CONFIGURATION SOFTWARE

Revision control

Revision	Comment	Date
a	First edition. Software version (1.1.1 (June 2020))	16/06/2020

Conditions of use

Before installing and/or configuring the CAD-250 control panel, check that the criteria described below are met.

If these criteria are not met, the control panel may be damaged, problems may arise during system start-up or the functioning of the system may be adversely affected.

The CAD-250 control panel is certified to work under certain conditions; exceeding the working ranges of the control panel or inadequate conditions can lead to the warranty being voided.

CONTENTS

1. INTRODUCTION

1.1. DISCLAIMER

The manufacturer or distributors of this product cannot accept any responsibility for any misinterpretation of an instruction or guidance note or for full system compliance.

The manufacturer's policy is of continuous improvement, the manufacturer reserves the right to make changes to the product specifications at their discretion and without prior notice.

Incorrect assembly, improper installation, poor configuration of the unit or the state of the detection wiring are not the responsibility of the control panel manufacturer.

1.2. REQUIRED DOCUMENTATION AND DESIGN

For the correct and complete installation, start-up, installation and maintenance, consult the following information and the annexes they reference:

Document	Description
MI 372 es 2019	CAD-250 control panel Installation Manual
MU 376 es 2019	CAD-250 control panel User Manual
MC 380 es 2020	CAD-250 control panel Configuration Manual

As required, the procedures will be shown in one or more diagrams, depending on the complexity of the task.

Detnov pays special attention to the compatibility of the components and the integrity of the system in the long term; however, check any compatibility notes between versions to ensure the greatest reliability and the best user experience. Check that the manual version corresponds to the unit you are going to install.

The features, specifications and information related to the product described in this manual refer to the date of this document and may be modified due to system design, installation and configuration regulations and standards.

The most up-to-date information and the approvals for this are available on our website www.DETNOV.com.

1.3. EXPLICIT DEFINITIONS

The procedures described in this manual include warnings and cautions to advise the user to adopt methodical and safe working practices during installation, start-up and configuration.

Please heed the warnings in this manual, as incorrect use or improper configuration may lead to an unacceptable risk for people or property.

These warnings alert you to serious risks or precautions to consider when configuring the system, if the procedures, recommendations, regulatory references or advice for facilitating the assembly, connection or installation processes are not followed.

The definitions are classified according to the following levels:

Word	Definition
⚠ WARNING!	Risk of personal injury
⚠	Risk for the product and system
EN UNE ISO	Check according to the applicable regulations
📄	There is no risk and no observations or comments to facilitate the action
✗ (tools)	Go to the technical support service
✔	Recommended action
✗	Action not recommended or incorrect

1.4. ABOUT THIS MANUAL

The purpose of this manual is to describe the functionalities of the CAD-250 control panel configuration program, including all kinds of descriptions of the procedures and technical details necessary for implementing the configuration, as well as actions that can be carried out towards or from the control panel. This manual's purpose is not to provide the required minimum knowledge that the engineer must possess for designing a fire detection and alarm system.

For each step in the process, a detailed description is included with drawings, diagrams and charts, making these instructions easier to understand.

The accuracy of the contents of this manual is the most important aspect and on which all efforts have been focused; nevertheless, the manufacturer reserves the right to change the information without prior notice.

The manual includes all configurable aspects that allow the system to be adapted to any user requirement.

1.5. BEFORE GETTING STARTED

Please note that fire detection and alarm systems play an important role in protecting people and property. The design, installation, configuration and start-up require specific knowledge of the product and the design standards. There may be specific local rules and regulations.

For the detection system to be effective, the protected building's spaces must be organised and grouped so that both the detection of a potential fire and the warning are accurate and allow an immediate response. The speed of the response and with which action is taken is essential for safeguarding people and minimising damage to the facilities.

1.6. AREAS AND ZONES

The subdivision of the space protected by the system is organised into what we call zones. These zones are subdivisions, whereby one protection function is carried out independently of any other.

Their definition must take the building's layout into account, as well as any potential difficulties in searching or moving around the building. The differentiation between automatic and manual alarm signals, push-button or the varying risks between different parts of the building are reasons for subdividing the spaces into different zones.

The function may be automatic fire detection, the activation of an alarm signal or the activation of a fire protection signal.

Please also note the need to differentiate the type of alarm to be emitted, if there is a sequence and the potential limits in the event of a fault as determined by the applicable regulation.

There may be limitations in terms of the size of the zones.

> **EN UNE ISO** This organisation of the zone space is necessary for accurate detection, thus preventing an excess of information coming from the multiple points that make up the system. This distribution is usually a regulatory requirement, stipulated, for example, in the EN 54 standard and in the UNE 23307-14 design standard.

For complex systems, CAD-250 allows a subdivision level that is superior to the zone, the **AREAS**. For the CAD-250 system, the zones are spatial subdivisions restricted locally by a single panel, whereas the areas can break this restriction and constitute subdivisions on the control panel network level.
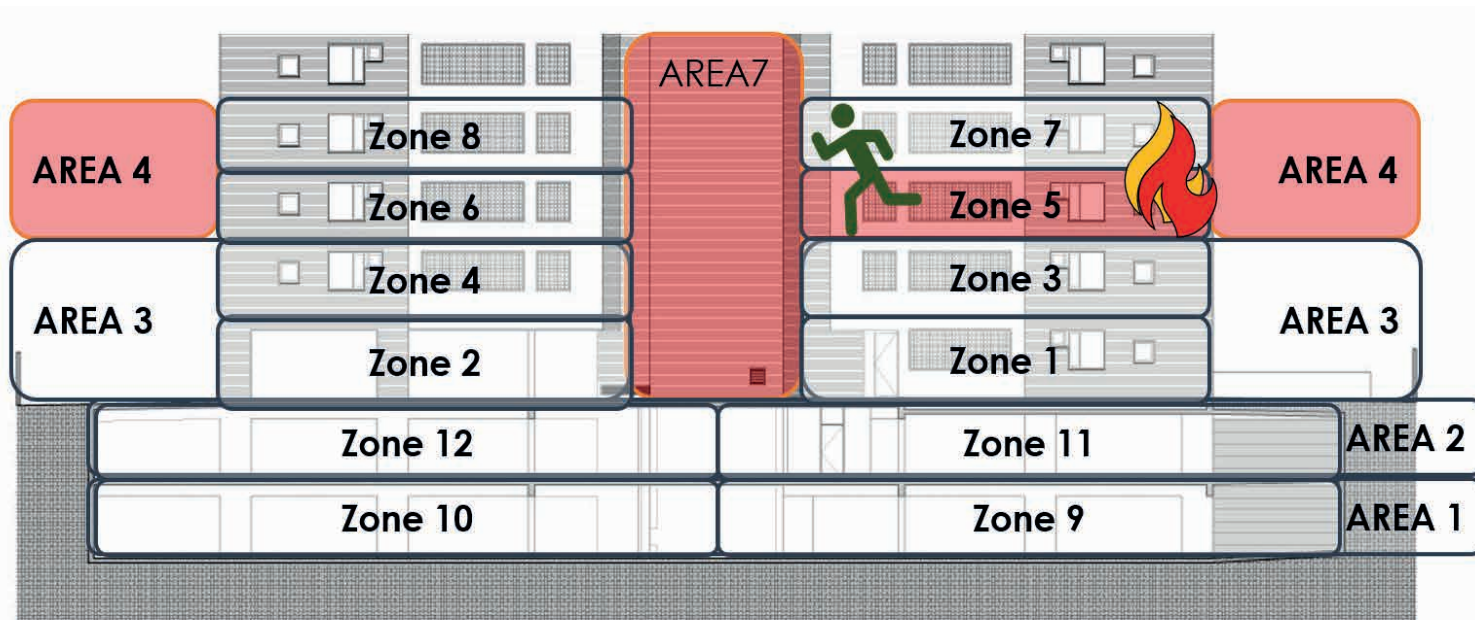
2. VESTA SYSTEM ARCHITECTURE.

VESTA is a powerful addressable fire detection and alarm system based on **CAD-250** control panels. This is an addressable control panel with advanced configuration and functional features, designed to work with **DETNOV** addressable sensors, modules and addressable push-buttons. Its modular design provides the user with an extremely powerful and completely flexible system.

2.1. LOOPS AND DEVICES

The automatic detection elements, manual detection elements, push-buttons, monitoring modules or output elements, such as sounders or control modules, are the devices that are connected to the CAD-250 control panels in a closed loop.

The control panel allows open loop operation, but the use of this topology, whereby a single incident in the transmission lines can lead to the loss of protection in quite large areas, is not recommended.

> The design and product or local standards in Europe require the use of closed loop systems. Check the requirements of your local regulations.

Each loop can support up to 250 different devices and 250 addresses.

Please note that some devices use more than one address. Go to **APPENDIX 1** at the end of the chapter to check the types of device available, the number of addresses they use in the loop and their consumption.

2.2. FIRE AND AUXILIARY INPUTS

The main purpose of the detection panel is to detect a potential fire. The panel features automatic detectors, alarm manual call points and monitoring modules configured for this task.

The purpose of certain monitoring modules is to monitor signals that are not directly related to detection. They are auxiliary signal control modules. It must be indicated on the control panel when a module is carrying out a fire monitoring function and when it is carrying out an auxiliary function.
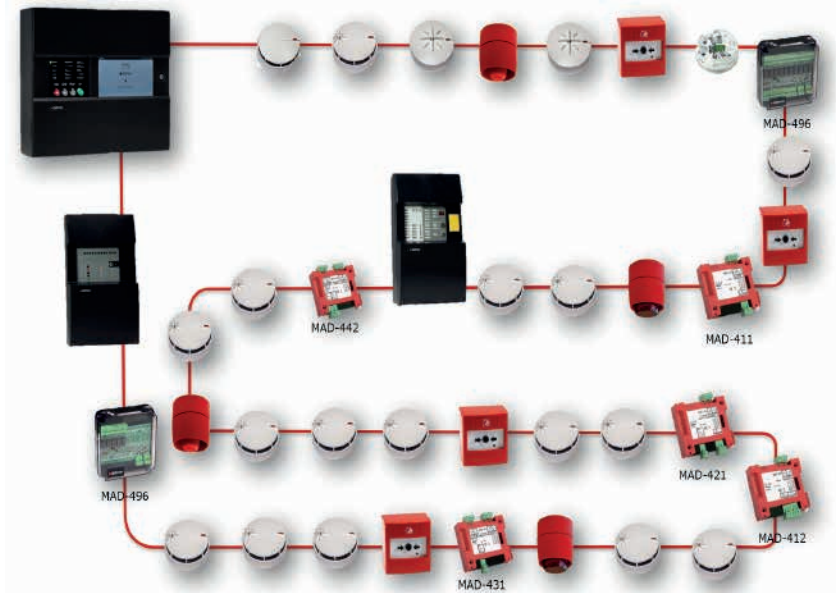
2.3. ALARM AND CONTROL OR MANOEUVRE OUTPUTS

If a hazard is detected or a control signal is received, the system will carry out predefined actions, either by default or the programming of conditioned manoeuvres.

These manoeuvres will act on the different output elements, whether they are sounders or control modules.

The system provides different tools for grouping inputs or outputs or associating manoeuvres, states and events, allowing the creation of the most demanding emergency plans.

2.4. PANEL

The modular design of the CAD-250 control panel allows up to 3 modular components to be combined in a single structure of up to 4 sections or cabinets.

This feature provides CAD-250 control panels with extraordinary versatility and power. As such, nodes or single control panels can be generated with a capacity of:

32 loops per node

8000 devices per node

2000 programmable zones per node

250 areas per system

1000 groups per system

1000 virtual modules per system

2500 special modes

100,000 manoeuvres

1,000,000 event logs

The panel typology to be used and the basic data of the facility must be configured.

2.5. NODES

The **VESTA** system allows a network architecture of up to 64 control panels that share events and manoeuvres.

In the configuration, the controller or master unit must be identified.
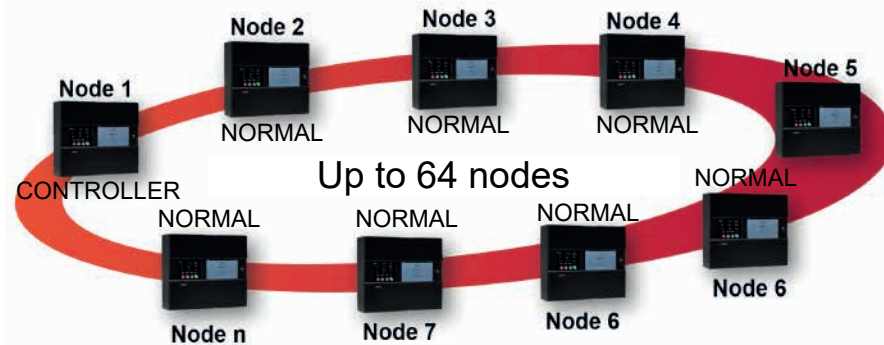
Item	Ref.	Description
A	CAD-250	Main cabinet with interface Expands up to + 8 loops The ref. does not include the loops
B	CAD-250-BLED	Cabinet with 250 dual LEDs for zones Expands up to + 8 loops The ref. does not include the loops
C	CAD-250B	Blind cabinet to expand up to + 8 loops The ref. does not include the loops
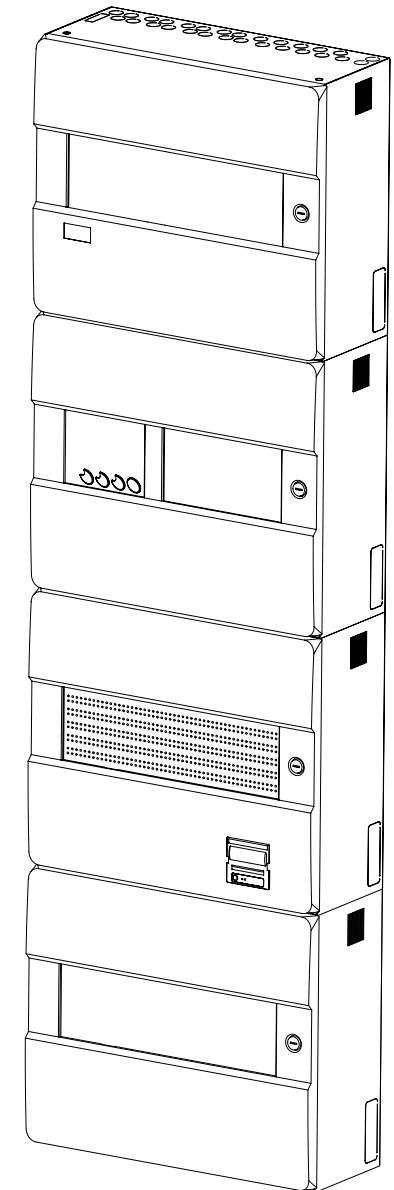
1 x CAD-250 +

1 x CAD-250LBLED +

2 x CAD-250 B

3.   REQUIREMENTS AND TOOLS

3.6. SYSTEM REQUIREMENTS

The configuration software for Vesta systems with CAD-250 control panels must be installed on a computer whose minimum requirements are equivalent to:

Operating system:

Windows 7 SP1 x64 or later

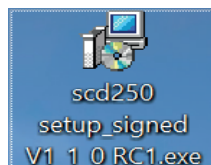Windows 10 v.1809 or later

USB port

Processor: 2.4 GHz Dual Core Processor

Memory: 2 GB RAM

Graphics card: 512 MB VRAM

Hard drive: 2 GB (x64)

scd250 setup_signed V1_1_0 RC1.exe

3.7. INSTALLATION PROCEDURE

Download the configuration software from the website www.detnov. com.

Go to the downloads area, if you are not already registered, you must create an account from the private area. Remember that if you have not registered, you will not be able to download the software.

• To install it, CLICK on the installer icon.

• The installer will ask you to specify the language.

• Press the **OK** button.

• Confirm whether you want to create a desktop shortcut and press **NEXT**.

• The progress bar will indicate that the program is being installed on your computer**.**

• Select whether you want to open the configuration program and press the **FINISH** button.

Private area

Downloads area
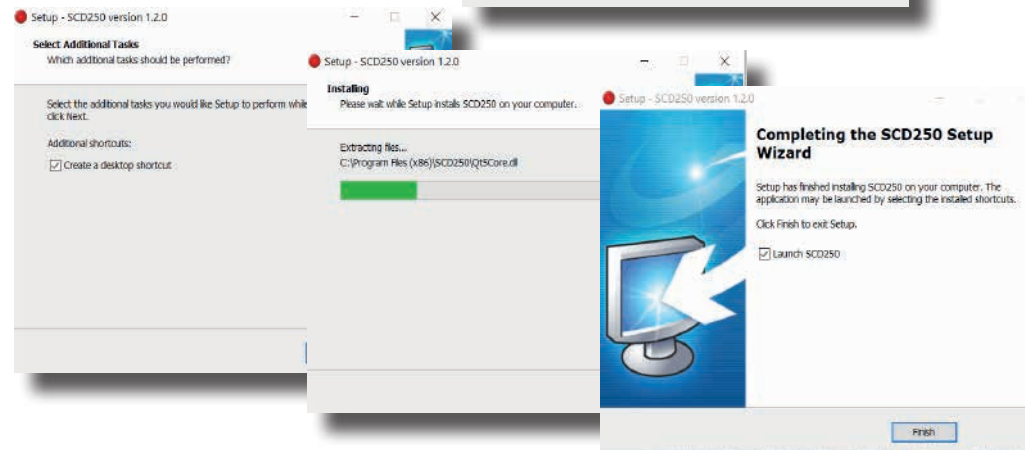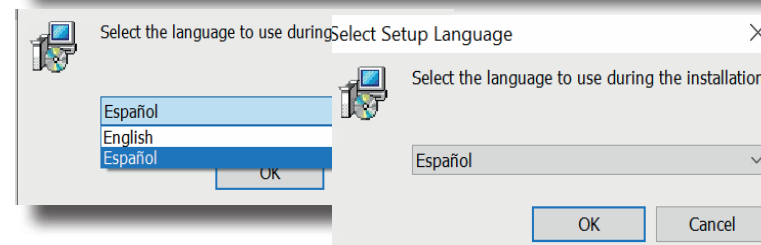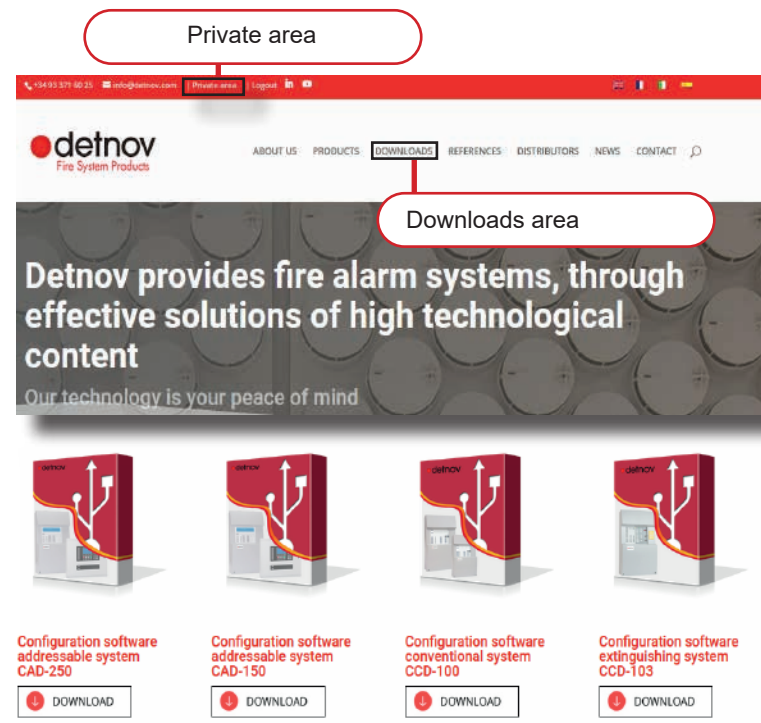
3.8. CONFIGURATION PROGRAM MENUS

To launch the application, CLICK on the shortcut the installer created on the desktop.

The program uses standard Windows methods for opening, closing or selecting elements.

The application displays 3 different areas in the initial window:

- **Menu bar.** It includes all the necessary initialisation functions.

- **Tool buttons**. Quick actions for managing the program.

- **Main configuration area**. The configurable elements are shown.

The initial window displays the following options on the menu bar:

- **Archive:** it includes submenus for managing the project file and exiting the application.

- **Tools:** it includes submenus for importing and exporting data or generating reports.

- **Options:** it lets you establish application usage parameters, such as recovering the default configuration, displaying a detailed view of the elements, language selection or enabling the log.

- **Help:** it displays the current version of the program.
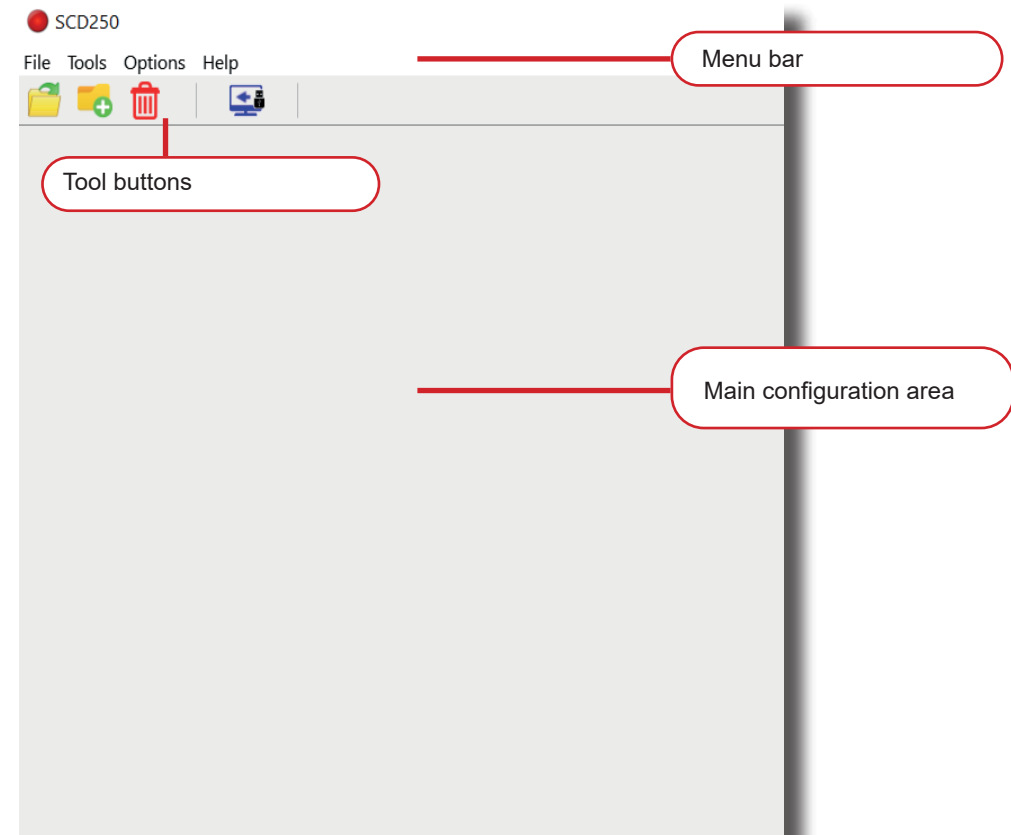
3.8.1. Project file management

From the *File* option on the toolbar, there are two options.

• **Facility.** It displays the main management sub-options.

• **Open.** This option lets you open an existing project. The project files have the format *.detnov.*

By selecting the project file, you will access the configuration window. This screen includes:

New tool buttons
System configuration tabs
System nodes
Secondary bar

• **New.** By selecting this option, the pop-up window will propose a location. Modify the location as required and define the name of the new project file. By default, a new project does not include any preconfigured nodes.

• **Close.** This option can only be selected if you have a project open. Close the current project.

• **Delete.** It deletes the current project. A confirmation message will appear for this action. **ARE YOU SURE YOU WANT TO DELETE** *nnnnn* **(NAME OF YOUR FILE)?**

• **Save as.** It lets you create a copy of the current project by reassigning the file name.

• **Export to USB.** It lets you generate a synchronisation file with the control panel. The project database is saved in the selected location in a folder with the format **CAD250.SYNC**. This database can be recovered on the control panel from the USB Type-C port on the main board.

The database contains the configuration information for each control panel, the event log and the map information.
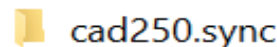
• **Import from USB.** It lets you recover a configuration generated by the control panel on a pen drive.

cad250.sync

Tool buttons

Configuration tabs

System nodes

Secondary bar
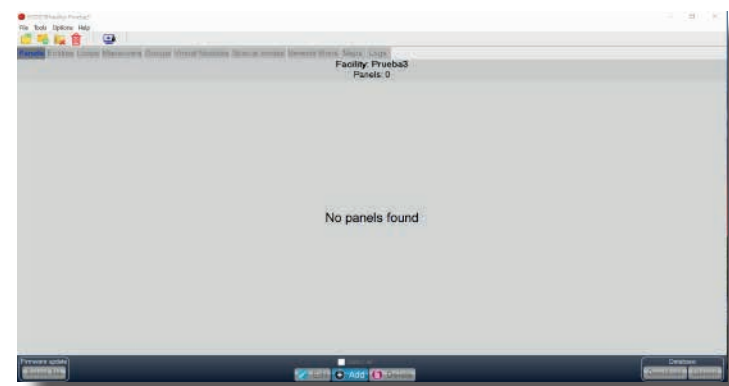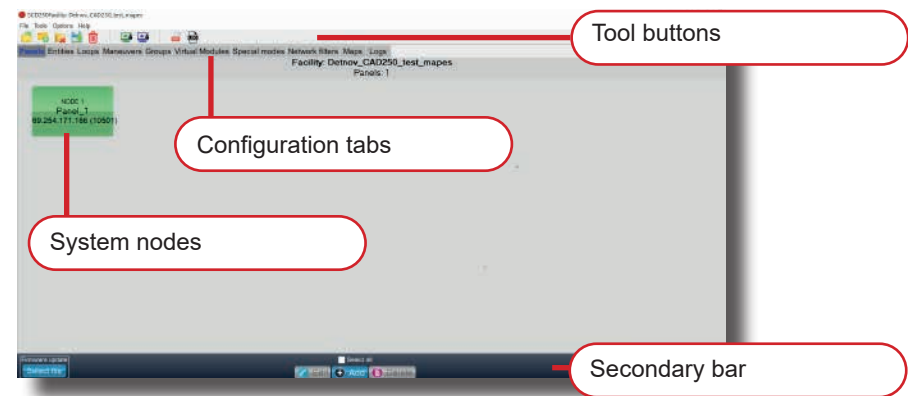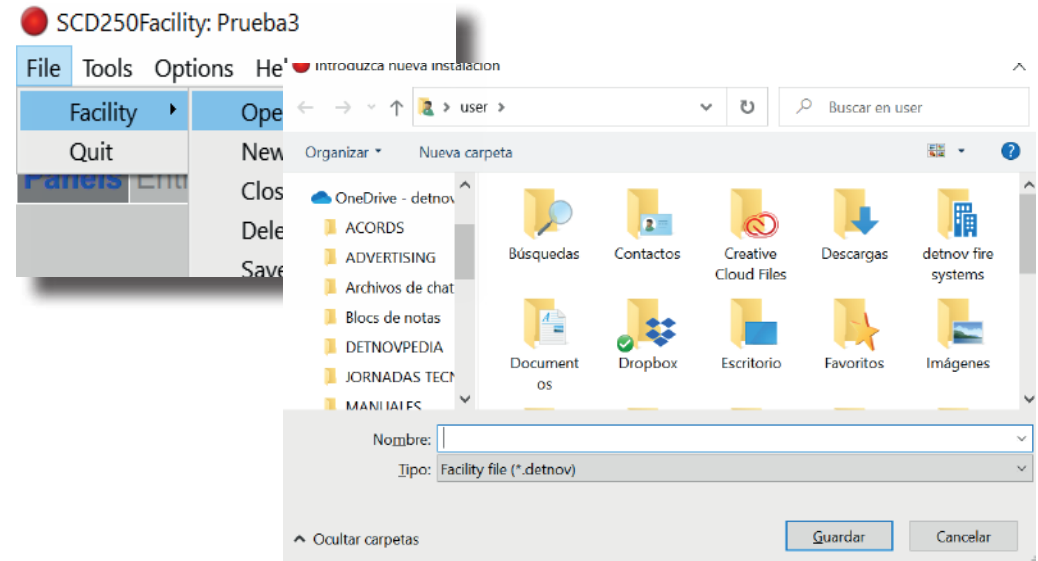
3.9. CONFIGURATION TABS

Once the first Node has been generated, the configuration tabs are arranged under the toolbar. These tabs are organised as distinct configuration sections or folders for the entire project, whether it has 1 or 64 nodes. They are as follows:

Panels. For the configuration of each node's characteristics, such as:

> Connection
> Contact data
> Network configuration
> Printer configuration
> Node size
> Special configurations

Entities. Configuration of areas, zones and devices.

