum.

By **increasing** the values of each parameter, the control unit becomes less sensitive for the Fault signaling for the Points installed on the lines.

By **decreasing** the values of each parameter, the control unit becomes more sensitive for the faults signaling for the Points installed on the lines, moreover the Fault warning message is activated: “Line changed par.”

Sounder

This TAB is dedicated to the programming of the siren outputs (all devices programmed with SW SND type). The user can program the following items



- **Active sirens on correlation**
In case of alarm if this function is enabled, the sirens associated with this zone will be activated only when the programmed correlation number for the alarm zone is reached (see ZONE programming paragraph)
- **Sound alarm type.** Sound tones in case of alarm from addressed devices (Values allowed from 1 to 32. For details, refer to the technical data sheets attached to the sirens)
- **Alarm volume.** In the case of alarm from addressed devices (Values allowed from 1 to 4. For more details see the technical data sheets attached to the sirens)
- **Sound evacuation type.** Sound tone when activating the central control evacuation control (Values allowed from 1 to 32. See the technical data sheets attached to the sirens for more details).
- **Evacuation volume.** (values allowed from 1 to 4. For more details, see the technical data sheets attached to the sirens).
- **Step 2 Enable**

Prints –

Selecting the submenu "Prints" opens the List of functions dedicated to printing events.

Prints the contents of the **historical archive**.

Prints the **analog values of the programmed sensors** in the control panel.

Prints the list of **alarm points** in progress.

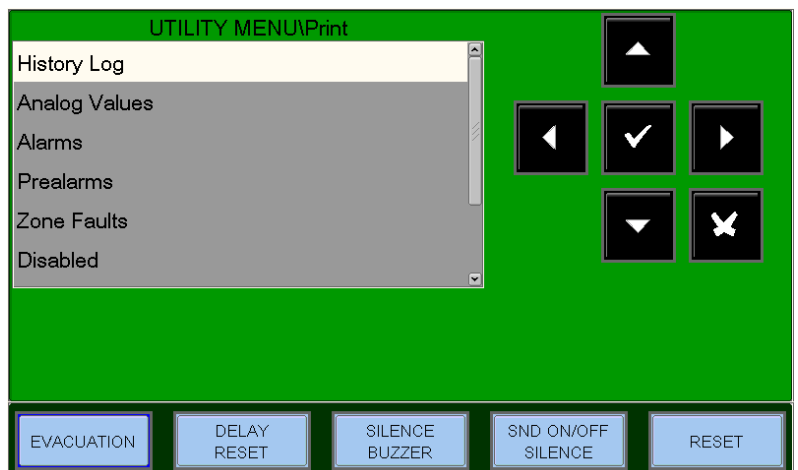
Prints the list of **pre-alarm points** in progress

Prints the list of **Zone in faults** in progress.

Prints the list of **excluded points**.

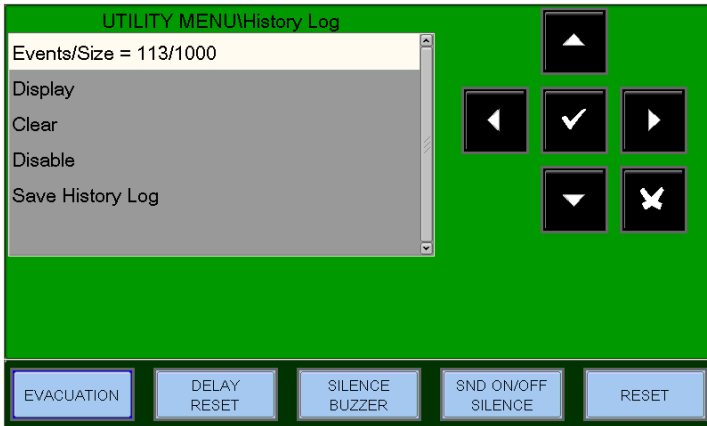
Prints the list of **active input modules** In progress.

Prints the list of **active output modules** In progress.



UTILITY - History LOG

The historical archive has a capacity of 1000 events for a 2 loop station, up to 8000 events for a 16 loop central (1000 events for each LIB-8200). When the maximum number of memorized events is reached, the panel in case of a new event clears the most old event and stores the new event.



CLEAR

The clear function will delete all events in the historical file

DISPLAY

This function allows the display of the events in the Historical File.

DISABLE

This function disables the storing of all the events (alarms, Faults, etc.).

By default the Log is enabled.

SAVE History Log

This function will save the History Log file in a memory stick on the USB port

• History Log Display:

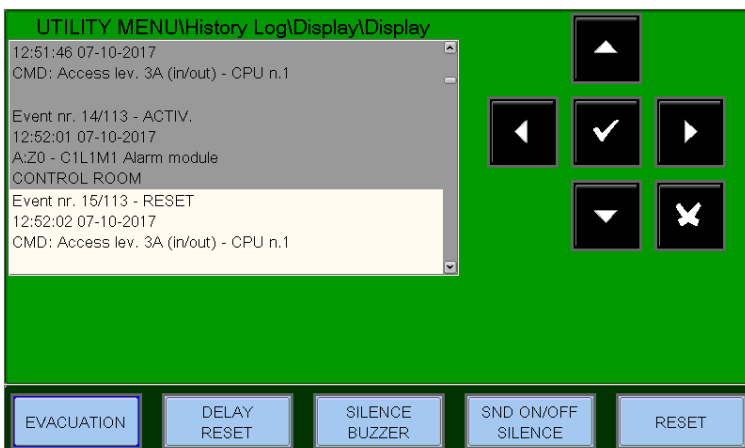
This function allows the display of the events in the Historical File on the Panel Display.



Enter **start date and time** of the search and press the enter key to confirm

Select YES / NO to filter the Type of Events to display

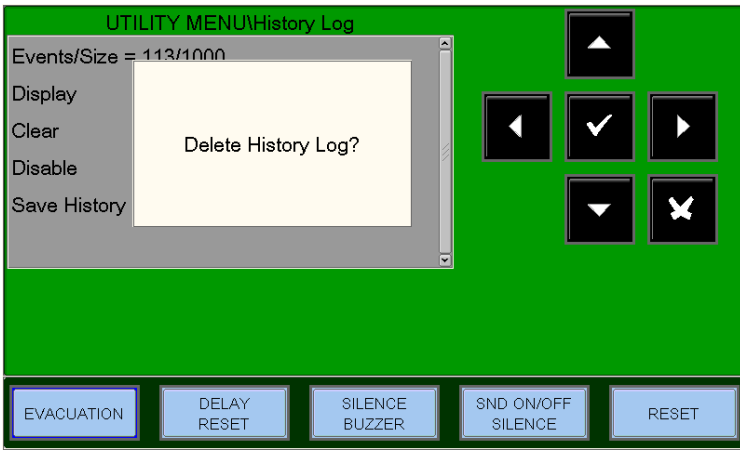
To change one or several parameters in this folder select the parameter through arrow keys (the characters of the selected field are in Reverse), press the enter key and use the arrow keys to change the parameter; at the end press the enter key to confirm the datum.




Selecting “**Display**” the first 2 event are displayed

Use the arrows keys to scroll the list of all events.

