ZITON

ZP1-X3 Operation Manual

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Version

REV 02. This document applies to ZP1-X3 control panels with software version 1.0 or later.

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CE

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Caution: Caution messages advise you of possible equipment damage. They tell you which actions to take or to avoid in order to prevent the damage.

Note: Note messages advise you of the possible loss of time or effort. They describe how to avoid the loss. Notes are also used to point out important information that you should read.

Introduction

This is the operation manual for the ZP1-X3 Extinguishing and Fire Alarm Control Panel. Read these instructions and all related documentation entirely before operating this product.

The control panel provides three fire detection zones (Z1, Z2, and Z3) and several manual call point (MCP) inputs that control the extinguishing actions for a single extinguishing area.

If a fire detection zone is not configured as part of the extinguishing detection area, the control panel provides standard fire panel functionality for that fire detection zone. For example, the panel activates fire sounders, fire routing, and other auxiliary outputs.

Consult your system installer for configuration details about the fire zones that have been assigned to the fire extinguishing area or (optionally) to fire detection zones.

Table 1 explains the possible fire alarm and extinguishing event states of the control panel.

Table 1: Control panel alarm states

Alarm state	Description
Extinguishing preactivation	An alarm in one fire detection zone was detected but an alarm in another fire detection zone must be detected to activate the extinguishing event. In this state, fire sounders are activated immediately with a steady tone. Fire routing, if available, is activated after any configured delay. If an alarm is not reported in the second zone linked to the extinguishing detection area and if no “start extinguishing” manual call point is activated, the preactivation alarm continues until the control panel is reset by an authorized operator. The system does not proceed to the extinguishing activation alarm. If the control panel is configured with only one zone linked to the extinguishing area, an alarm in that zone triggers an extinguishing activation alarm (there is no preactivation alarm).
Extinguishing activation	This state is also called “in delay to release”. The control panel has detected an extinguishing event (depending on configuration, either one or two fire detection zones entered into an alarm state) or a “start extinguishing” manual call point was pressed. In this state, extinguishing sounders are activated. Normally, your system installer will have configured an intermittent tone. If the extinguishing activation alarm is not cancelled (by pressing an “abort extinguishing” manual call point) or paused (by pressing a “hold extinguishing” manual call point), the system proceeds to the extinguishing released state after the configured delay. The default delay is 10 seconds, but it can be configured for up to 60 seconds.

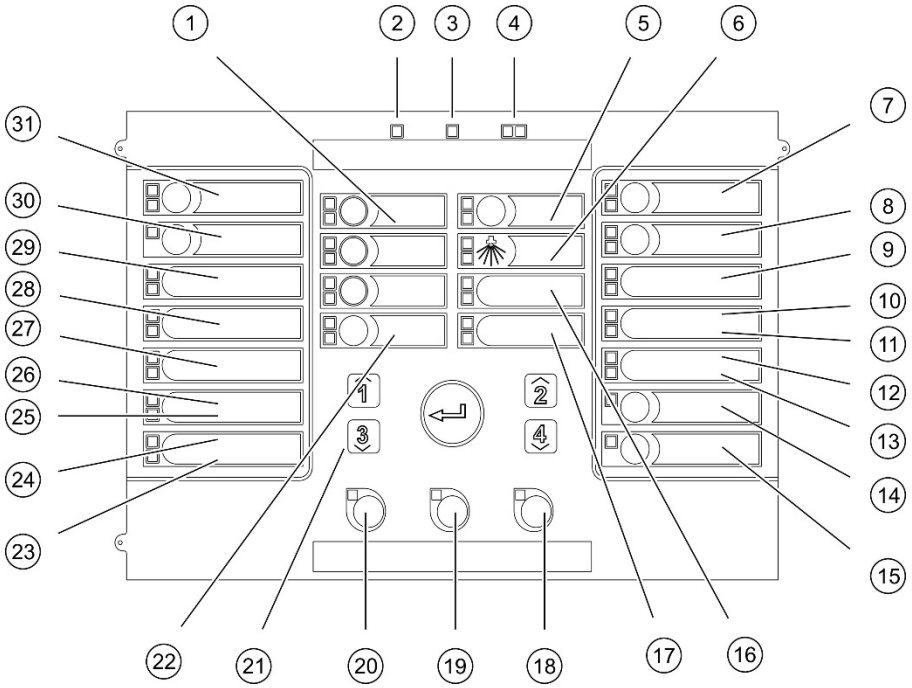
Alarm state	Description
	The control panel cannot be reset during the extinguishing activation stage and the reset button may be disabled for up to 30 minutes.
Extinguishing released	The extinguishing agent is released into the extinguishing area. The site optical warning signs or panels are activated. Normally, your system installer will have configured the extinguishing sounders to change to a continuous tone. The extinguishing process cannot be stopped once it has started and extinguishing will continue until the extinguishing agent containers are empty.
Fire alarm	An alarm in a zone not linked to the extinguishing area or event triggers a fire alarm. In this state, fire sounders and other system features or devices are activated after any configured delay. No extinguishing alarms or devices are activated.

Control panel overview

This topic provides an introduction to the control panel interface, operator controls, and indicators.

The user interface

Figure 1: The user interface



1. Zone buttons and LEDs (Z1, Z2, Z3)
2. Supply LED
3. General Fault LED
4. General Fire Alarm LEDs
5. Preactivation button and LEDs
6. Released LEDs
7. Extinguishing Sounders On button and LEDs
8. Fire Sounders Delay button and LEDs
9. Optical Panel On LEDs
10. Door Fault/Disabled LED
11. Networking Fault LED
12. Reserved for future use
13. Expansion I/O Fault/Disabled LED
14. General Disable button and LED
15. General Test button and LED
16. Low Pressure LEDs
17. Extinguishing Agent Flow LEDs
18. Reset button and LED
19. Panel Silence button and LED
20. Fire Sounders Start/Stop button and LED
21. Numeric keypad and Enter button
22. Manual Mode button and LED
23. System Fault LED
24. Out of Service LED
25. Earth Fault LED
26. Supply Fault LED
27. MCP Abort LEDs
28. MCP Hold LEDs
29. MCP Start LEDs
30. Fire Routing Delay button and LED
31. Fire Routing On button and LEDs

Operator controls and indicators

The following table gives an overview of the control panel operator controls and indicators. Item numbers refer to Figure 1 on page 3.