Loops. Configuration of the panel and devices. It lets you obtain the current control panel configuration or upload a new one to it.

Manoeuvres. Configuration of relationships between events and actions.

**Groups.** Configuration of element associations for easier creation of manoeuvres.

Virtual modules. Configuration of button functions and dependency loops with actions.

Special modes. Configuration of element behaviour linked to a calendar and/or schedule.

Network filters. Configuration of the view modes for network events in each panel.

Logs. Review of the current control panel log.
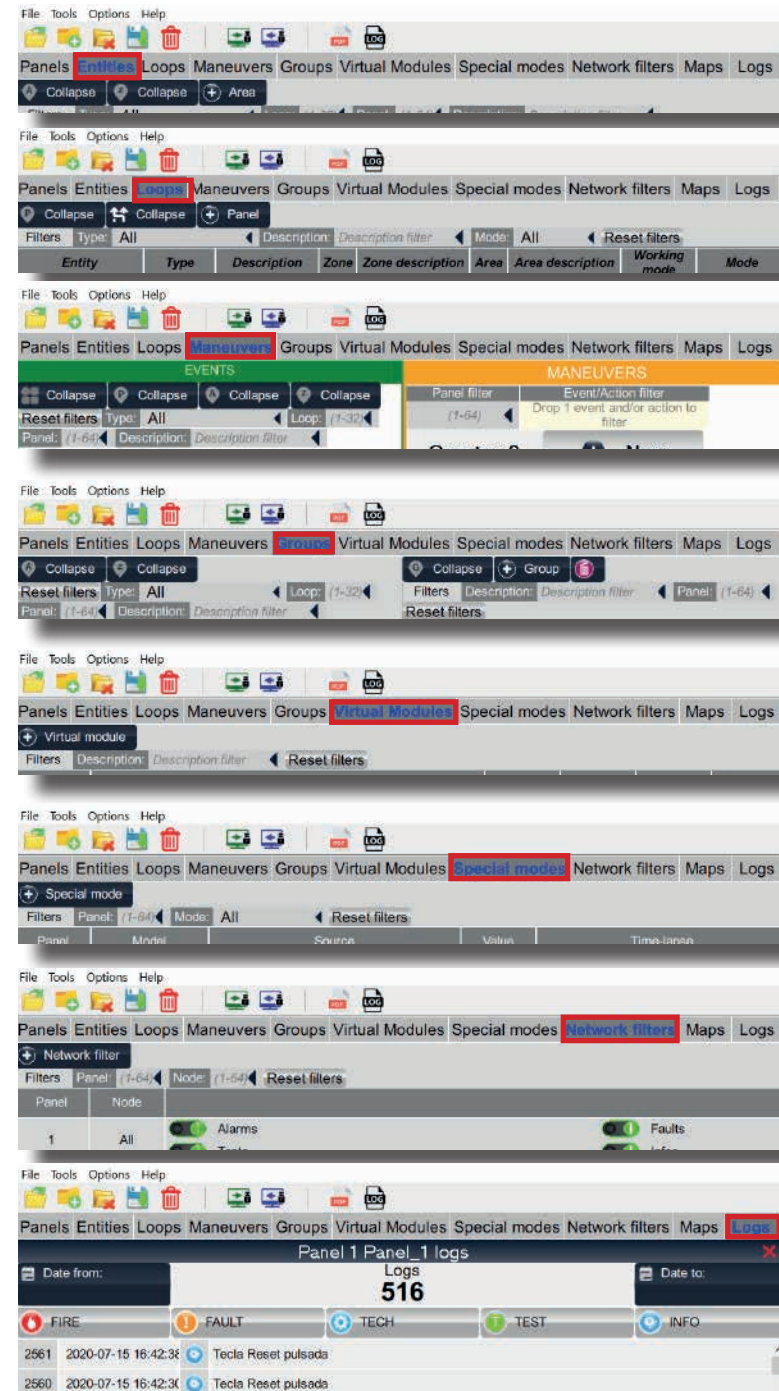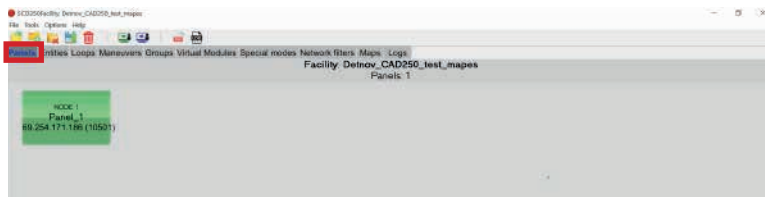
3.9.1. Tools

From the tools option on the menu bar, you can:

Import. Future option for incorporating configuration data directly from the control panel or an ***.XLS** file.

Export. It lets you export the event log as a ***.CSV** file.

By clicking on the Log to **CSV** option, an initial window lets you select the node logs that you want to export. Once you have selected the **NODES**, press **OK** to accept or **CANCEL** to discard.

Select the event log type to export from (allows the selection of various types of event or all events simultaneously):

    Alarm
    Fault
    Technical
    Test
    Information

Once you have selected the event types, press **OK** to accept or **CANCEL** to discard.

A Windows browser window will let you confirm or modify the destination location of the exported file.

Enter the name by which you will later recognise the exported file. The generated file will contain the following information:

    Panel ID
    Panel name
    ID
    Date
    Time
    Type
    Description
    Source
    Device type

Generate reports. This tool lets you generate a document in *.pdf format, which will contain all of the details of the project.

As already described for the export of the log file in **CSV** format, by clicking on the **GENERATE REPORT** option, an initial window lets you select the nodes for which you want to export the project information. Once you have selected the Nodes, press *OK* to accept or **CANCEL** to discard.

Select the type of information to export from the following sections:

    Panels
    Loops
    Entities
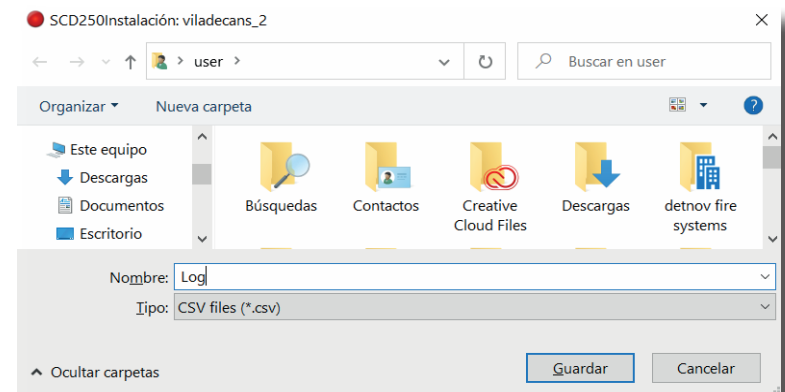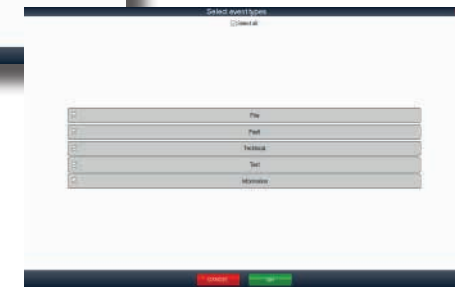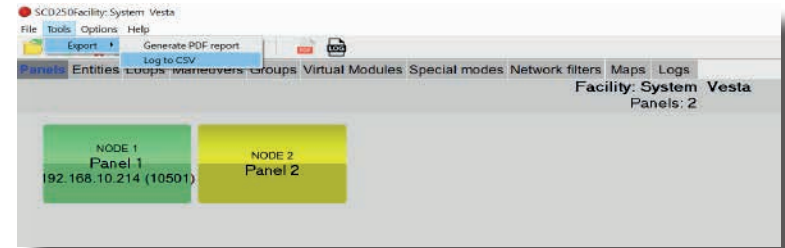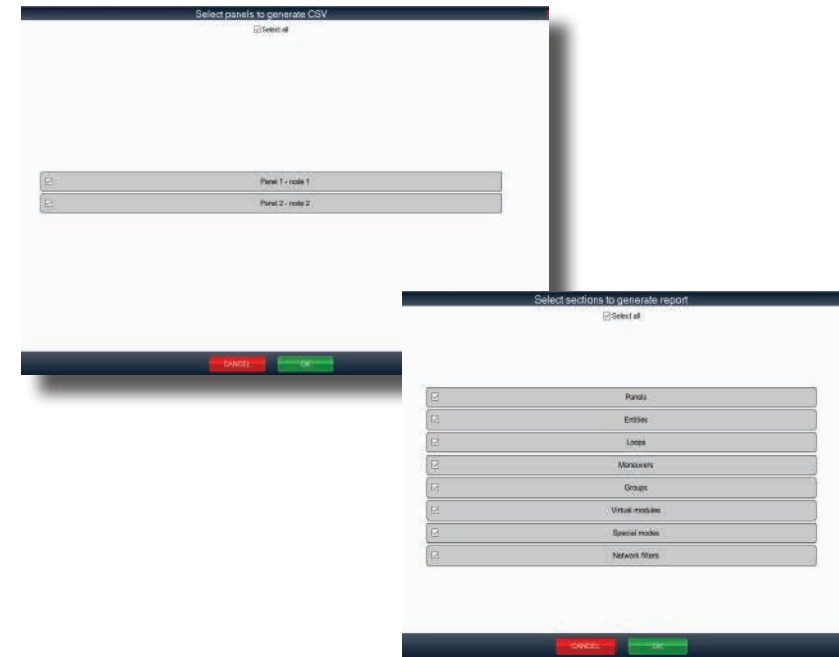   Virtual modules
    Groups
    Manoeuvres
    Special modes

Once you have selected the information to export, press **OK** to accept or **CANCEL** to discard.

A Windows browser window will let you confirm or modify the destination location of the exported file.

3.9.2. Options

From Options on the menu bar, you can set the following elements:

Default values: set all configuration program options to their default condition, i.e. the basic configuration with which the program is supplied.

View. Select the advanced view option for more detailed information on the entities to be configured.

Language. It lets you change the application's language.

Log. It lets you enable the application's event log or delete the entire log.
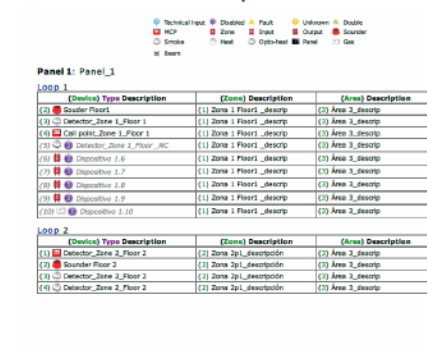
3.9.3. Help

Selecting the About field from the help option will provide information on the installed program's version.

3.10. TOOL BUTTONS

The tool buttons facilitate access to common actions in an intuitive way.
Each button corresponds to actions included on the menu bar.

About ✕

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Copyrigth 2020 - Detnov

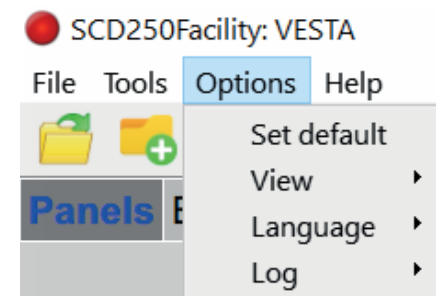|			
	It lets you open an existing project. The project files have the format ***.DETNOV.**		It lets you generate a database file for uploading to the control panel. It is equivalent to the new option on the **TOOLBAR > EXPORT TO USB**
	It creates a new project. It is equivalent to the new option on the **TOOLBAR > FILE**		It lets you upload a database file generated from the control panel. It is equivalent to the new option on the **TOOLBAR > IMPORT FROM USB**
	It closes the current project. It is equivalent to the new option on the **TOOLBAR > CLOSE**		It can generate a document in ***.PDF** format containing all of the details of the project. It is equivalent to the new option on the **TOOLBAR > GENERATE REPORT**
	It lets you save the current project. It is equivalent to the new option on the **TOOLBAR > SAVE AS**		It lets you export the event log as a ***.CSV** file. It is equivalent to the new option on the **TOOLBAR > EXPORT > LOG TO CSV**
	It lets you delete the current project. It is equivalent to the new option on the **TOOLBAR > DELETE**		

3.11.CONNECTION TO THE CONTROL PANEL

You can configure or recover the control panel's databases from the control panel via the USB procedure that is explained in the Configuration Manual for the control panel or by connecting the control panel directly to a PC that has the configuration software installed.

There are two ways of connecting to the control panel from your PC.

- **RJ45 port** for Ethernet connection on the main board. Located next to the CPU card and the fan.
- **USB** Type-B port, to the right of the Ethernet port and next to the piezoelectric buzzer, also on the main board of the control panel.

Disconnect the J7 jumper to cancel the earth leakage fault detection for the time it remains connected to the control panel via the USB port.

Once you have downloaded or uploaded the control panel database or updated the firmware, replace the earth leakage fault detection jumper.

USB Type-B port

Ethernet port
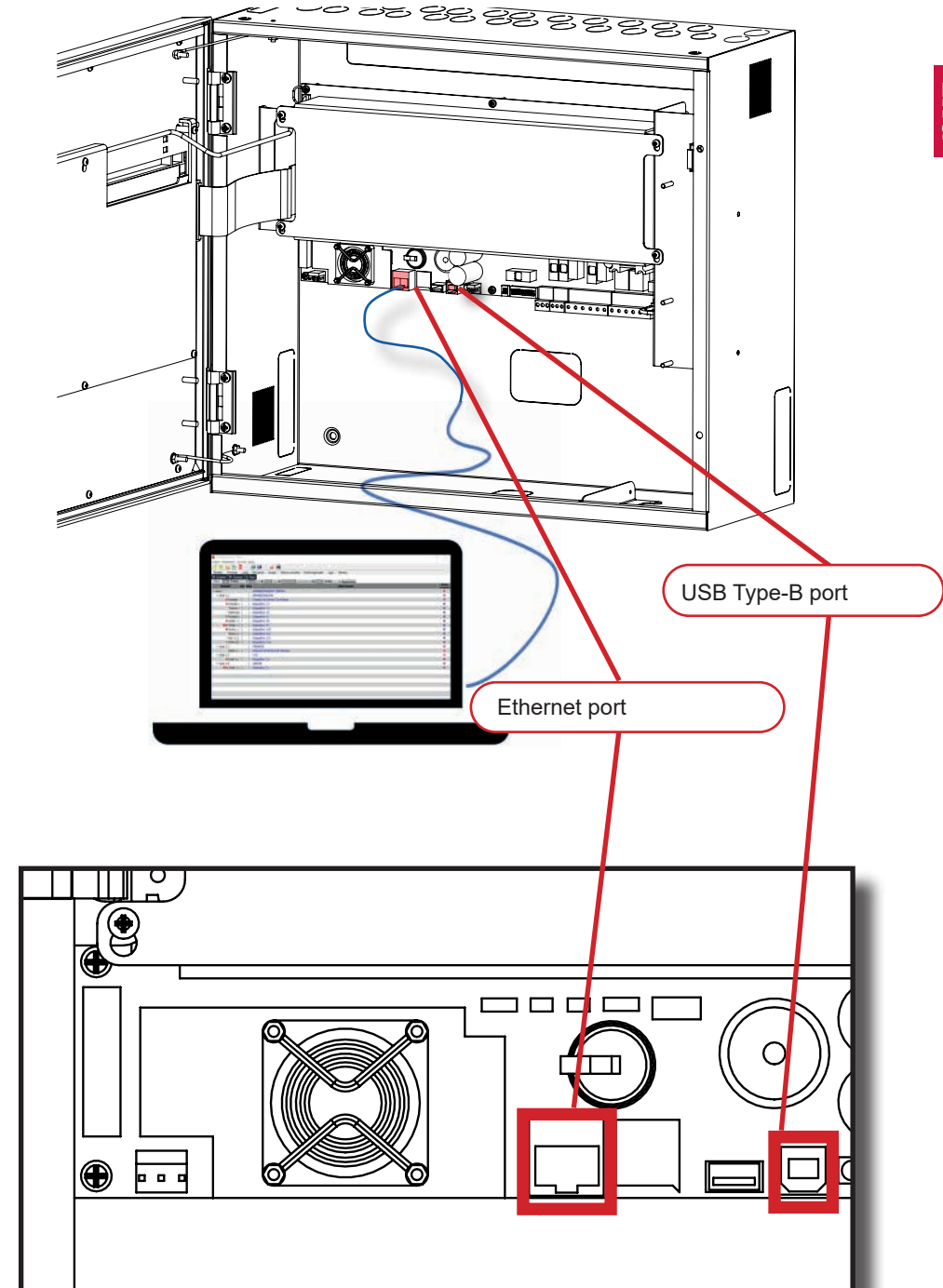
3.11.1. Port configuration

Please note that in order to establish the communication between the PC and the control panel, certain settings must be implemented on the PC and the control panel.

To do so, first create a project (see 3.8.1 and 3.9) or press [icon] create project.

Press [Add], **ADD** on the secondary bar.

The new window is shown selected in the first configuration tab, with the **PANELS** tab highlighted.

In the left margin, you will see the various general configuration options for the panel. In this menu, the **CONNECTION** configuration option appears selected by default. The fields to be configured are in the top part of the configuration area.

Node: The node number must match the number assigned on the control panel. See the Configuration Manual for the control panel.

Description: Assign a name to the panel.

Connection type: Select whether you want the connection to be via TCP/IP or serial USB port.

TCP/IP: by selecting this option, the following fields will be available:

• **IP address**. Enter the address assigned to the control panel. The address must be in the network domain. **SETTINGS MENU** > **CONNECTIVITY** on the control panel.

• **Port.**

• **Password:** It must be the same as the one assigned to the control panel. See the Configuration Manual for the control panel. **SETTINGS MENU** > **CONNECTIVITY** on the control panel. By default *detnov*.

Serial USB: modify the connection type to serial USB. You must have the control panel connected to your computer, as described previously.

The program must show the available port automatically as a virtual serial port (COM port).

Connection configuration

Panel options

Port found   Search button
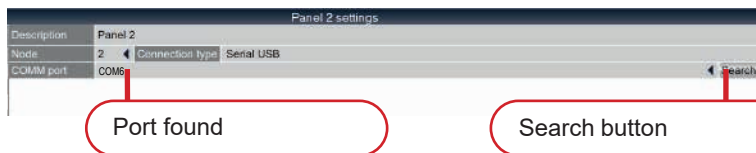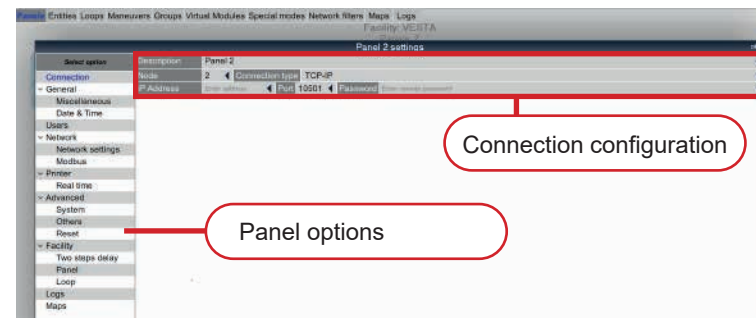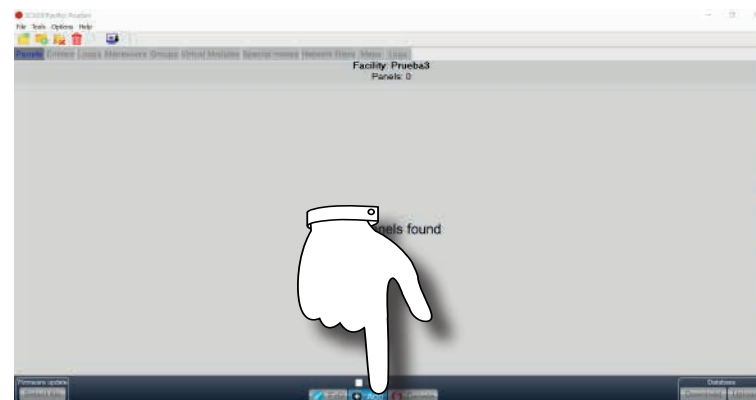
4. PANEL CONFIGURATION

By creating or opening a new project, as described in SECTION 3.8.1, you can add nodes (control panels) to the system.

If you have already created the **NODE**, it will appear in the main configuration area.

On the main configuration screen, the system configuration tabs will be available.

If the Node has not been selected for editing, it will be shown as yellow. When you select it, it will be highlighted in blue.

To delete the **NODE**, press [🗑 Delete], **DELETE** on the secondary bar.

The **SELECT ALL** option lets you apply the **DELETE** action to all **NODES** simultaneously.

Press the [✏ Edit], **EDIT** button on the secondary bar.
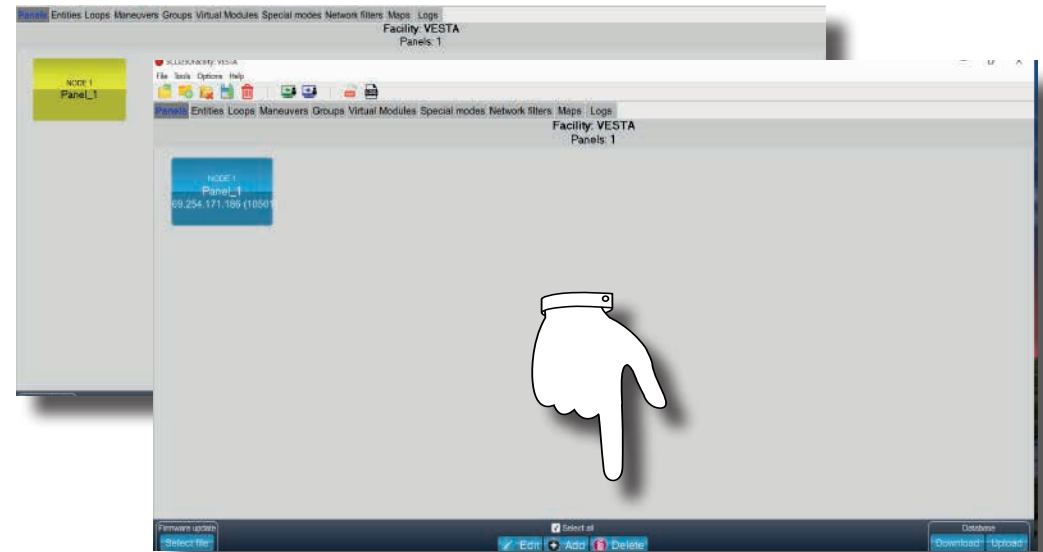
4.12. Firmware update

From the secondary bar, you have the option of updating the control panel's firmware.

Press the **SELECT FILE** button. The Windows window will let you change the location where the update package has been saved, by default the user folder in Windows 10.

Select the update package in ***.ZIP** format supplied by the manufacturer and press **OPEN**.

After loading the firmware package, the Update firmware button will show the **UPDATE** tag. By pressing it, a new confirmation message will appear, press **NO** to discard or press **YES** to confirm and the firmware transfer process will begin.

The **SELECT ALL** option lets you apply the **UPDATE** firmware action to all **NODES**.

📄 This will only be possible if you have the connection gateway suitably configured with each control panel in TCP/IP and all are in the same domain. If the connection is not available, you will receive an error message.
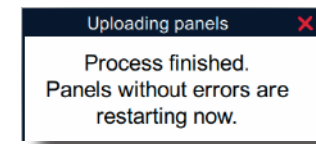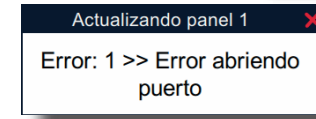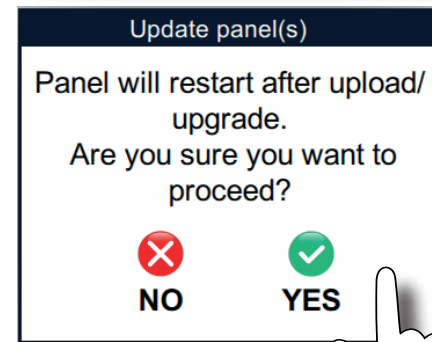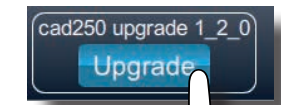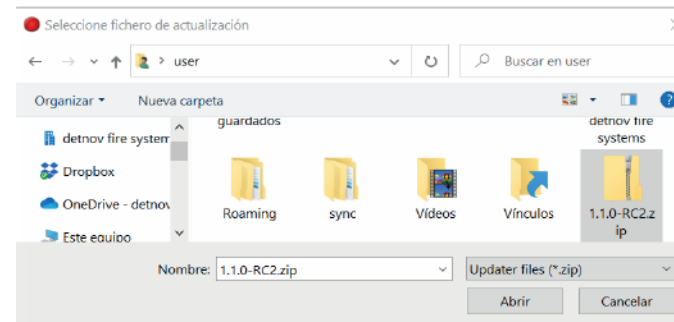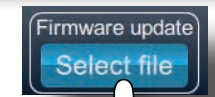
4.13. Uploading and downloading configurations

From the secondary bar, you have the option of downloading (recovering) the control panel's current configuration and of uploading the configuration generated or modified in the SCD-250 configuration program.