By selecting the “**Clear**” function the following display appears:

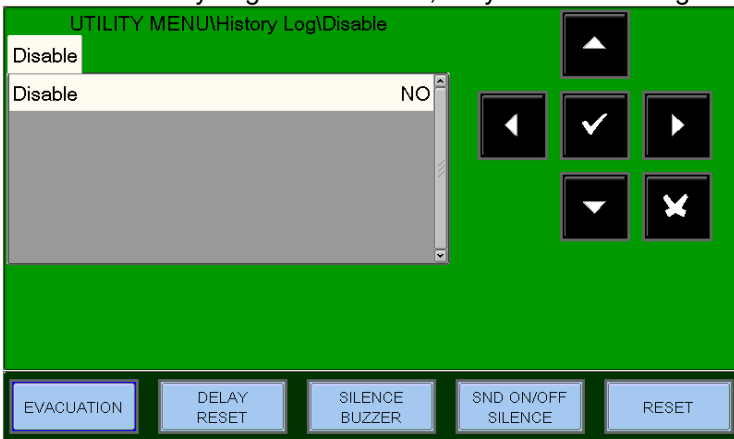





Press the **enter** key  to perform the cancellation of all events stored in the historical event.

• **History Log Disable:**

Through the “**Disable**” control (when activated) all new events arriving from both the detection lines and the keyboard are not stored in the historical file.

In case of History Log was disabled , a System Fault is signalled in the Faults List

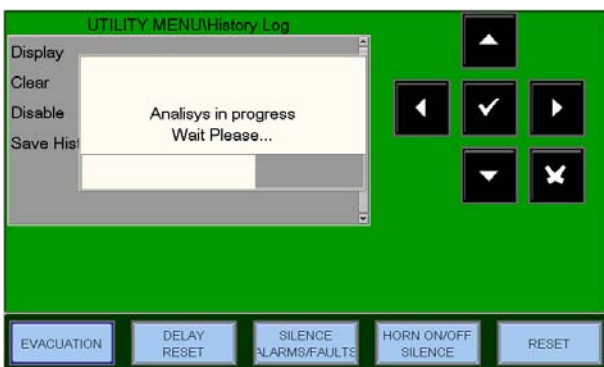


To change this parameter in this folder press the **enter** key  and select through the arrow keys   “**YES**” or “**NO**”

Note
the “**Disable**” function is “**NO**” by default.

• **History – Log Save:**

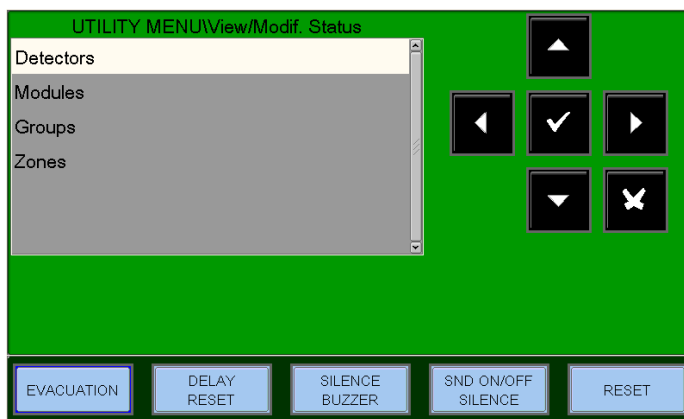
This function will save the History Log file in an USB-MEMORY STICK .



UTILITY - VIEW / MODIFY STATUS

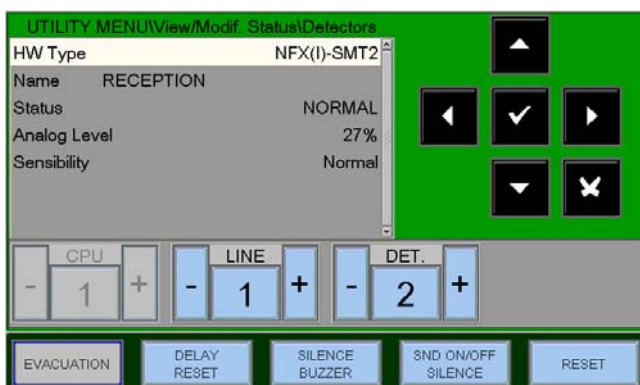
This function allows to examine the state of a point and in case of a detector, the analogue value can be displayed.

This value will be displayed as a percentage with respect to the alarm threshold programmed for that device. Parameters relevant to modules, zones or software groups programmed can also be displayed.



Detectors status

The display shows by default the first device of the first line. To select another device use the function keys.



Use - LINE or + LINE to display previous/next Line

Use -DET. or +DET. to display previous/next Detector

Display of NRX-OPT detector (Detector wireless)

HW Type

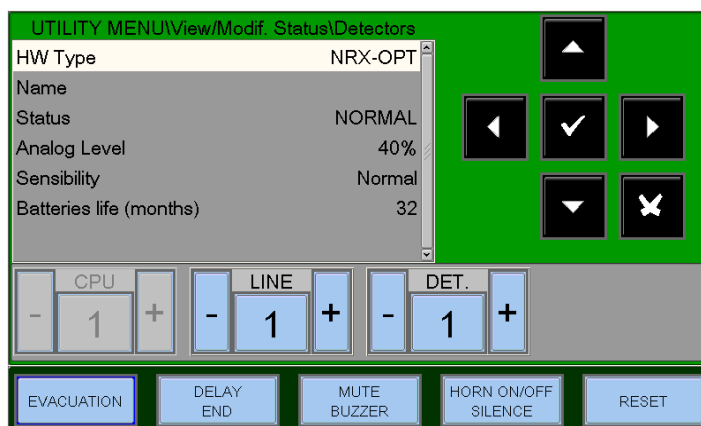
Name = Programmable Text max. 32 char

Status= Detector condition

Analog level: percentage in respect to Alarm level

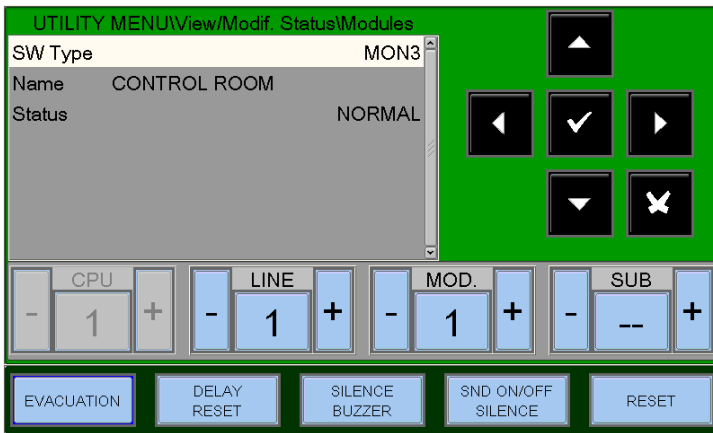
Sensibility: programmed sensitivity

Batteries life: Predicted batteries life time

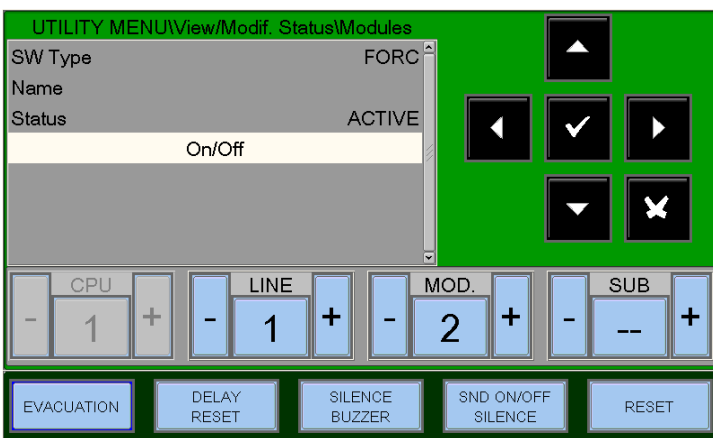


Module Status

The display shows by default the first device of the first line. To select another device use the function keys



Module Status depends on Module Type (Input or Output)



Modify the Output Status of a Control Module

After selecting the “On/Off” field using the arrow keys \uparrow \downarrow , user can switch the control module output status pressing the OK \checkmark Key..