Operational features described here may not be available to all users. Further information on control panel operation and user restrictions can be found in the topic “Control panel operation” on page 18.

Table 2: Operator controls and LED indicators

Item	Control/LED	LED colour	Description
1	Zone buttons and LEDs (Z1, Z2, Z3)	Red/Yellow	Disables or tests a zone (when pressed with the General Disable or General Test button). A red LED indicates a fire alarm in the corresponding zone. A flashing red LED indicates that the fire alarm was activated by a detector. A steady red LED indicates that the fire alarm was activated by a manual call point. A flashing yellow LED indicates a wiring fault in the corresponding zone. A steady yellow LED indicates a disablement or a test.
2	Supply LED	Green	Indicates that the system is powered up.
3	General Fault LED	Yellow	Indicates a fault. The corresponding zone, device, or function fault LED also activates.
4	General Fire Alarm LEDs	Red	Indicates a fire alarm. Flashing red LEDs indicate that the fire alarm was activated by a detector. Steady red LEDs indicate that the fire alarm was activated by a fire manual call point, the start manual call point or an extinguishing agent flow. For alarms from fire detection zones, the corresponding zone alarm LED indicates the source or location of the fire alarm.
5	Preactivation button and LEDs	Red/Yellow	Disables the extinguishing event (when pressed with the General Disable button). A flashing red LED indicates an extinguishing preactivation. A steady red LED indicates: • An extinguishing activation if the red Released LED is off, flashing fast, or flashing slow • An extinguishing released state if the red Released LED is on steady A flashing yellow LED indicates a fault that prevents the panel from entering the extinguishing activation state. A steady yellow LED indicates that the extinguishing event is disabled.

Item	Control/LED	LED colour	Description
6	Released LEDs	Red/Yellow	Indicates the extinguishing agent release status. A fast flashing red LED indicates the final 10 seconds before activating the actuator output. A slow flashing red LED indicates that the actuator has been activated and the control panel is waiting confirmation of the release of the extinguishing agent flow. Consult your system installer to determine whether your system has this option configured. A steady red LED indicates that the panel entered the extinguishing released state. A flashing yellow LED indicates an actuator output wiring fault. A steady yellow LED indicates an actuator output disablement or test.
7	Extinguishing Sounders On button and LEDs	Red/Yellow	Disables or tests the extinguishing sounders (when pressed with the General Disable or General Test button). A steady red LED indicates that the extinguishing sounders are active (sounding). A flashing yellow LED indicates a wiring fault on the extinguishing sounders (or, if configured, sounder outputs in expansion modules linked to the activation or released states). A steady yellow LED indicates a disablement or test.
8	Fire Sounders Delay button and LEDs	Yellow	Enables or disables a previously configured fire sounders delay. Disables or tests the fire sounders (when pressed with the General Disable or General Test button). A steady LED indicates that a delay is configured and enabled. A flashing LED indicates that a delay is counting down (fire sounders activate when the configured delay elapses). A flashing yellow LED indicates a Fire Sounders wiring fault. A steady yellow LED indicates a Fire Sounders disablement or test.
9	Optical Panel On LEDs	Red/Yellow	Indicates the status of the optical warning panel or sign outputs linked to the released state. A red LED indicates that the optical warning panel or sign output is activated (to indicate the released state). A flashing yellow LED indicates a wiring fault. A steady yellow LED indicates a disablement or test.

Item	Control/LED	LED colour	Description
10	Door Fault/Disabled LED	Yellow	Indicates a safety door monitoring fault or disablement. Safety door monitoring is optional. A fast flashing LED indicates a safety door open or closed faulty status as follows. When the control panel is not in activation or released state: • In automatic mode, the control panel reports a fault if the safety door is *open* and the door fault delay expires. • In manual mode, the control panel reports a fault if the safety door is *closed* and the door fault delay expires. When the control panel is in activation or released state, the control panel reports a fault if the safety door is open. A slow flashing LED indicates a short or open circuit fault in the safety door wiring connected to the control panel. The door fault prevents the panel from entering activation the activation state (because of life safety issues) and from activating the actuator (to ensure property protection). A steady LED indicates a disablement. Consult your system installer to determine whether your system has this option configured.
11	Networking Fault LED	Yellow	Indicates a networking fault. Networking is optional. Consult your system installer to determine whether your system has this option configured.
12	Reserved for future use		This LED-switch position is reserved for future use.
13	Expansion I/O Fault/Disabled LED	Yellow	Indicates that an installed expansion board has a fault or is disabled. Expansion boards are optional. A flashing LED indicates a fault. A steady LED indicates a disablement. Consult your system installer to determine whether your system has expansion modules installed.
14	General Disable button and LED	Yellow	Disables a system feature or device (when pressed with the corresponding button). The disablement of some devices requires pressing the button for more than 3 seconds. (See “Disabling other extinguishing devices” on page 26 for further details.) A steady General Disable LED and the corresponding feature or device yellow LED indicates a disablement.

