Manual

Consilium

Salwico Cargo

Conventional Fire Detection System

User Guide

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April 2010
Document no. 5100332-02A01
Part no: 5100332

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1 Introduction

1.1 About This Manual

This User Guide is intended for personnel using the Fire detection system and provides basic understanding how to operate the system.

Note!
This guide is valid for Control panel software versions beginning with version 1.0.0.

The chapter Fire Detection System gives general information about the system.

The chapter Control Panels describes the function of the Control panel and the Repeater in the Fire detection system.

The chapter Operations describes how to operate the Fire detection system.

The chapter Testing provides brief instructions on how to connect and test the system (detailed information is found in the Service & Maintenance manual).

The Fault Code List in the Appendix lists the different fault codes.

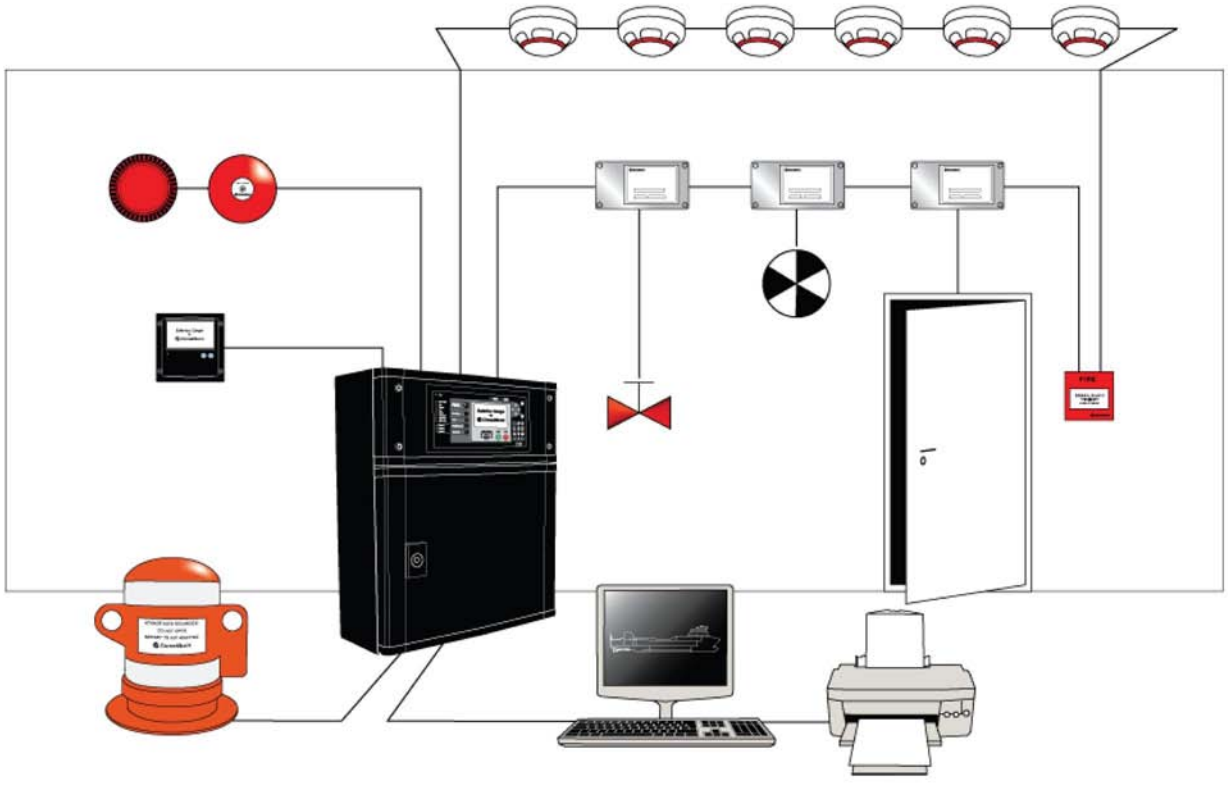
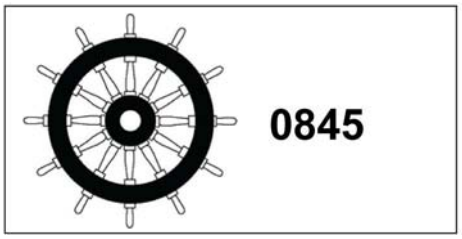


Figure 1. Salwico Cargo Fire Detection System, an example.

1.2 Approvals



2 Symbols Used in the Manual

Danger!
Risk of serious or fatal injury to the user, and/or severe damage to the product, if the instructions are not followed.

Warning!
Risk of personal injury and/or damage to the product if the instructions are not followed.

Caution!
Risk of minor or moderate personal injury. Risk of equipment damage, loss of data, extra work, or unexpected results, if the instructions are not followed.

Note!
Note symbols alert you to important facts and conditions.

Information
Tip symbols direct you to specific instructions, such as where to find additional information and tell you how to perform a certain operation in an easier way.

3 Fire Detection System

3.1 System Description

This Fire detection system is a state-of-the-art fire-detection system designed to meet marine and industrial requirements. Special care is given to ergonomics and user-friendliness with its logical and intuitive operator panel.

3.2 System Block Diagram

The following figure shows a typical system and its connected components, see Definitions of Terms, page 39 in the Appendix for explanation of terms and abbreviations.

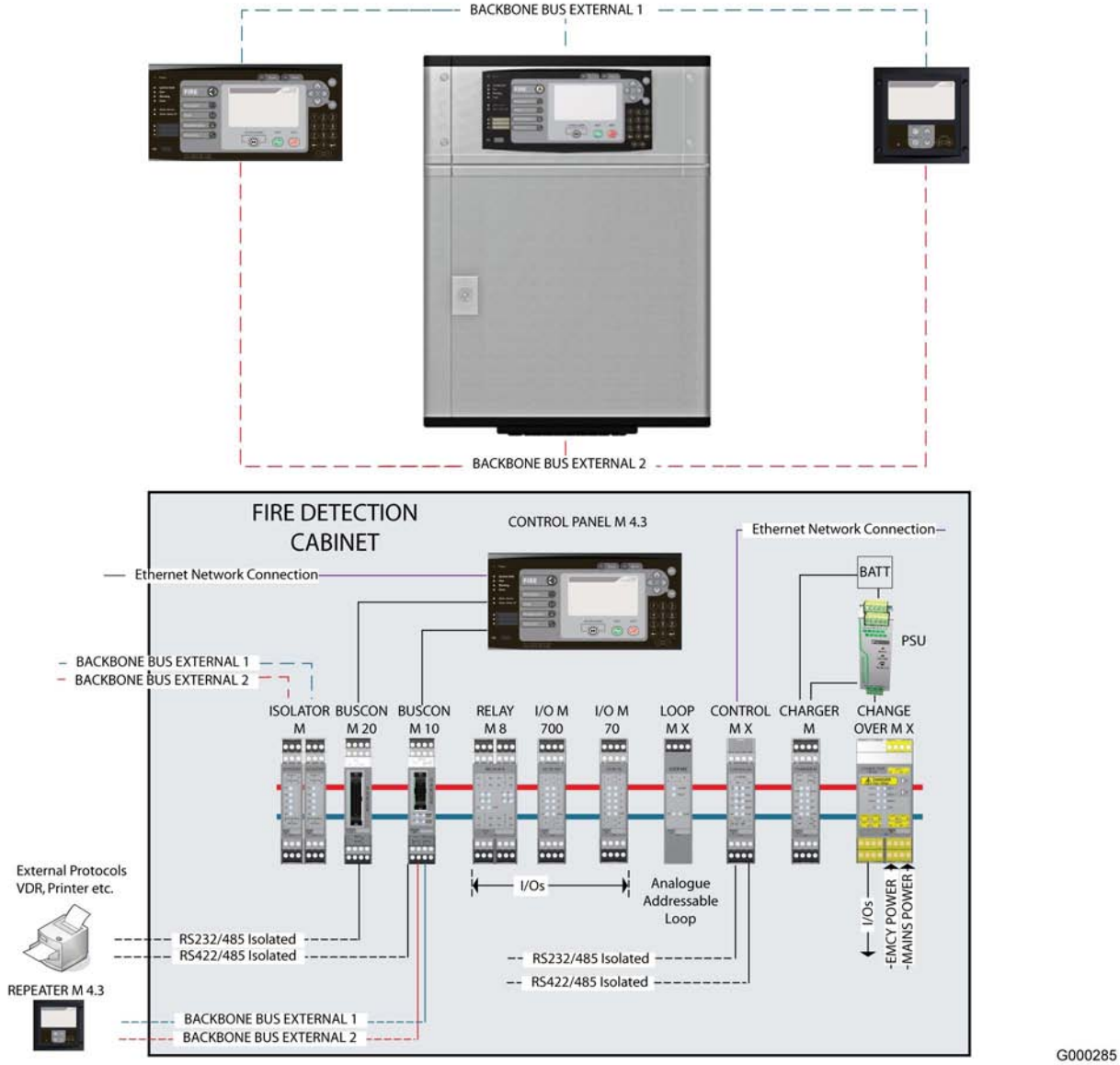


Figure 2. An example of a system block diagram.