To recover the control panel's configuration, once you have selected the Node or Nodes, press the **DOWNLOAD** button from the **DATABASE** option in the secondary menu.

To transfer the configuration to the control panel, once you have selected the node or nodes, press the **UPLOAD** button from the **DATABASE** option in the secondary menu.

By pressing it, a new confirmation message will appear, press **NO** to discard or press **YES** to confirm and the firmware transfer process will begin.

The **SELECT ALL** option lets you apply the **DOWNLOAD** *or* **UPLOAD** action to the configuration database for each selected **NODE**.

> 📄 This will only be possible if you have the connection gateway suitably configured with each control panel in TCP/IP and all are in the same domain. If the connection is not available, you will receive an error message.
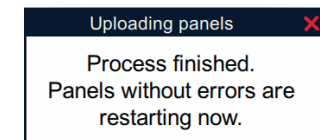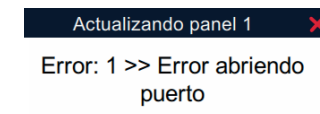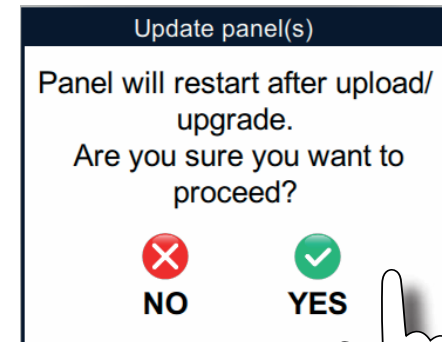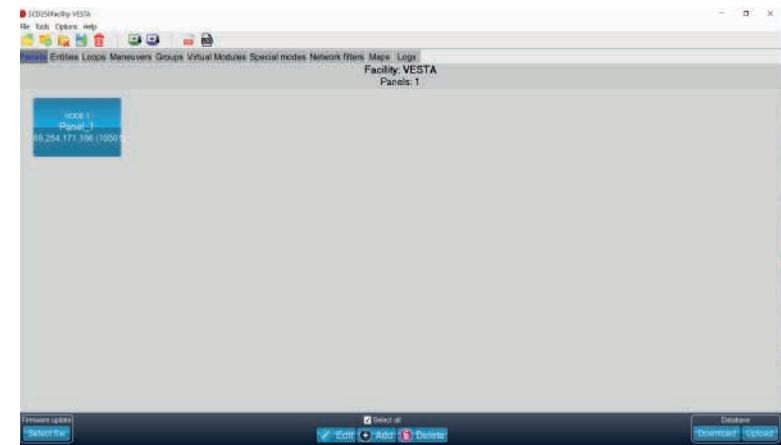
4.14. GENERAL

Select the Node to be configured.

Press the [✏ Edit], **EDIT** button on the secondary bar.

The panel configuration menu options are as follows:

4.14.1.   Maintainer/installer information

From the **MISCELLANEOUS** option, you can modify the following fields:
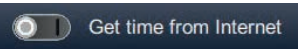
Contact phone: Enter the telephone number that will be shown in the event manager if any faults occur.

Installer description: Enter the details of the installation or maintenance company that will provide the service or support. These details will be shown in the event manager when faults occur. It accepts up to 60 characters.

4.14.2.   Date and time

This section defines the time and date of the control panel, which will be used when manoeuvres are programmed.

To modify each field, just touch the required field and slide the field's scroll wheel until the required value is reached.

The time can be updated automatically by activating the [◯ Get time from Internet] , **UPDATE TIME FROM INTERNET** option.

📄 The system must be connected via the RJ45 port to an Ethernet network with Internet access.

To synchronise it, modify the **UPDATE TIME FROM INTERNET** option.

[◯ Get time from Internet]
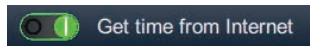
📄 Until you confirm all of the changes by pressing OK in the right-hand corner of the top margin on the configuration screen, the data will not be saved in the Node.
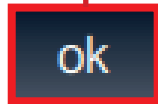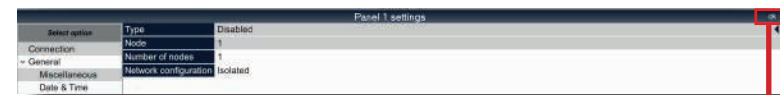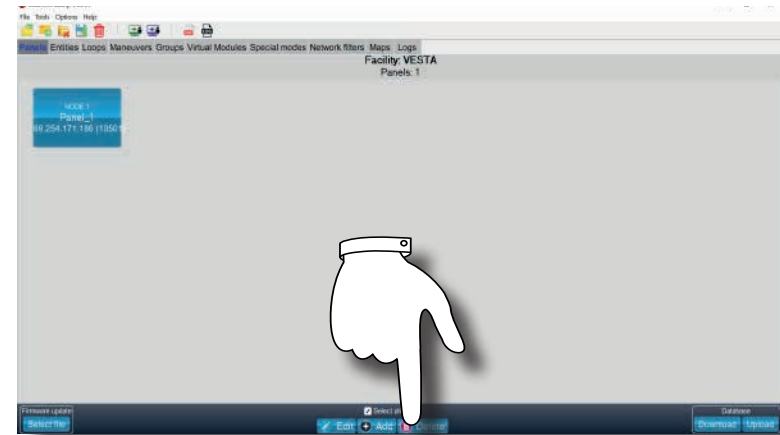
4.14.3. Configuration of users and permissions

This option lets you configure access permissions for staff, users or those responsible for system maintenance. CAD control panels let you configure two permission levels, which are as follows:

- **User permission.** It corresponds to Level 2 as described in the EN54-2 standard.
- **Installer permission**. It corresponds to Level 3 as described in the EN54-2 standard.

To add a new permission, press the Add button in the secondary menu. Complete the **USER DESCRIPTION**, **PASSWORD** (it must be unique) and the **LEVEL** of access granted to the user, either **USER** or **INSTALLER**.

To modify an access, select the corresponding ID and press the _____, **EDIT** button.

To delete an access, select the corresponding ID and press the _____, **DELETE** button.

The system accessibility has 4 access levels:

Access level 1: this access level does not require permissions. It lets you access:

- The events view
- Control functions, such as: control panel acoustic silencer, sounder silencer, sounder activation, reset.
- Pinned button functions
- Special modes configured

Access level 2: or user access provides access to:

- Entity disablement
- Event log review with various filter options
- Review of general data from the system settings menu, such as the panel tag, contact phone, installation company or language.
- Date setting
- Version review
- Printer setting
- Performing the LED and indicator test
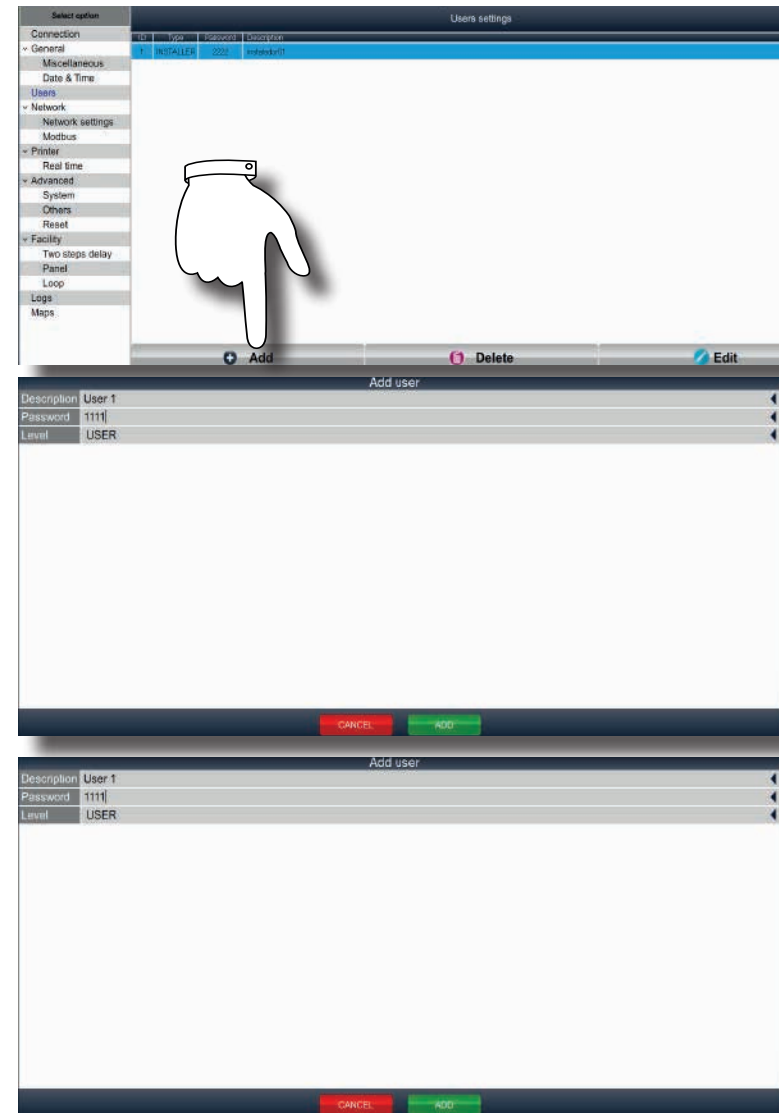
Access level 3: or installer and configuration access lets you carry out all system configuration actions or diagnosis actions.

Access level 4: it is defined by the setting actions that require the opening of the control panel, such as configuration with PC or PEN DRIVE or TOTEM configuration.

For more information on the ACCESS LEVELS, see also the INSTALLATION and CONFIGURATION SOFTWARE MANUALS for PC.

4.15. NETWORK CONFIGURATION

Configure the network architecture here. This menu has the following configuration or information fields:

Type: it has 3 configuration options.

Disabled, when it is not a network node.

• **Normal**, when it is defined as a network node but it is not the main unit.

Controller, when it is the main node from which the complete recognition of the network will be done.

Node: it is the node number assigned to the panel or booster.

Number of nodes: it is the number of nodes in the network. It is 1 by default and until the network has been synchronised.

Network configuration: always isolated if a synchronisation has not been carried out from the controller panel.

Node synchronisation: once all control panels have been assigned their network configuration and the configuration has been transferred to each control panel, go to the control panel programmed as **CONTROLLER** and access the network configuration screen.

Press the **SEARCH FOR NODES** button to start the search.

If the control panel does not have a network card, it will show the message **NODE INFORMATION NOT AVAILABLE**. If the controller control panel has a network card but it does not identify any other network nodes, it will show:

Number of nodes: 1

Configuration: isolated.

Once the search is complete, the control panel will show the number of nodes found and the **NETWORK** configuration type.

Recover the new configuration for each control panel (see SECTION 4.12).
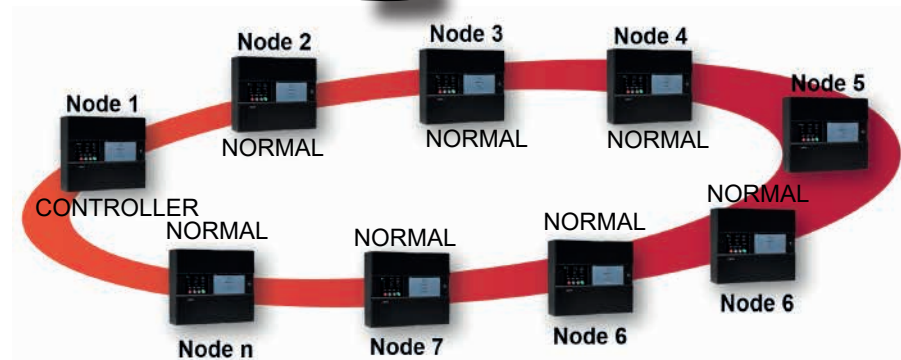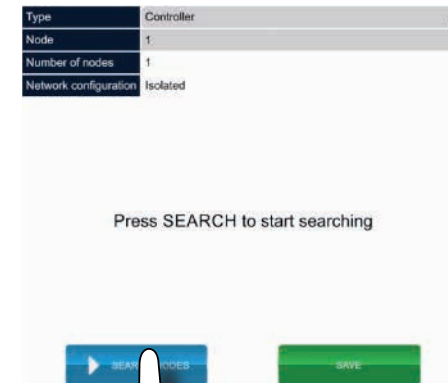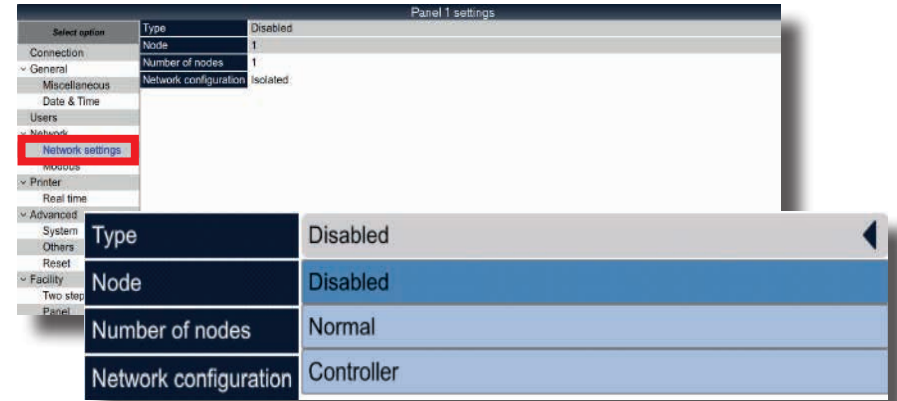
4.15.1. Modbus

Modbus is a request-response protocol implemented using a master-slave relationship. The communication always occurs in pairs, one device must initiate a request and then wait for a response, and the initiating device (the master) is responsible for initiating each interaction. Typically, the master is a SCADA system interface and the slave is the fire control panel. The content of these requests and responses, and the network layers across which these messages are sent, are defined by the different layers of the protocol.

From version 1.1.1, CAD-250 control panels have featured the ModBus integration protocol as standard.

The integration of the CAD-250 control panel via Modbus IP gives the integrator information on:

- General information logs
- Panel information logs
- Loop status information logs
- Loop status information logs
- Network information logs
- Status/mode of the zones
- Status/mode of the points
- Addressable values of the points
- Zone information and element type
- Activation and deactivation of elements
- Enabling and disabling elements
- Enabling and disabling zones or areas, or putting them in Test mode

From the Modbus option, you can activate the integration protocol. By enabling the protocol, you can configure the following fields:

Address: 1 by default.

Type: TCP/IP.

Port: 502 by default.

4.15.2. Network filters

From this submenu, filter the information you want to view for the remaining network nodes in the current panel. Networked systems move a lot of information and it may not always be convenient, practical or even useful to try to show all the information for all control panels that make up the system.

Event type view filters can be applied to all system nodes or selectively.

To configure the network filters, select the Network filters tab on the main configuration screen. By default, the control panel has slider buttons for general filters that you can activate for each node. These filters only apply to the control panel you are currently configuring and only affect the view. To filter the information, move the slider button to the left and it will change to red. From then on, that type of event will not be shown on the control panel screen.

The event information is always propagated via the network and on each control panel, it is possible to choose whether or not to show certain information.

1. If you need to create filters for specific control panels, add the filter for the required control panel by pressing the **+ NETWORK FILTER** button.

2. The pop-up screen lets you select the panel you want to apply the selective filter to.

3. Then, in a new window, select the node you want to apply the filters to.

For example, if you select Panel 1 and Node 2, the applied filters will have an effect on panel 1. As a result, the filtered events from panel (node) 2 will not be displayed on your screen.

If you enter a number that has already been assigned, the system will return the message **ERROR: LOCAL NODE OR ALREADY INSERTED**.

Error: local node or already inserted.

4. To delete a filter, select it and press the **DELETE** button. In the example, filters were applied to a networked system with 2 nodes.
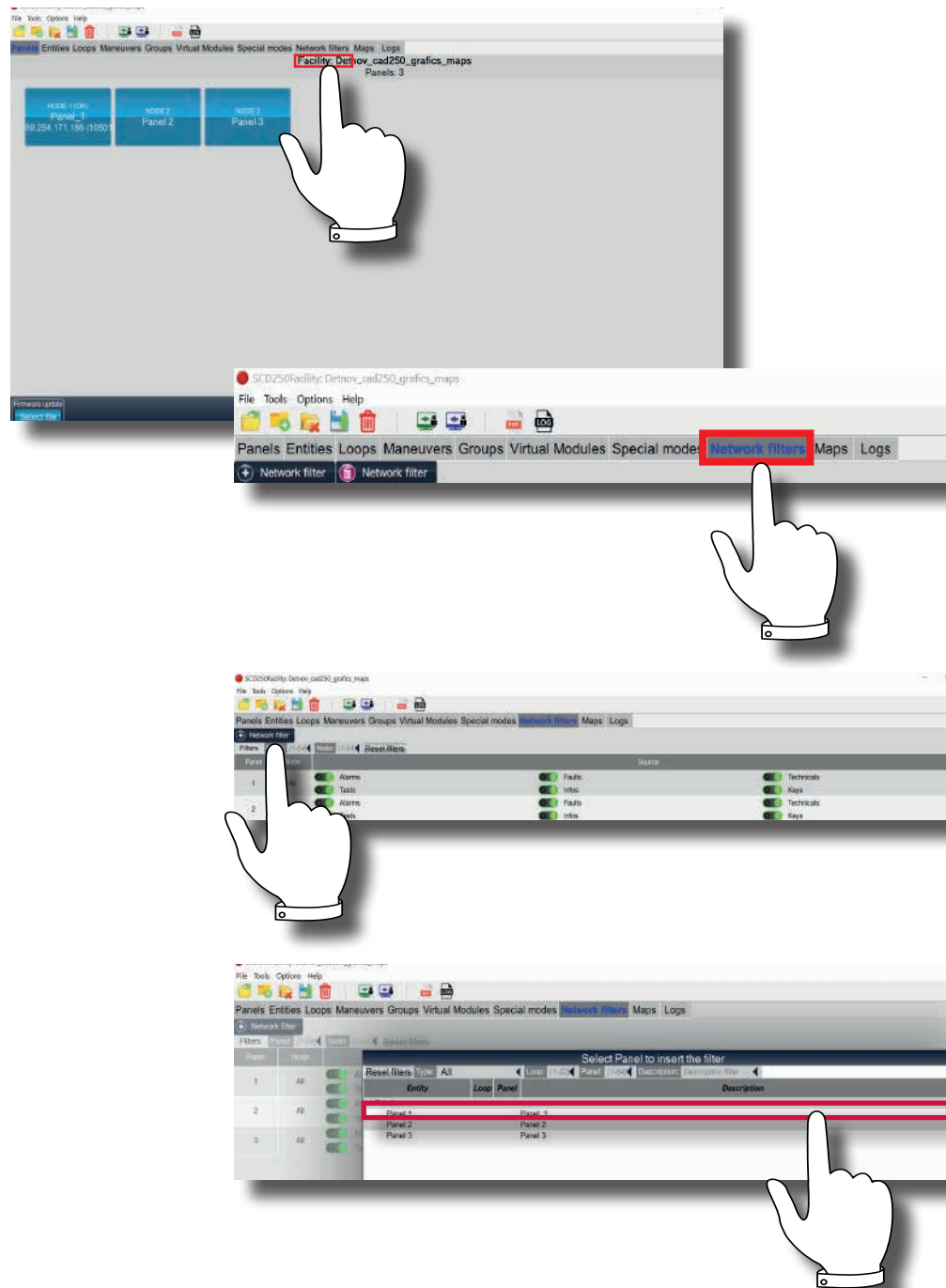
The table shows how the system will interpret the configuration.

If you have a large network of control panels and the number of filters is high, it may be difficult to work with and modify them.

You can apply list filters that will let you focus on the panels and nodes of interest to you. The list filters are as follows:

Panel: select the panel number where the network filter is applied. It lets you include a value of 1 to 64, number of panels that does not exist in the programming will result in an empty list.

Node: select the node for which you have filtered the event view. It lets you include a value of 1 to 64. If the node does not exist, it will produce an empty list.

The filters that are determined for more specific levels take precedence over higher level filters, i.e.:

If the general filter lets you view the alarms for all nodes and the specific filter indicates that the alarms for node 2 should not be displayed, then the alarms for node 2 will not be displayed, but the alarms for the remaining nodes will be.

Filter	Panel	Node	Colour	Definition
ALARM	1	All	Green	The Node 2 alarms are not shown
ALARM	1	2	Red	

Filter	Panel	Node	Colour	Definition
ALARM	1	All	Red	Only the Node 2 alarms are shown
ALARM	1	2	Green	

Reset filters: by pressing this button, all filters entered as previously described will be deleted.

When you select a filter line, it will be highlighted in blue. If you press the **Network filter bin** button, this filter line will be deleted from the configuration.

List filters
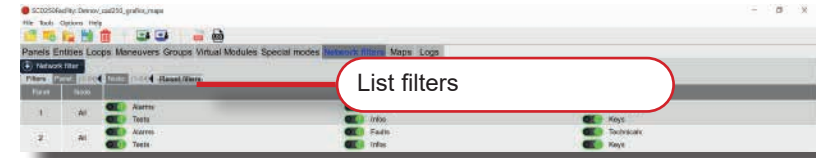
Filter	Panel	Node	Colour	Definition
ALARM	1	All	Green	It shows the alarms of the 2 panels in panel 1
FAULT	1	All	Green	It shows the faults of the 2 panels in panel 1
TECHNICAL	1	All	Green	It shows the technical events of the 2 panels in panel 1
TEST	1	All	Green	It shows the tests of the 2 panels in panel 1
INFO	1	All	Green	It shows the information of the 2 panels in panel 1
KEYS	1	All	Green	It shows the control actions of the 2 panels in panel 1

Filter	Panel	Node	Colour	Definition
ALARM	1	2	Green	It shows the panel 2 alarms in panel 1
FAULT	1	2	Green	It shows the panel 2 faults in panel 1
TECHNICAL	1	2	Red	It does not show the panel 2 technical events in panel 1
TEST	1	2	Red	It does NOT show the panel 2 tests in panel 1
INFO	1	2	Red	It does NOT show the panel 2 information in panel 1
KEYS	1	2	Red	It does NOT show panel 2 control actions in panel 1

4.16. PRINTER CONFIGURATION

The CAD 250-P control panel version includes a thermal printer, so you can enable printable events.

The printer configuration menu shows a series of parameters that can be activated via selectors.

To activate the event output by the printer, press **ENABLED.** The selector for enabling printing activates the event output by the printer.

The printable information is divided into two columns:

Event type selectors let you choose whether to print all system events, **ENABLE** selector, or just the events of the panel you are configuring, **LOCAL ONLY** selector.
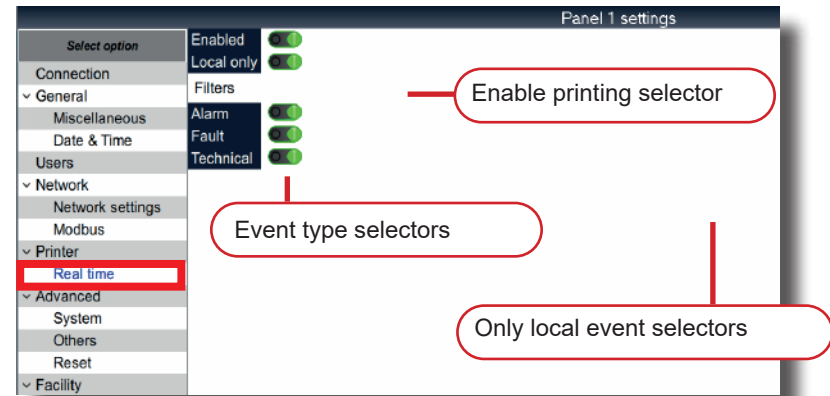
4.16.1. System configuration (advanced and default)

In this section, you can set basic configuration parameters for the control panel, as well as engineer settings to facilitate start-up and configuration tasks.

There are 3 configuration tabs on this level, **SYSTEM**, **OTHERS** and **RESET**.

In the **SYSTEM** tab, you can confirm key characteristics, such as the number of cabinets your control panel has, the number of loops or whether it has a cabinet with zone LEDs. See SECTION 2 of this manual and the hardware configuration descriptions in the Installation Manual.
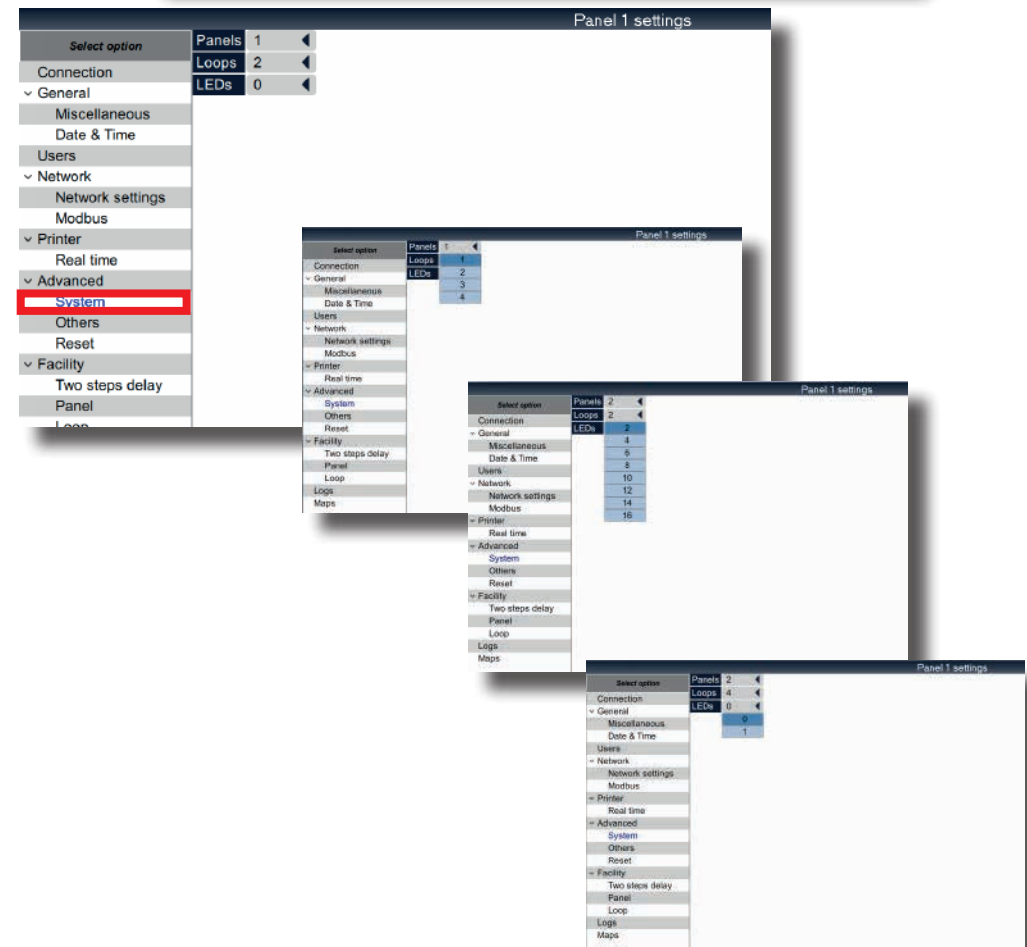
Panels: Indicate the number of cabinets that constitute the control panel node. Enter the corresponding value between 1 and 4.