Item	Control/LED	LED colour	Description
15	General Test button and LED	Yellow	Tests a system feature or device (when pressed with the corresponding button). Testing of some devices requires pressing the button for more than 3 seconds. (See “Testing other extinguishing devices” on page 26 for further details.) A steady General Test LED and the corresponding feature or device yellow LED indicates a test.
16	Low Pressure LEDs	Yellow	Indicates the pressure status of the extinguishing agent container. A flashing LED indicates that the pressure in the extinguishing agent container is low (the General Fault LED also flashes). A flashing yellow LED indicates an open or short circuit wiring fault. A steady yellow LED indicates a disablement or test.
17	Extinguishing Agent Flow LEDs	Red/Yellow	Indicates the extinguishing agent flow status. A steady red LED indicates that the extinguishing agent was released out of its container and into the extinguishing area. A flashing yellow LED indicates an open or short circuit wiring fault. A steady yellow LED indicates a disablement or test.
18	Reset button	Yellow	Resets the control panel and clears all current system events. A steady LED indicates that the operator level is active (see “User levels” on page 18) and that the control panel can be reset. A flashing LED indicates that the Reset button is disabled and that the panel cannot be reset. The Reset button may be disabled for up to 30 minutes.
19	Panel Silence button and LED	Yellow	Silences the control panel buzzer and acknowledges all current events. A steady LED indicates that all current events are acknowledged.

Item	Control/LED	LED colour	Description
20	Fire Sounders Start/Stop button and LED	Red	The LED indicates what happens when the button is pressed: If the LED is on (flashing or steady), pressing the button silences the fire sounders. If the LED is off, pressing the button activates the fire sounders (if the control panel status and operating mode allow manual activation of sounders). The LED also indicates the status of the sounders: • Steady indicates that fire sounders are active (or will be activated shortly) • Flashing indicates that a delay countdown is in progress (fire sounders are activated when the configured delay elapses or when the delay is cancelled) • Off indicates that the fire sounders are off (or will be deactivated shortly) **Note:** To prevent the immediate silencing of fire sounders when an alarm is first reported, the Fire Sounders Start/Stop button may be temporarily disabled during a configured fire sounder delay countdown. For more information, see “Stopping or restarting fire sounders” on page 21.
21	Numeric keypad and Enter button	N/A	Used to enter the operator level password. The Enter button is also used to disable or test selected features (when pressed with the General Disable or Test button).
22	Manual Mode button and LED	Yellow	Used to change from manual-only mode to manual-automatic mode and vice versa, if configured. A steady yellow LED indicates that the control panel is in manual only mode: the automatic fire detection zones cannot generate the extinguishing event. Your system installer may have disabled this feature by configuring an external device that is connected to a control panel input.
23	System Fault LED	Yellow	Indicates a control panel processor failure.
24	Out of Service LED	Yellow	Indicates that control panel power supply conditions have put fire detection zones and inputs out of service. Other system functions remain operational. A steady yellow LED indicates that there is no mains power and the battery power is insufficient. A flashing yellow LED indicates that the mains power is insufficient and there is no battery power.

Item	Control/LED	LED colour	Description
25	Earth Fault LED	Yellow	Indicates an earth isolation fault.
26	Supply Fault LED	Yellow	Indicates a fault in the power supply. A flashing LED indicates a battery or battery fuse fault. A steady LED indicates a mains or mains fuse fault.
27	MCP Abort LEDs	Red/Yellow	Indicates the abort manual call point status. A steady red LED indicates that an abort extinguishing manual call point has been activated (the extinguishing process is cancelled). A flashing yellow LED indicates an open or short circuit wiring fault. A steady yellow LED indicates a disablement or test. An MCP Abort fault prevents entering activation (because of life safety issues) and activating the actuator (to ensure property protection).
28	MCP Hold LEDs	Red/Yellow	Indicates the hold manual call point status. A steady red LED indicates that a hold extinguishing manual call point is active, and the extinguishing process is paused. A flashing yellow LED indicates an open or short circuit wiring fault. A steady yellow LED indicates a disablement or test. An MCP Hold fault prevents entering activation (because of life safety issues) and activating the actuator (to ensure property protection).
29	MCP Start LEDs	Red/Yellow	Indicates the start manual call point status. A steady red MCP Start LED indicates that a start extinguishing manual call point has been activated to create a manual extinguishing event. A flashing yellow LED indicates an open or short circuit wiring fault. A steady yellow LED indicates a disablement or test.
30	Fire Routing Delay button and LED	Yellow	Enables or disables a previously configured fire routing delay. Fire routing is optional. A steady LED indicates that a fire routing delay is configured and enabled. A flashing LED indicates that a fire routing delay countdown is in progress (fire routing activates when the configured delay elapses). Consult your system installer to determine whether the Fire routing option is configured.

Item	Control/LED	LED colour	Description
31	Fire Routing On button and LEDs	Red/Yellow	Overrides the configured delay (when this is running) and activates fire routing. Disables or tests fire routing (when pressed with the General Disable or General Test button). A flashing red LED indicates that fire routing is activated. A flashing yellow LED indicates a wiring fault. A steady yellow LED indicates a disablement or a test. Consult your system installer to determine whether the Fire routing option is configured.

Audible indicators

The control panel buzzer acts as an audible indicator to highlight system events. It can sound a constant tone or an intermittent tone.

A constant tone can indicate a fire alarm, an extinguishing preactivation or activation, an extinguishing released state, or a system fault.

An intermittent tone can indicate that:

- The control panel is in a fault condition.
- The control panel is in the last 10 seconds of a delay countdown before activating the extinguishing actuator (extinguishing release is imminent).

Control panel status indications

This section includes a summary of the default control panel status indications.

Standby

Standby, or normal status, is indicated as follows:

- A steady Supply LED
- A steady Fire Sounders Delay LED (if a delay is enabled)
- A steady Fire Routing Delay LED (Figure 1, item 30) (if a delay is enabled)

There is no audible indication.

Fire alarm (fire-only)

The fire alarm state applies to zones that are not linked to the extinguishing area, and act as fire-only zones.