This action is indicated as:

Activated = ON

Deactivated = OFF

Esempio di visualizzazione dispositivi FAAST

SW Type programmed for output of the device

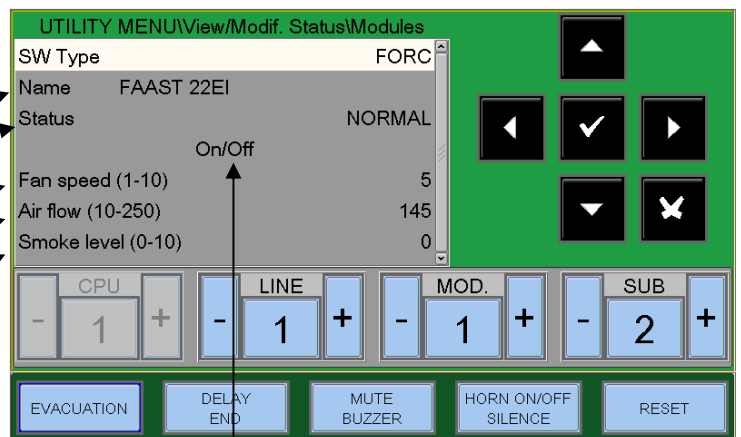
Name = Programmable Text max. 32 char

Status of the module

Displays the Fan speed

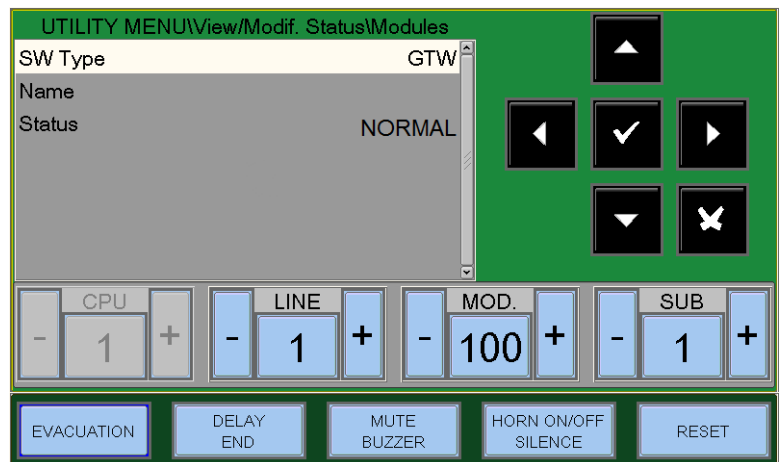
Displays the Air flow

Displays the Smoke level

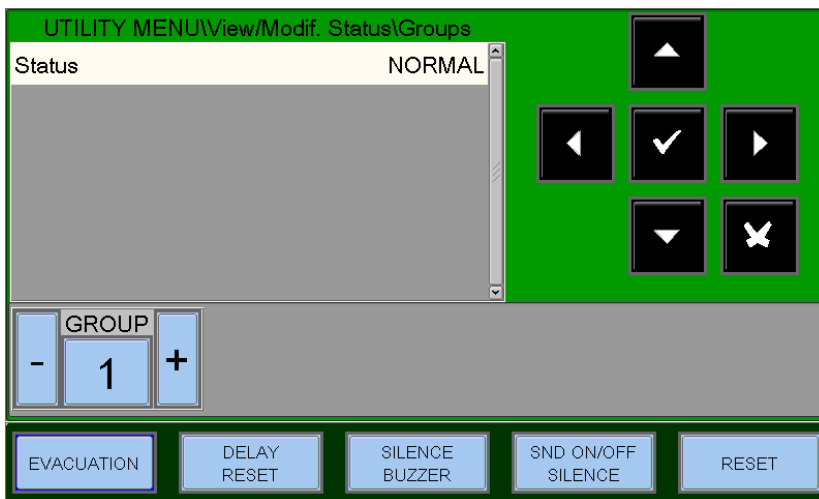


Modify the Output Status

Display example of NRXI-GATE devices (Gateway for wireless system)



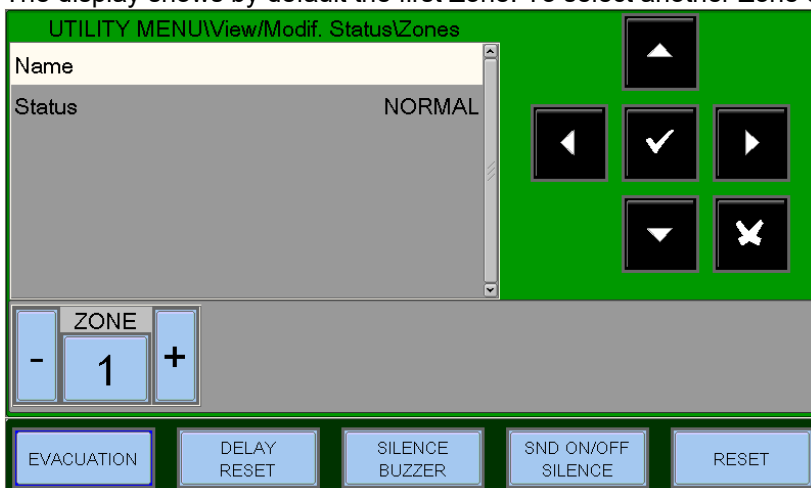
Groups Status



The display shows by default the first Group. To select another Group use the function keys

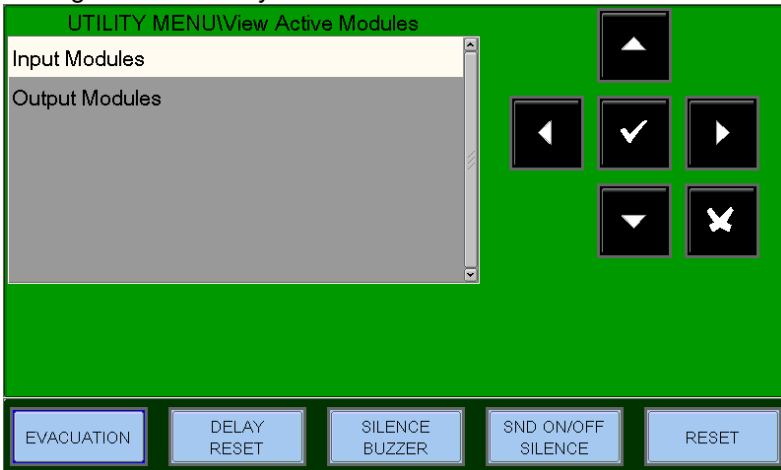
Zones Status

The display shows by default the first Zone. To select another Zone use the function keys



UTILITY – ACTIVE MODULE LIST

Through this function you can examine the active module lists which are connected to the control unit lines.