4 Control Panels

4.1 Control Panel M 4.3

4.1.1 General

This menu-operated system monitors and controls all system functionality. The control panel's clear graphical display makes it easy to use.

4.1.2 Description of Keys and Indicators

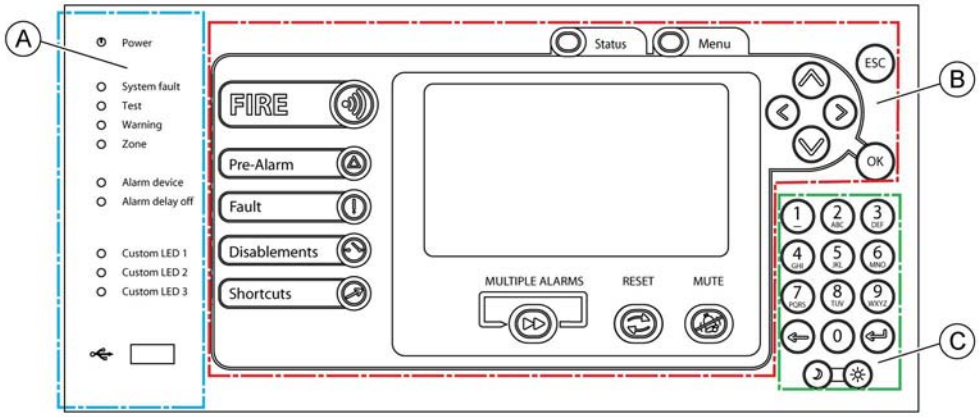


Figure 3. Keys and indicators for the control panel

As shown in the figure above, the control panel is divided into three sections:

A = System Indicators
B = Operational Controls
C = Numerical Keypad

Part A: System Indicators

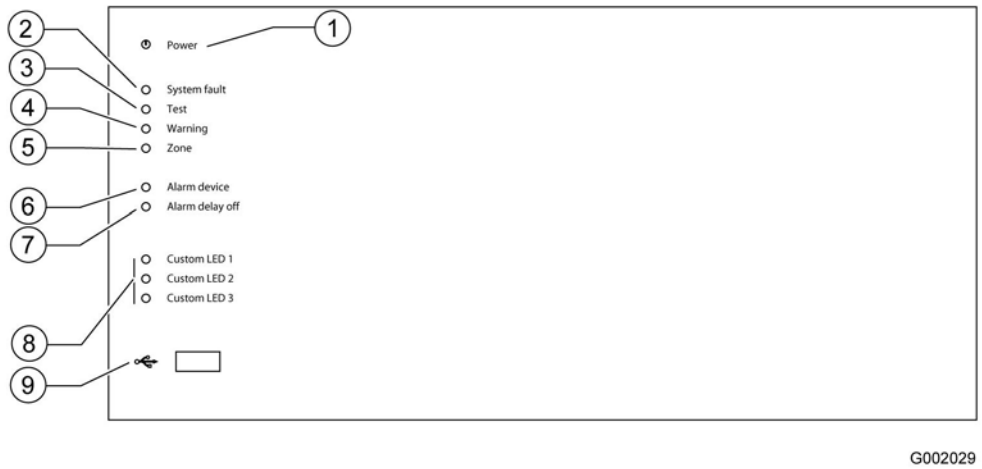


Figure 4. The system indicators section of the control panel

The System Indicators section is comprised of the following indicators:

1. **Power**

Steady green light	Power supply to the control panel is OK.

2. **System fault**

Flashing yellow light	Main process fault. A serious system fault in the system.

3. **Test**

Steady yellow light	At least one zone is manually set in test mode.

4. **Warning**

Steady yellow light	At least one warning indication exists.

5. **Zone**

Steady yellow light	At least one zone or a fire detector is disabled.
Flashing yellow light	At least one zone or a fire detector is in fault condition. (Priority over disablement indication.)

6. **Alarm device**

Steady yellow light	At least one alarm device output (e.g., a bell) is disabled.
Flashing yellow light	At least one alarm device output is in fault condition.

7. **Alarm delay off**

Steady yellow light	The alarm delay function is disabled.

8. **Custom indication 1-3**

Colour and pattern of Custom LED indication is depending on system configuration.

9. **USB**

USB connection for flash memories to load or save a configuration file.

Part B: Operational Controls

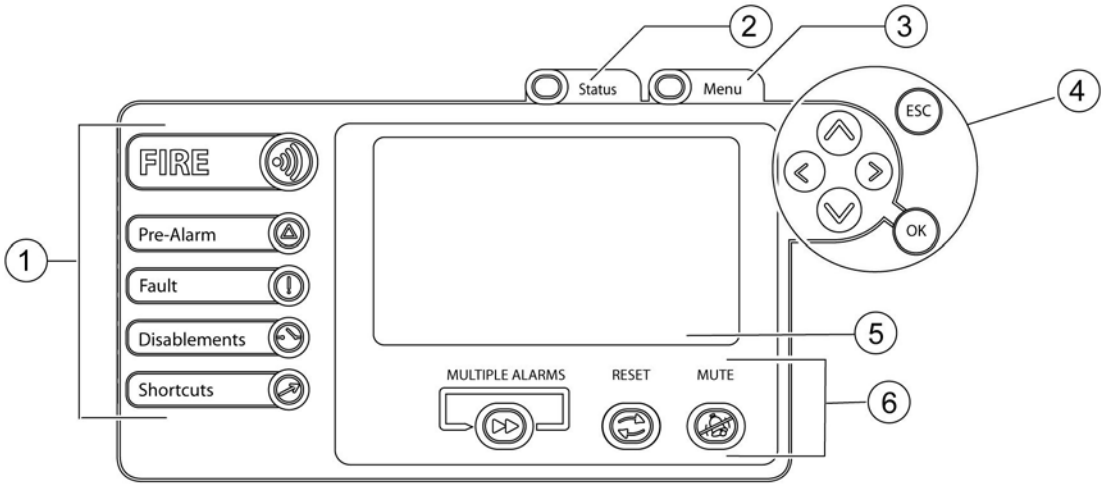


Figure 5. The operational section of the control panel

1. **Main indicators**

Fire alarm

The Fire alarm button indicates existance of a fire alarm and gives direct access to the Fire alarm list.
Indications:

Flashing red light	An un-muted fire alarm in the system.
Steady red light	All fire alarms are muted.

Pre-Alarm

Note! Only for analogue addressable systems.
The Pre-Alarm button indicates existance of a pre-alarm and gives direct access to the Pre-Alarm list.
Indications:

Flashing orange light	An un-muted pre-alarm in the system.
Steady orange light	All pre-alarms are muted.

Fault

The Fault button indicates existance of a fault and gives direct access to the Fault alarm list.
Indications:

Flashing yellow light	An un-muted fault in the system.
Steady yellow light	All faults are muted.

Disablements

The Disablements button indicates existance of a disablement and activates the Disablements menu.
Indications:

Steady yellow light	At least one disabled function in the system.

Shortcuts

The Shortcut button activates the customer specific shortcut list.

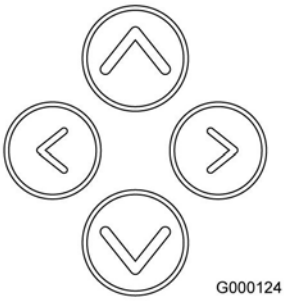
Indications:

Steady orange light	The alternatives in the shortcut list and the corresponding indicators (Shortcut 1, Shortcut 2 and Shortcut 3) are programmed via the definition program.

2. **Status**
   This button gives direct access to the System status summary list with Alarms (Fire and Pre-Alarms), Maintenance (Faults and Warnings) and Disablements (Active and Periodic).
   Shortcuts are:
   1. Upload the system log to USB Memory stick.
   2. Go to the maintenance menu.
3. **Menu**
   This button gives direct access to the main menu and all system functions.
4. **Navigation and Command Keys**
   The arrow keys are used to navigate menus, select different menu alternatives, and show details for list items.

Go to the previous item in the list or menu.

Go to previous menu.



Selects the chosen menu alternative.

Go to the next item in the list or menu.

ESC
The Escape button is used to go to the top menu screen.

OK
This button is used to select a menu alternative or to accept a function. The OK button is also in some cases used to show details for a selected list entry.

5. **Display**
   The display has a backlited 4.3" graphical screen, 480×272, 16-bit colour screen.
6. **Alarm buttons**

Multiple alarms
Press this button to scroll through the different alarms. The list always returns to the first fire alarm after 30 seconds of inactivity.

Reset

This green button is used to reset a selected alarm, fault or disablement.