A fire alarm in a detection zone that is not linked to the extinguishing area is indicated as follows:

- General Fire Alarm LEDs: Flashing if the alarm was activated by a detector. Steady if the alarm was activated by a manual call point.
- Zone LED: Flashing if the alarm was activated by a detector. Steady if the alarm was activated by a manual call point. Shows which zones are in alarm.
- Fire Sounders Delay LED: Flashing while a delay countdown is in progress. Steady if a delay is enabled.
- Fire Sounders Start/Stop LED: Steady if fire sounders are active (or will be activated shortly). Flashing when a delay countdown is in progress. Fire sounders are activated when the configured delay elapses or when the delay is cancelled. Off when the fire sounders are off (or will be deactivated shortly).
- Fire Routing Delay and Fire Routing On LEDs: If the system has been configured to use fire routing, the indicators display accordingly.

  After the first detector alarm in the system, the Fire Routing Delay LED flashes to indicate that a configured delay countdown is in progress. When the delay expires (or is cancelled), fire routing is activated, and the red Fire Routing LED flashes.

  If the system detects an MCP alarm, the Fire Routing Delay LED turns on steady if a delay is enabled, the fire routing is activated immediately, and the Fire Routing LED flashes.

Consult your system installer or maintenance contractor to determine whether your system has a zone configured for fire-only operation.

The control panel buzzer sounds continuously.

Extinguishing preactivation

The control panel is in the extinguishing preactivation state when:

- One fire detection zone in the extinguishing area goes into fire alarm and the system is configured so that a second zone in the extinguishing area is required to activate the extinguishing event.
- Extinguishing event conditions are detected (one or two zones go into fire alarm depending on configuration) but manual mode is activated or a fault or disable condition of an extinguishing device is preventing activation.
- The start manual call point is pressed but a fault or disable condition of an extinguishing device is preventing activation.

The extinguishing preactivation state is indicated as follows:

- Preactivation LED: Flashing red LED.
- Zone LEDs: Flashing red (for zones in fire alarm). Note that these will always flash (indicating detector alarms) for extinguishing detection zones, as these zones are considered to be automatic.
- General Fire Alarm LEDs: Flashing for detector activation. Steady for MCP activation.
- Fire Sounders Start/Stop LED: Steady, as the fire sounders are activated immediately and any configured delay is bypassed.
- Fire routing indications are shown in the usual manner, linked to the fire alarm event.

The control panel buzzer sounds continuously.

Extinguishing event prevented

When the control panel is in standby, fire alarm, or extinguishing preactivation, the extinguishing event is automatically prevented (in effect, the extinguishing event is disabled) for any of the following:

- Disabled extinguishing sounder, extinguishing release optical warning panel or sign, or releasing actuator
- Fault in hold or abort extinguishing manual call point, extinguishing sounder, extinguishing release optical warning panel or sign, safety door monitoring (status or wiring), or releasing actuator.

The extinguishing event is enabled automatically (with a short delay) when the disabled feature is enabled.

The extinguishing event is enabled automatically when the fault is fixed and the control panel is reset.

A prevented extinguishing event is indicated by a flashing yellow Preactivation LED and by the fault/disabled LED of the device that prevented the event.

Extinguishing activation

The extinguishing activation state is also called “in delay to release”.

The control panel is in this state when:

- In automatic mode, the extinguishing event conditions are detected (one or two zones go into fire alarm, depending on the system configuration)
- The start manual call point is pressed

An extinguishing activation state is indicated as follows:

- Preactivation LED: Steady red.
- Zone LEDs: Flashing red (for zones in fire alarm). Note that these will always flash (indicating detector alarms) for extinguishing detection zones, as these zones are considered to be automatic.
- General Fire Alarm LEDs: Flashing for detector activation. Steady for MCP activation.
- MCP Start LED: Steady if the alarm was activated by a start extinguishing manual call point.
- Extinguishing Sounders On LED: Flashing if the tone is intermittent. Steady if the tone is continuous. The extinguishing sounders are activated immediately with the configured tone.
- Released LED: Flashing rapidly during the last 10 seconds before activating the actuator to release the extinguishing agent. Flashing slowly if the actuator has been activated and the control panel is waiting for confirmation of the flow of the extinguishing agent. Consult your system installer to determine whether your system has this option configured.
- Reset LED: Flashing slow yellow to indicate that the manual reset is prevented until the configured delay expires. Consult your system installer to determine the delay configured.
- Fire routing indications are shown in the usual manner, linked to the fire alarm event.

The control panel buzzer sounds continuously, except for the final 10 seconds prior to activating the actuator when the buzzer sounds intermittently.

If the abort manual call point is pressed while in extinguishing activation:

- The extinguishing process is cancelled immediately.
- MCP Abort LED: Steady.
- Extinguishing Sounders On LED: Turned off. The extinguishing sounders are deactivated immediately.

If the hold manual call point is pressed while in extinguishing activation:

- The extinguishing process is paused.
- MCP Hold LED: Steady (depends on the hold mode configured). Consult your system installer to determine which hold mode was configured for your system.

Mode A: When the MCP Hold is activated, the actuator delay countdown continues, but the panel is prevented from entering the extinguishing activation state. When the MCP Hold is deactivated, the delay countdown determines when the panel enters the extinguishing activation state.

In Mode A, activation of the MCP Hold turns on the MCP Hold LED, which stays on until the panel is manually reset. The yellow Preactivation LED flashes to indicate that the panel is being prevented from entering the extinguishing activation state. The Preactivation LED flashes to show when the MCP Hold is on; it turns off when the MCP Hold is off.

Mode B: When the MCP Hold is activated, the actuator delay countdown stops, putting the extinguishing release process on hold. The sounders emit a unique sound pattern (1 second on, 4 seconds off) while the extinguishing release process is on hold. When the MCP Hold is deactivated, the delay countdown restarts and the sounder pattern changes to the tone configured for extinguishing activation. The MCP Hold LED turns off when the MCP Hold device is deactivated.

Extinguishing released

The control panel is in this state when:

- The actuator output to release the extinguishing agent has been activated and the agent flow confirmation is not configured or is disabled.
- The actuator output to release the extinguishing agent has been activated and the agent flow has been confirmed, when agent flow confirmation is configured.