Loops: the possible combinations are displayed according to the number of cabinets indicated in the previous point.

If the number of loops to be configured is not shown, check the number of panels configured or try to scroll through the drop-down menu.

LEDs: you can define whether the system has a cabinet with zone LEDs or not. You can select 0 or 1.

Enable printing selector

Event type selectors

Only local event selectors

4.16.2.   Advanced configuration, others

In the **OTHERS** tab, there are 5 slider buttons for facilitating start-up and maintenance tasks.

Inactivity timeout: by deactivating this slider button, the control panel will always remain in the last access level and screen that you used. Always active by default, the control panel will return to the main screen if there is no activity and the access password must be re-entered in order to gain access.

Jump to scroll on incident: by default, if a new event occurs, the EN54-2 control panels must exit the configuration, user or log menus that are being displayed and must show the new event for this to be recognised.

In start-up tasks, when the facility is not operating, it may be useful to use this function. By deactivating the slider button, a new incident will not be shown immediately. It is always active by default.

Jump to last priority incident on timeout: when activating the slider button by moving the scroll, the priority event will be shown after the timeout period.

Remember Virtual module status in incidents view: it retains the virtual module status view on the event screen.

Exit test mode automatically (hours): it lets you configure the timeout or exit from test mode time. If the slider button is off, then Test mode will be maintained indefinitely.

A timeout lapse of between 1 and 24 hours can be configured by turning the time selector.

> ⚠ **WARNING!** For reasons of system security and regulatory requirements, all inactivity, timeout and scroll slider buttons must be activated (green) by default.

The **RESET** tab will return the control panel's panel configuration values to the default values. This does not affect the configuration of entities, loops, manoeuvres, groups, virtual modules, special modes, network filters or event logs.
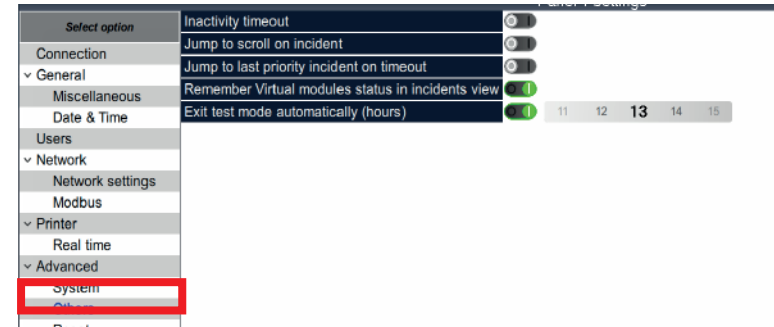
4.16.3. Two-step delay

The two-step delay function lets you configure the reaction times before the activation of all planned outputs. This function will prevent unnecessary costs caused by an unwanted automatic alarm. The menu lets you configure:

Enabled: activates the two-step delay. This applies to the local control panel.

Reaction time: waiting time before any activation from an automatic detection, whether they are smoke or heat detectors. The reaction time can adopt values of between **10 and 60 sec**.

Investigation time: it is the maximum time from the first activation, considering the initial reaction time and all successive extensions. It accepts between **30** and **600 sec**.

When a detector is activated, two function buttons appear on the main screen:

- **Add time:** it extends the waiting time by a value equal to the reaction time multiplied by the number of presses and up to a **maximum of 600 sec**.
- **Cancel time:** it cancels all delays and activates the actions.

> The two-step delay is only applied to the automatic detection elements, smoke and heat detectors.
>
> The reaction time also defines the delay extension times, as specified in the EN 54-2 standard.
>
> The activation of any control panel push-button cancels all delays. If you have a network, all panels must be configured with the same criterion.

The activation of the number of incidents specified in the **MAXIMUM ALARM DELAY** and **ENTITY TYPE** fields will cancel the delays.

Maximum alarm delay: it is the number of active detectors for cancelling the delay. It can adopt values of between 2 and 10.
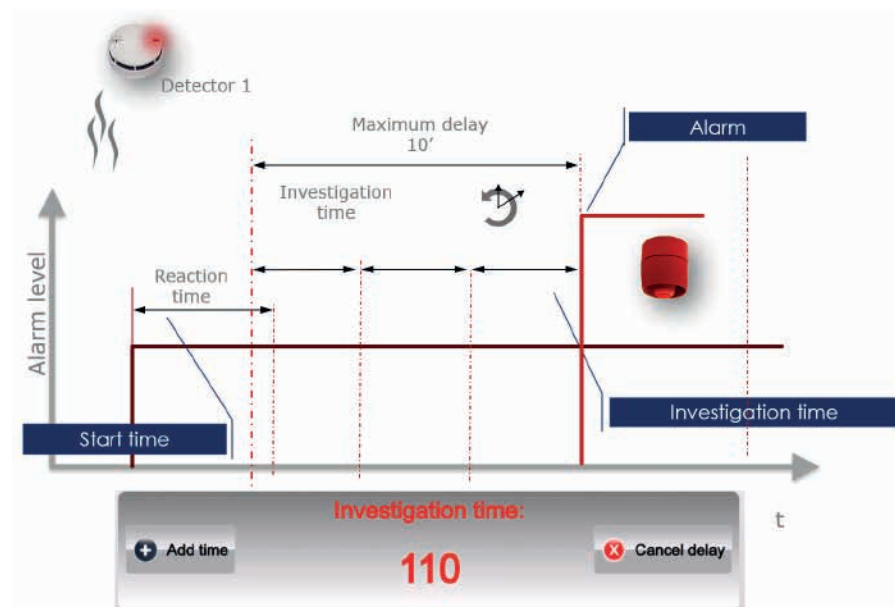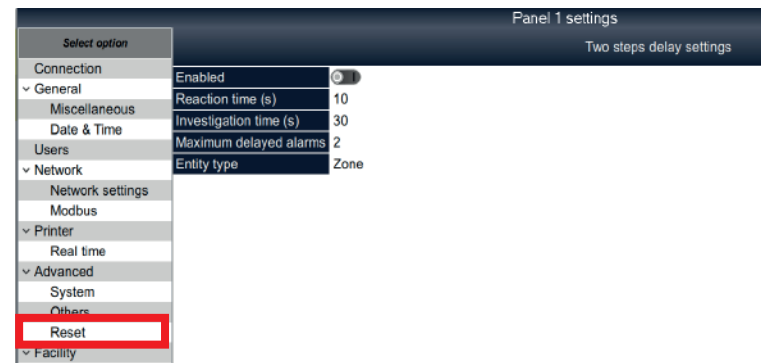
If 2 is defined as the value for this field, following activation of the first detector, the reaction time counter will start and from the main screen, you will be able to extend the delay until the second detector within the entity is activated or the maximum investigation time has passed.

If 3 is defined as the value for this field, at least 3 detectors must be active at the same time in order to cancel the delay.

By cancelling the delay or if the investigation time has passed, the activation of all actions will be carried out as defined in the programming.

Entity type: it defines the origin of the elements that can cancel the delay. It can adopt the following values:

Panel, area, zone or only manoeuvres

If the number of detectors in alarm in the entity meets the value criterion for the **MAXIMUM ALARM DELAY** field, the delays will be cancelled.

By configuring this function, if the configured entity is *Panel*, then, for example, if the value for the maximum alarm delay field is 2, with alarm detection by the first detector, the reaction time counter will be activated. If any other detector of the **PANEL** is activated, the delays will be cancelled and all programmed actions will start.

If the configured entity is **AREA**, then if any other detector in the same **AREA** is activated, the delays will be cancelled and all programmed actions will start.

If the configured entity is **ZONE**, if any other detector in the same **ZONE** is activated, the delays will be cancelled and all programmed actions will start.

If the configured entity is **ONLY MANOEUVRES**, if any manoeuvre is activated, the delays will be cancelled and all programmed actions will start.

4.16.4. Special panel settings

> ⚠️ **WARNING!** The options that are available in this menu should only be used by trained staff. In general, they should all remain active, deactivation would put the panel outside of the scope of compliance with the EN54-2 standard. Please read each case carefully.

During the start-up process or troubleshooting tasks, the partial or total deactivation of these elements may be justified. Take the appropriate preventive measures if the system is already active when using this menu.

The deactivation of mandatory signals will cause the corresponding cancellation signalling on the panel indicators. Remember that this is a manual configuration, recover the correct configuration as soon as you finish the work. Inform the system manager of the changes in this menu and their consequences.

The panel menu lets you configure the following elements:

Enable relays: The deactivation of this slider button (grey) will prevent the activation of all relay outputs, the control panel and system control modules. It should normally be active.

Enable sounders: The deactivation of this slider button (grey) will prevent the activation of all sounder outputs, the control panel main board, control modules configured as sounders, as well as sounders and visual devices of the system. It should normally be active. Permanent deactivation may contravene the approval criteria of the EN54-2 standard and local regulations, potentially impeding evacuation.

It is vital to reset the activation of this slider button. Limit its use to essential cases.

Buzzer: The deactivation of this slider button (grey) will prevent the activation of the control panel's acoustic signal. It should normally be active. Permanent deactivation contravenes the EN54-2 standard.

It is vital to reset the activation of this slider button. Limit its use to essential cases.
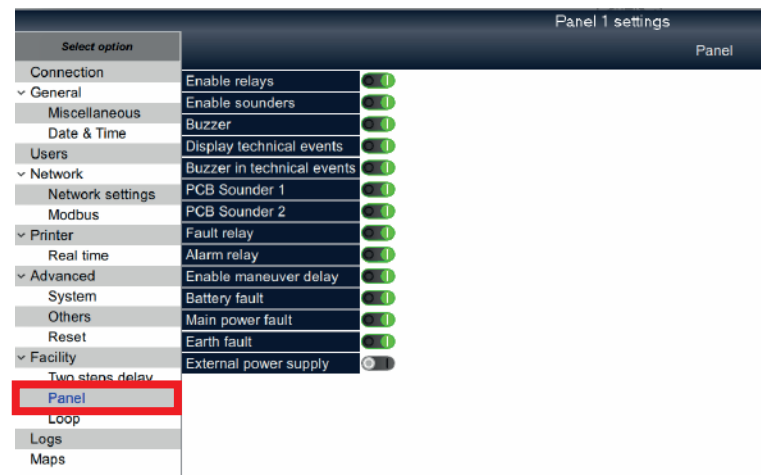
Display technical events. In highly-complex systems, it is easy for there to be a constant flow of events, especially of technical events. Always showing this type of event on the screen may be confusing and not very useful. This slider button lets you lock the screen view.

You can monitor the changes produced in this type of element from the event log, **LOG**.

Buzzer in technical events. This slider button lets you lock the screen view. Its application is the same as that described in the previous point.

PCB Sounder 1. The deactivation of this slider button (grey) will prevent the activation of the sounder 1 output on the main board. It should normally be active. Permanent deactivation may contravene the approval criteria of the EN54-2 standard and local regulations. Limit its use to essential cases.

PCB Sounder 2. The deactivation of this slider button (grey) will prevent the activation of the sounder 2 output on the main board. The slider button should normally be active. Permanent deactivation may contravene the approval criteria of the EN54-2 standard and local regulations. Limit its use to essential cases.

Fault relay. The deactivation of this slider button (grey) will prevent the activation of the fault relay on the main board. The slider button should normally be active (green). Permanent deactivation may contravene the approval criteria of the EN54-2 standard.

Alarm relay. The deactivation of this slider button (grey) will prevent the activation of the alarm relay on the main board. The slider button should normally be active (green). Permanent deactivation may contravene the approval criteria of the EN54-2 standard.

Enable manoeuvre delay. The deactivation of this slider button (grey) will cancel any delay configuration for the manoeuvres. The slider button should normally be active (green).

Battery fault. The deactivation of this slider button (grey) will prevent the indication of any battery fault. The slider button should normally be active (green). Permanent deactivation may contravene the approval criteria of the EN54-2 standard and local regulations.

Main power fault. The deactivation of this slider button (grey) will prevent the indication of any main power supply fault. The slider button should normally be active (green). Permanent deactivation may contravene the approval criteria of the EN54-2 standard and local regulations.

Earth leakage fault. The deactivation of this slider button (grey) will prevent the indication of any earth leakage faults. Earth leakage faults may generate errors in the transmission of data and cause harm to people or damage to the unit. The slider button should normally be active (green). Permanent deactivation may contravene the approval criteria of the EN54-2 standard and local regulations.

External power supply. The CAD-250 system supports up to 32 loops on a single NODE. When implementing large systems, it may be necessary to increase the capacity of the secondary power supply in order to ensure the required autonomy.

To meet this requirement, the CAD-250 system features the FD-500 power supply, which allows the use of batteries of up to 150 Ah.

By activating this slider button, CAD-250 will monitor the FD-500 external power supply as a secondary power supply. In this mode, the sounder 1 output on the main board will be used as a monitoring line for the secondary power supply.

4.16.5. Special loop settings

This menu provides the following configuration options:

LED flashing: The intermittent flash of the LED indicators indicates that information is being exchanged between the control panel and the detector. In certain uses, for example, when people are sleeping, the brightness of the LED indicators may be very annoying for the resident. By moving this slider button to the off position (grey), this search indication will not be shown. Normally, its position is active (green).

Dirtiness notification. Over time, dirt will accumulate in the smoke
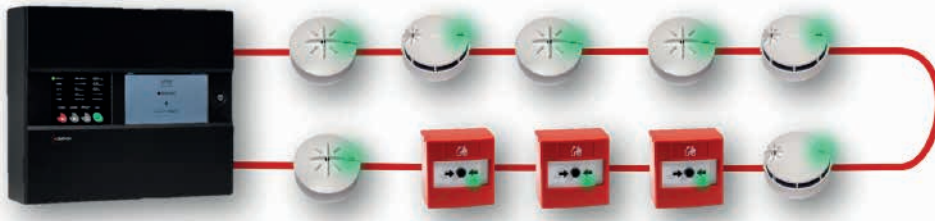
detector chamber. The speed at which this occurs will depend on the working environment.

The CAD-250 control panel has a dirty chamber detection procedure. The control algorithm assesses the changes in the chamber's value, and according to this value, determines whether it should activate a maintenance alert or not. You can disable this function by deactivating the dirtiness notification slider button. Its normal configuration is activated (green).
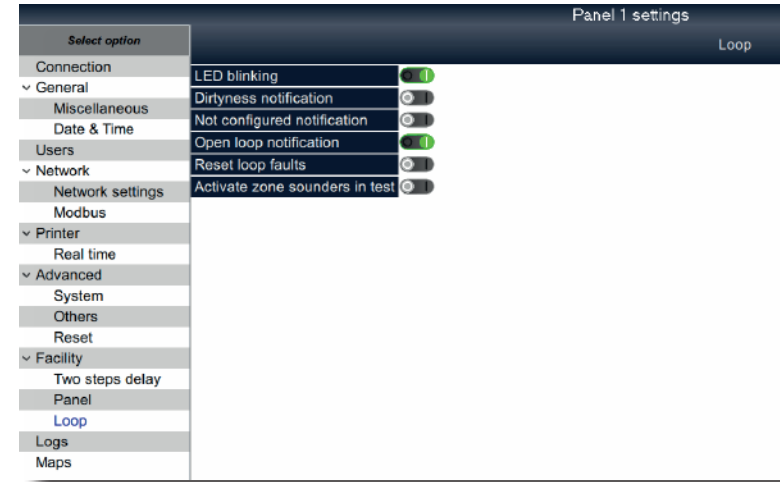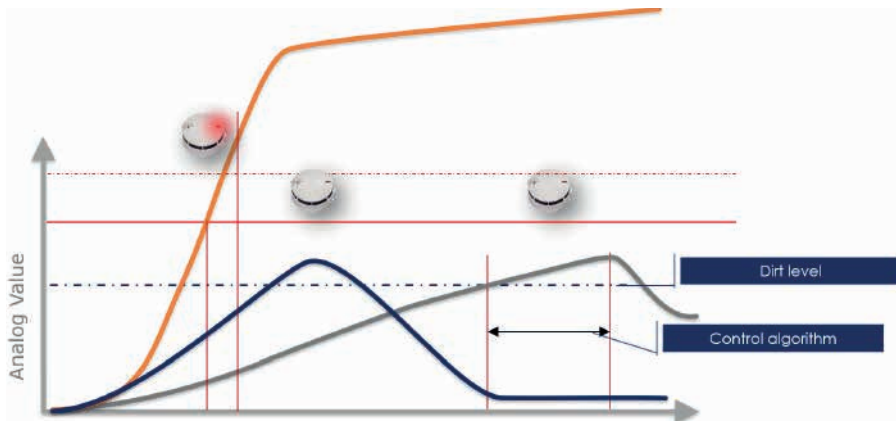
Not configured notification. When searching using the **AUTOSEARCH** function in the loop menu, the address may not have been configured for certain devices. This function lets you identify devices without a configuration while the slider button is active (green). The slider button's default position is active (green). Identify the devices and configure them using the PGD-200 programmer or using the **ADDRESS PROGRAMMING** function from the **LOOP** menu.
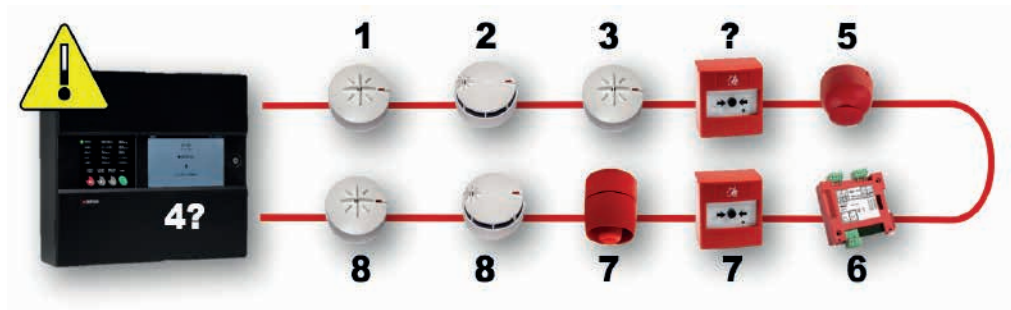
Open loop notification. Systems for protecting people establish mechanisms that guarantee the continuity of the systems in the event of faults. They also try to limit the effects of the systems by establishing design and application criteria. Detection systems limit the effects of a short-circuit fault or an open circuit in the transmission lines. Loop configuration and the use of isolator switches meet this requirement.

Even if local regulations do not require it, the use of this kind of loop typology is recommended. However, in certain circumstances, such as the renovation of old facilities or difficult access, it may be necessary to use an open loop configuration. By deactivating this slider button, the control panel will not show the open loop fault and will operate normally.

The normal configuration of this slider button is activated (green).

📄 Permanent deactivation may contravene the approval criteria of the EN54-2 standard and local regulations.

Reset loop faults. Loop fault errors may be generated sporadically if the facility is in an environment with a high amount of electromagnetic interference, exceeding the approval levels.

Under normal conditions, the loop fault indications will remain set until a manual system reset occurs.

By using this function, this fault time will reset automatically.

The reset does not affect any other type of indication or the event log (LOG).

Configuration tabs
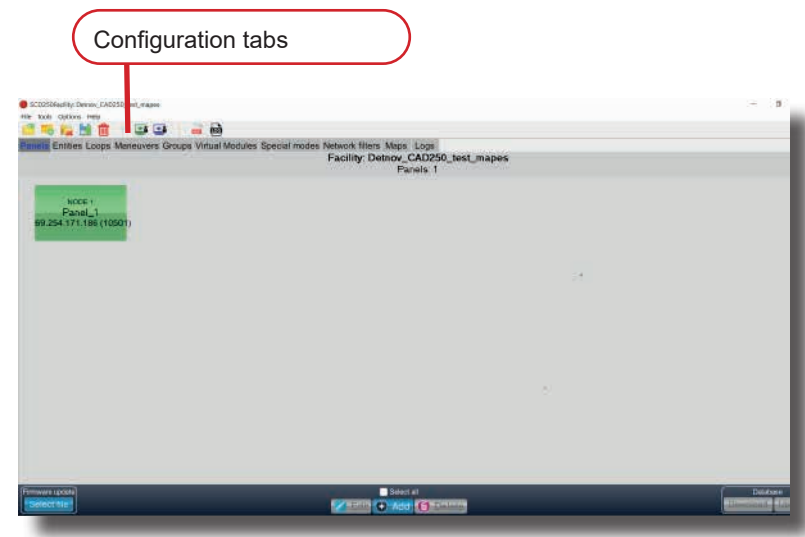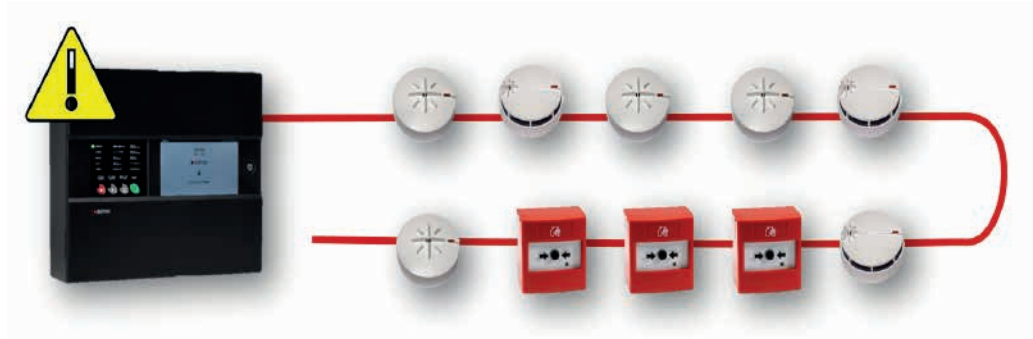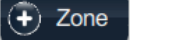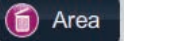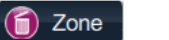
5. ENTITY CONFIGURATION

From the **Entities** tab, the complete system hierarchy can be configured, regardless of the number of nodes the system has. Create, assign or edit areas and zones, and incorporate or modify the system devices.

It will be useful to recover the control panel configuration once you have carried out an autosearch of the system loops, see the Configuration Manual from the control panel and section 4 of this manual. In any case, you should subsequently check that the device locations and types correspond to what is expected.

Observe the following work areas in the entity menu.

Button area. It has 3 or 4 buttons according to the selected entity.

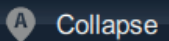| Icon	Description
Collapse	Collapses or expands the area hierarchy
Collapse	Collapses or expands the zone hierarchy
Zone	It shows the zone editing window, proposes a new unused zone number and incorporates it into the system. Define the zone description and the area where it is assigned (see the configuration area part in this section).
Device	It shows the device editing window, proposes a new unused zone number and incorporates it into the system. Define the zone description, the area where it is assigned and the loop to which it belongs (see the configuration area part in this section).
Area	Deletes the selected area and all the elements it contains. The following confirmation message will appear: **ARE YOU SURE YOU WANT TO DELETE THE SELECTED ITEM?**
Zone	Deletes the selected zone and all the elements it contains. The following confirmation message will appear: **ARE YOU SURE YOU WANT TO DELETE THE SELECTED ITEM?**
Device	Deletes the selected device. The following confirmation message will appear: **ARE YOU SURE YOU WANT TO DELETE THE SELECTED ITEM?**

View and entity filter area

Display button area

Entity configuration area
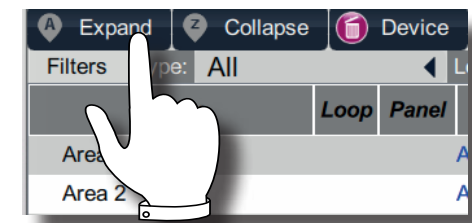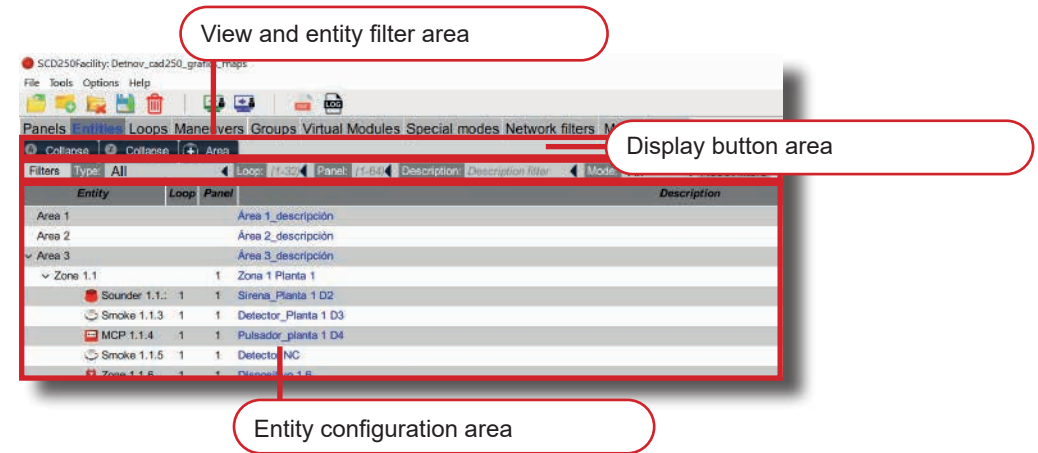
Entity deletion confirmation
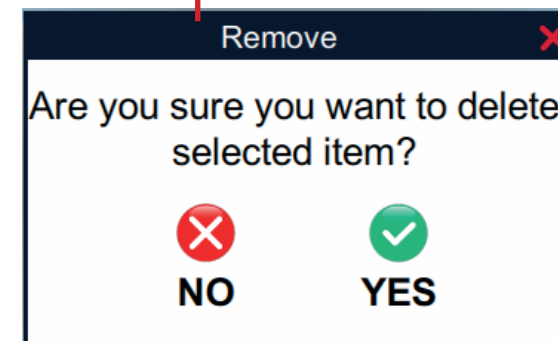
Filter area. It lets you simplify the list of entities shown by adjusting the filter criterion. Different filters can be overlapped.

Filter	Description
TYPE	By selecting the type of device that should be shown, the area and zone hierarchy to which the selected elements correspond continues to be shown
LOOP	Select the loop number to which you want to restrict the search. It allows values of 1 to 32. the area and zone hierarchy to which the selected elements correspond continues to be shown
PANEL	Select the panel number to which you want to restrict the search. It allows values of 1 to 64. the area and zone hierarchy to which the selected elements correspond continues to be shown
DESCRIPTION	The list is restricted to the elements that contain the string included in the filter in their description. The filter is sensitive to upper and lower case, and special characters. the area and zone hierarchy to which the selected elements correspond continues to be shown
MODE	It restricts the list to elements whose mode is the same as the one selected from enabled, test and disabled. the area and zone hierarchy to which the selected elements correspond continues to be shown
RESET FILTERS	By pressing the button, all filters will be deleted

Configuration area.

The configuration area contains the complete system hierarchy. It is displayed as a table.