Mute
This red button is used to mute (acknowledge) and silence alarms.

Part C: Numerical Keypad

Figure 6. The keypad on the control panel.

1. **Numerical keypad**
   Keys 0 - 9
   The numerical keypad is used to enter numerical values. Keys 1–9 are also used as shortcuts when navigating in the menus.

   Erase
   This button is used to erase characters from the text display.

   Enter
   This button is used to select a menu alternative or to accept a function. The Enter button is also used to show details for a selected list entry.

   Day mode
   Increase the brightness/contrast level for the indicators and display on the panel.

   Night mode
   Decrease the brightness/contrast level for the indicators and display on the panel.

4.1.3 Guide to the Menu System

4.1.3.1 General

The Fire detection system is menu-operated. All system functions are available from the different menus.

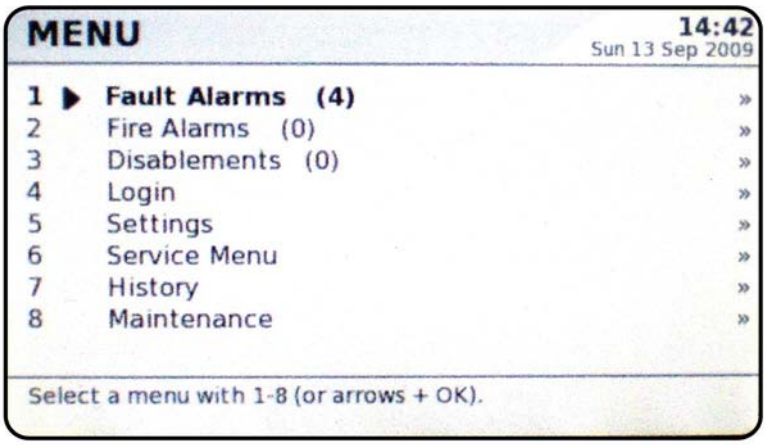


Figure 7. Menu tree screen.

4.1.3.2 Choosing Menu Alternatives

1	Press **Menu** to enter the menu system
2	Navigate in the menu alternatives with the ⌃ and ⌄ arrows.
3	Choose a menu alternative with the › arrow and go to the previous menu alternative using the ‹ arrow.

It is also possible to choose a menu alternative by entering the menu number.

In the lower part of the display the different options available for each individual menu are shown.

The numerical keypad is used to enter information, e.g., zone and detector number.

The ⌫ button erases the last character.

4.1.3.3 Menu Tree

Information
This section lists the available system menus. The bracketed number following each menu refers to corresponding menu in the Explanation of the Different Menu Alternatives, page 15.

Note!
All menus are shown in the system, as described below. But depending on the actual system configuration some menu alternatives can have limited function.

1 Fault Alarms (1)

1 Fault List* (1.1)

Mute

Reset

2 Warning List* (1.2)

3 Reset All Faults (1.3)

2 Fire Alarms (2)

1 Fire List* (2.1)

Mute

Reset

0 Disable

2 Pre-Alarm List* (2.2)

3 Resound (restart bells) (2.3)

4 Reset All Fire Alarms (2.4)

3 Disablements (3)

1 New disablement[1] (3.1)

1 Zones (3.1.1)

`Choose Zone and Zone Type`

1 Permanent disablement

2 Timer disablement

3 Clock disablement

4 Periodic disablement

2 Detectors & Manual Call Points (3.1.2)

Note! Only for analogue addressable systems

`Choose Zone, Detector Type and Detector`

1 Permanent disablement

2 Timer disablement

3 Clock disablement

4 Periodic disablement

3 External Controls (3.1.3)

1 External Controls (3.1.3.1)

1 All groups (Doors, Fire, etc.) (3.1.3.1.1)

2 Doors (3.1.3.1.2)

3 Fire (3.1.3.1.3)

4 Fault (3.1.3.1.4)

5 Ventilation (3.1.3.1.5)

6 Indication (3.1.3.1.6)

2 Alarm Transfer (3.1.3.2)

4 Alarm Device (Bells etc.) (3.1.4)

5 Alarm Delay (3.1.5)

1 Permanent disablement

2 Timer disablement

3 Clock disablement

4 Periodic disablement

6 Test Mode (3.1.6)

2 Disablement list* (3.2)

1 Reset (reconnect) (3.2.1)

3 Periodic Disable list* (3.3)

4 Old Disablements (3.4)

5 Remove all disablements (3.5)

4 Login (4)

5 Settings (5)

- 1 Set Dimmer (5.1)
- 2 Set Time (5.2)
- 3 Set Date (5.3)
- 4 Test display (5.4)
- 5 Alarm Delay Times[2] (5.5)
  - 1 Alarm Delay Time 1 (mute)
  - 2 Alarm Delay Time 2 (reset)
- 6 Keyboard Beep (5.6)
- 7 Cause Effect in Test Mode (5.7)

6 Service Menu[3] (6)

- 1 System Details (6.1)
- 2 Centrals* (6.2)
  - 2 Modules
    - `Includes the same system menus as “Modules” below`
- 3 Modules* (6.3)
  - 0 Disable Modules
  - 2 Module Inputs
    - 0 Disable
    - 2 Set Input
    - 3 Clear Input
  - 3 Module Outputs
    - 0 Disable
    - 2 Set Output
    - 3 Clear Output
  - 4 Loops
    - `Select Loop Units (only when addressable loop)`
      - 0 Disable Loop Unit
      - 2 Set In Fire (simulate fire alarm)
      - 3 Erase Loop Unit
- 4 Zones* (6.4)
  - 0 Disable Zone
  - 2 Loop Units (only when addressable zone)
    - 0 Disable Loop Unit
    - 2 Set In Fire (simulate fire alarm)
    - 3 Erase Loop Unit
    - 4 Change supplementary text
- 5 Loops* (6.5)
  - 0 Disable Loop
  - 2 Loop Units (only when addressable loop)
    - 0 Disable Loop Unit

2 Set In Fire (simulate fire alarm)

3 Erase Loop Unit

3 Add Unit

4 Scan Loop Units

6 Configuration

1 Reload configuration (6.6)

1 Load entire configuration (6.6.1)

2 Load Supplementary Texts only (6.6.2)

2 Load configuration from USB Memory (6.7)

3 Save configuration to USB Memory (6.8)

4 Save changes to configuration (6.9)

5 Synchronize system configuration (6.10)

6 Reboot system (excluding myself) (6.11)

7 Reboot myself (6.12)

7 Firmware

1 Download Firmware to modules (6.13)

2 Modules

`Program selected Module with Firmware`

2 Load Service Pack from USB Memory

3 Backup Service Pack to USB Memory

8 System Log (6.14)

7 History (7)

1 Fire History List* (7.1)

2 Fault History List* (7.2)

3 Disable History List* (7.3)

4 Common History List* (7.4)

8 Maintenance (8)

Note! Only for analogue addressable systems

1 Lightly Contaminated Detectors (8.1)

2 Heavily Contaminated Detectors (8.2)

Footnotes for the menu tree:

* All lists can be printed by pressing 1 on the numerical keypad. It is also possible to monitor details about the list objects by pressing the OK button.

1 Access level 2B

2 Access level 3

3 Access level 4

4.1.3.4 Explanation of the Different Menu Alternatives

The menu alternatives for the Fire detection system are described and listed by the area in which they appear.

Home

The top-level menu displays system and the name of the installation (if defined).

Fault Alarms

1 Fault Alarms

The menu from which fault- and warning messages are listed and handled.

1.1 Fault List

Shows all present fault indications.

1.2 Warning List

Shows all present warning messages, for instance a dirty detector or an open door on a central unit.

1.3 Reset All Faults

The system will attempt to reset all present fault alarms in the Fault List (1.1).

Fire Alarms

2 Fire Alarms

Fire alarms and pre-alarms are displayed and managed from this menu. Muted alarm devices may be reactivated here.

2.1 Fire List

Shows all present Fire Alarms.

2.2 Pre-Alarm List

Shows all present Pre-Alarms.

2.3 Resound (restart bells)

If the alarm devices have been silenced by pressing Mute button  , this function will restart them (if the fire alarm has not been reset).

2.4 Reset All Fire Alarms

The system will attempt to reset all Fire Alarms in the Fire List (2.1)

Disablements

3 Disablements

Disablemented parts of the Fire detection system are added, removed, or listed from this menu. (For instructions, see Disablements, page 27.)

3.1 New Disablements (access level 2B)

Adds new disablements.

3.1.1 Zones

Disable entire zones for a specified time period or permanent.

3.1.2 Detectors & Manual Call Points

Note! Only for analogue addressable systems.

Disable individual detectors or manual call points for a specified time period or permanent.

3.1.3 External Control

Deactivate External Controls or an Alarm Transfer.

3.1.3.1 External Controls

Disables outputs (all or individual categories) to external controls. This means that an alarm condition will not cause activation of the selected category.