Consult your system installer to determine the option configured in your system.

An extinguishing released state is indicated as follows:

- Released LED: Steady.
- Extinguishing Agent Flow LED: Steady, if confirmation is configured.
- Preactivation LED: Steady red, unless extinguishing agent flow confirmation configured and received, but no extinguishing activation event occurred.
- General Fire Alarm LED: Steady. The Alarm relay activates.
- MCP Start LED: Steady if the alarm was activated by a start extinguishing manual call point.
- Extinguishing Sounders On LED: Flashing (for intermittent tone) or steady (for continuous tone) according to your system configuration.
- Optical Panel On LED: Steady to indicate that the output to activate the optical warning panel or sign is active.
- Reset LED: Flashing slowly, to indicate that manual reset is disabled until the configured delay expires.

Fire alarm indications will be on as usual if the extinguishing event that caused the release was not a start manual call point activation. Fire routing indications, if configured, are shown in the usual manner, linked to the fire alarm event.

The control panel buzzer sounds continuously.

Faults

Faults are indicated with a flashing General Fault LED and an active fault indication LED corresponding to the feature or device with a fault.

The control panel buzzer sounds intermittently.

Note: Contact your installation or maintenance contractor to solve all reported faults. Some faults can prevent or disable the extinguishing event. See “Extinguishing event prevented” on page 12 for more information.

Disablements

- A disabled extinguishing event is indicated by a steady General Disable LED and a steady yellow Preactivation LED.
- Disabled zones are indicated by a steady General Disable LED and a steady yellow Zone LED.
- Disabled extinguishing sounders (and sounder outputs linked to the preactivation or released states) are indicated by a steady General Disable LED and a steady yellow Extinguishing Sounders On LED.
- Disabled fire sounders are indicated by a steady General Disable LED and a steady yellow Fire Sounders LED.
- Disabled fire routing is indicated by a steady General Disable LED and a steady yellow Fire Routing LED.
- Disabled expansion boards are indicated by a steady General Disable LED and a steady Expansion I/O Fault/Disabled.
- Disabled actuators are indicated by a steady General Disable LED and a steady yellow Released LED.
- Disabled safety door monitoring is indicated by a steady General Disable LED and a steady Door Fault/Disabled LED.
- Disabled extinguishing agent flow monitoring is indicated by a steady General Disable LED and a steady yellow Extinguishing Agent Flow LED.
- Disabled extinguishing agent pressure monitoring is indicated by a steady General Disable LED and a steady yellow Low Pressure LED.
- Disabled extinguishing released optical warning panels or signs are indicated by a steady General Disable LED and a steady yellow Optical Panel On LED.
- Disabled start, hold, or abort extinguishing manual call points are indicated by a steady General Disable LED and a steady yellow LED for MCP Start, MCP Hold, or MCP Abort.

There is no audible indication.

Note: Some disablements can prevent or disable the extinguishing event. See “Extinguishing event prevented” on page 12 for more information.

Tests

- Zone tests are indicated by a steady General Test LED and a steady yellow Zone LED.
- Extinguishing sounder tests are indicated by a steady General Test LED and a steady yellow Extinguishing Sounders On LED.
- Fire sounder tests are indicated by a steady General Test LED and a steady yellow Fire Sounders LED.
- Fire routing tests are indicated by a steady General Test LED and a steady yellow Fire Routing LED.
- Actuator tests are indicated by a steady General Test LED and a steady yellow Released LED.
- Extinguishing agent flow monitoring tests are indicated by a steady General Test LED and a steady yellow Extinguishing Agent Flow LED.
- Extinguishing agent pressure monitoring tests are indicated by a steady General Test LED and a steady yellow Low Pressure LED.
- Extinguishing released optical warning panel or sign tests are indicated by a steady General Test LED and a steady yellow Optical Panel On LED.
- Start, hold, or abort extinguishing manual call point tests are indicated by a steady General Test LED and a steady yellow LED for MCP Start, MCP Hold, or MCP Abort.

There is no audible indicator.

WARNING: Risk of death or serious injury. Disconnect the extinguishing agent actuator from the control panel *before* you issue the actuator output test command. When you confirm the test command, the actuator output is activated immediately.

Out of service

The control panel is out of service when there is insufficient mains or battery power. In this state there are no further fire alarm or fault signals from detection zones and no activation, deactivaton, or fault signals from input devices are processed.

The out of service state is indicated as follows:

- Out of Service LED: Steady indicates that there is no mains power and the battery power is insufficient. Flashing indicates that the mains power is insufficient and there is no battery power.
- Supply Fault LED: Steady indicates that there is no mains power. Flashing indicates that there is no battery power.

The control panel buzzer sounds intermittently.

When power is re-established, the control panel returns to its former status after being reset. (The Out of Service state is latched.)

Note: When the control panel indicates *out of service,* the fire alarm detection in your system is inactive and your site is not protected. Contact your installation or maintenance contractor immediately to solve the problem.

Control panel operation

User levels

For your safety, access to some features of this product are restricted by user levels. The access privileges of each user level are described below.

Public user

The public user level is the default user level.

This level allows basic operating tasks, such as responding to fire alarms or fault warnings at the control panel. No password is required.

See “Public user level operation” below for more information.

Operator user

The operator user level allows additional operating tasks that command the system or perform maintenance functions. It is reserved for authorized users who have been trained to operate the control panel.

The default password for the operator user level is 2222.

See “Operator user level operation” on page 20 for more information.

This is a restricted user level, protected by password security. To enter the operator user level, enter the password using the numeric keypad, and then press Enter.

A long beep and a steady Reset LED indicate that the correct password was entered and that the operator user level is active. Three short beeps accompanied by a flashing General Fault LED indicate that an incorrect password was entered.

The control panel automatically exits the operator user level and reverts to the public user level after 5 minutes if no button is pressed.

Note: The control panel is available with an access key option. The key switch is located on the panel cover. With this option, either the key or the password can be used to enter the operator user level.