Entity

      Area

      Zone

      Device

Loop

Panel

Description

Mode

Filter deletion

Entity description column

Loop and panel columns

Entity column

Mode column

ENG

41
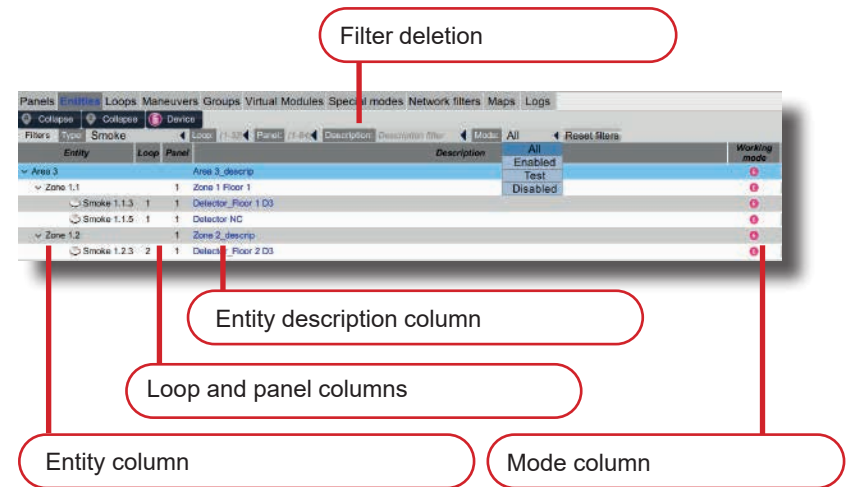
To edit or create an entity, the following methods are available:

a) Recover the device tree from the control panel as described previously and edit each device to define its location in the hierarchy, area, zone and description.

b) Use the buttons in the top part of the table to create entities, which were described previously in the **BUTTON AREA** part of this section.

c) Position the cursor over the configuration area and right-click. An options menu will be displayed, according to the following:

• If you have not selected an entity, the menu will show:

New > Area
 Zone
 Device

• If you have selected an entity, it will show:

New > Area
 Zone
 Device
Edit
Delete
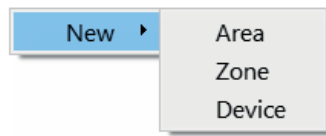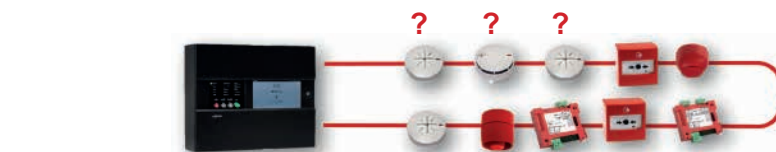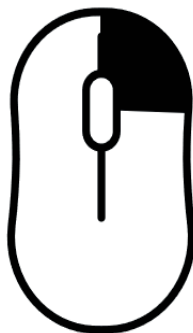
d) An entity can be edited simply by double-clicking on it from the configuration area.

e) All entity descriptions can be edited directly from the configuration area. To do so, position the cursor in the entity description field and left-click. If there is any text, it will be highlighted. If you have not entered any text yet, the cursor for entering text will appear in the description cell. You can:

• Copy the text to the clipboard using the Ctrl+C keys
• Paste the content of the clipboard using the Ctrl+V keys
• Enter a corresponding description using your keyboard

The keyboard arrow keys let you move between the different entities to quickly modify the description.

If you adopt the advanced view, see **MENU BAR** > **OPTIONS** > **VIEW**, you can also edit the mode directly from the configuration window, see section 3.9.2.

5.17. Creating and editing an area

Area. If you create a new area, the first available number will be shown by default, the field is lightly highlighted in grey indicating that it is an editable field. Modify the number as required.

If you assign an undefined area in the facility, this will automatically form part of the entity tree.

If you are editing an already defined area, you will **NOT** be able to modify the area number, the white background of the field indicates that it is a non-editable field.

Remember that the areas are global entities of the system, for the entire network.

Description. Enter or modify the description as required.

Mode. Define the mode that the area will adopt once the configuration has been transferred to the control panel, i.e. enabled, disabled or test.

Press **SAVE** to keep the changes

Press **CANCEL** to discard the changes

Area configuration fields

Mode option drop-down

5.18. Creating and editing a zone

Zone. If you create a new zone, the first available number will be shown by default, the field is lightly highlighted in grey indicating that it is an editable field. Modify the number as required.

If you assign an undefined zone in the facility, this will automatically form part of the entity tree. If you generate a zone from the selection of an entity, the new zone will be created by default within the area to which the entity belongs.

If you are editing an already defined zone, you will **NOT** be able to modify the zone number, the white background of the field indicates that it is a non-editable field.

Remember that the zone is a local entity, i.e. of the panel. The maximum number of zones per panel is 250.

Panel. Information field that is only editable when you have created a new zone. If the panel does not exist, it will not let you save the changes.

Editing an existing zone

Editing a new zone
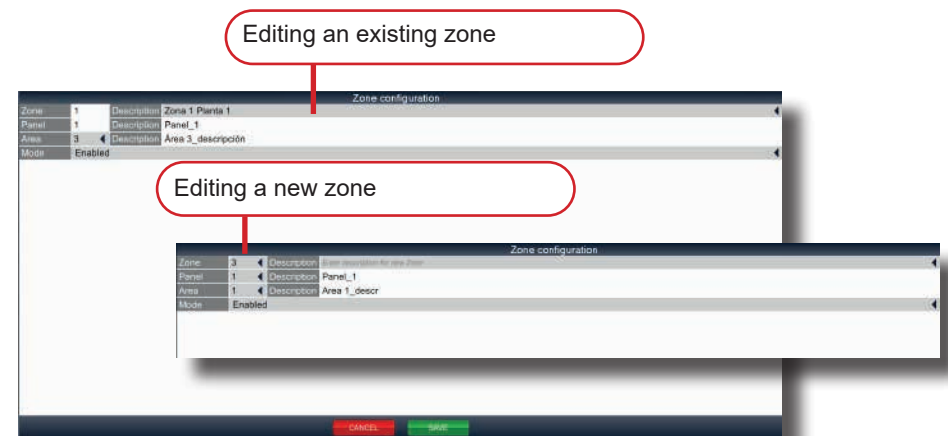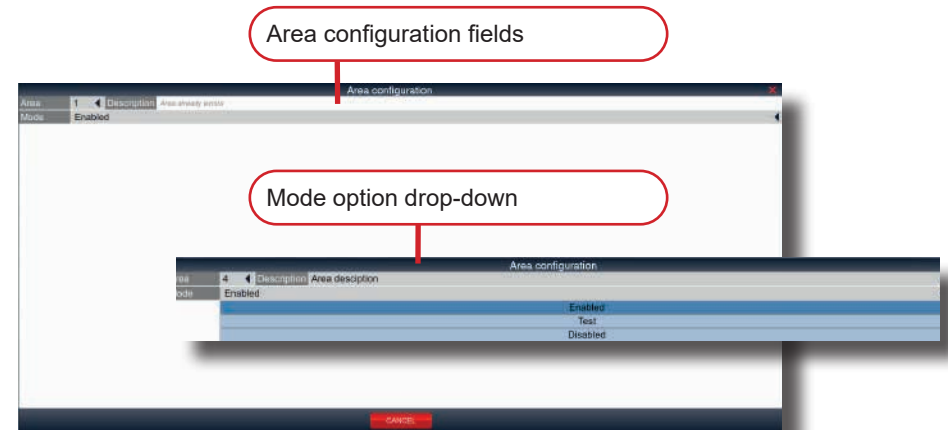
Area. The field is always shown highlighted in grey when it is an editable field. Assign the zone to the corresponding area number. If the area number is new, the new entity will automatically be created in the entity tree.

Description. Each entity has 3 descriptive fields:

- **Zone description:** Enter or modify the description as required.
- **Panel description:** Not editable in this window; the background of the field is white.
- **Area description:** Not editable in this window.

Mode. Define the mode that the zone will adopt once the configuration has been transferred to the control panel, i.e. enabled, disabled or test.

Press **SAVE** to save the changes

Press **CANCEL** to discard the changes

5.19. CREATING AND EDITING A DEVICE

Panel. Information field that is only editable when you have created a new device. If the panel does not exist, it will not let you save the changes.

Address. Make sure the address is the one assigned to the device via the PGD-200 programmer. If the address is incorrect, when loading the programming, you will receive a fault event, which could be:

- **Type fault,** a unit that is incorrectly associated with its type, e.g. a push-button configured as an optical detector.

1/4	**TYPE FAULT**	14:17 16.07.2020
D (1.1.4): Call point_Floor 1 D4		
Z (1.1) : Zone 1 Floor 1		
A (3) : Area 3_descrip		

- **Device removed fault,** the address cannot be found.

2/4	**DEVICE REMOVED**	14:17 16.07.2020
D (1.1.5): Detector NC		
Z (1.1) : Zone 1 Floor 1		
A (3) : Area 3_descrip		

Device configuration fields

Editing an existing device
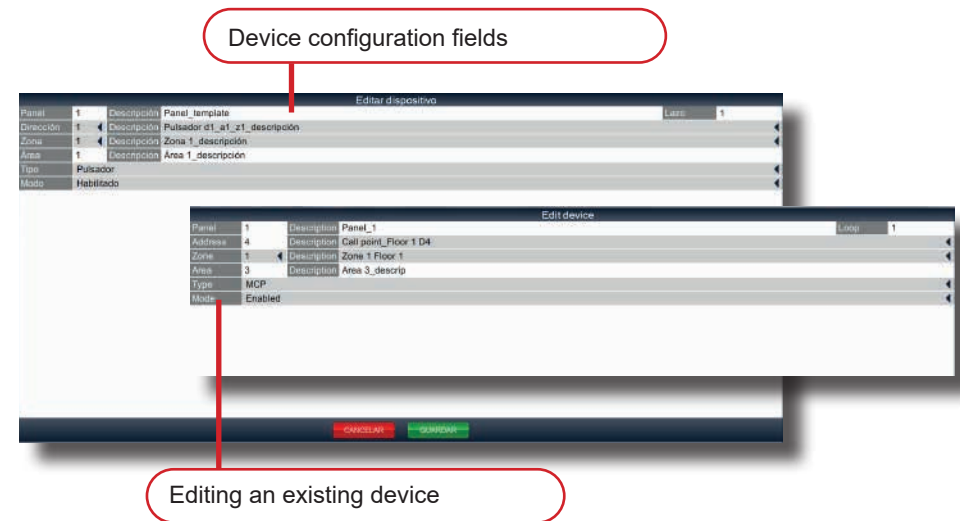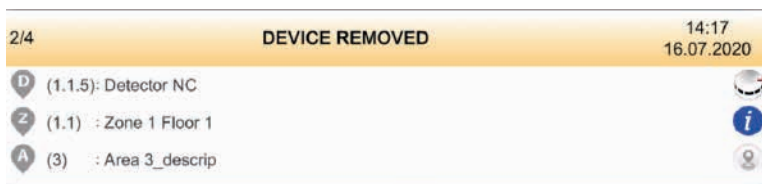
Zone. If you associate an existing zone, the area to which it belongs will also be associated. If you modify the field and associate an undefined zone, it will automatically be created in the Entities tree.

The maximum number of zones per panel is 250.

Area. The field is always shown with a white background, indicating that it is a non-editable field. It depends on the zone and which area it belongs to.

Counter. Only available in the creation of new devices, this field lets you create as many devices simultaneously as indicated by the counter.

Type. Identify found or assigned devices. Optical detector, heat detector, optical-heat detector, input, technical input, detection zone, manual call point, sounder output, sounder, panel or gas detector.

Please note the characteristics of each type, some devices use more than one address. See Appendix 1 of the manual.

Depending on the device type, you may have some additional configuration options, see the table.

Mode. Define the mode that the zone will adopt once the configuration has been transferred to the control panel, i.e. enabled, disabled.

Loop. This field can only be edited when you create a device. It allows the number of loops with which you have configured the panel. See the **PANELS** > **ADVANCED** > **SYSTEM** menu.

Description. Each entity has 4 descriptive fields:

- **Panel description:** Not editable in this window; the background of the field is white.
- **Device description:** Enter or modify the description as required.
- **Area description:** not editable in this window.
- *Zone description:* Enter or modify the description as required.

Press **SAVE** to save the changes
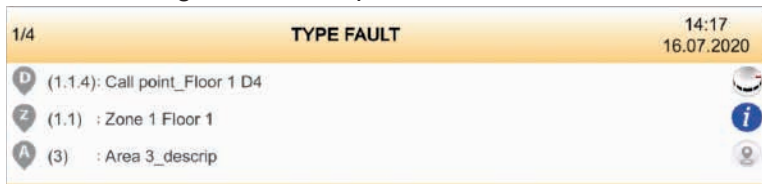
Press **CANCEL** to discard the changes

Editing a new device

Counter field. No. of devices to be created

Device type field
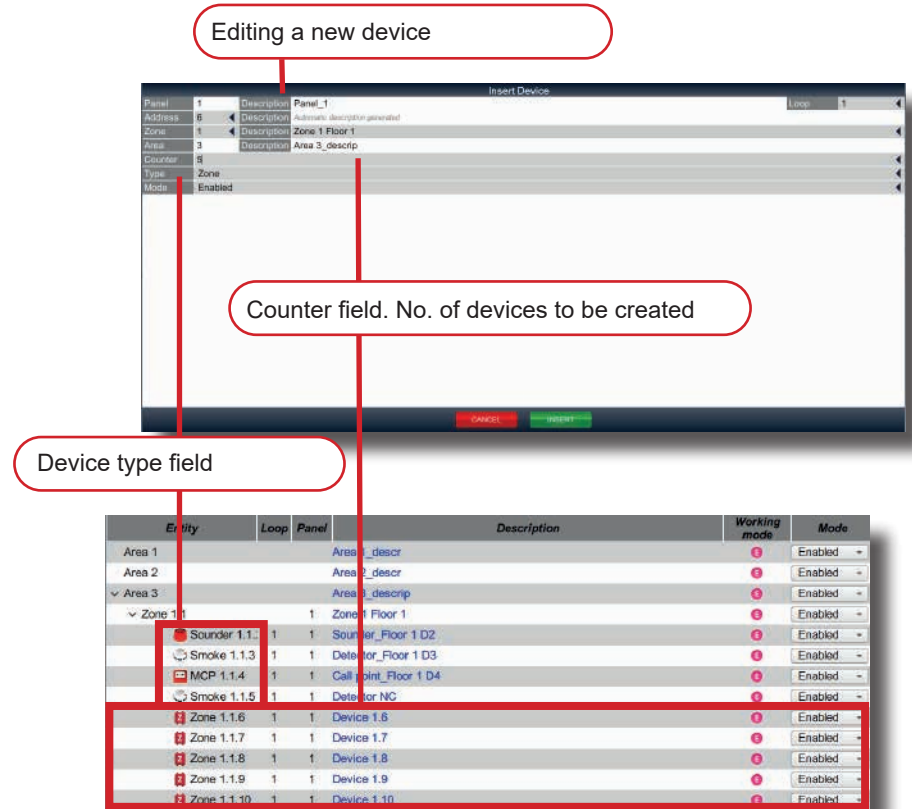
Type		Enable	Technical	Sounder	Special mode
OPT		YES			YES
OPT-HEAT		YES			YES
HEAT		YES			YES
PUS		YES			YES
ZONE		YES			
SOUNDER		YES			
IN		YES	YES		
OUT		YES		YES	
INDICATOR		YES			
PANEL		YES			
GAS		YES			

6. LOOP CONFIGURATION

From the **LOOPS** tab, the architecture for connecting elements to the system can be configured, regardless of the number of nodes the system has. Insert and edit panels, incorporate devices into the loops or edit any element.

The creation or editing procedures are equivalent to those described in the **ENTITY CONFIGURATION** section.

As described in the previous section, it will be useful to recover the control panel configuration once you have carried out an autosearch of the system loops, see the Configuration Manual from the control panel and section 4 of this manual. In any case, you should subsequently check that the device locations and types correspond to what is expected.

Observe the following work areas in the **LOOPS** menu.

Button area. It has 3 or 4 buttons according to the selected entity.

Icon	Description
Collapse	Collapses or expands the **PANEL** hierarchy
Collapse	Collapses or expands the **LOOP** hierarchy
Device	It shows the device editing window, proposes a new unused address and incorporates it into the system. The system also proposes the zone affiliation from where you created the device. Define or confirm the zone
Panel	Deletes the selected panel and all the elements it contains. The following confirmation message will appear: **ARE YOU SURE YOU WANT TO DELETE THE SELECTED ITEM?**
Device	Deletes the selected device. The following confirmation message will appear: **ARE YOU SURE YOU WANT TO DELETE THE SELECTED ITEM?**

Display button area

Entity deletion confirmation
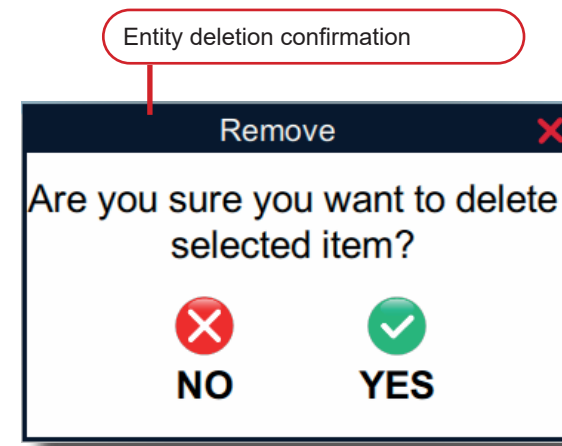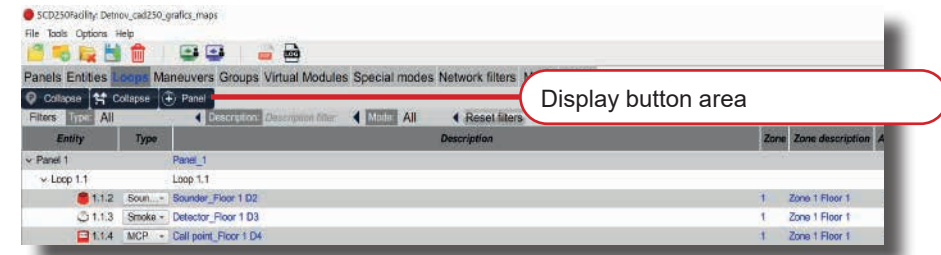
- **Filter area**. It lets you simplify the list of loop elements shown by adjusting the filter criterion. Different filters can be overlapped.

Filter	Description
TYPE	By selecting the type of device that should be shown, the Panel and Loop tree to which the selected elements correspond continues to be shown
DESCRIPTION	The list is restricted to the elements that contain the string included in the filter in their description. The filter is sensitive to upper and lower case, and special characters. The area and zone hierarchy to which the selected elements correspond continues to be shown.
MODE	It restricts the list to elements whose mode is the same as the one selected from enabled, test and disabled. The area and zone hierarchy to which the selected elements correspond continues to be shown.
RESET FILTERS	By pressing the button, all filters will be deleted.

Display button area

Filter area

Working mode

Type configuration

Entity configuration area

Entity mode

Configuration area. The configuration area contains the complete panel architecture for the system and is displayed in table format.

The editing procedures are equivalent to those described for the entity configuration menu. The programmer has more direct configuration fields in the table.

Entity	Type	Description	Zone	Zone description	Area	Area description	Working mode	Mode
PANEL (No. OF PANEL P)	N/A	60 characters Editable	N/A	N/A	N/A	N/A	N/A	N/A
LOOP (No. of LOOP AND PANEL L.P)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
DEVICE (No. of PANEL, SIDE AND ADDRESS, P.S.A)	Smoke / Heat / Smoke-Heat / MCP / Zone / Input / Output / Sounder / Panel / Gas / Remote indicator / Beam	60 characters Editable	1 - 250	60 characters Editable	1-250	60 characters Editable	Behaviour (a) E: Enabled D: Disabled	By element configuration

To edit or create an entity, the following methods are available:

a) Edit each device to define its location in the hierarchy, area, zone and description.

b) Use the buttons in the top part of the table to create devices, which were described in the **Button area** part of this section.

c) Position the cursor over the configuration area and right-click. An options menu will be displayed, according to the following:

• If you have not selected an entity, the menu will show:

Level 1	Level 2	Description
New	Panel	Create a new panel or node

• If you have selected a Panel entity:

Level 1	Level 2	Description
New	Device	Create a new element, detector, manual call point, sounder, input, output, panel or gas
	Panel	Create a new panel or node
Connection	Download	It lets you obtain the database from a control panel configured with the same node as the current one. See the port configuration and configuration upload and download sections
	Upload	It lets you update the database of a control panel configured with the same node as the current one from the configuration program. See the port configuration and configuration upload and download sections
Edit		It lets you edit the Panel fields
Delete		It lets you delete the complete node

• If you have selected a Loop entity:

Level 1	Level 2	Description
New	Device	Create a new element, detector, manual call point, sounder, input, output, panel or gas
	Panel	Create a new panel or node
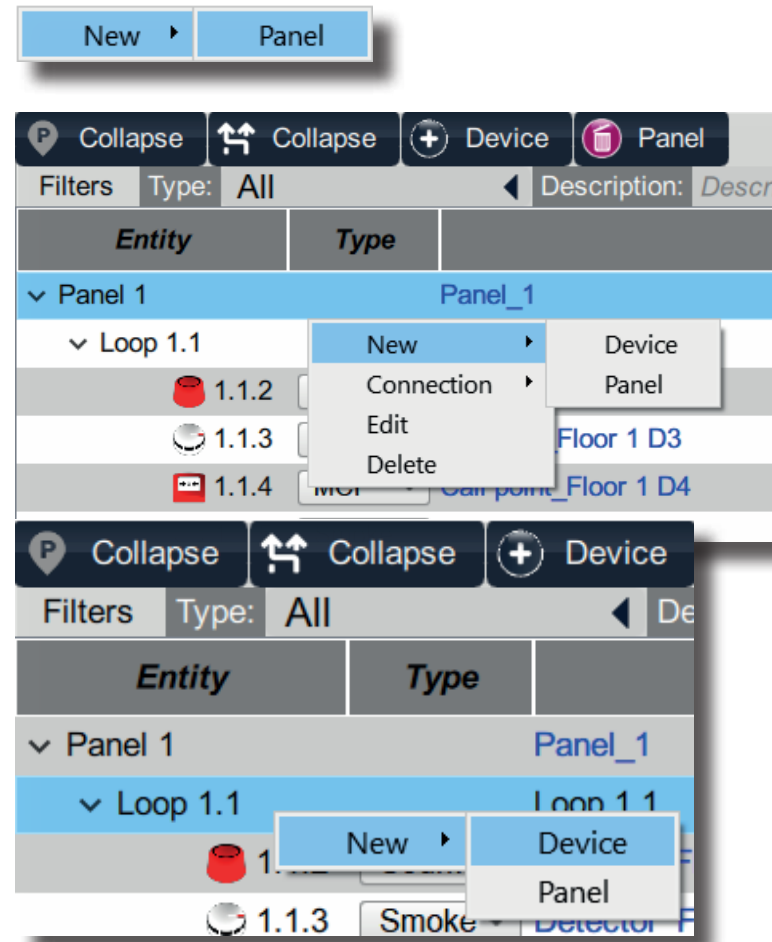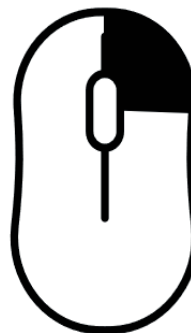
• If you have selected a device:

Level 1	Level 2	Description
New	Device	Create a new element, detector, manual call point, sounder, input, output, panel or gas
	Panel	Create a new panel or node
Edit		It lets you edit the Panel fields
Delete		It lets you delete the complete node

• d) An element can be edited simply by double-clicking on it from the configuration area.

• Double-clicking on the **PANEL** entity will open the panel configuration menu. See section 4 on panel configuration.

• Double-clicking on the **LOOP** entity does not display any configuration menu

• Double-clicking on the **DEVICES** entity will open the device configuration menu, as described in section 5.19 on device configuration.

e) Device zone descriptions and numbers can be edited directly from the configuration area. To do so, position the cursor in the entity description field and left-click. If there is any text, it will be highlighted. If you have not entered any text yet, the cursor for entering text will appear in the description cell. You can:

• Copy the text to the clipboard using the Ctrl+C keys
• Paste the content of the clipboard using the Ctrl+V keys
• Enter a corresponding description using your keyboard

The keyboard arrow keys let you move between the different entities to quickly modify the description.

f) From the loop configuration table, edit the type and initial mode of the device directly.

Panel configuration menu

Device configuration menu

Type configuration

Left-click to edit

Entity mode

Working mode
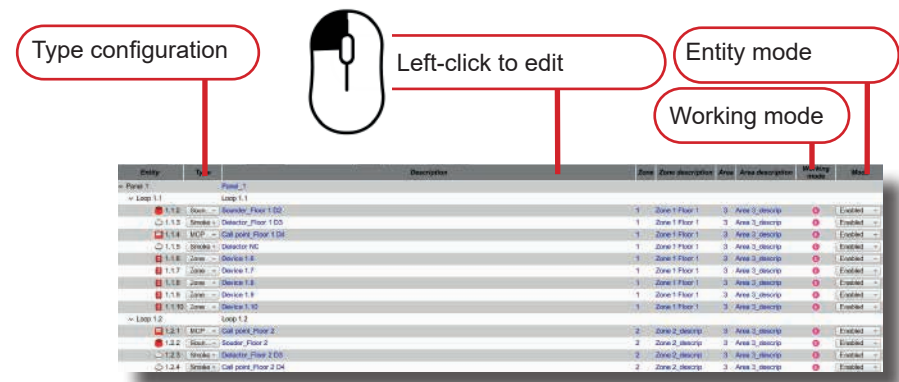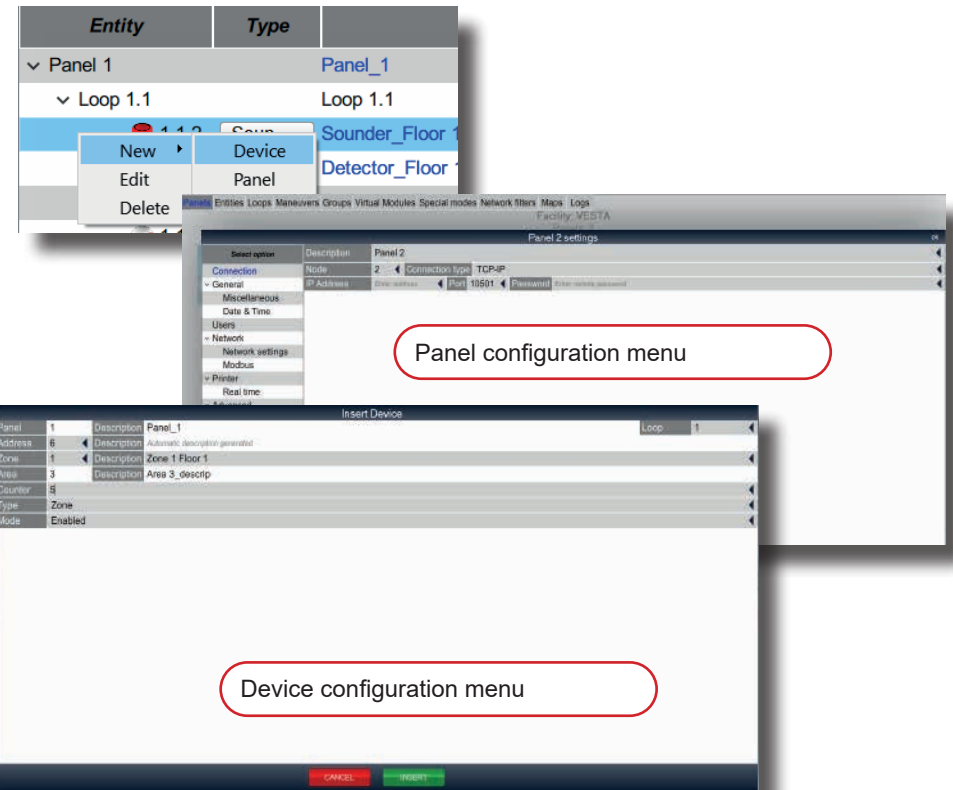
7. MANOEUVRE CONFIGURATION

7.20. INTRODUCTION

A manoeuvre can be defined as a set of actions that are programmed on a control panel based on the states taken by the system, areas, zones or devices.