Input modules

Active input modules display.



In the case of a line where there are no alarm input modules, the following indication is given:
"No active input module"



In case of no active output modules in a line there will be the following indication shown in the figure below:
" No Output Module Active"

FIRMWARE Version

Through this function the servicing personnel can display the firmware version installed in the AM-8000 control unit CPU, LIB card and LCD DISPLAY



Firmware Update

This function will upload a new version of the DISPLAY firmware from an USB key inserted in the LCD connector

This function have to be authorized from Notifier Italia Technical service

DISABLE MENU

By pressing the **DISABL** function key in System State screen you can access the Disable menu, where detectors, modules, zones, etc. can be disabled

The following menu is displayed



By selecting the "**Display**" item the user enter the following menu where devices are displayed by the type:

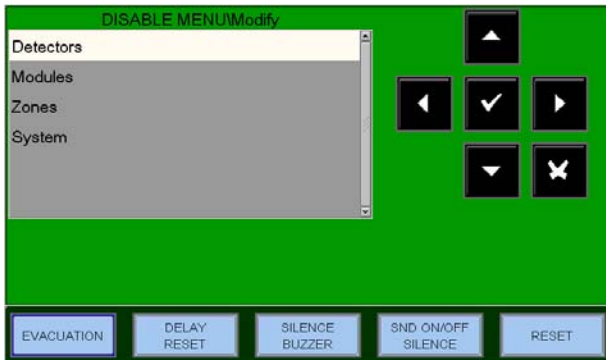


Counters of n° of Disabled Devices by Type

To display the Disabled device list , select through the arrow keys \uparrow \downarrow the type of device, press the enter key \checkmark to confirm the selection.

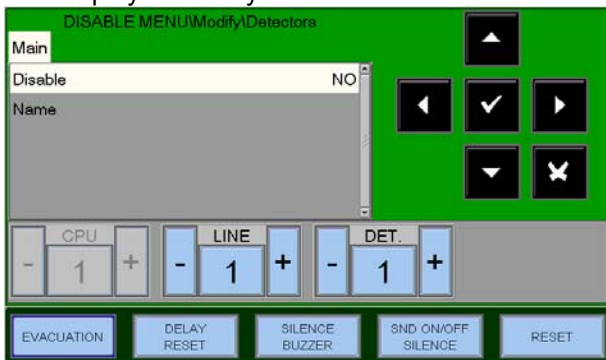
MODIFY

By selecting the “**Modify**” item, and **typing the correct password Level 2**, the following display will appear, where it is possible to change the state of Enabled/Disabled for the various devices







□ Modify Status - Detectors

The display shows by default the first device of the first line. To select another device use the function keys.

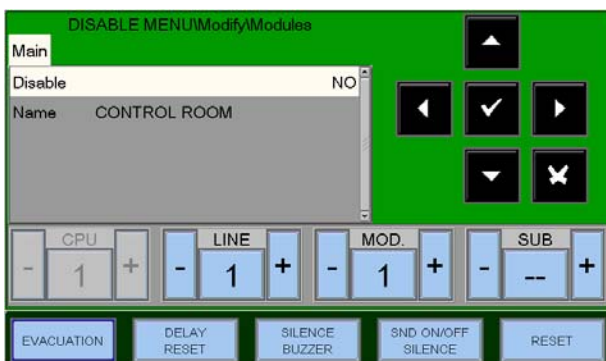


When a detector is **Disabled** the control unit is inhibited to the reception of the Alarm and Faults signaling from the sensor.





To **Disable** a detector select it through the function keys. Once the device has been selected press the **enter** key  and through the arrow keys   select **YES** and subsequently press the **enter** key  to confirm the disablement.

□ Modify Status - Modules

The display shows by default the first device of the first line. To select another device use the function keys.



When a module is **Disabled** the control unit is inhibited to the reception of the Alarm and Faults signaling from the module.





To **Disable** a module select it through the function keys. Once the device has been selected press the **enter** key  and through the **arrow** keys   select **YES** and subsequently press the **enter** key  to confirm the disablement.

❑ Modify Status - Zones

The display shows by default the first zone. To select another zone use the function keys



When a Zone is Disabled the control unit is inhibited to receive the Alarm and Fault signaling from all the points which belong to the Zone.





To Disable a zone select it through the function keys. Once the zone has been selected press the enter key  and through the **Arrow** keys   select **“YES”** and subsequently press the **enter** key  to confirm the Disablement.

❑ System Disable

This procedure is composed of 3 programming folders where the editing function previously explained is applied to enter data.

- Sounder exclusion



To change this parameter in this folder press the **enter** key  and select through the arrow keys   **“YES”** or **“NO”** and press the **enter** key  to confirm the datum,

- Exclusion of immediate activation of Siren Output

This feature allows the exclusion of the siren output and all the output modules programmed with SW-Type-SW "SND" (terminals CNU-17 and CNU18 of the main board).



- Immediate activation Siren outputs

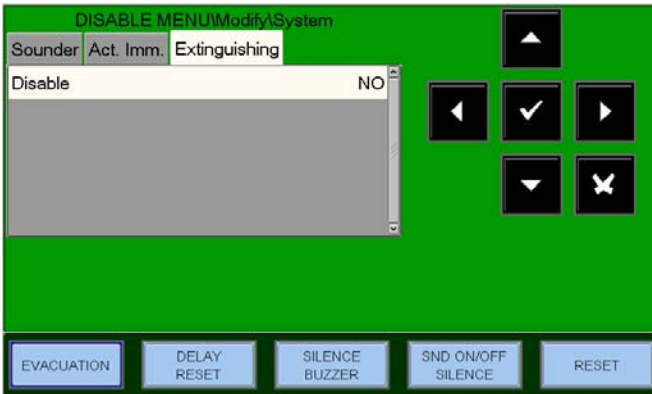
When the exclusion is activated for the immediate activation of the siren outputs, Active Exclusion and Delay LEDs are turned on.

In the event of an alarm, the control panel delays the outputs mentioned for the programmed times in the programming menu (Prog \ Sist \ Usc.All. Timings).

During delay time, the Active LEDs flashes and you can reset the delay with the Reset Delay button.

To change this parameter in this folder press the **enter** key  and select through the arrow keys   **“YES”** or **“NO”** and press the **enter** key  to confirm the datum

- **Extinguishing exclusion**



This function allows the exclusion of all the output modules programmed with TYPE ID "UDS1" (UDS and UDS2-N extinguishing panels)

To change this parameter in this folder press the **enter key** and select through the arrow keys **▲▼** "YES" or "NO" and press the **enter key** to confirm the datum.