Public user level operation

Public user level operations are those that can be performed by any user. No password is required to perform tasks at this level.

Public user level operation lets you:

- Acknowledge a system event and silence the control panel buzzer
- Cancel an active fire sounders delay
- Cancel an active fire routing delay
- Perform a control panel LED and buzzer test

Acknowledging a system event and silencing the control panel buzzer

To acknowledge a system event and silence the control panel buzzer, press the Panel Silence button.

A steady Panel Silence LED indicates that the control panel buzzer is silenced and that all current events are acknowledged.

Cancelling an active fire sounders delay

If a fire sounders delay is enabled and active, press the Fire Sounder Delay button to cancel the delay and activate the sounders immediately.

The Fire Sounders Delay LED indicates the following conditions:

- Steady: A delay is configured and enabled.
- Flashing (during a fire alarm): A countdown for the configured delay is in progress. Sounders activate when the delay elapses or when the delay is cancelled.

Note: If an alarm is reported in a zone linked to the extinguishing event, any configured delay is ignored and the fire sounders are activated immediately.

A fire alarm activated by a manual call point overrides any configured delay and activates the fire sounders immediately.

Cancelling an active fire routing delay

If a fire routing delay is enabled and active, press the Fire Routing On button or the Fire Routing Delay button to cancel the delay and activate fire routing immediately.

The Fire Routing Delay LED indicates the following conditions:

- Steady: A delay is configured and enabled.
- Flashing (during a fire alarm): A countdown for the configured delay is in progress. Fire routing activates when the delay elapses or when the delay is cancelled.

A fire alarm activated by a manual call point overrides any configured delay and activates fire routing immediately.

Performing a control panel LED indicator and buzzer test

To perform a control panel LED indicator and buzzer test, press and hold the Test button for more than 3 seconds.

The test is indicated as follows:

- All LEDs are steady.
- The control panel buzzer sounds continuously.

The test continues for as long as the Test button remains pressed (with an automatic timeout of 12 seconds). When the test is completed the control panel returns to its former state.

Operator user level operation

The operator user level is protected by password security and is reserved for authorized users who have been trained to operate the control panel for control and maintenance purposes. The default operator user password is 2222.

Those tasks included in the topic “Public user level operation” on page 18 are also available at this user level.

This user level lets you:

- Reset the control panel
- Stop or restart fire sounders
- Stop or restart extinguishing sounders
- Disable or enable sounders
- Disable or enable a fire sounders delay
- Test sounders
- Disable or enable fire routing
- Disable or enable a fire routing delay
- Test fire routing
- Disable or enable a zone
- Test a zone
- Disable or enable the extinguishing event
- Disable other extinguishing devices
- Test other extinguishing devices
- Set the manual-only mode of operation

Resetting the control panel

Note: Investigate all alarms and system faults before resetting the control panel.

To reset the control panel and clear all current system events, press the Reset button. System events that have not been resolved continue to be highlighted when the reset process ends.

The Reset button is disabled when the control panel enters the extinguishing activation state (the Reset LED flashes to indicate the disablement). The control panel cannot be reset at this time and the Reset button may remain disabled for up to 30 minutes. Consult your system installer for the time configured. When the Reset LED is steady the control panel can be reset.

Stopping or restarting fire sounders

To stop the fire sounders, press the Fire Sounders Start/Stop button. To restart stopped fire sounders, press the button again.

If the control panel has been configured to operate in evacuation mode, sounders can be started without the panel being in the fire alarm state by pressing the Fire Sounders Start/Stop button.

A steady Fire Sounders Start/Stop LED indicates that the fire sounders are active (sounding). A flashing Fire Sounder Start/Stop LED indicates that a configured fire sounder delay countdown is in progress and that fire sounders can be silenced (before activation) by pressing the Fire Sounder Start/Stop button.

Notes

To prevent the immediate silencing of fire sounders when an alarm is first reported, the Fire Sounders Start/Stop button may be temporarily disabled for a preconfigured period of time when a configured fire sounder delay is being counted down. The default disable time for the Fire Sounders Start/Stop button is 1 minute.

The disable countdown begins when the control panel enters the fire alarm state and the configured fire sounder delay starts.

During the configured disable time the Fire Sounders Start/Stop LED is off and the sounders cannot be silenced (before activation) by pressing the Fire Sounders Start/Stop button.

During the time from the end of the configured disable time period until the end of the configured fire sounder delay (when the Fire Sounders Start/Stop LED is flashing), pressing the Fire Sounders Start/Stop button will silence fire sounders (before activation).

A configured fire sounder delay may still be cancelled while the delay is running (and sounders activated) by pressing the Fire Sounders Delay button.

Note that sounder functionality is subject to system configuration and, depending on what your installation or maintenance contractor has selected, silenced sounders may restart automatically if another alarm event is detected. Contact your installation or maintenance contractor to determine the configuration details for your site.

Stopping or restarting extinguishing sounders

To stop the extinguishing sounders, press the Extinguishing Sounders On button.

An Extinguishing Sounders On LED indicates that the extinguishing sounders are active (sounding). The LED indicates the tone of the extinguishing sounders: flashing for an intermittent tone, steady for a continuous tone.

The extinguishing sounder tone depends on the extinguishing status (extinguishing activation or extinguishing released) and the system configuration. Normally, this tone is intermittent for activation and continuous for released. Consult your system installer to determine whether these default settings are used for your site.

Extinguishing sounders can only be stopped when the control panel is in extinguishing released state (the Released LED is steady). To restart stopped extinguishing sounders, press the Extinguishing Sounders On button again.

The control panel may provide additional extinguishing sounders in expansion modules linked to the preactivation or released state which activate continuously. These outputs accept the stop and restart commands normally.

Disabling or enabling sounders

To disable the fire sounders, press the General Disable button, and then press the Fire Sounders Delay button.

To disable the extinguishing sounders, press the General Disable button, and then press the Extinguishing Sounders On button.