Status changes are called events, and an action will be linked to each event, such as the activation of sounders, relays, etc.

The process of programming a manoeuvre involves first defining the event or events that must trigger the action and then associating the action or actions. The manoeuvre configuration on CAD-250 control panels is extremely powerful and flexible. Each manoeuvre can include innumerable inputs as events and innumerable actions.

For the manoeuvre configuration, you will use the menus of the following tools in three different tabs:

• **Manoeuvres:** where the input and output relationships required by the protection plan are generated.

• **Groups:** you can specify associations of elements, areas, zones or devices that will help you to create action rules.

• **Virtual modules:** it lets you create dependency functions with outputs. A set of inputs will determine the virtual module status and this can, in turn, act as an input for another rule.

Manoeuvre configuration window:

The manoeuvre configuration window has three different areas:

• Events area
• Actions area
• Manoeuvres area

In the event and action windows, there is a view button area and a filter area.
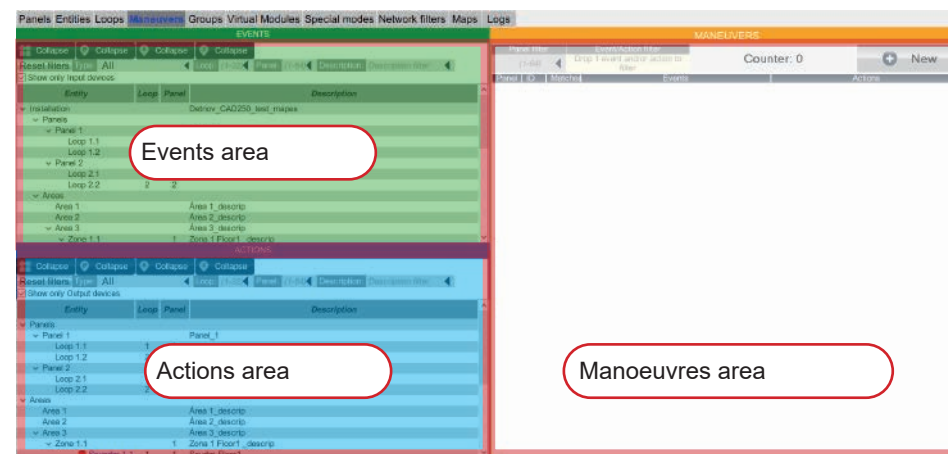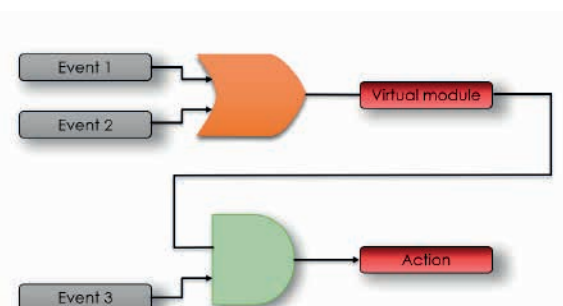
Button area. It has 3 or 4 buttons according to the selected entity.

Icon	Description
Collapse	Collapses or expands all the hierarchies
P Collapse	Collapses or expands the **PANEL** hierarchy
A Collapse	Collapses or expands the **AREA** hierarchy
Z Collapse	Collapses or expands the **ZONE** hierarchy

Filter area. It restricts the list of elements shown, adjusting to the filter criterion. Different filters can be overlapped.

Filter	Description
TYPE	By selecting the type of device that should be shown.
LOOP	The list is restricted to the elements contained in the loops with that numbering.
PANEL	It restricts the list to elements of the selected node.
DESCRIPTION	Restricts the list to elements with the string entered. It is sensitive to upper and lower case.
RESET FILTERS	By pressing the button, all filters will be deleted

The complete system tree according to the following structure:

Level 1) Facility. It comprises the complete system

Level 2) Panels. It comprises each node with its loops.

        Panel 1 > **Loop 1.1**, **Loop 1.2** ...
        Panel 2 > **Loop 2.1**, **Loop 2.2** ...

Level 3) Areas

        Area 1 > *Zone 1.1* > **Device 1**, **Device 2** ...
                   > **Zone 1.2** > ...
        Area 2 > **Zone 1.3** > ...
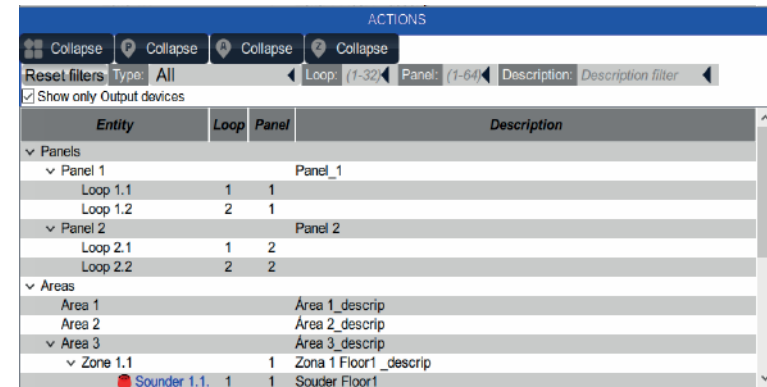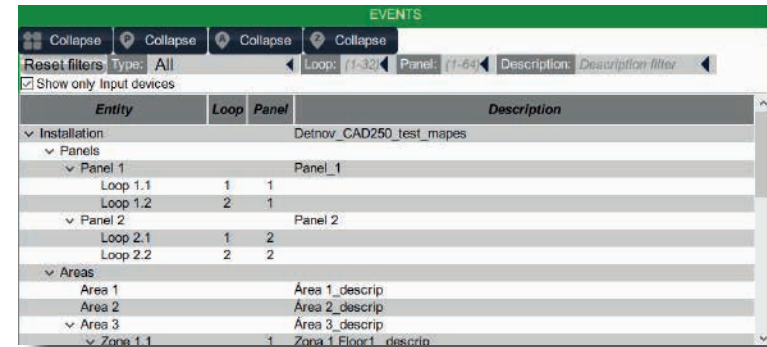   > **Zone 1.4** > ...
        Area 3 > **Zone 2.1** > ...
                   > **Zone 2.2** > ...

Generate the first manoeuvre by pressing the **+ NEW** button in the Manoeuvres window.

The new **MANOEUVRE CREATION** window shows the areas.

7.20.1. Coincidences

It is the number of inputs that must be true, i.e. all of their particular conditions are met, so that the activation of the associated outputs in that manoeuvre is ordered.

If two input events occur at the same time in the manoeuvre and you have indicated a value of 1 in the coincidences field, if either of the events occur, the output will be true and the programmed output manoeuvre(s) will be executed. This behaviour is similar to the behaviour of an OR logic gate.
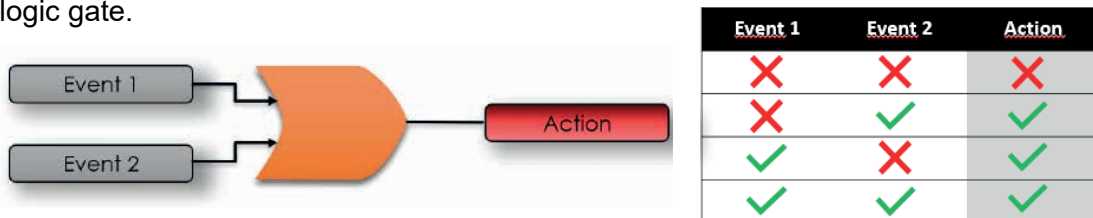
If two input events occur at the same time in the manoeuvre and you have indicated a value of 2 in the coincidences field, the two events must occur for the output to be true and for the programmed output manoeuvre(s) to be executed. This behaviour is similar to the behaviour of an AND logic gate.
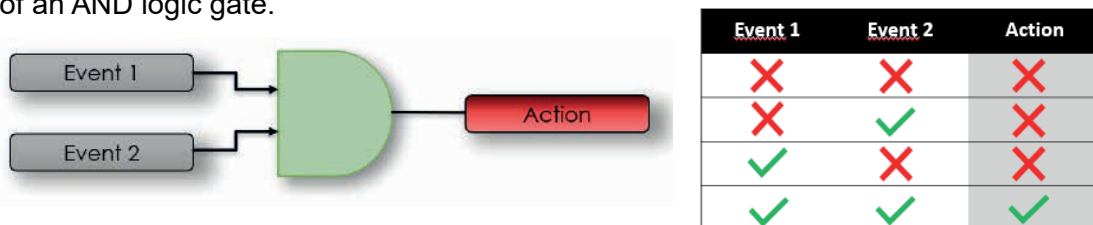
7.20.2. Events

Using the mouse, drag any of the entities from the event window that will be an input condition for the manoeuvre.

You can include as many input conditions as required in each manoeuvre. For each input, define the qualities that must be met for the condition to be true. To do so, edit the event by clicking on it twice in the **MANOEUVRE CREATION** menu or select the event and press the **EDIT** button.

E.g. in the facility entity, the event editing window lets you determine the prerequisites that must be met for that event to be true, which are:

The no. of coincidences equals the number of events that must be true for the action to be carried out.

An event is true when all the prerequisites established for the event are met.
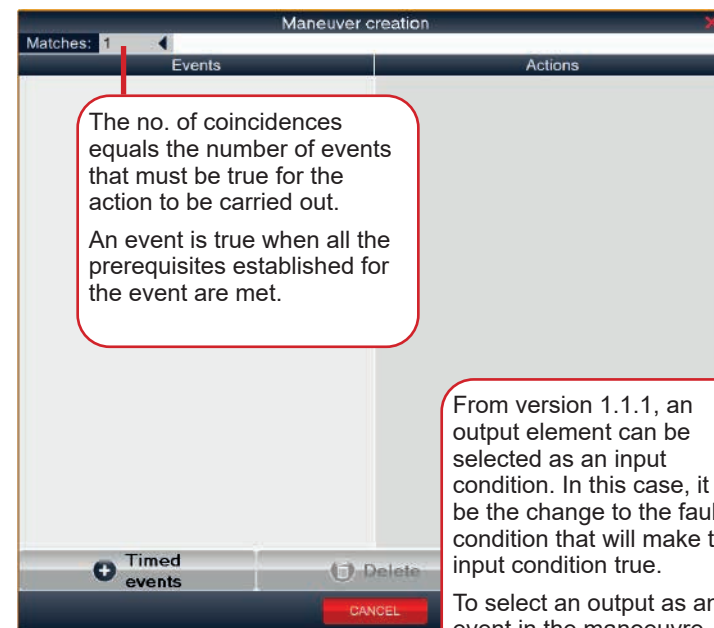
From version 1.1.1, an output element can be selected as an input condition. In this case, it will be the change to the fault condition that will make the input condition true.

To select an output as an event in the manoeuvre, uncheck the "Show only Input devices" box.
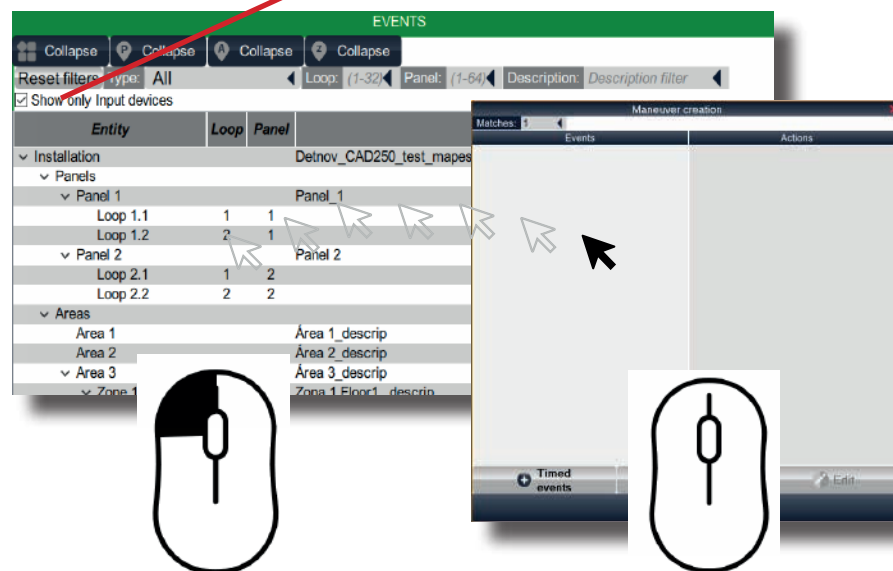
ORIGIN: it is defined by dragging the entity from the event screen to the Manoeuvres section. This may be:

- Local or network
- Facility, panel, loop, area, zone, device, group or virtual module.

TYPE: it has two fields that correspond to the status and type of device.

Status conditions:

Alarm: when the input entity has one or more elements in alarm, the input condition is met.

Fault: when the input entity has one or more faulty elements, the input condition is met.

Technical: when the entity has one or more active inputs, the input condition is met.

Type condition: it allows you to ascertain that the input is true only if this is due to:

All, any active device in the entity

Manual call points, only any push-button in the entity

Detectors, only any detector in the entity

Input, only any input in the entity

REPETITIONS: whole number, up to 9999, the event must be repeated in the entity for the input to be valid. If you have selected a zone entity as an input, in detector alarm condition with 3 repetitions. The condition is true when 3 detectors are in alarm condition.

LOGIC: it has two configurable options:

Normal: the state condition is true

No: the state condition is false, e.g. it is not an alarm

ENTITY: shows the entity you are configuring. It is not editable.

Repetitions: number of events required in the entity for the prerequisite to be true.

Type definition: it restricts the element type that makes the prerequisite true, detector, manual call point, input, etc.

Type condition: it is the status that makes the prerequisite true, alarm, fault, active, etc.

Normal or No (rejected): reverses the type declaration.
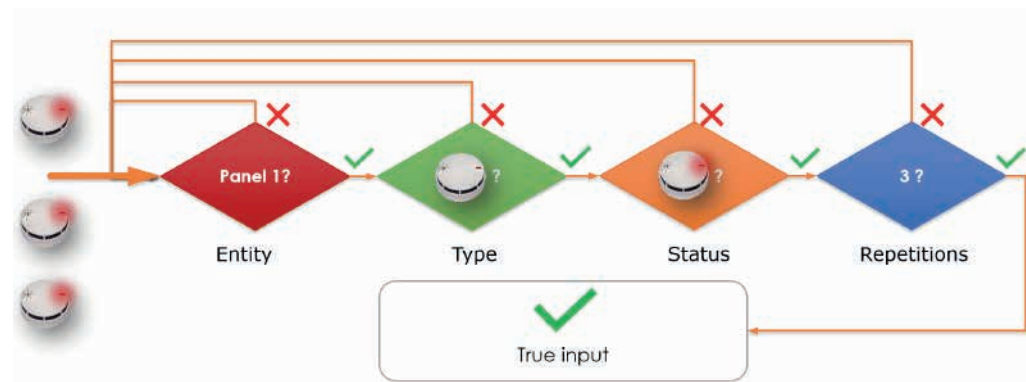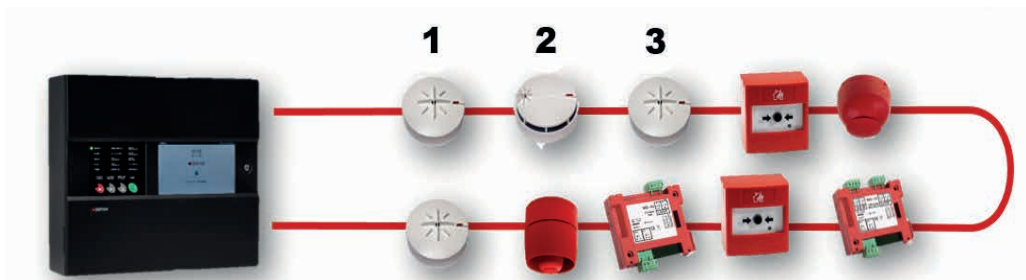
7.20.3. Defining a time condition

In order to define a time condition for an input, proceed as described in the previous section. When you arrive at point 3 of the previous section, select the **TIME CONDITION** option.

This option lets you condition the actions to a moment in time.

A specific period is identified in which the input equation will be considered valid, or during which the input equation should not carry out any action.

- **From month to month:** define the interval in months
- **From day to day:** define the interval in days of the week
- **From time to time:** define the time range
- **Logic:** define the logic state.

  Normal: the defined period makes the state true

  No: the defined period makes the state false

For example, it may be necessary for the sounders to not be activated in a specific area on a particular day of the week at a certain time.

Press [SAVE], **SAVE** to update the database.
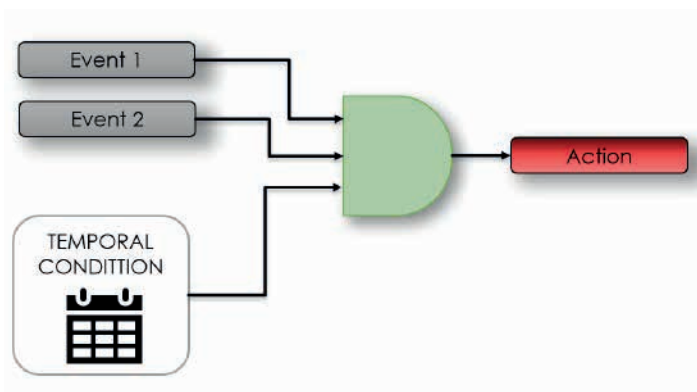
Press [CANCEL], **CANCEL** to undo the proposed changes.

Add time condition: it lets you condition the action to a predetermined fraction of time.

7.20.4. Actions

Using the mouse, drag any of the entities from the action window that will be an output condition for the manoeuvre.

For each output, define the action type that must be carried out when all input event conditions are true. To do so, edit the action by clicking on it twice in the **MANOEUVRE CREATION** menu.

For the *actions*, outputs, the following must be determined:

• **Delay:** if the action must occur after a certain time. The delay starts from the moment the input condition is true. The delay time can be configured between 0 and 600 seconds

Actions:

Activate the outputs.

Deactivate the outputs.

Enable the entity.

Disable the entity.

Test, sets the entity to test mode.

Reset the entity.

Pulse activates the entity's outputs with a pulse width that can be configured between 0-600 seconds (10 seconds by default).

Configuration, allows you to cancel delays.

Element type:

All. All of the entity's outputs.

Sounders. It only activates the entity's sounders.

Relays. It only activates the entity's relays.

Intermittent sounder. It activates the entity's sounders intermittently.

PCB Sounder 1. It activates sounder 1 on the control panel.

PCB Sounder 2. It activates sounder 2 on the control panel.
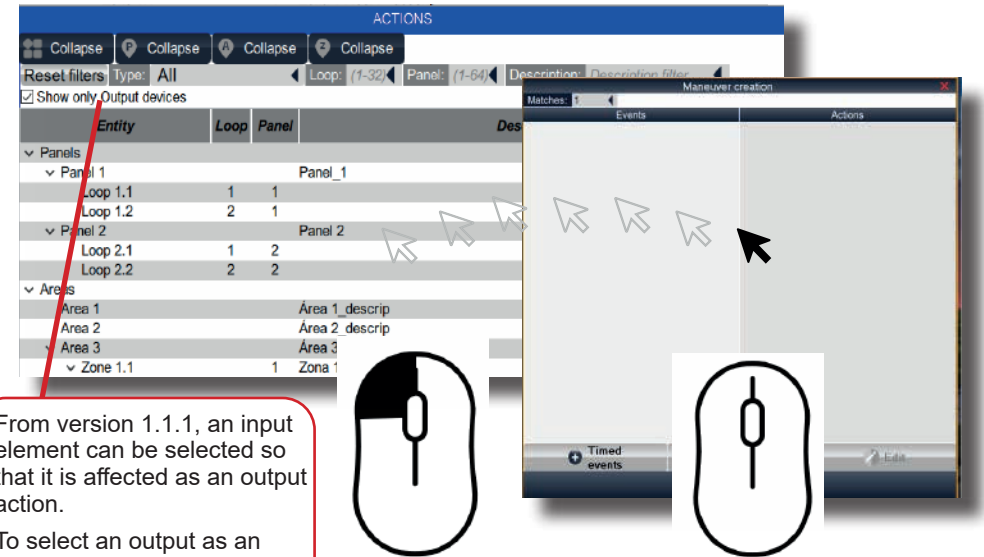
From version 1.1.1, an input element can be selected so that it is affected as an output action.

To select an output as an event in the manoeuvre, uncheck the "Show only Output devices" box.

Action type: activate the output, deactivate, reset or pulse.

Action destination: all outputs, sounders, relays or intermittent sounders.

Delay: time from when all input prerequisites are met until the action is carried out. Between 0 - 600 sec.
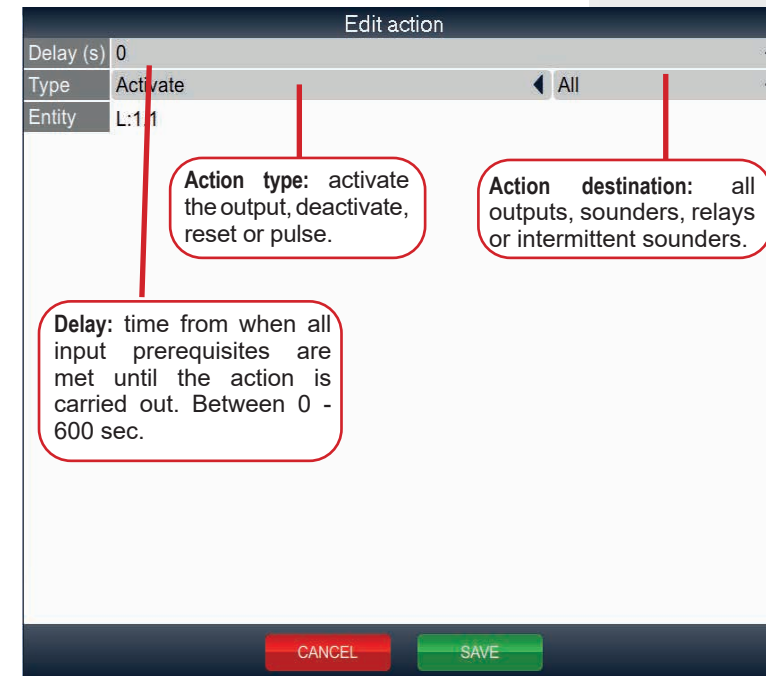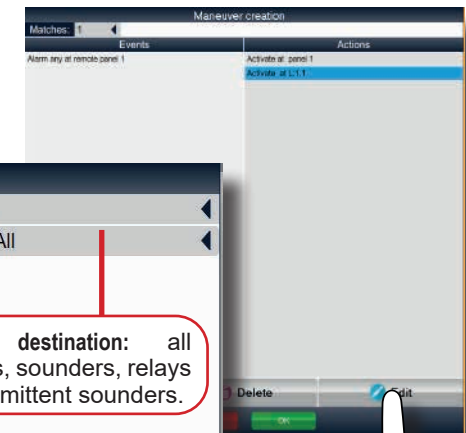
Type		Entity							
Action	Element type	Panel	Loop	Area	Zone	OUT devices	IN devices	Group	VM
ACTIVATE	All	Yes	Yes	Yes	Yes	Yes		Yes	Yes
	Sounders	Yes	Yes	Yes	Yes			Yes	
	Relays	Yes	Yes	Yes	Yes			Yes	
	Sounders dev.	Yes	Yes	Yes	Yes			Yes	
	Sounder 1	Yes							
	Sounder 2	Yes							
DEACTIVATE	All	Yes	Yes	Yes	Yes	Yes		Yes	Yes
	Sounders	Yes	Yes	Yes	Yes			Yes	
	Relays	Yes	Yes	Yes	Yes			Yes	
	Sounder 1	Yes							
	Sounder 2	Yes							
RESET		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PULSE	Time	Yes	Yes	Yes	Yes	Yes		Yes	
ENABLE		Yes		Yes	Yes	Yes	Yes	Yes	Yes
DISABLE		Yes		Yes	Yes	Yes	Yes	Yes	Yes
TEST		Yes		Yes	Yes				
PROGRAMMING	Cancel delay	Yes							

The options depend on the selected entity, see the attached table.

Press [SAVE], **SAVE** to update the database.

Press [CANCEL], **CANCEL** to undo the proposed changes.

• **Their destination. Entity:**

   • Panel, loop, area, zone, device, group or virtual mode

The actions always relate to the selected entity.
The program does not let you mix actions on entities from different panels.

The manoeuvre window will now show the complete information for the sequence.

On the left, in the events table, all inputs that must be considered for the manoeuvre will be included.

On the right side of the window is the table with all the actions that will be triggered when the prerequisites defined in the events table are met.

The system supports 100,000 inputs and outputs configured in different manoeuvres.

The manoeuvre window provides the following view and configuration fields.

Panel filter. Indicate the panel number for which you want to restrict the manoeuvre view.

Event/action filter. Drag the entity for which you want to restrict the view from the **EVENTS** and/or **ACTIONS** tables.

Manoeuvre no. Order number of the current manoeuvre with regards to the manoeuvre table.