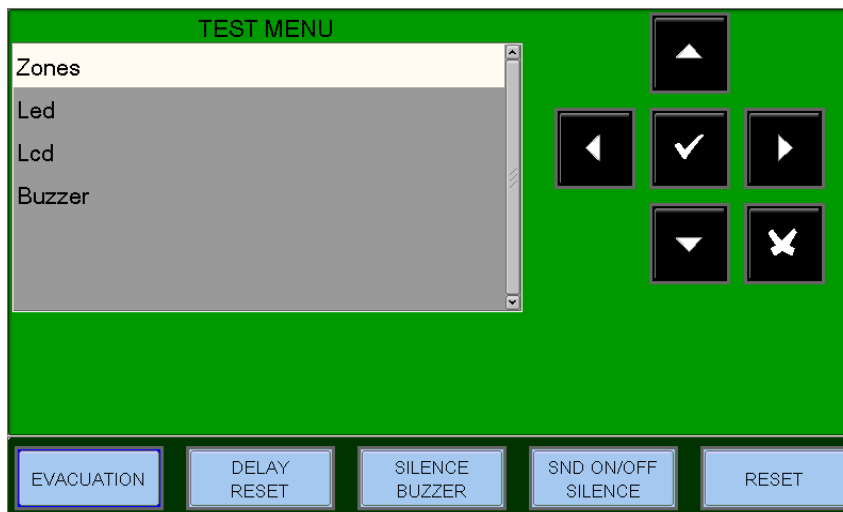
TEST MENU

By pressing the function key **TEST** in System State, you can access the Test menu which includes the functions generally used by the servicing personnel to test the system.

To access the menu enter the **Level 2 Password** (22222 is the default password).

To enter the password consult the editing function previously mentioned in the paragraph description of the keyboard operation to enter data.

The following menu is displayed:



❑ **Zone TEST :**

This function allows to start the Walk-Test procedure for a selected zone.

This procedure is composed of 2 folders where the editing function previously explained is applied to enter data.

Enabling of a zone for the test function

Enter the zone number for which the test function must be activated.

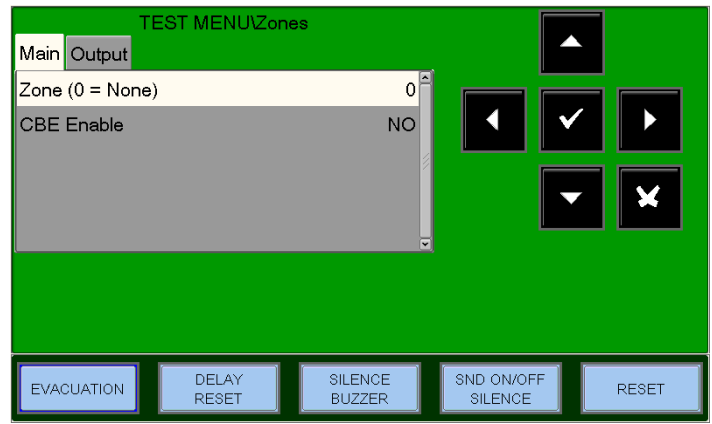
(0 = inactive test zone)

CBE Enabling

By selecting CBE Enable.: YES

in case of alarm from the test zone devices

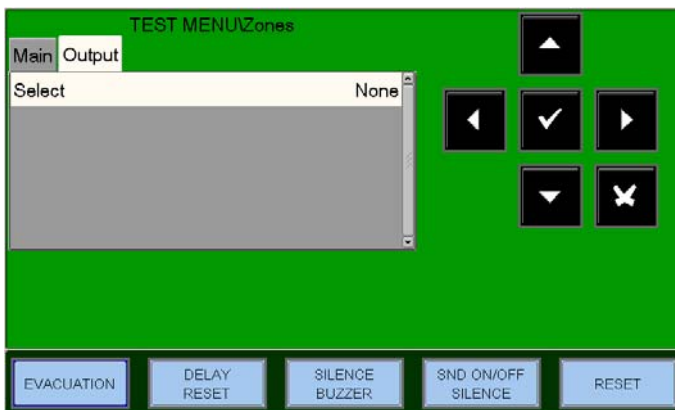
CBEs associated with them are activated



To change one parameter in this folder select the parameter through the arrow keys \uparrow \downarrow (the characters of the selected field are in Reverse), press the enter key \checkmark and use the arrow keys \uparrow \downarrow to change the parameter; at the end press the enter key \checkmark to confirm the datum.

Output selection

In the subsequent programming folder the output to be activated in case of alarm from a device of the test zone is selected.



In the “**Select**” field you can select one of the following items:

NONE = in case of alarm from the test zone it does not activate outputs.

SOUNDER = in case of alarm both the Siren output and all the output modules programmed through Type – ID “**HORN**” are activated at each alarm event from the test zone
The activation duration is 3 sec.

MODULE = in case of alarm from the test zone the output module programmed in the “**Ind. Mod.**” Item is activated and at each alarm event it will be active for 3 sec.

To change one or several parameters in this folder select the parameter through the arrow keys \uparrow \downarrow (the characters of the selected field are in Reverse), press the enter key \checkmark and use the arrow keys \uparrow \downarrow to change the parameter; at the end press the enter key \checkmark to confirm the datum.

❑ **LED TEST:**

By selecting through the arrow keys \uparrow \downarrow the Led item and by pressing the enter key \checkmark to confirm, the control unit performs the lamp-test function (all the control unit leds flash for some seconds)

❑ **LCD TEST:**

By selecting through the arrow keys \uparrow \downarrow the LCD item and by pressing the enter key \checkmark to confirm, the control unit performs the display test.

❑ **BUZZER TEST:** It will sound intermittently

Appendix A – CONTROL-BY-EVENT EQUATION

Control by event concept

Currently is available one formula (direct or reverse depending on the type of point) for each point (sensor / module) of the system;

Multiple modules devices have a formula for each sub-address.

For example:

- M721 is managed as 3 sub-address
- MMX-10ME card is manages as 10 consecutive sub-address, etc
- In addition to these CBE , is possible to setup one CBE for each GROUP
- And one CBE each ZONE.
- Inside each formula (CBE) can be programmed several items (points or groups) that:
 - will be activated by ... : when the formula becomes «true» (direct CBE)
 - cooperate to calculate the «true» value of the formula: When becomes «true» the object is activated. (reverse CBE)

A typical programming of the control unit is defined as **CONTROL-BY-EVENT EQUATION (CBE)**.

During the programming phase, a CBE equation must be associated with each point, zone or group

The **CONTROL-BY-EVENT** equation allows to program a series of conditions that the control unit will assess when the Point, the Zone, the Group are **ACTIVE**, and will perform the programmed operations.

To define these conditions, perform the **CBE** equation by using some logical operators (OR, AND, XGRP, NOT, DEL, SDEL and TIM).

The "**ACTIVE**" condition is valid when:

- Input point (input modules or sensors) = in Alarm
- Output point (output Module) = ACTIVATED
- Group = one of the points of the group is Active

RULES FOR THE CORRECT SYNTAX OF THE EQUATIONS

- ❑ To be valid and accepted by the control unit, the control equation must follow some precise syntax rules. If a syntax errors occurs, the CBE equation is refused.
- ❑ The logical operators (ex. OR, AND, ...) which are valid for several operands, shall be written by following this procedure:

OPERATOR (OPERAND-1 OPERAND-2 ...)