Sounders can only be disabled when the sounder outputs are not activated. Disabled sounders do not operate or indicate a fault if there is an alarm.

Note: Disabling the extinguishing sounders automatically prevents (disables) the extinguishing event. See “Disabling or enabling the extinguishing event” on page 25 for more information.

Fire sounder disablement is indicated as follows:

- A steady General Disable LED
- A steady yellow LED for the Fire Sounders Delay button

Extinguishing sounder disablement is indicated as follows:

- A steady General Disable LED
- A steady yellow LED for the Extinguishing Sounders On button

To enable the fire sounders, press the General Disable button, and then press the Fire Sounders Delay button again.

To enable the extinguishing sounders, press the General Disable button, and then press the Extinguishing Sounders On button again.

Disabling or enabling a fire sounders delay

To disable a configured (and enabled) fire sounders delay, press the Fire Sounders Delay button. To enable the delay, press the button again.

If an alarm is reported in a zone linked to the extinguishing event, any configured delay will be ignored and fire sounders will be activated immediately.

Testing sounders

To test the sounders, press the General Test button, and then press the Fire Sounders Delay button.

Sounders can only be tested when the control panel is in standby state.

The test is indicated as follows:

- A steady General Test LED
- A steady yellow LED for the Fire Sounders Delay button
- The audible sounder test signal (3 seconds on, 5 seconds off) for the duration of the test, without any configured delay

To end the test, press the General Test button, and then press the corresponding sounder Fire Sounders Delay button again.

If there is an extinguishing preactivation, activation, release, or fire alarm event during the test, the control panel exits the test and responds to the alarm event as configured.

Disabling or enabling fire routing

To disable fire routing, press the General Disable button, and then press the Fire Routing Start button.

The disablement is indicated as follows:

- A steady General Disable LED
- A steady yellow Fire Routing On LED

To enable fire routing, press the General Disable button, and then press the Fire Routing On button again.

Note: Disabled fire routing does not operate or indicate a fault if there is a fire alarm.

Disabling or enabling a fire routing delay

To disable a configured (and enabled) fire routing delay, press the Fire Routing Delay button. To enable the delay, press the button again.

Testing fire routing

Note: Before performing any fire routing tests, ensure that the fire routing signals are not connected or notify the fire brigade of the tests.

To test fire routing, press the General Test button, and then press the Fire Routing Start button.

The test is indicated as follows:

- A steady General Test LED
- A steady yellow Fire Routing On LED
- A flashing Fire Routing On LED and the test signal (3 seconds on, 5 seconds off) without any configured delay for the duration of the test

To end the test, press the General Test button, and then press the Fire Routing On button again.

If there is an extinguishing preactivation, activation, release, or fire alarm event during the test, the control panel exits the test and responds to the alarm event as configured.

Disabling or enabling a zone

To disable a zone, press the General Disable button, and then press the corresponding Zone button.

The disablement is indicated as follows:

- A steady General Disable LED
- A steady yellow Zone LED

To enable the zone, press the General Disable button, and then press the Zone button again.

Note: No fire alarm or faults are indicated for disabled zones.

Testing a zone

To test a zone, press the General Test button, and then press the corresponding Zone button.

The test is indicated as follows:

- A steady General Test LED
- A steady fault/disable/test Zone LED

When an alarm is activated in a zone in test:

- The alarm Zone LED is steady or flashing, depending on the source of the alarm
- Fire routing and other zone-dependent functions are not activated
- Unless configured otherwise, the fire sounders are activated for 5 seconds and the Fire Sounders Start/Stop LED is steady (see the note below)
- Unless configured otherwise, the control panel buzzer sounds continuously for 5 seconds (see the note below)
- The control panel resets automatically after 5 seconds and clears alarms for the zone in test

To end the test, press the Test button, and then press the Zone button again.

If there is an alarm in another zone not in test, or if the MCP Start is activated, the control panel responds to the alarm event as configured.

Note: The control panel buzzer and sounders may be configured not to sound when an alarm is activated in a zone being tested.

Disabling or enabling the extinguishing event

Note: When the extinguishing event is disabled (or prevented) the control panel does not report extinguishing alarms and the extinguishing event will not be activated. The control panel will continue to report and indicate fire alarms in the extinguishing area.

To disable the extinguishing event, press the General Disable button, and then press the Preactivation button.

The disablement is indicated as follows:

- A steady General Disable LED
- A steady yellow Preactivation LED

To enable the extinguishing event, press the General Disable button, and then press the Preactivation button again.

If an extinguishing alarm is reported at the same time that the extinguishing event is enabled, there is a short delay (configurable up to 60 seconds) before the control panel enters extinguishing released state.

Note: Some faults or disablements of extinguishing devices can prevent or disable the extinguishing event. See “Extinguishing event prevented” on page 12 for more details.

Disabling other extinguishing devices

The devices listed in Table 3 can also be disabled at the operator user level.

To disable any of these devices, press the General Disable button for more than 3 seconds, press the 1 and 3 buttons (the Up and Down buttons) to select the option to be disabled (the corresponding LED flashes), and then press Enter to confirm the disablement.

The disablement is indicated by:

- A steady General Disable LED
- A steady disabled LED for the corresponding device

To enable a disabled option, press the General Disable button for more than 3 seconds, press the 1 and 3 buttons to select the option to be enabled, and then press Enter.

Table 3: Additional device disablement options

Device	LED used
All installed expansion boards [1]	Expansion I/O Fault/Disabled
Actuator	Released yellow
Door monitor [2]	Door Fault/Disabled
Pressure switch monitoring	Low Pressure yellow
Extinguishing agent flow monitoring	Extinguishing Agent Flow yellow
Extinguishing release optical warning panel/sign	Optical Panel On yellow
Start extinguishing manual call points	MCP Start yellow
Hold extinguishing manual call points	MCP Hold yellow
Abort extinguishing manual call points	MCP Abort yellow

[1] Expansion boards cannot be disabled individually.