3.1.3.1.1 All groups (Doors, Fire, etc.)

Category including all external controls (doors, fire, fault, ventilation and indication).

3.1.3.1.2 Doors

Disable external door controls in the system.

3.1.3.1.3 Fire

Disable external fire controls in the system.

3.1.3.1.4 Fault

Disable external fault controls in the system.

3.1.3.1.5 Ventilation

Disable external ventilation controls in the system.

3.1.3.1.6 Indication

Disable external indication controls in the system.

3.1.3.2 Alarm Transfer

Disables the supervised alarm transfer output, which is normally used in on-shore installations to alert the fire brigade in case of a fire alarm.

3.1.4 External Device (Bells etc.)

Disables the outputs for alarm devices, such as audible (e.g., bells) and optical alarm devices.

3.1.5 Alarm Delay

Disables the alarm delay function.
Alarm delay is a programmable time delay between when a fire is detected and until the alarm device outputs are activated.
The alarm delay function is normally enabled.
See Alarm Delay, page 29 for more information.

3.1.6 Test Mode

Set a zone into test mode. See section Test Mode Overview, page 33 for more details.

3.2 Disablement list

Shows all active disablements in the system. A periodic disablement (3.3) that is not active will not be shown in this list. The reconnection of a disabled unit is made from this list. See section Reconnecting Disabled Items, page 30 for more details.

3.2.1 Reset

Reset the disablements by pressing the  button on the control panel.

3.3 Periodic Disable list

Shows all periodic disablements in the system. The removal of periodic disablements is made from this list.

3.4 Old Disablements

This list displays the 150 previously removed disablements and allows these older disablements to be reactivated.

Information

This function is very useful if the same disablement is frequently needed during irregular time periods. Just mark the appropriate old disablement in the list and press 0 to reactivate it.

3.5 Remove all disablements

Removes all active disablements shown in the Disablement list (3.2).

Note!
Periodic disablements (3.3) are not permanently removed. Only the periodic disablement's active period is removed.

Login

4 Login

Log in from this menu by entering a personal access code. For further details see section Login, page 24.

Settings

5 Settings

Use this menu to adjust system parameters, such as the dimmer level, date, time and alarm delay time.
It is also possible to make a lamp test for the control panel under “Test display” (5.4).

5.1 Set Dimmer

Use this menu to adjust the contrast level (1–9) for the display and indications on the control panel.

5.2 Set Time

Use this menu to set the system time.
It is possible to synchronize the system clock with the ship's central time.

5.3 Set Date

Use this menu to set the system date.

5.4 Test display

Use this menu to activate a lamp test that verifies correct function of the display and all indications on the control panel.

5.5 Alarm Delay Times (access level 3)

Use this menu to adjust the programmable alarm delay time (max 2 minutes).

5.6 Keyboard Beep

Use this menu to turn the keyboard beep ON or OFF.

5.7 Cause Effect in Test Mode

Use this menu to turn the Cause Effect programming ON or OFF during test mode. If set to ON, the outputs are activated as normal during test mode.

Service Menu

6 Service Menu (access level 4 is needed to perform advanced service options)

Use this menu to list and view information about the system and its components. It is also possible to make disablements of the listed units. The Service menu is described in more detail in the separate Service and Maintenance manual.

6.1 System Details

This menu lists the installed system's information, such as name and reference number (if defined). It also lists when the system was last configured and by which program.

6.2 Centrals

Use this menu to list information about the installed centrals and the modules in each central.

6.3 Modules

Use this menu to list information about the installed system modules. It is possible to display all details about the modules, such as installed detector loops, installed program versions, input/output status. It is also possible to print information.

6.4 Zones

This menu shows a list of all zones configured in the system. It is possible to list all loop units in a zone if the zone consists of addressable loop units, disable zones or loop units, and set a single fire detector in alarm condition.

6.5 Loops

This menu shows a list of all physical loops installed in an analogue addressable system. A loop can consist of conventional or addressable fire alarm detectors and other loop units. It is also possible to disable entire loops. Use Scan Loop to scan the loop for new loop units.

6.6 Reload configuration

Reload the configuration when a new updated configuration file or supplementary text file has been downloaded to the system.

6.6.1 Load entire configuration

Use this command to reload the configuration. The system will restart.

6.6.2 Load Supplementary Texts only

Use this command to reload all supplementary texts from the configuration file without a system restart.

6.7 Load configuration from USB Memory

Download a new configuration file from a suitable USB Memory stick.

6.8 Save configuration to USB Memory

Copy the existing configuration file to a suitable USB Memory stick.

6.9 Save changes to configuration

Caution!
It is highly recommended to backup the Configuration File before continuing.

Use this command to save all changes made from the control panel to the system configuration.

Note!
The changes are not permanently saved in the configuration file until this command is performed.

6.10 Synchronize system configuration

Caution!
It is highly recommended to backup the Configuration File before continuing.

Use this command to synchronise the Configuration Files in the system.

6.11 Reboot system (excluding myself)

This operation will reboot all Control Modules in the system.

Note!
The Control Module used for this procedure will not reboot.

6.12 Reboot myself

The operation will reboot this Control Module only.

6.13 Download Firmware to modules

Use this command to overwrite the firmware in the chosen Module

6.14 System Log

Once the System Log is copied to the USB Memory, it can be sent to an authorized service organization for further technical assistance.

History

7 History

Use this menu to view previous events in the Fire detection system.

7.1 Fire History List

Shows a chronological list of the last 200 fire alarms.

7.2 Fault History List

Shows a chronological list of the last 200 fault alarms.

7.3 Disable History List

Shows a chronological list of the last 200 disablements.

7.4 Common History List

Shows a common chronological list of the last 1000 pre-alarms, fire alarms, fault alarms, disablements, warnings, and I/Os.

Maintenance

8 Maintenance

Note! Only for analogue addressable systems.

Use this menu for monitoring detectors that may need maintenance.

8.1 Lightly Contaminated Detectors

Shows a list of lightly contaminated detectors for the entire system.

8.2 Heavily Contaminated Detectors

Shows a list of heavily contaminated detectors for the entire system.

4.2 Repeater M 4.3

4.2.1 General

The repeater panel is used to monitor functions in the Fire detection system. It is possible to view and list:

- Fire alarms
- Faults
- Disablements

4.2.2 Description of Keys and Indicators

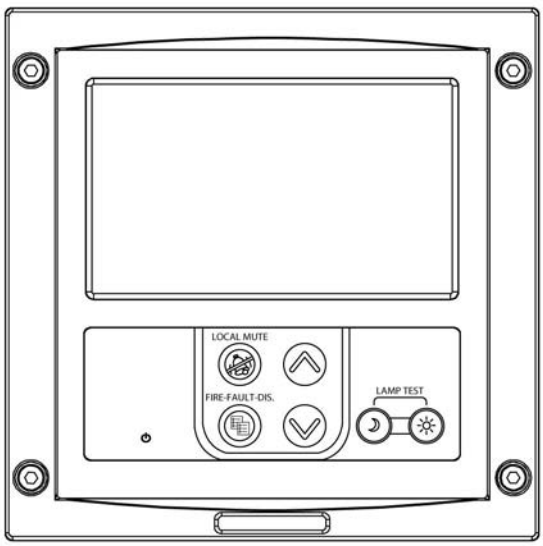


Figure 8. Keys and indicators for the repeater panel.

Repeater panel

- **Power**
  Green steady light indicates that the power supply to the repeater panel is OK.

- **Local Mute**
  Silence the local buzzer alarm.

- **Fire - Fault - Dis.**
  Press the button to select the lists: Fire Alarm, Fault Alarm and Disablements.

- **Navigation key – previous**
  Scroll to previous item in the selected list.

- **Navigation key – next**
  Scroll to next item in the selected list.

- **Night mode**
  Increase the brightness/contrast level for the indicators and display on the panel.

- **Day mode**
  Decrease the brightness/contrast level for the indicators and display on the panel.

- **Lamp test**
  When you press the buttons for Day and Night mode at the same time, all the repeater panel indicators and the display are lit – if not, they are not working correctly.

5 Operations

5.1 Access Levels

To prevent un-authorized operation of the system access levels protect the different functions of the Fire detection system.

The user has to log in to the system before any vital operations can be performed. Without access to an authorization code the user can only view fire and fault alarms and mute the local buzzer.

Access level 2B is the default level. The system automatically returns to access level 2B after 30 minutes of inactivity.

Description of Access levels

There are different access levels as shown in the following table:

Table 1. Access levels

Access level	Procedure to enter level	User	Permissions
2B	**Operator access level** None	Personnel trained and authorized to operate the system in case of fire or maintenance.	For viewing of fire or fault alarms: • Fire alarms have priority over fault alarms. • Possibility to mute local buzzer. • Access to the menu system • List status • Reset and muting of alarms • Make disablements
3	**Power User access level** Enter access code for level 3 via menu/login.	Personnel trained and authorized to make changes to the configured system.	Same permissions as level 2B, plus these additional permissions: • Possibility to make changes to the configured system
4	**Service access level** Enter access code for level 4 via menu/login.	Only authorized service personnel trained by an authorized service organization.	All functions available, including advanced service options.