Panel. Panel where the manoeuvre is hosted, the actions correspond to entities in this panel.
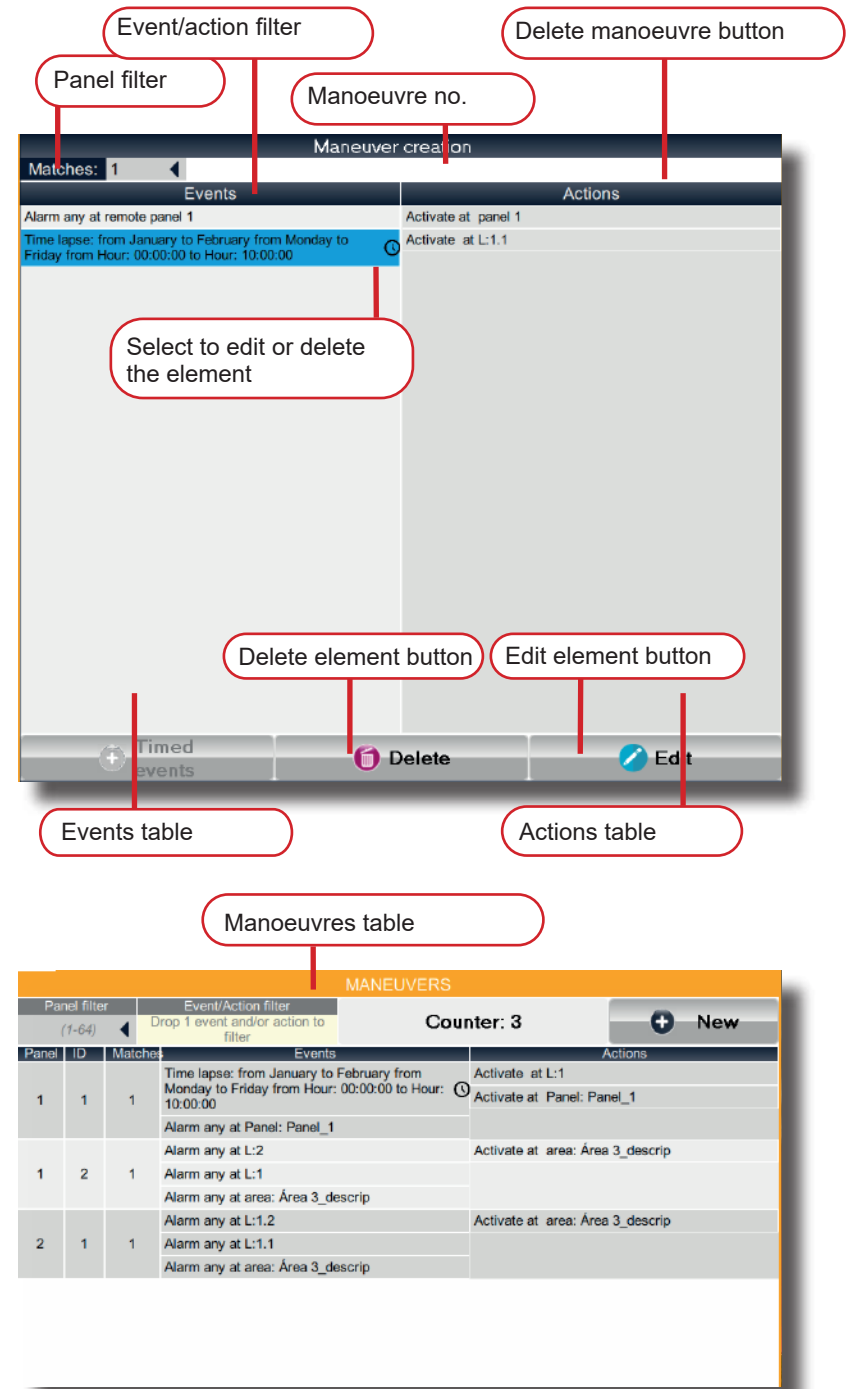
Coincidences. See section 7.20.1 Coincidences.

Delete element. Select the element from either of the two manoeuvre tables, events or actions, and press this button to delete it.

Edit. Select the element from either of the two manoeuvre tables, events or actions, and press this button to enter the menu for editing the element.

Delete manoeuvre. This button deletes the entire manoeuvre.

Press ⟲ to go to the manoeuvre table.

Event/action filter

Delete manoeuvre button

Panel filter

Manoeuvre no.

Select to edit or delete the element

Delete element button

Edit element button

Events table

Actions table

Manoeuvres table

7.21. GROUPS

The creation of groups is a very powerful tool that radically streamlines the creation of manoeuvre rules.

On many occasions, you will need to manage actions that easily go beyond the physical grouping of zones, areas or that are dependent on the status of various elements of these zones or areas.

You may have to organise an evacuation sequence that groups different floors or sectors of a building. You may also have to manoeuvre elements that are located in other zones and areas.

A specific group of elements may be required in different input or output rules.

> 📄 In a group, you can enter as many system elements as required for one entity type. It is not allowed to mix different entities. For example, if you create a group with zones, you can only include zones. An entity can only be contained in up to 8 groups.

The group configuration tab menu has the following elements:

Button area: it has up to 5 buttons according to the selected entity.

Icon	Description
Ⓐ Collapse	Collapses or expands the **AREA** hierarchy
Ⓩ Collapse	Collapses or expands the **ZONE** hierarchy
Ⓖ Collapse	Collapses or expands the **GROUP** hierarchy
⊕ Group	Add a new group
🗑	Delete a group. It is visible when there are groups defined

Filter area. It lets you simplify the list of elements, entities or groups shown by adjusting the filter criterion. Different filters can be linked together.

Buttons

Filters

Entities table

Groups table
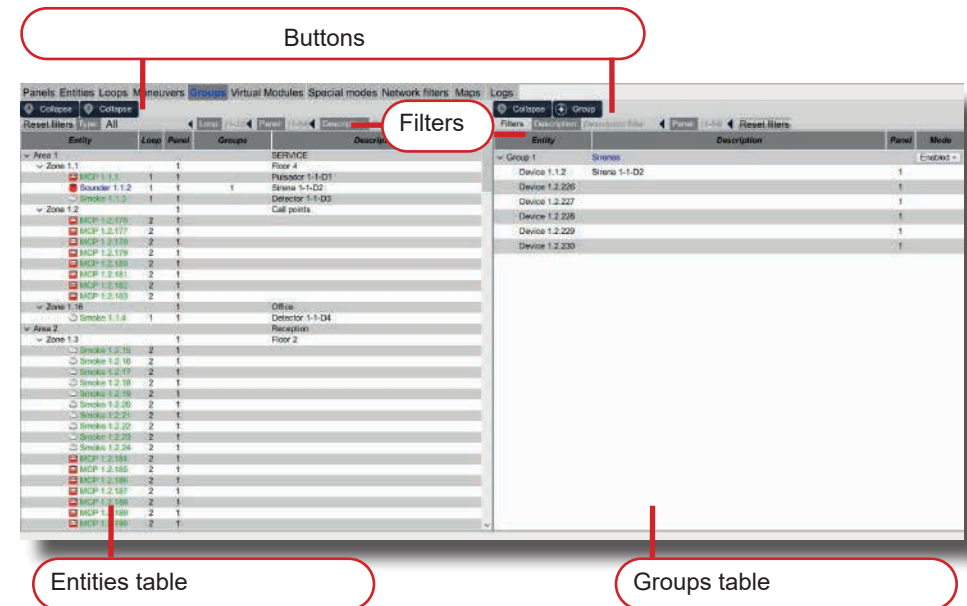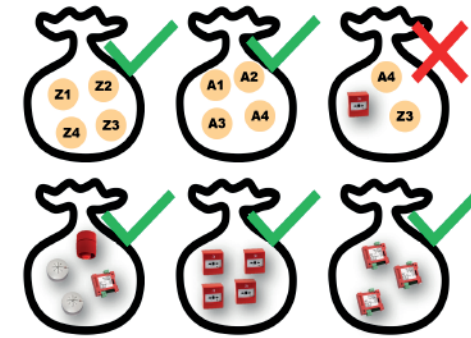
| Filter	Description
TYPE	By selecting the type of device that should be shown.
LOOP	The list is restricted to the elements contained in the loops with that numbering.
PANEL	Restricts the list to elements from the selected node
DESCRIPTION	Restricts the list to elements with the string entered. It is sensitive to upper and lower case.
RESET FILTERS	By pressing the button, all filters will be deleted.

Creating a group

1. From the groups window, press the , + Group button.

Alternatively, as described for other menus, using right-click, you can access the creation, editing or element and group deletion options directly.
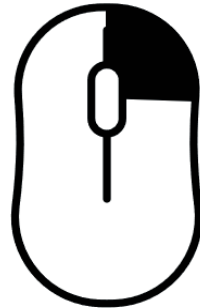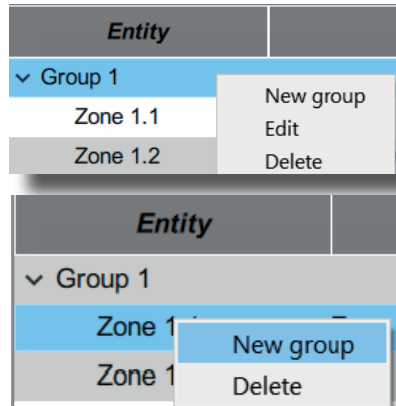
2. It shows a screen that lets you associate the group number that will be assigned to the group. The system shows the first available number.

Touch the arrow keys to move the counter up or down. If you press the number field, the numerical keyboard will appear for you to indicate the group number. Up to 1,000 groups can be created.

Press **SAVE** , **SAVE** to update the database.

Press **CANCEL** , **CANCEL** to undo the proposed changes.

If you enter a number that has already been assigned, the system will return the message **ERROR: CANNOT INSERT GROUP. CHECK IF GROUP IS NOT ALREADY CREATED**.

3. Click and drag the entities you want to group one by one. Drop each element onto the corresponding group.

4. If you do not want the group to be active when transferring the configuration to the control panel, put the group in disabled mode.

6. Include the group in the manoeuvre with the procedure described in the previous section.

Select group

1

CANCEL   OK

Error

Cannot insert group.Check if group is not already created.
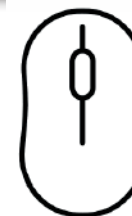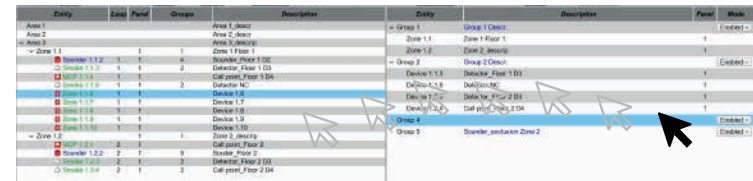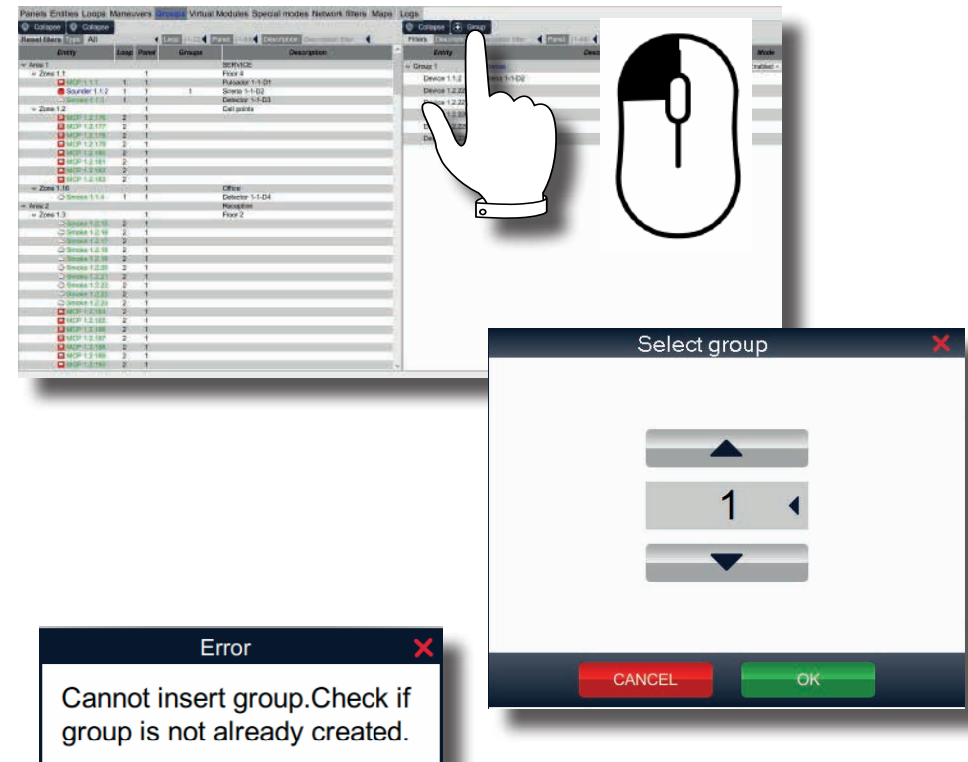
7.22. VIRTUAL MODULES

As described in the previous chapter, Groups, the virtual module menu appears with the following elements:

Virtual modules are intermediate functions. They let you create complex functions, using the results of one manoeuvre as a condition for another manoeuvre.

Virtual modules can be used as quick button functions on the initial panel:

Button + virtual module: creates a new module

Delete button + virtual module: deletes the selected module

Description filters.

Reset filters button.

Virtual module list: the list of created modules and associated information, module number, description, the current mode (enabled or disabled) and status will be displayed.

1. To create a virtual module, press the **+VIRTUAL MODULE** button.

2. A screen appears that lets you associate the virtual module number that will be assigned. The system shows the first available number.

Touch the arrow keys [▲] [▼] to move the counter up or down.

If you enter a number that has already been assigned, the system will return the message **ERROR: CANNOT INSERT MODULE. CHECK IF GROUP IS NOT ALREADY CREATED**.

📑 Up to 1000 virtual modules can be created.

Press **OK** to confirm.

Press **CANCEL** to discard.

Create filter button

Virtual module list

Filter

When creating the first virtual module, the module list area adopts a table format with the following fields:

ID: module number identifier

Description. Enter a tag that lets you identify the virtual module's function. By pressing the field, you will access the keyboard in alphanumeric mode

Mode. If you do not want the module to be active when transferring the configuration to the control panel, put the module in disabled mode.

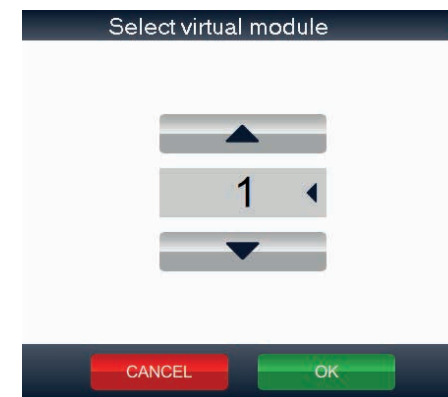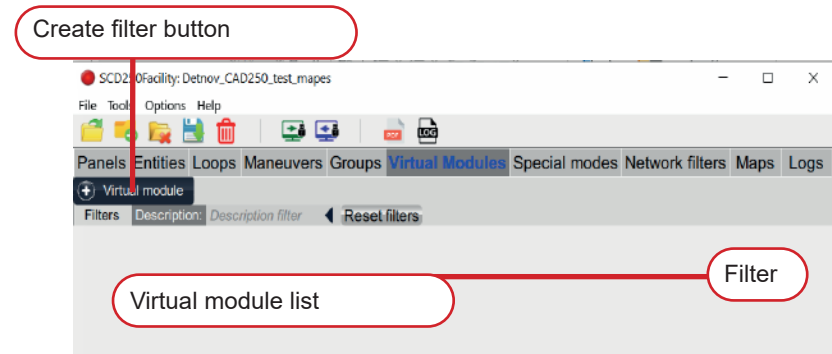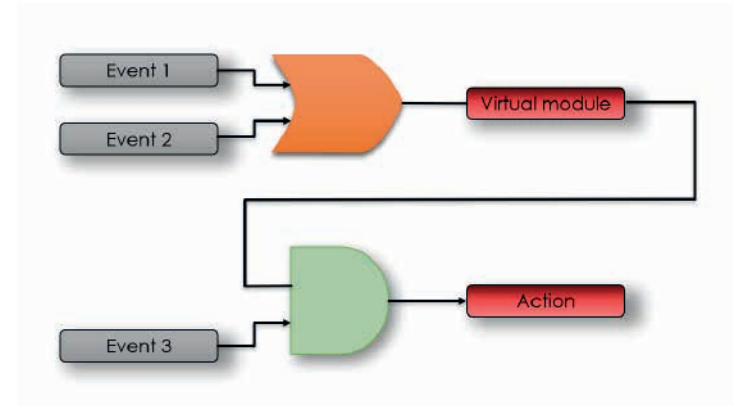**Resettable.** by resetting the control panel, the resettable module, if activated, will return to standby and not active mode.

Shortcut. Defines whether the virtual module is also a button function that can be accessed from the standby screen.

If you have virtual modules configured as a button function, you can access them by clicking the VM icon, which will appear in the bottom left corner of the control panel's standby screen.

Hidden. If it is not active and the shortcut button is not active, the virtual modules will be accessible from the quick access by clicking the **+** icon.

If the slider button is active, the button will not appear on the standby screen. Neither in pinned mode nor from the **+** icon.

To make the virtual module functional, generate a manoeuvre following the steps described in the previous points.

1. Creation of a quick button function for **EVACUATION**.

Create a virtual module following the described steps:

- **Description:** EVACUATION.
- **Mode:** enabled
- **Resettable**: active slider button
- **Shortcut:** active slider button

Create a manoeuvre assigning the **EVACUATION** virtual module as an event (input).
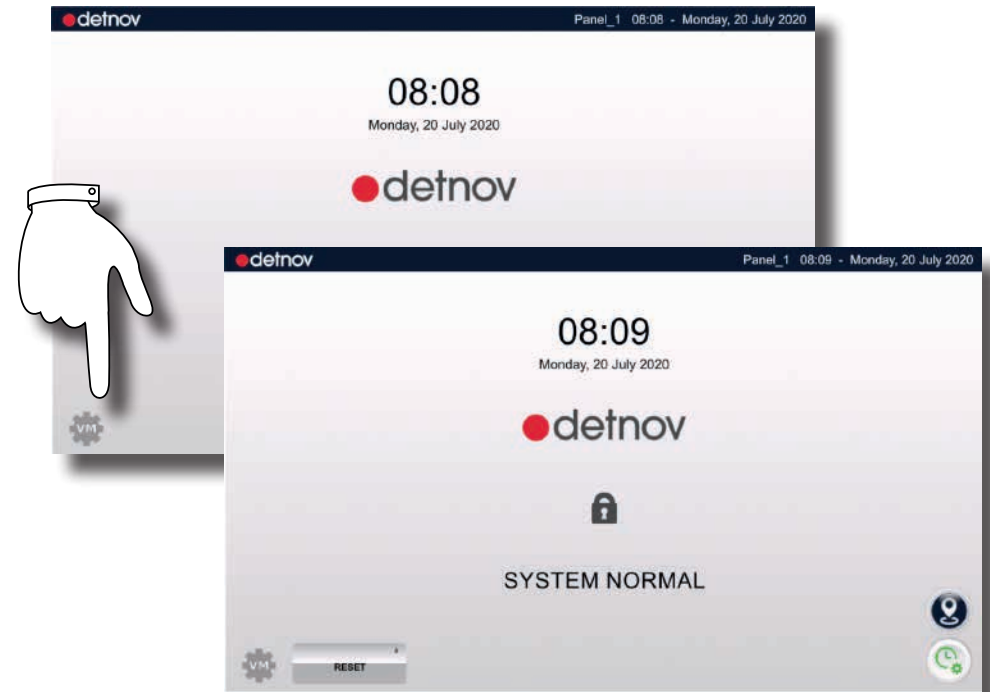
Associate the outputs. Select the **PANEL** entity:

- **Action to be carried out:** activate
- **Type:** Sounders

Press **SAVE.**

Check that the **VM** icon for accessing the quick buttons appears on the main standby screen. By touching the button, all the configured buttons will be displayed on the bottom margin, in this case the **EVACUATION** button.

By pressing the **EVACUATION** button, a warning screen will appear requesting confirmation.

Designing a manoeuvre

The scenario that is defined requires that:

In the event of a fire in zone 1 or zone 2, the following manoeuvres are carried out:

• Immediate shutdown of the ventilation

• Activation of the alert signal

• Delayed activation of the evacuation signal in the area

In order to confirm the alarm in zone 1, there must be at least 2 active detectors in that zone.

In zone 2, any element immediately activates the manoeuvre.

These actions will be carried out only if the access doors are closed.

It must not be possible, under any circumstances, for the manoeuvre to operate locally on the weekend.

It must be possible to stop the manoeuvre using a push-button in the local area.

> The attached example describes a medium complexity manoeuvre that can be configured with CAD-250.
>
> The configuration options are extremely flexible, letting you create very complex manoeuvres.
>
> When you create manoeuvres, plan the scenarios well and avoid creating loops.
>
> In any case, check each scenario and make sure you have not generated missing or incorrect gateways, and more importantly, test each manoeuvre and complete scenario.
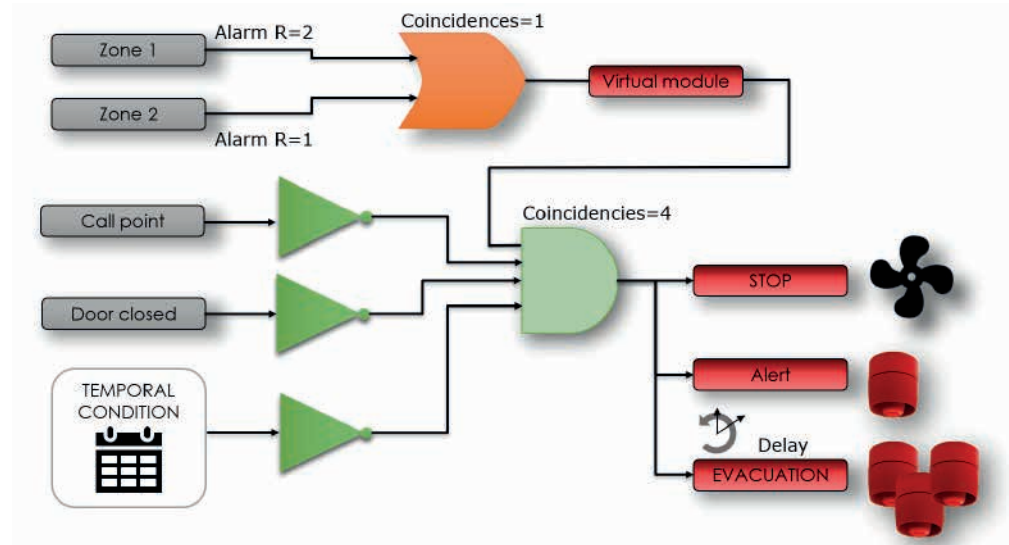
8. Special modules

It is normal that in different detection areas or zones in the same system, different activities are carried out that require specific processing. It is also very likely that the activity in each area will be dynamic and that the mode in which signals are processed based on that activity will require special attention.

CAD-250 lets you create up to 2500 special modes for processing the detection signals adjusted to the activity. For example, it is possible to adjust the detector sensitivity levels for specific panels, areas, zones or devices or to define whether the signal they activate requires some kind of prior confirmation to confirm the alarm.

> ⚠ Special modes are a powerful and extremely flexible tool. Their configuration requires a good level of knowledge of the tool, the project and the fire detection and alarm concepts. Medium and high complexity configurations require method and thoroughness when checking the system's functionality. Let skilled professionals who have the specific technical training help you.
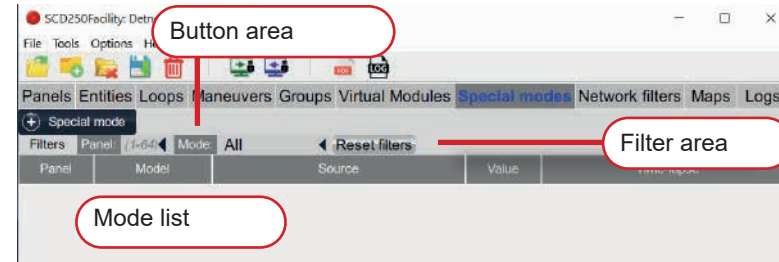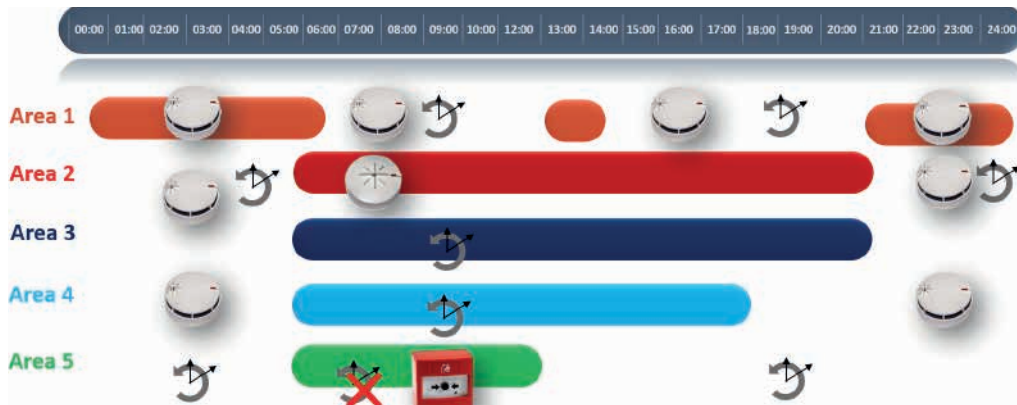
The group **CONFIGURATION TAB** menu has the following elements:

Button area: it has up to 2 buttons according to the selected entity.

Icon	Description
Special mode	Creates a new special mode
Special mode	Deletes the selected mode

Filter area. It lets you simplify the list of elements, entities or groups shown by adjusting the filter criterion. Different filters can be linked together.

Filter	Description
PANEL	It restricts the list to elements from the selected node
MODE	It restricts the list to the mode, sensitivity, optical-heat, confirmation.
RESET FILTERS	By pressing the button, all filters will be deleted

> 📄 Special modes have certain precedence rules to determine the priority of the rule in case several are applied at once.
>
> **Configuration overlaps on the same entity are not permitted** with modes of the same type.
>
> The most specific mode takes precedence, therefore, if an area is defined with high sensitivity and a specific device in that area is defined with low sensitivity, the low sensitivity mode will continue to be met for that device and the high sensitivity mode for the other devices.

The mode list is displayed as a table with the following content:

- **Panel:** the node that the mode is applied to

- **Mode:** (sensitivity, confirmation, etc.)

- **Source:** panel, zone or device that will be affected by the mode

- **Value:** magnitude associated with the configured mode

- **Time lapse:** it is the period of time for which the special mode established in the table will be active.

1. To incorporate a mode, press the **+SPECIAL MODE** button. In doing so, you will access the entity selection menu. According to the tabs in the top margin of the menu, select Panel, Zone or Devices.

2. By selecting **PANEL** or **ZONE** after you have selected the entity, you will access the new special mode's configuration menu directly.

The configuration menu shows the following configuration fields:

Entity: it is possible to modify it as long as you have not closed the mode configuration.