[2] If a safety door monitoring is not used, make sure that your installer has not configured this option or disable it to avoid preventing the extinguishing event.

Testing other extinguishing devices

The devices listed in Table 4 and Table 5 can also be tested at the operator user level.

To test any of these devices, press the General Test button for more than 3 seconds, press the 1 and 3 buttons (the Up and Down buttons) to select the option to be tested (the corresponding LED flashes), and then press Enter to confirm the test condition.

The test condition is indicated by:

- A steady General Test LED
- A steady test LED for the corresponding device

To exit from a test condition, press the General Test button for more than 3 seconds, press the 1 and 3 buttons to select the option, and then press Enter.

Table 4: Additional input device test options

Input device	LED used	Test functionality
Pressure switch monitoring	Low Pressure yellow	A flashing Low Pressure LED indicates that the input has been activated.
Extinguishing agent flow monitoring	Extinguishing Agent Flow yellow	A steady Extinguishing Agent Flow LED indicates that the input is active.
Start extinguishing manual call point	MCP Start yellow	A steady MCP Start LED indicates that the input has been activated.
Hold extinguishing manual call point	MCP Hold yellow	A steady MCP Hold LED indicates that the input has been activated.
Abort extinguishing manual call point	MCP Abort yellow	A steady MCP Hold LED indicates that the input has been activated.

The activation of any input under test will not activate any associated functionality.

Table 5: Additional output device test options

Output device	LED used	Test functionality
Actuator	Released yellow	The actuator output will be 3 seconds on, 5 seconds off, for the duration of the test. A steady Released LED indicates that the output is activated.
Extinguishing release optical warning panel or sign	Optical Panel On yellow	The optical panel output will be 3 seconds on, 5 seconds off, for the duration of the test. A steady Optical Panel On LED indicates that the output is activated.

WARNING: Risk of death or serious injury. Disconnect the extinguishing agent actuator from the control panel *before* you issue the actuator output test command. When you confirm the test command, the actuator output is activated immediately.

Set the manual-only mode of operation

If the control panel is not configured to use an external input to switch to manual-only mode, press the Manual Mode button on the control panel. Manual-only mode is indicated by a steady Manual Mode LED. In this mode, the extinguishing event can only be generated by activation of the MCP Start point. The fire detection zones in the extinguishing area cannot generate the extinguishing event.

Pressing the Manual Mode button again switches the control panel back to automatic-manual mode. The Manual Mode LED turns off. In automatic-manual mode, the detection zones in the extinguishing area and the MCP Start point can generate the extinguishing event.

Maintenance

Perform the following maintenance tasks to ensure that your fire alarm system works correctly and complies with all required European regulations.

WARNING: Risk of death or serious injury. Disconnect the extinguishing agent actuator from the control panel *before* you issue the actuator output test command. When you confirm the test command, the actuator output is activated immediately.

Note: Before performing any tests, ensure that fire routing (if configured) is disabled or that the fire brigade has been notified.

Quarterly maintenance

Contact your installation or maintenance contractor to perform a quarterly inspection of the system.

This inspection must test at least one device per zone and verify that the control panel responds to all fault and alarm events. The control panel power supply and battery voltage should be checked.

Annual maintenance

Contact your installation or maintenance contractor to carry out an annual inspection of the system.

This inspection must test all system devices and verify that the control panel responds to all fault and alarm events. All electrical connections must be visually inspected to make sure that they are securely fastened, that they have not been damaged, and that they are appropriately protected.

Cleaning

Keep the outside and inside of the control panel clean. Carry out periodic cleaning using a damp cloth for the outside. Do not use products containing solvents to clean the unit. Do not clean the inside of the cabinet with liquid products.

Regulatory information

European standards for fire control and indicating equipment

These control panels have been designed in accordance with European Standards EN 54-2, EN 54-4, and EN 12094-1.

In addition, all models comply with the following EN 54-2 and EN 12094-1 optional requirements.

Table 6: EN 54-2 optional requirements

Option	Description
7.8	Output to fire alarm devices [1]
7.9.1	Output to fire alarm routing equipment [2]
7.11	Delays to outputs
8.4	Total loss of power supply
10	Test condition

[1] Inputs and outputs on the optional 2010-1-SB expansion I/O board do *not* support the optional requirement of EN 54-2 clause 7.8 and should not be used for fire alarm devices.

[2] Requires installation of optional 2010-1-SB expansion board (not supplied).

Table 7: EN 12094-1 optional requirements

Option	Description
4.17	Delay release of extinguishing agent
4.18	Indication of extinguishing agent flow
4.19	Monitor component status
4.20	Emergency hold device (mode A or B)
4.23	Manual mode
4.24	Trigger signals to equipment within the system
4.26	Trigger signals to equipment outside the system
4.27	Emergency abort device
4.30	Activate alarm devices with different signals

European standards for electrical safety and electromagnetic compatibility

These control panels have been designed in accordance with the following European standards for electrical safety and electromagnetic compatibility:

- EN 62368-1
- EN 50130-4
- EN 61000-6-3
- EN 61000-3-2
- EN 61000-3-3

European regulations for construction products

This section provides a summary on the declared performance according to the Construction Products Regulation (EU) 305/2011 and Delegated Regulations (EU) 157/2014 and (EU) 574/2014.

For detailed information, see the product Declaration of Performance (available at firesecurityproducts.com).

Certification	CE
Certification body	0370
Manufacturer	Carrier Manufacturing Poland Spòlka Z o.o., Ul. Kolejowa 24, 39-100 Ropczyce, Poland. Authorized EU manufacturing representative: Carrier Fire & Security B.V., Kelvinstraat 7, 6003 DH Weert, Netherlands.
Year of first CE marking	11
Declaration of Performance number	360-3106-0399
Product identification	See model number on product identification label
Intended use	See the product Declaration of Performance
Declared performance	See the product Declaration of Performance