Custom Specific Restrictions

Note!
Permissions on the different access levels can in some cases vary depending on programmed custom specific restrictions.

A Control Panel M 4.3 could be programmed to view events in the system with restricted rights to operate functions. For example a fire alarm is shown, but mute and reset are not allowed.

5.2 Login

Each user is assigned to a specific access level.

The predefined users are assigned the following default access codes:

Level 2B	2222
Level 3	3333

To log in to the system:

1	Go to *Menu » 4 Login* and select user.	
2	Enter the four-digit access code for the user.	The system will acknowledge if the correct code is entered.

5.3 Fire Alarm

5.3.1 Information Displayed when “Fire” is Flashing

The following sections describes the information displayed during a fire alarm, how to mute and reset an alarm, and the different types of alarms.

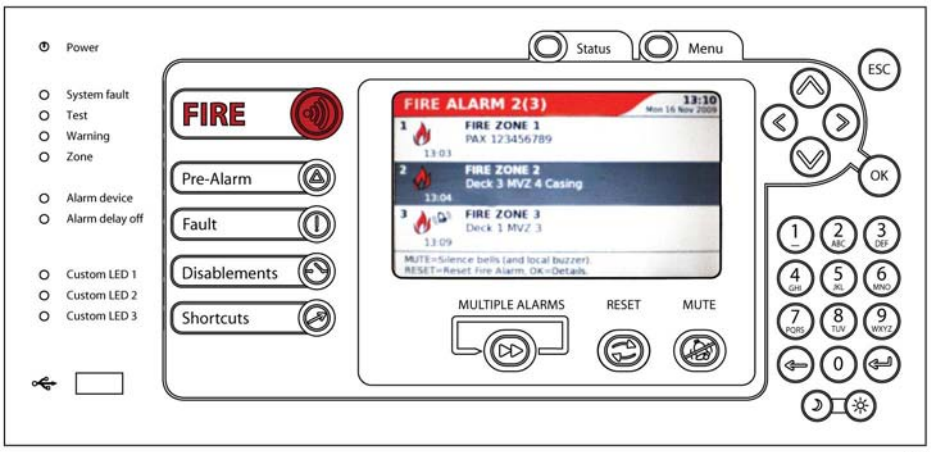


Figure 9. A fire alarm is detected in the system.

The following information is displayed in the Control Panel:

- Number of alarm(s)
- First, last and current list entry
- Zone in alarm
- Supplementary text (if defined in system configuration)

Press OK for more details:

- Time of alarm
- Date of alarm

5.3.2 Mute a Fire Alarm

The Mute button has different functions depending on the current access level.

1	Press	Access level 2B or higher: Silences the internal buzzer and all external alarm devices*, and mutes the fire alarm indication. The fire indicator stops flashing, but remains lit until the Fire Alarm is reset.
2	Press for more details.	

* Programmable function of external devices, programmed by system Cause/Effect.

5.3.3 Reset a Fire Alarm

1	Press to reset the current Fire Alarm.	**Note!** Alarms cannot be reset as long as the device remains in alarm condition.

5.3.4 Several Alarms

If there is more than one fire alarm in the system, the indication is activated. The first and last fire alarms are always displayed in the control panel.

1	Scroll through the different fire alarms with the button or the / arrow keys.	
2	Mute and reset as above.	For detailed instructions, see Mute a Fire Alarm, page 25 and Reset a Fire Alarm, page 25.

5.3.5 Type of Fire Alarms from Conventional Zones

The Fire detection system will display whether a detector or a manual call point generated the fire alarm. If two or more detectors are activated in the same zone, the fire alarm will be presented as a manual call point/multiple detectors.

5.4 Fault Indications

5.4.1 Information Displayed when “Fault” is Flashing

The following sections describe the information that displays when a fault occurs, and how to mute and reset a fault.

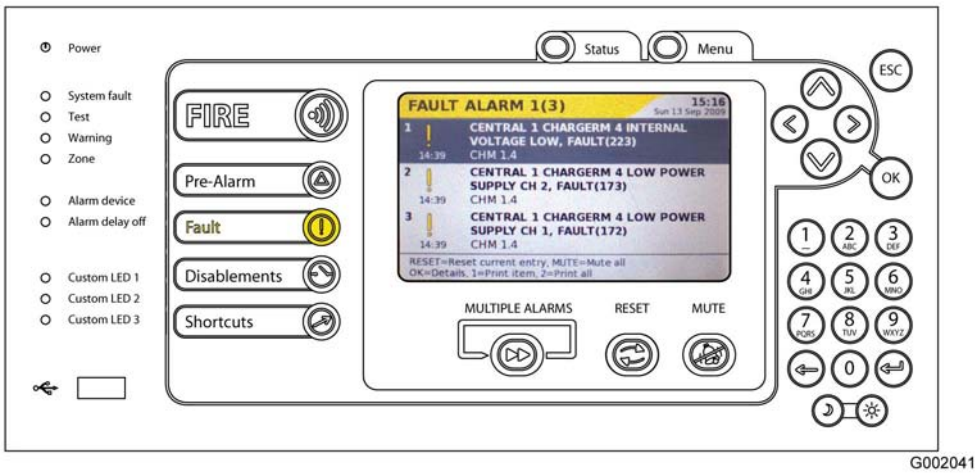


Figure 10. A fault is detected in the system.

The following information is displayed in the Control Panel:

- Number of detected fault(s)
- Type of fault
- Identification of the faulty unit
- Supplementary text for the faulty unit (if defined in system configuration)

Press OK for more details:

- Time when fault occurred
- Date when fault occurred
- Supplementary text about location of fault (if defined in system configuration)

5.4.2 Mute a Fault

1	Press to silence internal buzzer and mute all faults in list.
2	Press OK for more details.

5.4.3 Reset a Fault

1	Press to reset the current fault alarm.	**Note!** If the cause of the fault alarm remains, the alarm cannot be reset. Check the fault code in the Fault Code List, page 35 to solve the problem.

5.4.4 Reset a Fault from the Fault List

All faults in the system are shown in the fault list.

1	Go to the fault list under: *Menu » 1Fault Alarms » 1 Fault List*	
2	Choose the fault in the fault list and then press to reset the fault alarm.	**Note!** If the cause of the fault alarm remains, the alarm cannot be reset. Check the problem, solve it, and reset the fault.

5.4.5 Reset All Faults

1	Go to: *Menu » 1 Fault Alarms » 3 Reset All Faults*	
2	Press	The system will make an attempt to reset all faults.

5.5 Fault Messages

The control panel displays a fault with information about where in the system the fault occurred and a short description of that fault.

See Fault Code List, page 35 for a list of all fault messages.

5.6 Disablements

5.6.1 About Disablements

It is possible to disable different devices attached to the system, such as zones, alarm devices and external control devices.

All disablements are presented in a disablement list. The yellow Disablements indicator is lit on the control panel when at least one disablement is activated in the system and remains lit until all disablements are reconnected.

To perform a disablement you must enter access level 2B or higher.

Danger!
When a fire detector or zone is disabled, the Fire detection system will not be able to detect any occurring fire in that area. It is therefore important that disablements are minimized in terms of quantity of disabled units and duration of time.

5.6.2 Available Disablements

There are four different types of disablements available.

Permanent disablement

The device is permanently disabled until it is manually enabled.

Note!
It is possible to limit the disablement time by defining a maximum disablement time in the configuration program.

Timer disablement

Disablement is instantaneous and lasts for the time period entered (hh:mm). Maximum disablement time is 23 hours 59 minutes. Maximum disablement time can be limited depending on rules and regulations.

Clock disablement

Enter a reconnection time. Disablement is instantaneous and the reconnection will take place next time the entered time occurs. The maximum disablement time is 23 hours 59 minutes.

Take time under consideration on ships going through different time zones (if the system time is not synchronized with the ship's central time).

Periodic disablement

A disablement for a certain time period during certain days of the week. Example: Disable zone 1 each Tuesday and Friday between 7.00 - 17.00.

Take time under consideration on ships going through different time zones (if the system time is not synchronized with the ship's central time).

5.6.3 Acknowledgement of a New Disablement

Once a new disablement is correctly entered, an acknowledgement is presented on the control panel. The Disablements button indicates with steady yellow light, use it to activate the Disablements list.

The new disablement is also added in the disablements list under: *Menu » 3 Disablements » 2 Disablement list*

5.6.4 Disabling Zones

(Access level 2B or higher)

Disabling a Conventional Zone

1	Select *Menu » 3 Disablements » 1 New disablement » 1 Zones*
2	Choose Zone (Zone number)
3	Choose disablement type (Permanent, Timer, Clock or Periodic)
4	Enter time (if Timer, Clock or Periodic was chosen in the previous step)

5.6.5 Disabling Alarm Devices

(Access level 2B or higher)

Examples of alarm devices are bells, buzzers and flash lights.