- ❑ The NOT logical operator is valid only for one operand, and shall be written before the corresponding operand
- ❑ If several operators are used, the first character of the equation must be a left-hand bracket, and the last character must be a right-hand bracket.

Example

(OPERATOR (OPERAND- 1 OPERAND-2 ...) OPERATOR (OPERAND- 1 OPERAND-2 ...))

N.B. : A programmable CBE for output modules, contains the address of the objects which will activate them, such as: input sensors, input modules or groups. If the module activation must occur for a combination of various objects, the AND,OR, ect. operators must be used.

A programmable CBE for input sensors and modules, contains the address of the objects to be activated in case of alarm, which may be output modules or groups. If it is necessary to activate a series of objects, just re-write them in sequence, without using any operator.

- ❑ The following format can also used:

Example : AND(G1G2)OR(G3AND(G4G5))

Which is equivalent to: 1 - IF BOTH group G1 and group G2 are active

2 - OR

3 – Group G3 is ACTIVE and both group G4 and group G5 are active.

N.B.: the equation must be written without inserting spaces between the characters to be entered.

Sensor remote led in CBE

This is required to use a single LED repeater connected to a single sensor, but indicate a multiple sensors alarm for a common area (Hospitals, Military dormitory, etc)

To manage the LED output on the sensor the direct CBE (sensors, input modules and groups), will change so they can be used for the activation of this output on sensor.

Example:

If inside C1L1S1 programming the CBE is = (C1L1S2 C1L1S3)

Then

When C1L1S1 is in Alarm, the LEDs outputs on C1L1S2 and C1L1S3 will be ALSO activated.

Additionally, as usual , also :

- Direct Groups can take place inside a Direct formula of «input» Points (sensors and input modules)
- Reverse Groups can take place inside operands on reverse formulas for points (LED output on sensors and Output modules).

CBE “Null”:equation

You can also not program any equation for a device.

In this case:

- If the device in question is an input sensor or module, the control unit will activate only all general visual and sound indications (Alarm LED on the front panel, General Alarm RELAY, BUZZER and possible output modules programmed through TYPE ID software for general signallings).
- If the device in question is an output module, this output will never be activated unless it is programmed through TYPE ID software for general signallings.

☞ N. B.: for output modules, the control unit does not allow to program an equation if the module has a TYPE ID for general signalling.

Refer to Appendix: **Modules Software Type_ID** at the end of this manual.

Operators used in the control by event equation:

OR

is the operator which requires **AT LEAST ONE** operator to be **ACTIVE**.

Example: the output module equation is: **OR (G9 G15 G23)** or the **OR** operator can be omitted by entering:
(G9 G15 G23)

If **ANY** of the three operands in this equation (G9 G15 G23) is in alarm; the output module will be activated, that is:

- **IF** the software group 9 is in alarm, or
- **IF** the software group 15 is in alarm, or
- **IF** the software group 23 is in alarm
- **THEN** this output module will be activated.

AND

is the operator which requires **EACH** operand to be **ACTIVE**.

Example: the output module equation is: **AND (G9 G15 G23)**.

Only if **ALL THREE** operands in this equation are in alarm, the output module will be activated, that is

- **IF** the software group 9 is in alarm, or
- **IF** the software group 15 is in alarm, or
- **IF** the software group 23 is in alarm
- **THEN** this output module will be activated.

NOT

is the operator which **DENIES** the operand or the series of operands in brackets, which follow it.

Example: the equation of an output module is: **NOT (G23)**.

The output module will remain activated until the operand (G23) **IS** alarmed, that is:

- **If** the software group 23 is in alarm
- **THEN** this output module will be deactivated.

N.B.

It is not allowed to write a CBE for a direct group, if the operands contained inside the round brackets are some groups having an index lower than the group for which the CBE must be associated as in the following example:

CBE not allowed

~~G33 = (G23 G24)~~

CBE allowed

G21 = (G23 G24)

It is not allowed to write a CBE for an inverse group, if the operands contained inside the round brackets are some groups having an index higher than the group for which the CBE must be associated as in the following example:

CBE not allowed

$$\text{G305} = (\text{G306 G307})$$

CBE allowed

$$\text{G307} = (\text{G305 G306})$$

XGRP

is the operator which requires **AT LEAST TWO** elements of the group indicated below, to be **ACTIVE**.

FORMAT : XGRP (GXXX) where GXXX= Group 1 ÷ 400

Example: the equation of an output module is **XGRP (G23)**

- **IF ANY COMBINATION** of two or several input devices (sensors or modules), which have been programmed (with their CBE Equation) on this software group (through **the Double Consent parameter = YES.**), they are ACTIVE.

- **THEN** this output module will be activated.

Or only when a thermal sensor (type-id "THER") and an optical sensor (type-id "PHOT") which have been programmed (through their CBE Equation) on this software group (through **the Double Consent parameter = NO**), are ACTIVE.

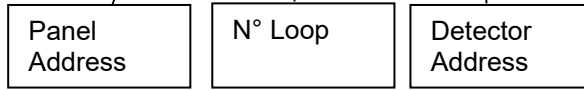
- **THEN** this output module will be activated,
-

It is not allowed to write an equation of an output module with several groups as in the following example:

CBE not allowed

$$\text{XGRP} (\text{G23 G24})$$

PRE(CxxLxxSxxx)



It is the operator that uses the pre-alarm state of a sensor.

Example: The equation of an output module is: OR (PRE (C1L1S2) PRE (C2L1S10))

If either of the two sensors (L1S2 of the control panel 1 or L1S10 of the control panel 2) is in pre-alarm, the output module to which the CBE is associated is activated.

FLT(CxxLxxSxxx)



It is the operator that lets you use the state of a device or zone failure.

Example 1: The equation of an output module is: OR (FLT (C1L1S2) PRE (C2L1S10))

If either one of the two sensors (L1S2 of the control panel 1 or L1S10 of the control panel 2) is in failure or pre-alarm, the output module to which the CBE is associated is activated.

Example2: The equation of an output module is: OR (FLT (Z1) FLT (Z2))

If any of the two Zones (Z1 or Z2) is faulty, the output module to which the CBE is associated is activated.

DIS

It is the operator that allows the disarming of zones and points by activating a programmed input module programmed with Type-SW "NONA" (does not generate an alarm in the central unit).

Example1: The equation of an input module is: (DIS (Z1))

When the input module is active, Zone 1 is disabled.

Example2: The equation of an input module is: (DIS C1L1M1)

When the input module is active, the L1M1 module of the control panel 1 is disabled.

Additionally, the DIS operator allows you to recover a zone or point disabled state by activating the output modules.

Example: The equation of an output module is: (DIS (Z1))

When Zone 1 is disabled the output module is active.

TONE

It is the operator that allows to set tone and volume for zone groups via the CBE of inverse groups.
TONE (Zone Volume Range Tone)

Where :

Tone = sound type in range 1 ÷ 33

Volume = volume in range 1 ÷ 4

Range_di_Zone = list of zones to activate the pattern (tone and volume) in Zxxx format: Zyyy
(example Z1: Z10 to indicate zones from zone 1 to zone 10)

TAC(SYS)

It is the operator that allows you to retrieve the silence of the control panel

Example: An output module equation is: (TAC (SYS))

When the siren silence command is executed in the control panel, the output module will be activated

DEL

is the operator which allows to program some activation delays for specific conditions.