Select the Entity

Entity field   Mode field

Mode value

Lapse type
Always = not subject to the calendar

Mode editing menu
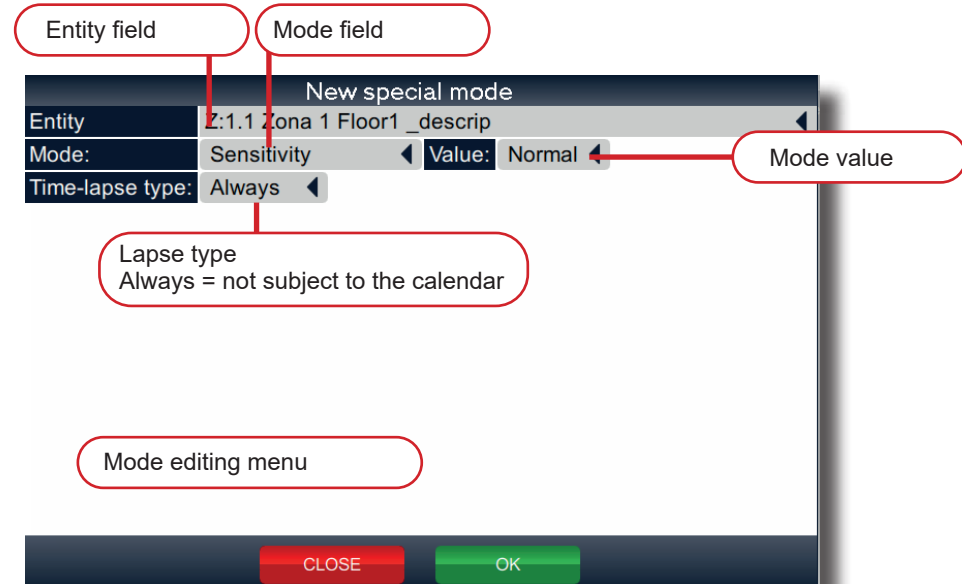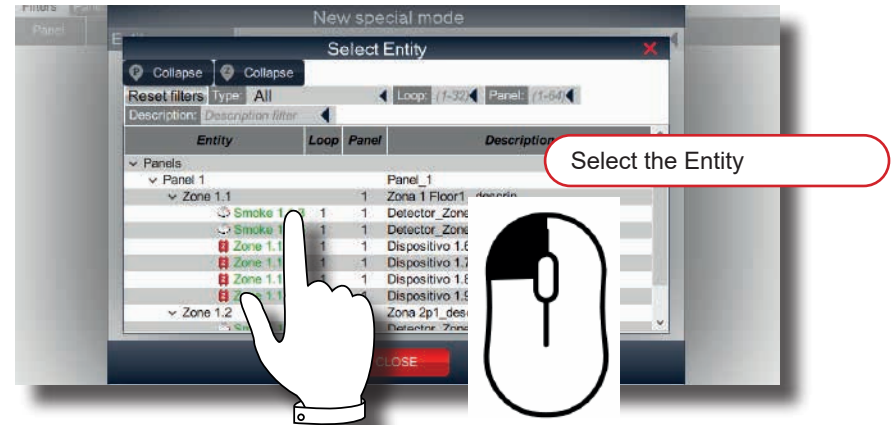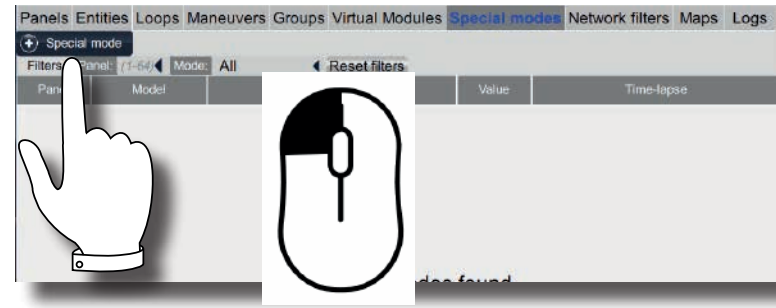
Mode: it accepts the following configurations

Sensitivity: it is applied to smoke and temperature detection. When it is applied generically to the panel or zone, it will only have an effect on the smoke or heat detection elements included in that entity.

You can adopt the values of lower, low, normal, high or higher, within the approval range.

You can generate a low sensitivity mode applicable to a daily fraction of time and a high sensitivity mode applicable to another fraction of time.

Optical-heat: it is applied to detectors that have both technologies. You can adopt the following values: only optical, only heat or both.

When the protected space has different uses, it may be necessary to program a different working mode for each use. If work that generates smoke is planned for a specific time, you can opt to apply a heat only mode during a period of time.

Please note that the change in principle may be subject to regulatory restrictions.

Confirmation: the confirmation mode is applicable to all alarm detection entities. Under this mode, the control panel will check that the alarm condition is maintained for a prolonged period.

The mode allows the configuration of values of between 1 and 60 seconds.

The control panel will not show the alarm condition until the confirmation time is over. Once this is over, if the addressable value falls below the alarm level of 100, the alarm will not be confirmed. The process will start again when the detector exceeds the alarm level.

Reset confirmation: the reset confirmation mode applies to all alarm input devices. Under this mode, the control panel resets the device and checks the recurrence within a specific period.

If the device is activated again, the control panel will process the alarm and will trigger all mandatory and programmed actions.

Any device in the monitoring entity selected for the mode that exceeds the alarm level, e.g. within the zone, will confirm the alarm.

Sensitivity mode

Normal mode

Only optical mode

Only heat mode

Confirmation mode
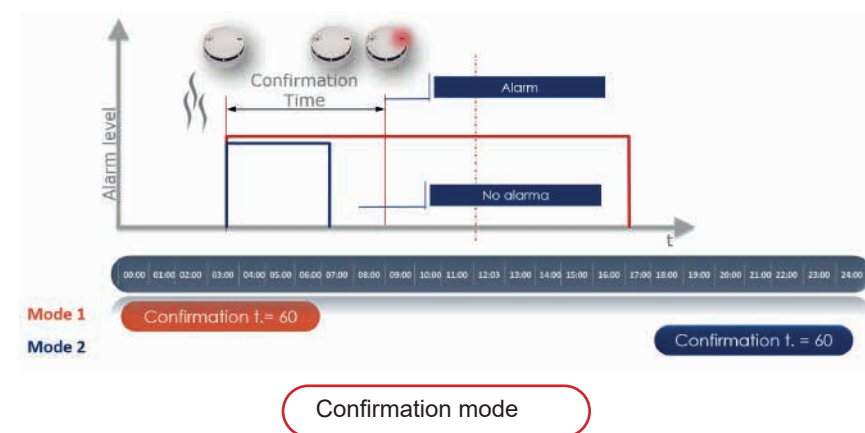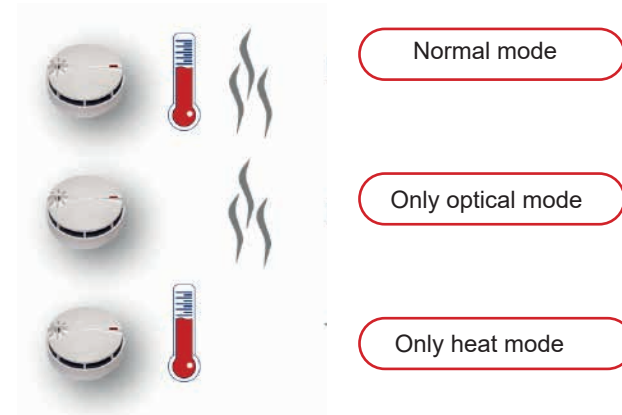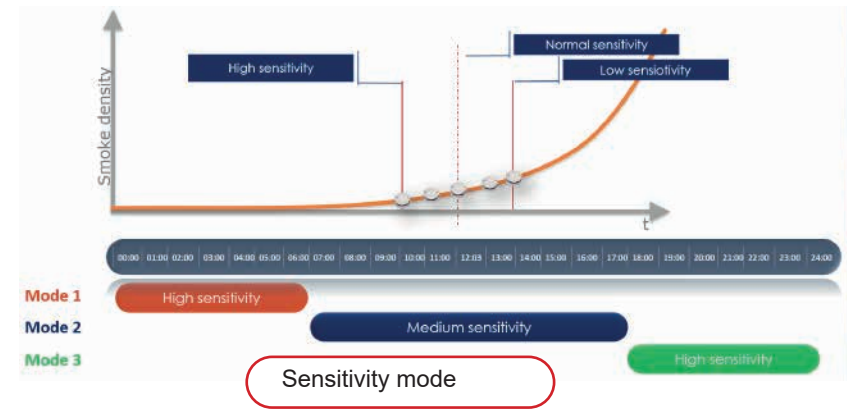
Type of time lapse: this field lets you assign the time fraction to the mode in which the mode will be active. It accepts the following values:

• **Always.** This is the default value. There is no interruption in the assignment of the lapse and it will always remain active unless a precedence criterion is applied. This means that if the mode was applied to a generic panel entity and there is a mode assigned to a zone or device with a value criterion in a different way, the most specific one will prevail.

• **Lapse.** it defines a fraction of time in which the mode is applicable. By selecting this option, the list of configuration options is displayed within the menu.

  • **Time.** It lets you choose between the entire day and a time range. If you opt for the time range, define the start and end times.

  If a mode overlap occurs, you will get the error message *"Check if there are overlaps with another special mode created"*.

  • **Day.** It lets you choose between the whole week, a day of the week from Monday to Sunday and a range of days. If you opt for a range of days, define the start and end days. CAD-250 regards Monday as the first day of the week.

  If a mode overlap occurs, you will get the error message *"Check if there are overlaps with another special mode created"*.

  • **Month.** it lets you select the entire year, a month from January to December or a range of months. If you opt for a range of months, specify the start and end months.
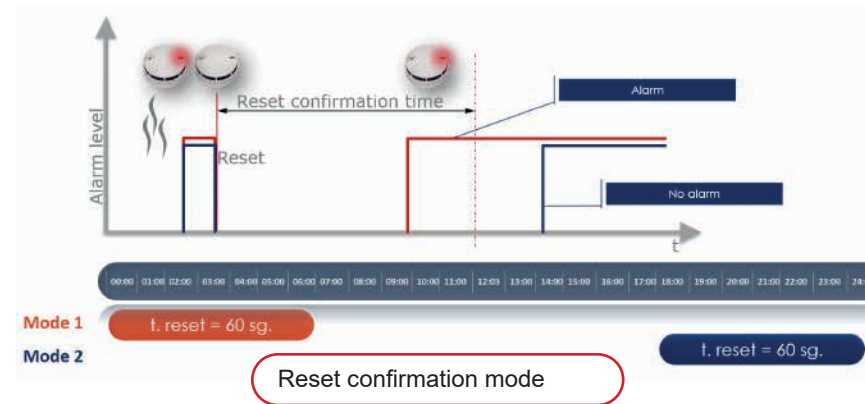
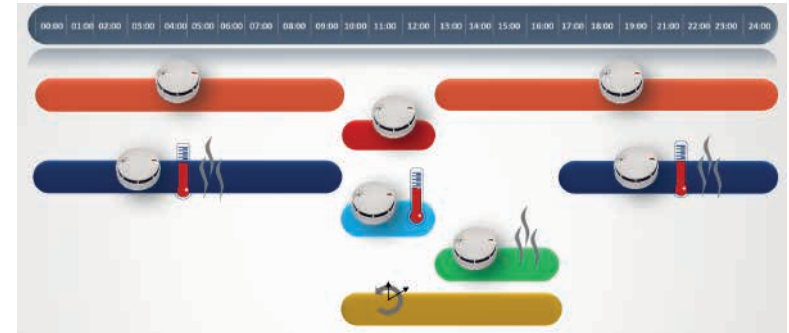Reset confirmation mode

Type = lapse

Lapse configuration fields

If a mode overlap occurs, you will get the error message **CHECK IF OVERLAPS WITH ANOTHER SPECIAL MODE CREATED**.

In the example on the right, different modes have been established for zone 1.

1) The smoke detector devices in zone 1 will work in **HIGH SENSITIVITY** every day of the week from 00:00 until 10:00 and from 13:00 until 24:00.

2) The smoke detector devices in zone 1 will work in **LOW SENSITIVITY** every day of the week from 10:00 until 13:00.

3) The combined detector devices in zone 1 will use both technologies, optical and heat, every day of the week from 00:00 until 10:00 and from 17:00 until 24:00. The sensitivity of the optical part will be affected by the configuration of the sensitivity modes, if they have been defined.

4) The combined detector devices in zone 1 will only use heat technology every day of the week from 10:00 until 13:00.

5) The combined detector devices in zone 1 will only use optical technology every day of the week from 13:00 until 17:00. The sensitivity of the optical part will be affected by the configuration of the **SENSITIVITY** modes, if they have been defined.

6) All detection devices in zone 1 are affected by the RESET CONFIRMATION for both sensors, optical and heat, every day of the week from 10:00 until 17:00.

1 - High sensitivity

2 - Low sensitivity

3 - Optical-heat

4 - Heat

5 - Optical

6 - Reset confirmation

E.g. overlapping modes for ZONE 1

9. Logs

By downloading the control panel's configuration, you also download the control panel's event log.

This function provides flexibility for working on the history log. The filters provided by the tool will let you focus on the period or event type you want to work on.

CAD-250 has the capacity for up to 1,000,000 event logs. These logs are vital for reviewing the chain of events, understanding the causes and checking the deployment of actions after a potential fire alarm, fault or activation.

The LOGS menu or event log displays the following information:

• **From date:** filter start date, events that occurred at an earlier date are not displayed. Pressing the **FROM DATE** button gives you access to the calendar where you can set the filter start date. Press delete to discard the start filter.

• **To date:** filter end date, events that occurred at a later date are not displayed. Pressing the **TO DATE** button gives you access to the calendar where you can set the filter end date. Press delete to discard the filter.

• **Event list:** list of events recorded since the last deletion of events. They are displayed consecutively and in order of occurrence.

Filter buttons: they let you limit the view to the event type that has been filtered.

> 📄 The system will not save the events of devices, zones or areas that are disabled.

The *EVENT LIST* shows the following information, ordered from most recent to oldest:

When selecting each option on the **SUBMENU**, you can filter the events by the corresponding types for better analysis.

By filtering the event type, the counter will also update its value.

From date — Event counter — To date — Event list — Event ID
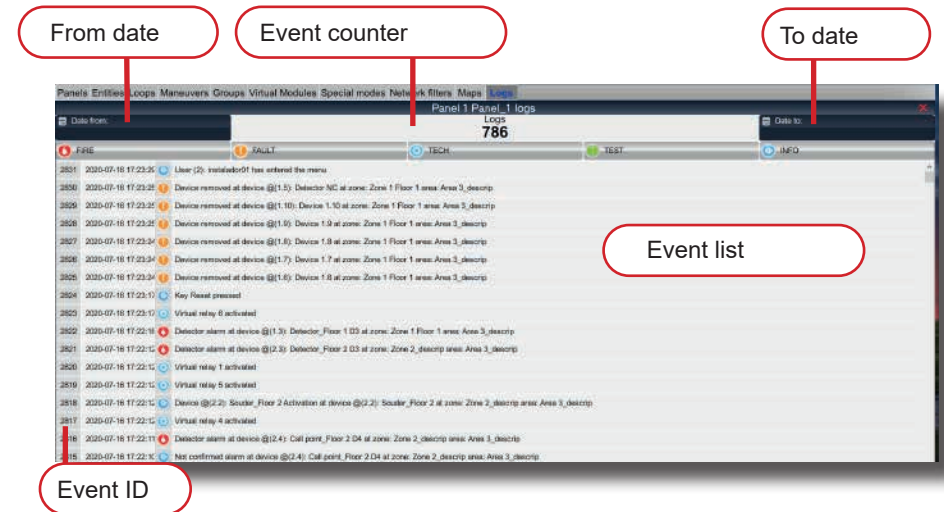
Field	Definition
ID	Event identifier, event sequence number.
DATE	Date and time when the event occurred.
TYPE	Event typology, corresponds to the types of filter in the submenu
	ALARM Fire alarm events
	FAULT OR FAILURE Fault events of any system element
	TECHNICAL ACTIVATIONS Events caused by the activation of technical signals, which are not a fire alarm detection
	TEST Zone or area events when configured in test mode
	INFORMATION General events, such as access, zone or area changes or actions on general control function keys, such as RESET, SILENCE, etc.
DESCRIPTION	The system generates a description of the event

Tap one of the filter options on the submenu to view:

ALARMS: Only the alarms are shown.

FAULT: Only the faults are shown.

TECHNICAL: Events that are produced by technical inputs are shown.

TEST: The events of ZONES and AREAS configured in test mode are shown.

INFORMATION: Log of accesses to the control panel, zone/area mode changes and physical keys pressed.

Filter buttons
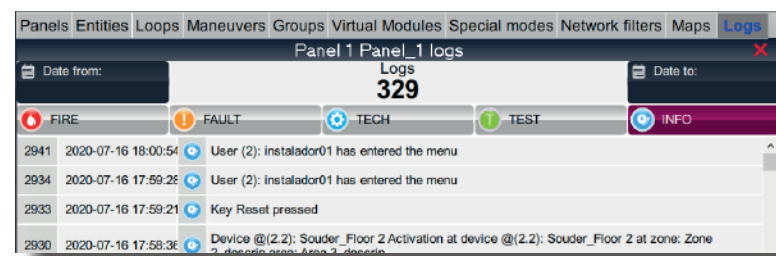
You can export the log as a ***.CSV** file, (see section 3.9.1 Tools).

ANNEX 1: Compatible devices and consumption

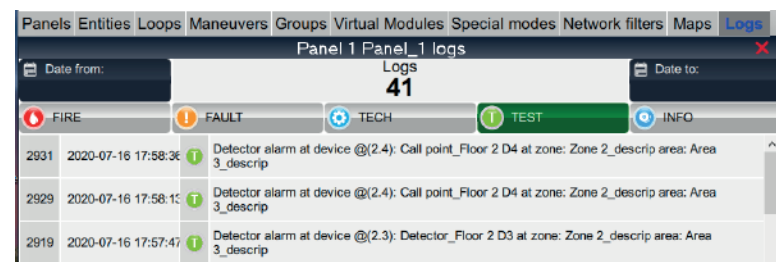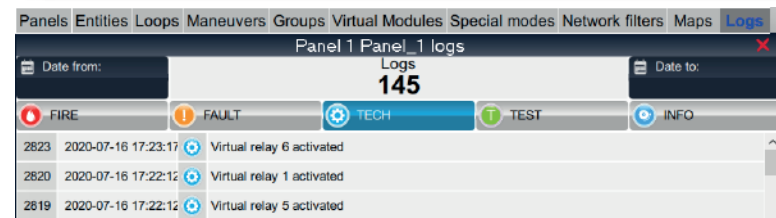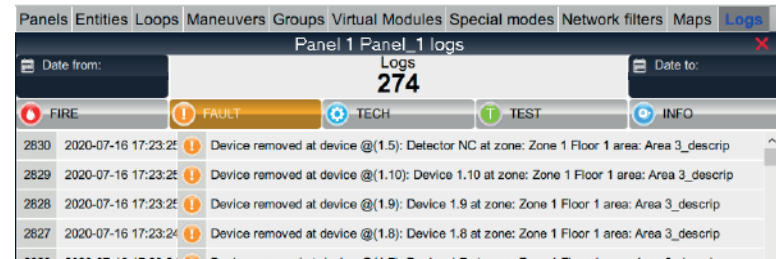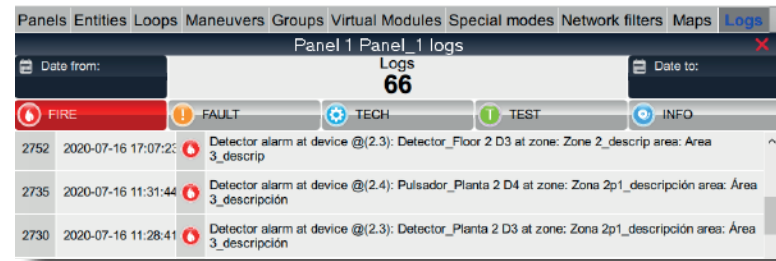| Reference	Type	Standby consumption	Alarm consumption	Isolator switch	External power supply	Address no.	Description
DTD-210A	HEAT.D	0.3 mA	3 mA	No	No	1	Addressable thermovelocimetric detector
DTD-215A	HEAT.D	0.3 mA	3 mA	No	No	1	Addressable high-temperature heat detector
DOD-220A	OPTICAL.D	0.3 mA	3 mA	No	No	1	Addressable optical detector
DOTD-230A	OPTICAL-HEAT.D	0.3 mA	3 mA	No	No	1	Optical-heat detector
DTD-210A-I	HEAT.D	0.3 mA	3 mA	Yes	No	1	Addressable thermovelocimetric detector with isolator switch
DTD-215A-I	HEAT.D	0.3 mA	3 mA	Yes	No	1	Addressable high-temperature heat detector with isolator switch
DOD-220A-I	OPTICAL.D	0.3 mA	3 mA	Yes	No	1	Addressable optical detector with isolator switch
DOTD-230A-I	OPTICAL-HEAT.D	0.3 mA	3 mA	Yes	No	1	Addressable thermovelocimetric detector with isolator switch
DGD-600	GAS	4.5 mA	65 mA	No	No	1	Light flammable gas detector, Methane, Natural Gas, Hydrogen
DGD-600-AC		3.5 mA	62 mA	No	No		
DGD-620	GAS	4.5 mA	65 mA	No	No	1	Heavy flammable gas detector, Liquefied Petroleum Gases, Propane, Butane
DGD-620-AC		3.5 mA	62 mA	No	No		
MAD-401	MOD	0.3 mA	1.5 mA	No	No	1	Addressable 1-input monitor module.
MAD-401-I	MOD	0.3 mA	1.5 mA	Yes	No	1	Addressable 1-input monitor module with isolator switch.
MAD-402	MOD	0.3 mA	1.5 mA	No	No	2	Addressable 2-input monitor module.
MAD-402-I	MOD	0.3 mA	1.5 mA	Yes	No	2	Addressable 2-input monitor module with isolator switch.
MAD-405-I	MOD	0.3 mA	1.5 mA	Yes	No	5	Addressable 5-input module with isolator switch.
MAD-409-I	MOD	0.3 mA	1.5 mA	Yes	No	10	Addressable 10-input module with isolator switch.
MAD-410-I	MOD	0.3 mA	1.5 mA	Yes	No	10	
MAD-411	MOD	0.3 mA	1.5 mA	No	No	1	Addressable 1-output control module.
MAD-411-I	MOD	0.3 mA	1.5 mA	Yes	No	1	Addressable 1-output control module with isolator switch
MAD-412	MOD	0.3 mA	1.5 mA	No	No	2	Addressable 2-output control module.
MAD-412-I	MOD	0.3 mA	1.5 mA	Yes	No	2	Addressable 2-output control module with isolator switch.
MAD-415-I	MOD	0.3 mA	1.5 mA	Yes	Yes	5	Addressable module of 5 relay outputs with isolator switch
MAD-419-I	MOD	0.3 mA	1.5 mA	Yes	Yes	10	Addressable module of 10 relay outputs with isolator switch.
MAD-421	MOD	0.3 mA	1.5 mA	No	No	2	Addressable 1-input monitor and control module.

Reference	Type	Standby consumption	Alarm consumption	Isolator switch	External power supply	Address no.	Description
MAD-421-I	MOD	0.3 mA	1.5 mA	Yes	No	2	Addressable 1-input monitor and control module with isolator switch.
MAD-422	MOD	0.3 mA	1.5 mA	No	Yes	4	Addressable monitor and control module with 2 relay inputs and 2 relay outputs
MAD-422-I	MOD	0.3 mA	1.5 mA	Yes	Yes	4	Addressable monitor and control module with 2 relay inputs and 2 relay outputs with isolator switch.
MAD-425-I	MOD	0.3 mA	1.5 mA	Yes	Yes	10	Addressable module with 5 technical inputs and 5 relay outputs
MAD-429-I	MOD	0.3 mA	1.5 mA	Yes	Yes	20	Addressable module with 10 technical inputs and 10 relay outputs
MAD-431	MOD	0.3 mA	1.5 mA	No	Yes	1	Addressable control module with 1 monitored 24 V output
MAD-431-I	MOD	0.3 mA	1.5 mA	Yes	Yes	1	Addressable control module with 1 monitored 24 V output with isolator switch
MAD-432	MOD	0.3 mA	1.5 mA	No	Yes	2	Addressable control module with two 24 V outputs
MAD-432-I	MOD	0.3 mA	1.5 mA	Yes	Yes	2	Addressable control module with two 24 V outputs with isolator switch
MAD-441	MOD	0.3 mA	1.5 mA	No	Yes	1	Addressable monitor module of 1 conventional zone.
MAD-441-I	MOD	0.3 mA	1.5 mA	Yes	Yes	1	Addressable monitor module of 1 conventional zone with isolator switch
MAD-442	MOD	0.3 mA	1.5 mA	No	Yes	2	Addressable monitor module of 2 conventional zones.
MAD-442-I	MOD	0.3 mA	1.5 mA	Yes	Yes	2	Addressable monitor module of 2 conventional zones with isolator switch
MAD-450	PUS	0.3 mA	1.5 mA	No	No	1	Addressable button
MAD-450-I	PUS	0.3 mA	1.5 mA	Yes	No	1	Addressable button with isolator switch
MAD-451-I	PUS	0.3 mA	1.5 mA	Yes	No	1	Resettable addressable alarm button with built-in isolator switch
MAD-450-IW	PUS	0.3 mA	1.5 mA	No	No	1	IP67 resettable addressable alarm button
MAD-461-I	SIR	0.3 mA	4.5 mA	Yes	No	1	Addressable sounder with isolator switch.
MAD-464-I	SIR	0.3 mA	6.5 mA	Yes	No	1	Addressable sounder with built-in isolator switch.
MAD-465-I	SIR	0.3 mA	6.5 mA	Yes	No	1	Sounder with addressable beacon with built-in isolator switch.
MAD-467-IC	SIR			Yes		1	Addressable red alarm sounder with white beacon for ceiling installation, with built-in isolator switch.
MAD-467-IW	SIR			Yes		1	Addressable red sounder alarm with white beacon, for wall installation, with built-in isolator switch
MAD-469-IC	SIR			Yes		1	Addressable white beacon with red base for ceiling installation with deep base, with built-in isolator switch.
MAD-469-IW	SIR			Yes		1	Addressable white beacon with red base for wall installation with deep base, with built-in isolator switch.

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Reference	Type	Standby consumption	Alarm consumption	Isolator switch	External power supply	Address no.	Description
MAD-472	SIR	0.35 mA	7 mA	No		1	
MAD-473	SIR	0.35 mA	7.5 mA	No		1	Connection base with built-in sounder and addressable beacon.
MAD-481	MOD	0.3 mA	1.5 mA	No	Yes	1	Addressable control module with 1 voltage-free relay input of 240 Vac and 5 A.
MAD-490	ISO	0.3 mA		N/A	No	N/A	Isolator switch module
PAD-10	INDICATOR	0.625 mA	2.5 mA		No	1	Addressable remote indicator
T P L D - 1 0 0 (CCD-102)	PANEL ZONE	0.3 mA			No	3	Gateway card to the addressable loop for conventional control panels
T P L D - 1 0 0 (CCD-103)	PANEL ZONE	0.3 mA			No	7	Gateway card to the addressable loop for conventional control panels
T P L D - 1 0 0 (CCD-104)	PANEL ZONE	0.3 mA			No	5	Gateway card to the addressable loop for conventional control panels
T P L D - 1 0 0 (CCD-108)	PANEL ZONE	0.3 mA			No	9	Gateway card to the addressable loop for conventional control panels
T P L D - 1 0 0 (CCD-112)	PANEL ZONE	0.3 mA			No	13	Gateway card to the addressable loop for conventional control panels
RLI 3-30 V					No	N/A	Action indicator for embedding