Disablements of alarm devices:

1	Select *Menu » 3 Disablements » 1 New Disablement » 4 Alarm Device (Bells etc.)*

5.6.6 Old Disablements

Use this menu to reactivate previously performed disablements.

Note!
Only permanent disablements can be reactivated.

1	Select *Menu » 3 Disablements » 4 Old Disablements*
2	Mark the appropriate old disablement in the list and and press “0” to reactivate the disablement (again).

5.6.7 Alarm Delay

An alarm delay function will delay the activation of alarm devices in case of a fire alarm. The delay time is programmable and as default normally set to two minutes.

The alarm delay function (Access level 2B or higher) may be enabled/disabled:

1	Select *Menu » 3 Disablements » 1 New Disablement » 5 Alarm Delay*	
2	Select type of delay (Permanent, Timer, Clock or Periodic)	See Available Disablements , page 27 for explanation.

Set delay time (Access level 3 or higher):

1	Select *Menu » 5 Settings » 5 Alarm Delay Times » 1 Alarm Delay Time » 1 (mute)*	**Note!** Max allowed alarm delay time is 2 minutes acc. to SOLAS.

5.6.8 Disabling External Outputs

(Access level 2B or higher)

Examples of external outputs are fans or outputs controlling fire doors.

1	Select *Menu » 3 Disablements » 1 New Disablement » 3 External Controls » 1 External Controls*	
2	Select an output category to be disabled.	All groups = all categories of doors, ventilation, etc.
3	Press OK	

5.6.9 Disabling an Alarm Transfer Output

(Access level 2B or higher)

Disablements of the alarm transfer (fire brigade) output:

1	Select *Menu » 3 Disablements » 1 New Disablement » 3 External Controls » 2 Alarm Transfer*

5.7 Reconnecting

5.7.1 Reconnecting Disabled Items

All disablements in the system are presented in the disablement list. Any enablement is made from this list.

1	Select *Menu » 3 Disablements » 2 Disablement list*
2	Choose the disablement you want to cancel.
3	Press 

5.7.2 Reconnecting Periodic Disablements

Periodic disablements in the system are presented in the periodic disablement list.

Reconnecting is made from this list:

1	Select *Menu » 3 Disablements » 3 Periodic Disable list*
2	Choose the periodic disblement you want to cancel.
3	Press 

5.7.3 Remove All Disablements

This menu removes **all** active disablements presented in the Disablement list.

1	Select *Menu » 3 Disablements » 5 Remove all disablements*	
2	Confirm with OK to remove (reset) all active disablements in the system.	**Note!** Periodic disablements are not permanently removed. Only the periodic disablement's active period is removed.

5.8 Service Menu

(Access level 4)

The Service menu is used for configuring the system in the commissioning phase, as well as for troubleshooting and making small updates when the system is in

operation. The menu has functions for loading and saving information from/to a suitable USB Memory.

The Service menu screen displays a list of the 8 service menu alternatives, as shown in the figure below.

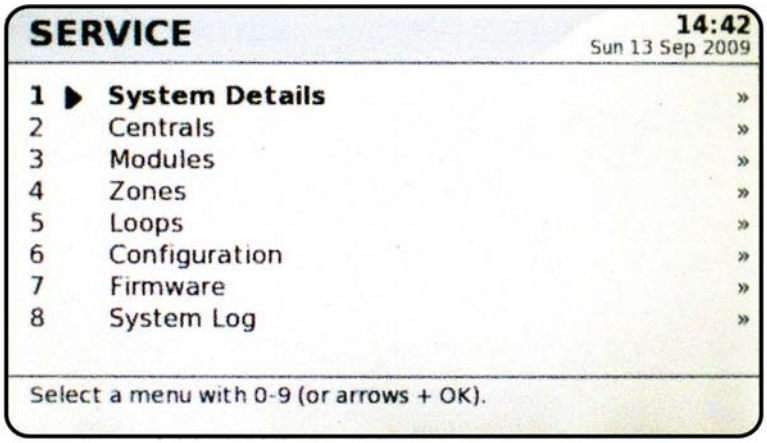


Figure 11. Service menu screen.

Please refer to the Service and Maintenance manual for detailed information about the Service menu.

6 Testing

6.1 About Testing

For additional information about testing, please refer to the Service and Maintenance Manual.

6.2 Test Mode Overview

Note!
This section is only applicable for addressable units.

The system has a special test mode function which makes the testing easier.

When a zone is in test mode:

- External alarm devices and controls are by default not activated in case of a fire.
  Information
  This functionality can be turned off.

- If a printer is connected to the system, alarms will automatically be printed as a result of the tested units.

Note!
The system handles fire alarms from zones not in test mode in the usual way.
The tested zone will automatically return to normal operation after two hours.

6.3 Testing a Fire-detecting Zone

1	Put the zone into test mode under: *Menu » 3 Disablements » 1 New Disablement » 6 Test Mode*.	
2	Select a zone and confirm by pressing the OK button.	The Disablements, Test, and Zone/Unit indicators light to confirm that they are in test mode.

It is now safe to test each detector and manual call point in this fire zone during the next two hours.

Note!
Use suitable testing equipment.

All alarms are listed under: *Menu » 7 History » 1 Fire History List*.

6.4 Reset Test Mode

Note!
After testing is completed, return the tested zone to its normal condition.
Before exiting test mode, make sure there are no detectors or manual call points in alarm condition.
The tested zone automatically returns to normal operation after two hours.

To reset test mode:

1	The zones in test mode are listed in the Disablement List, found under: *Menu » 3 Disablements » 2 Disablement List*.
2	Choose the zone in the Disablement List and then press  .

6.5 Test the Control Panel Display

With the function Test display it is possible to test:

- The display
- All indications on the control panel

1	To test the control panel display, use: *Menu » 5 Settings » 4 Test display*.

7 Appendix

7.1 Fault Code List

Listed in the table below are all fault codes, their causes, and how an operator with knowledge of the system can solve the problem.

Table 2. Fault Codes with cause and remedy

Fault Code		Cause	Remedy
128	**NO ANSWER**	Explanation: Lost communication. The system has recognized a unit but lost contact.	
		Wrong type of loop unit	Switch to the correct loop unit
		Two loop units have the same address (a secondary fault appears)	Check address of the units. Rescan the loop.
		Defect unit	Replace the unit. Refer to the Installation manual or Service & Maintenance manual:
		Cable break or short circuit in a loop (a secondary fault appears)	Locate the cable break or short circuit. Refer to the Installation manual or Service & Maintenance manual:
129	**SENSOR FAULT**	The detector has a faulty sensor element	Replace the unit. Refer to the Installation manual or Service & Maintenance manual:
		The smoke detector is exposed to strong airflow	Protect the detector from the airflow or consider repositioning the detector.
130	**DIRTY SENSOR**	The detector has a dirty (polluted) sensor element	Replace the detector. Refer to the Installation manual or Service & Maintenance manual:
131	**TOO FEW LOOP UNITS FOUND**	Fewer loop units found than configured. Loop units not correctly installed or addressed.	Check the loop configuration or reconfigure the system
			Address the unit correctly. Refer to the Installation manual or Service & Maintenance manual:
		Missing answer from a unit	Check address (possible double address). Otherwise replace the unit. Refer to the Installation manual or Service & Maintenance manual:
132	**TOO MANY LOOP UNITS FOUND**	More loop units found than configured	Check the specification or reconfigure the system. Refer to the Installation manual or Service & Maintenance manual:
		Loop units not correctly installed	Address the unit correctly. Refer to the Installation manual or Service & Maintenance manual:
133	**IN1 CABLE BREAK**	There is a cable break on input 1	Check that the cable between input and end of line resistor is complete
134	**IN2 CABLE BREAK**	There is a cable break on input 2	Check that the cable between input and end of line resistor is complete