The device which has in its CBE equation the “DEL” operator, when its equation is true, waits for the programmed time before activating.

If during this delay time its equation is not true any longer, the timer resets and is ready to start at the next event (therefore the output device does not activate)

FORMAT : OF (MM.SS (delay) MM.SS. (duration - optional) (CONDITION) equation which sets the delay start))

Where:

- MM = minutes (2 digits), SS = seconds (2 digits)
- CONDITION = it can be an equation of the type:

XGRP (GXXX)

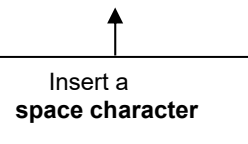
NOT (Element 1...)

OR (Element 1...Element 2...)

AND (Element 1...Element 2..)

- Element = it can be GXXX for a group (1 ÷ 400) - LXX S/MXX for an addressable point

Example 1: if the equation of the G90 software group is DEL(00.30 01.30(G21)) then:



- After 30 Sec. from the G21 activation

- the G90 group will activate and will be active for 1 minute and 30 seconds

Example 2: if the equation of the L2M90 output module is DEL (00.30 00.30 (AND (L1S1 L1S4)))

- After the L1S2 and L1S4 sensors have been in alarm condition for 30 seconds, the L2M90 module will be active for 30 seconds.

N. B.

- If a delay is entered = 00.00, then the equation will be active **AS SOON AS** the delay start equation is active, and it is active for the time period specified in “duration”.
- Only a DEL operator can exist for each equation

- If the DEL equation duration time is not specified, the equation will be active until the reset of the elements in the equation.
- The maximum value of the duration time is 10 minutes
- The maximum values of the delay time is 10 minutes.

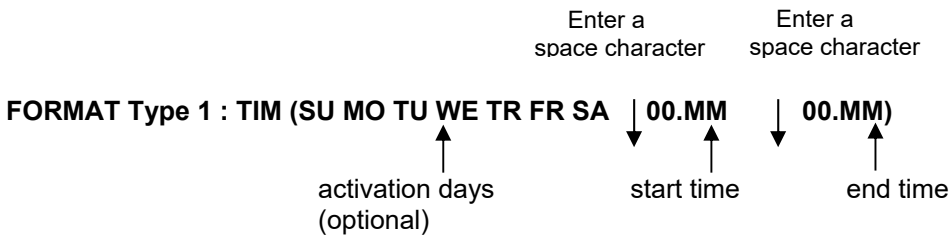
SDEL

The “SEDEL” operator is equal to the “DEL” operator, with the difference that, if during the delay time the equation is not true any longer, the timer continues to count and then it activates the output device. To re-set this timer perform an alarm or Fault reset.

TIM

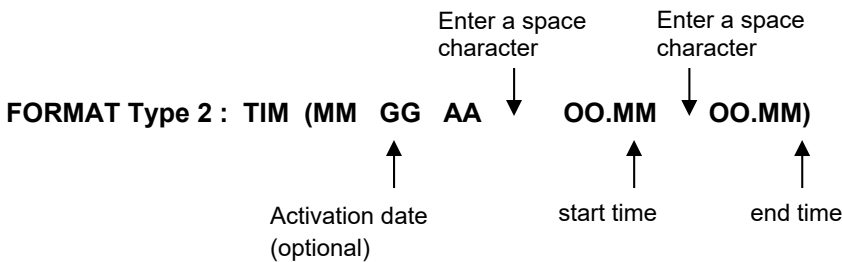
is the operator that allows to program output activations at periodic time intervals.

There can be two formats :



Where : 00 = hours, MM = minutes

This format allows to perform programmings weekly, for specific days of the week



Where : MM = month, GG = day, AA =year

This format allows to perform programmings yearly

Example: IF the G90 software group equation is : **TIM (SA SU 07.30 13.59)**
THEN the G90 group will be active on **Saturday** and **Sunday** from **07.30 a.m.** to **13.59**.

N.B.:

- If the day, month or year is not specified, the value assumes the meaning of “All days”. To not specify anything enter two signs “ – –” refer to the following example:
TIM (– – 07.30 13.59)
- The start time and end time values, use the 24 hour format (midnight = 00.00 ... 23.59)
- The value “00.MM” of end time **MUST** be higher than the value of the start time.
- The maximum value for start time and end time is 23:59

□ **Examples of programming:**

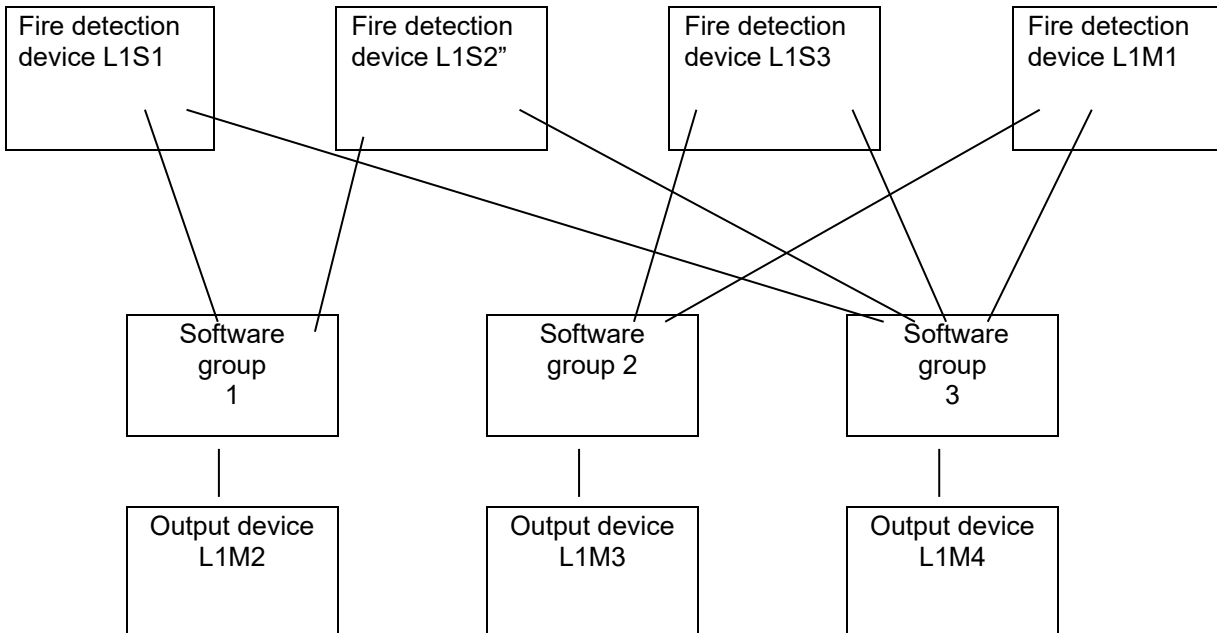
■ **OPTIONS**

The following example points out three ways to perform a simple programming, that is the output module activation as a response to an alarm on a detector (or any other alarm input device)

OPTION A	OPTION B	OPTION C
Fire detection device LOOP 1 - detector 1	Fire detection device LOOP 1 – detector 1	Fire detection device LOOP 1 - detector 1
Output device LOOP 1 – output module 1	Output device LOOP 1 – output module 1	Output device LOOP 1 – output module 1
Detector equation = (G1)	Detector equation =	Detector equation = (L1M1)
Module equation = (G1)	Module equation = (L1S1)	Module equation =

■ **GENERAL ALARM**

The following example shows a method of control unit programming for the general alarm.