Fault Code		Cause	Remedy
135	**EXT 24V FAIL**	External 24V power source missing or the local power supply unit is defective	Check the local power supply unit and consider replacing
136	**FEEDBACK FAULT**	External load is missing	Check the cable and the external load
137	**POSITION FAULT**	A supervised unit (for example, a door or damper) is in the wrong position	Check for obstructions
138	**LOOP SHORT CIRCUIT**	A short circuit in the detector loop cable	Locate the short circuit. Refer to the Installation manual or Service & Maintenance manual:
139	**LOOP A SHORT CIRCUIT**	Short circuit on the A-side of a detector loop	Locate the short circuit. Refer to the Installation manual or Service & Maintenance manual:
140	**LOOP B SHORT CIRCUIT**	Short circuit on the B-side of a detector loop	Locate the short circuit. Refer to the Installation manual or Service & Maintenance manual:
141	**CABLE BREAK POSITIVE**	A cable break on the positive conductor has been detected	Locate the cable break. Refer to the Installation manual or Service & Maintenance manual:
142	**CABLE BREAK NEGATIVE**	A cable break on the negative conductor has been detected	Locate the cable break. Refer to the Installation manual or Service & Maintenance manual:
143	**COMMUNICATION ERROR**	Explanation: The communication with a unit is deficient	
		Two units have the same address	Check the loop unit addresses. Refer to the Installation manual or Service & Maintenance manual:
		Faulty loop unit	Replace the unit. Refer to the Installation manual or Service & Maintenance manual:
		Interference from external source	Locate interference source. If not possible to solve the problem, contact an authorized service office
144	**LOOP UNIT TYPE CHANGED**	The type of unit found in the loop is different from the original type configured	Accept the unit found or replace to original type
145	**UNKNOWN TYPE OF LOOP UNIT FOUND**	Explanation: The type of unit found is not recognized by the system	
		Faulty unit	Replace the unit
		Wrong type of detector has been installed	Install the correct type and restart the loop
146	**TIMER STUCK**	The timer has been activated for too long	Reset the timer to zero
148	**DOUBLE ADDRESS**	Two units with the same address on a loop has been found	Change one of the addresses. Rescan or restart the loop. Refer to the Installation manual or Service & Maintenance manual:
149	**SHORT CIRCUIT**	Short circuit detected	Locate the short circuit and restore operation
150	**VALVE CLOSED**	The valve is closed	Open the valve
151	**CONFIGURED NOT PRESENT**	Unit is configured but not found	Verify if unit address is correct. Verify there is power to the module. Contact an authorized service office.

Fault Code		Cause	Remedy
152	**PRESENT NOT CONFIGURED**	Unit present but not configured	Verify if unit address is correct. Verify there is power to the module. Contact an authorized service office.
153	**HIGH CURRENT ON LOOP**	The high current has exceeded acceptable levels	Check if there are too many units connected to the loop. Refer to the Installation manual or Service & Maintenance manual:
155	**EARTH FAULT POSITIVE**	Earth fault on the positive conductor	Locate the earth fault. Refer to the Installation manual or Service & Maintenance manual:
156	**EARTH FAULT NEGATIVE**	Earth fault on the negative conductor	Locate the earth fault. Refer to the Installation manual or Service & Maintenance manual:
157	**FUSE FAULT**	A blown fuse	Replace the fuse
158	**BATTERY CABLE FUSE FAULT**	A battery fuse has blown or a cable to the battery is broken	Replace fuse or restore the cable
159	**CABLE BREAK**	A cable break has been detected	Restore the cable
160	**CABLE OVERLOAD**	Too high current on the output	Check external loads
162	**EMERGENCY POWER FAULT**	Emergency power is lost	Check the emergency power supply
163	**BATTERY FAULT**	Low battery voltage detected	Charge the battery. If the fault remains, replace the battery. Refer to the Service & Maintenance manual:
164	**BATTERY CHARGER**	The battery charger is unable to charge the battery	Replace the battery charger
165	**EXTERNAL FAULT**	External equipment is indicating a fault	Check the external equipment
166	**EARTH DETECTION FAULT**	The module is unable to detect earth fault	Contact an authorized service office
167	**CHECKSUM EEP**	Incorrect EPROM checksum	Contact an authorized service office
168	**RESTARTED**	A module has restarted	If restarts happen repeatedly, contact an authorized service office
170	**EXTERNAL LOAD**	There is too high external load on a conventional zone	Check the load and reduce if possible
171	**EXTERNAL POWER SOURCE**	Unexpected voltage detected in a conventional zone	Locate and remove the source
172	**LOW POWER SUPPLY PSU 1**	Low voltage on the primary 28VDC power supply to the internal system modules	Contact an authorized service office
173	**LOW POWER SUPPLY PSU 2**	Low voltage on the secondary 28VDC power supply to the internal system modules	Contact an authorized service office
174	**LOW INTERNAL POWER**	Too low voltage on the 3.3V/5V feeding to the internal circuit boards	Replace the module
175	**LOW POWER SUPPLY OPERATING**	Too low incoming 24VDC supply to the internal circuit boards	Contact an authorized service office

Fault Code		Cause	Remedy
176	**SYSTEM CONFIGURATION FAULT**	The configuration file is corrupt	Contact an authorized service office
		An error has occurred during downloading of the configuration file	
177	**LOW PRESSURE**	External equipment indicates low pressure	Check the pressure on the supervised unit
178	**ACTUATOR 1**	Missing feedback from actuator 1	Check cables to actuator 1. If the cables are OK, change the actuator.
179	**ACTUATOR 2**	Missing feedback from actuator 2	Check cables to actuator 2. If the cables are OK, change the actuator.
180	**MAINS POWER**	The main power supply is lost	Check the main power supply
181	**INTERNAL FAULT**	Internal system fault	Contact an authorized service office
182	**EXTERNAL FIRE**		Contact an authorized service office
183	**NO ANSWER CH 1 BACKBONE**	Fault code generated when a module stops answering on channel 1 on the Backbone Bus	Contact an authorized service office
184	**NO ANSWER CH 2 BACKBONE**	Fault code generated when a module stops answering on channel 2 on the Backbone Bus	Contact an authorized service office
209	**WRONG TYPE OF LOOP UNIT FOUND**	The type of loop unit found is different from the type configured	Change the loop unit and re-scan the loop
210	**CAUSE/EFFECT ERROR**	Fault detected in the configuration	Contact an authorized service office
212	**SYNCHRONISATION SIGNAL**	The synchronisation signal in the backbone is corrupt	Contact an authorized service office
213	**CONFIG NOT SYNCHRONIZED**	The configuration file’s in the system are not the same everywhere	Synchronise the configuration files between all panels
214	**POWER SUPPLY LIMIT EXCEEDED**	The PSU charges with a current that exeeds the maximum allowed current for a charger module	Check the number of modules configured or check the external load
215	**CHARGING CURRENT EXCEEDED**	The battery is charged with more than the allowed charging current	Change the battery externally
216	**INCOMPATIBLE FIRMWARE**	The firmware in a module does not comply with the modules hardware version. (Fault code generated by the faulty module.)	Contact an authorized service office
217	**HIGH VOLTAGE PSU 1**	The voltage from PSU 1 is too high. (Fault code generated by the Charger M modules.)	Adjust the voltage from the PSU 1
218	**HIGH VOLTAGE PSU 2**	The voltage from PSU 2 is too high. (Fault code generated by the Charger M modules.)	Adjust the voltage from the PSU 2
219	**FUSE FAULT PSU 1**	The fuse protecting the PSU 1 voltage input is broken. (Fault code generated by the Charger M modules.)	Contact an authorized service office
220	**FUSE FAULT PSU 2**	The fuse protecting the PSU 2 voltage input is broken. (Fault code generated by the Charger M modules.)	Contact an authorized service office

Fault Code		Cause	Remedy
221	**PSU1 PRESENT NOT CONFIGURED**	PSU 1 is found but not configured in the configuration file. (Fault code generated by the Charger M modules.)	Check the configuration file
222	**PSU2 PRESENT NOT CONFIGURED**	PSU 2 is found but not configured in the configuration file. (Fault code generated by the Charger M modules.)	Check the configuration file
223	**INTERNAL VOLTAGE LOW**	The voltage level from the Charger M is too low. (Fault code generated by the Charger M modules.)	Contact an authorized service office
224	**INTERNAL VOLTAGE HIGH**	The voltage level from the Charger M is too high. (Fault code generated by the Charger M modules.)	Contact an authorized service office
225	**XFIRE SIGNAL**	The XFIRE signal in the backbone is corrupt	Contact an authorized service office
226	**PRIMARY SYSTEM BUS**	No traffic is detected on the Primary System Bus	Contact an authorized service office
227	**SECONDARY SYSTEM BUS**	No traffic is detected on the Secondary System Bus	Contact an authorized service office
228	**NO ANSWER SYSTEM BUS**	The module has stopped answering on the system bus	Replace the module
229	**OVERHEATED**	The battery or Charger M is too hot. (Fault code generated by the Charger M module.)	Contact an authorized service office
230	**LOW VOLTAGE CH A BACKBONE**	Too low voltage detected on the Backbone Bus Power Supply, channel A. (Fault code generated by the Charger M modules.)	Contact an authorized service office
231	**LOW VOLTAGE CH B BACKBONE**	Too low voltage detected on the Backbone Bus Power Supply, channel B. (Fault code generated by the Charger M modules.)	Contact an authorized service office
232	**CORRUPT FIRMWARE**		Contact an authorized service office
233	**RELAY OUTPUT**	A relay is broken or in a state that damages the relay. (The voltage over the relay coil is too high.)	Replace the module
236	**WRONG TYPE OF MODULE FOUND**	The type of module found is different from the type configured	Change the module or the system configuration
255	**ILLEGAL**	Internal system error	Contact an authorized service office

7.2 Definitions of Terms

Alarm Condition	The state of the system when a fire or gas alarm is detected.
Alarm Delay	When activated the activation of Alarm Devices will be delayed for a preset time (normally 2 minutes).
Alarm Device	Device that is activated in case of fire, for example audible and optical alarms like bells, sirens and flashlights.
Alarm Transfer Output	A supervised output for signalling that a fire has occurred. The Alarm Transfer Output is usually used in onshore systems for alerting the Fire Brigade.