The **L1M2** output module is associated with the group **G1** and will be activated in case of alarm on the **L1S1** and **L1S2** detectors.

The **L1M3** output module is associated with the group **G2** and will be activated in case of alarm on the **L1S3** detectors or on the **L1M1** input module.

The **L1M4** output module is used as a general alarm device; it will be activated in case of alarm on any fire detection device (detector or input module) of the system, because all fire detection devices are associated with the group **G3**.

Appendix B : Software Type ID for MODULES

TABLE-1	Input modules for CONTACTS	CBE Y/N
MON3	Input Module 3 Treshold EN54	Y
MON	Input Module 2 Treshold (NOT EN 54 compliant)	Y
PULL	Same as MON, but label "MANUAL Call Point".	Y
NONA	Input Module Non Alarm	Y
STAT	Input Module same as NONA, signal both status variation	Y
NCMN	Input Module for N.C. contacts	Y
MTRB	Input Module Tamper.	N
MACK	Input Module for remote ACK (pulse).	N
MTAC	Input Module for remote SILENCE (pulse).	N
MRES	Input Module for remote RESET (pulse).	N
SCON	Input Module conventional zone	Y

TABLE -2	Output Modules Supervised Output Advanced and VDS	CBE Y/N
CON	Output Module supervised	Y
CONV	Output Module supervised VDS	Y
FORC	Output Module – Relay output contacts free voltage.	Y
PWRC	Output Module FORC interrupts momentarily the power supply (used for reset conventional detectors)	N
GPND	Output Module FORC activated at each alarm / fault.	N
APND	Output Module FORC activated at each alarm.	N
GAC	Output Module FORC activated at each alarm.	N
GAS	Output Module CON activated at each alarm.	N
GASV	Same as GAS but with controlled VDS output	N
TPND	Output Module FORC activated at each fault.	N
GTC	Output Module FORC activated at each fault.	N
GTS	Output Module CON activated at each fault.	N
GTSV	Same as GTS but with controlled VDS output	N
TRS	Output Module FORC activated at each fault.	N
ZDIS	Output Module activated in case of exclusion of point or zone.	N
MAINF	Output Module (not supervised) activated for Power Failure.	N
MAINFC	Come MANIF, supervised	N
MAINFV	Come MANIF, ma con uscita supervisionata (EOL RES complies VdS)	N
REM	Output Module con contatti liberi da potenziale, comandabile solo da supervisione	N
REMC	Same as REM supervised	N
REMV	Same as REM , supervised (EOL RES complies VdS)	N
SND	Output Module which follows the status of the panel Sounder Output	N
ZFLT	Output Module FORC activated when the associated zone is in fault	N
ZFLTC	come ZFLT supervised	N
ZFLTV	come ZFLT supervised VdS	N

TABLE -2B	Output Modules Supervised Output Advanced and NOT VDS	CBE Y/N
CON	Output Module supervised Output	Y
FORC	Output Module relay with potential-free contacts.	Y
PWRC	Output Module FORC interrupts momentarily the power supply	N
GPND	Output Module FORC activated at every alarm / fault.	N
APND	Output Module FORC activated at every alarm.	N
GAC	Output Module FORC activated at every alarm.	N
GAS	Output Module CON activated at every alarm.	N
TPND	Output Module FORC activated at every fault..	N
GTC	Output Module FORC activated at every fault..	N
GTS	Output Module CON activated at every fault..	N
TRS	Output Module FORC activated at every fault..	N
ZDIS	Output Module activated in case of exclusion of point or zone.	N

MAINF	Output Module FORC (not supervised) activated for Power Failure	N
MAINFC	Same as MANIF, but with supervised Output	N
REM	Output Module FORC controllable only by external commands.	N
REMC	Same as REM but with supervised Output	N
SND	Output Module which follows the status of the panel Sounder	N
ZFLT	Output Module FORC activated when the associated zone is in fault	N
ZFLTC	come ZFLT but with controlled output in standard mode	N

TABLE -2C	Output Modules NOT Supervised Output Advanced	CBE Y/N
FORC	Output Module relay with potential-free contacts.	Y
PWRC	Output Module FORC interrupts momentarily the power supply	N
GPND	Output Module FORC activated at every alarm / fault.	N
APND	Output Module FORC activated at every alarm.	N
GAC	Output Module FORC activated at every alarm.	N
TPND	Output Module FORC activated at every fault.	N
GTC	Output Module FORC activated at every fault.	N
TRS	Output Module FORC activated at every fault.	N
ZDIS	Output Module activated in case of exclusion of point or zone.	N
MAINF	Output Module (not supervised) activated for Power Failure	N
REM	Output Module FORC controllable only by external commands	N
SND	Output Module which follows the status of the panel Sounder	N
ZFLT	Output Module FORC activated when the associated zone is in fault	N

TABLE -2D	Output Modules CLIP	CBE Y/N
CON	Output Module with supervised Output	Y
FORC	Output Module relay with potential-free contacts.	Y
PWRC	Output Module FORC interrupts momentarily the power supply	N
GPND	Output Module FORC activated at every alarm / fault..	N
APND	Output Module FORC activated at every alarm.	N
GAC	Output Module FORC activated at every alarm.	N
GAS	Output Module CON activated at every alarm.	N
TPND	Output Module FORC activated at every fault.	N
GTC	Output Module FORC activated at every fault.	N
GTS	Output Module CON activated at every fault.	N
TRS	Output Module FORC activated at every fault.	N
ZDIS	Output Module activated in case of exclusion of point or zone.	N
REM	Output Module FORC controllable only by external commands	N
REMC	Same as REM with supervised Output	N
SND	Output Module which follows the status of the panel Sounder	N
GSND	Addressable Sounder that can be Silenced	Y
GSTR	Addressable Strobe that can be Silenced	Y
STR	Addressable Strobe which follows the status of the panel Sounder	N

TABLE -2E	Output Modules NOT Supervised Output CLIP	CBE Y/N
FORC	Output Module relay with potential-free contacts.	Y
PWRC	Output Module FORC interrupts momentarily the power supply	N
GPND	Output Module FORC activated at every alarm / fault..	N
APND	Output Module FORC activated at every alarm.	N
GAC	Output Module FORC activated at every alarm.	N
TPND	Output Module FORC activated at every fault.	N
GTC	Output Module FORC activated at every fault.	N
TRS	Output Module FORC activated at every fault.	N
ZDIS	Output Module FORC activated in case of exclusion of point or zone.	N
REM	Output Module FORC controllable only by external commands	N
SND	Output Module which follows the status of the panel Sounder	N
GSND	Addressable Sounder that can be Silenced	Y
GSTR	Addressable Strobe that can be Silenced	Y

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