Backbone Bus External (BBE)	The main bus outside a Central cabinet used for communication between Modules and stretched central parts. It consists of two redundant RS485 channels, two 24 VDC power lines and the Basic Backup (BBU) signal and Synchronisation Signal (SYNC).
Backbone Bus Internal (BBI)	The main bus inside a Central Cabinet used for communication between Modules. It consists of two redundant RS-485 channels, two 24 VDC power lines and the Basic Backup (BBU) signal and Synchronisation Signal (SYNC).
Backbone Segment	A Backbone Bus may be split in several Segments. Power feeding can be separate for each segment by using one Charger M per segment. Communication can be isolated between segments by using Isolator Modules.
Basic Backup Signal (BBU)	A signal in the Backbone Bus that is used for transmitting the Central's alarm status. The signal is only used when a module in Managed mode loses communication with its Controller Module.
Cause/Effect	The Cause/Effect program defines how the inputs and outputs of the system should react.
CCP Platform	An umbrella name for all the Modules and Devices that can be connected together, e.g. “the Control M 4.3 Module is a member of the CCP Platform”.
Central	A Central is a complete system that can operate autonomously; monitor its detectors and inputs, activate its outputs and display its faults and alarms. If connected to other centrals, it exchanges information with the other centrals via the System Bus, thus allowing all centrals to act as one System. Each central can only have one Backbone Bus.
Central Cabinet	Enclosure to contain a complete or part of a central.
Compact Central	Central Cabinet including basic functionality of Fire Detection System such as: Control Panel, Power supply, Battery backup, Basic I/Os and at least one analogue addressable loop. The Cabinet supplies limited expansion possibilities.
Control Module	The Control M 4.3, the Control M 2.2 and the Control M X can all act as Controller Modules, i.e. be in Controller Mode.
Control Panel	The Control M 4.3 and Control M 2.2 can act as a Control Panel, i.e. they have an HMI and the rights to manipulate and supervise the System.
Controller Mode	Control Modules can run in Controller Mode, i.e. being Master or Hot Standby Master within a central. Control Modules can also be in managed mode, that is being a module that is managed by the master. All other modules are always running in managed mode.
Controller Module	A Control Module that is in Controller Mode (master or hot standby) in a Central or System.
DCS	Distributed Central System (see also Stretched Central).
Detector	A device capable of detecting fire or gas alarms.
Disablement	Disablement of devices such as a Zones or Detectors. Alarms from disabled devices will be inhibited.
ESD System	Emergency Shut Down System, embedded system taking care of safety procedures in case of emergency, for example shut down of fire doors, ventilation etc.
Extension Bus	An additional (RS485) bus used inside a central for intra-central communication. The Extension Bus is typically used for connecting Repeater Modules (that does not require redundant communication and power) and should not be confused with the Backbone Bus.
External Communication	Communication to external entities is called external communication, using for example MODBUS or NMEA protocols.
External Control	Outputs used to control external equipment, for example fire doors.
Fault Condition	The state of the system when a fault is detected.

GA-auto	Automatically generated signal according to a pre-defined pattern (e.g. 7 short 1 long signal) for alarm devices or the PA system.
GA-Morse	Signal pattern generated manually via the GA button.
GA	General alarm, common activation of alarm devices and activation of the PA system.
Hot Standby Mode	Controller Modules in Hot Standby Mode can take over the responsibilities of the Controller Module managing a Central.
I/O 70	An Input/Output type providing a different function depending on the configuration of the system. The programmable functions are: • General Input • Fault Input • Conventional Fire Alarm Zone • Output (24 VDC/70 mA)
I/O 700	An Input/Output type providing a different function depending on the configuration of the system. The programmable functions are: • General Input • Fault Input • Output (24 VDC/700 mA)
I/O Module	A module with inputs and/or outputs. I/O modules always run in Managed Mode, that is they must be managed by a Controller Module.
I/O Pin or I/O Signal	An I/O Pin or an I/O Signal is a logical signal, compare to terminal.
Inter-central Communication	Communication between centrals is called inter-central communication.
Interface Channel	A communication channel used to interface the systems with external devices. Interface channels can be configured to communicate on different protocols.
Intra-central Communication	Communication within a central is called intra-central communication. This communication is between modules.
Loop	A common name for the cable, loop devices and other equipment connected to a loop module.
Loop Device	Fire Detectors, Gas Detectors, Manual Call Points and other devices that can be connected to the Loop.
Loop Module	A Module supplying power and is in charge of communication to the loop devices.
Managed Mode	The opposite of Controller Mode. All modules that are managed by a Controller Module are in Managed Mode.
MCS	Multi Central System. A System consisting of more then one Central.
MFZ	Main Fire Zone.
Mode of operation	Modules in the System can take on different roles. Connected to the Backbone Bus they can be in: • Central Controller Mode (Master or Hot Standby) • Central Managed Mode Modules connected to the System Bus can be in: • System Controller Mode (Master or Hot Standby) • System Managed Mode
Module	A module that is a part of the Platform, that is can be used to build Centrals. Modules within the platform generally supply a Backbone Bus interface. Controller Modules also have a System Bus Interface.

Module Address	Module Addresses are set via DIP switches on the Modules.
Mute	Acknowledge and silence the local buzzer and in some cases the alarm devices.
PA	Public Addressing.
Power Output	Output providing power supply, normally used to power external devices.
Pre-Alarm Condition	A condition preceding the Alarm Condition to give early warning for potentially dangerous situations like a smouldering fire.
Programmable Output	Output which signal behaviour is configurable via the Configuration Program.
PSU	Power Supply Unit.
Redundancy	Refers to the quality or state of being redundant, that is exceeding what is necessary or normal. In the System the term is used to describe backup functionality like in Hot Standby Controller Modules.
Relay	Electrically operated switch output, normally providing C/NO/NC contacts for connection of signal receiver.
Repeater Panel	The main attribute for Repeater Panels is that they can show information but not affect the Central (or System) they belong to. The Repeater M 4.3 is a Repeater Panel.
SCS	Single Central System.
SMig system	Salwico Safety Management interactive graphics, a PC-based software package providing graphical presentation and control of the System.
Stretched central (DCS)	A central that is physically distributed to two or more physical locations. One location may or may not supply power to another location (segmented) and two locations may or may not have isolated communication lines.
Synchronization Signal	A signal in the Backbone Bus that is used for transmitting synchronization signal used by system Modules to synchronize there behaviour.
System	A System consists of one or more Centrals.
System Bus	The communication bus used for connecting multi-central systems. The System Bus is used for inter-central communication but can also be used for external communication. If inter-central communication redundancy is required, the system bus will consist of a primary and a secondary System Bus.
Terminal	A Terminal is a physical point of connection, compare I/O pin.
Test Condition	Detectors put in the Test Condition (or Test Mode) are inhibited from generating the Alarm Condition but the alarms are displayed on the Control Panels to prove that the tested Detectors are operational.
USB	Universal Serial Bus, a communications bus that may be used to connect flash memories, keyboards, mice or other devices.
Warning Condition	The state of the system when a warning is detected. Warnings are not as serious as faults and only of informative nature, for example that a Gas Detector is in need of calibration.
Zone	A group of detectors located in a geographical area.

8 Quick Guide for Control Panel M 4.3

If Fire or Fault is Flashing

Follow the instructions displayed on the screen and take the appropriate actions.

Note! Only the main actions are described below. Further instructions for the control panel can be found in the Operations chapter in the User Guide.

Mute

1 Press to silence the internal buzzer and mute the alarm indication.

Note! Pressing the MUTE button may inhibit outgoing alarm functions and silence bells and PA system. Ensure proper actions are taken to verify the cause of alarm.

2 Press OK for more details on the screen.

Reset

1 Press to reset the current alarm.

Note! Alarms cannot be reset if the alarm condition remains.

Examples of Disablement

Disabling a Conventional Zone

1 Select *Menu > 3 Disablements > New disablement > 1 Zones*.

2 Choose zone (Zone number).

3 Choose disablement type (Permanent, Timer, Clock, or Periodic).

4 Enter time (if Timer, Clock, or Periodic was chosen in the previous step).

Reconnecting Disabled Items

All disablements in the system are presented in the disablement list. Any enablement is made from this list.

1 Select *Menu > 3 Disablements > 2 Disablement list*.

2 Choose the disablement you want to cancel.

3 Press .

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