



NC Series Conventional Fire Alarm Control Panel Operation Manual

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Important information

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Advisory messages alert you to conditions or practices that can cause unwanted results. The advisory messages used in this document are shown and described below.

WARNING: Warning messages advise you of hazards that could result in injury or loss of life. They tell you which actions to take or to avoid in order to prevent the injury or loss of life.

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 NC Series Conventional Fire Alarm Control Panels. Read these instructions and all related documentation entirely before operating this product.

Product range

The NC Series Conventional Fire Alarm Control Panels includes the models shown below.

Model [1]	Description
NC-PF2, NC-PF2-SC	Two-zone conventional fire alarm control panel
NC-PF4, NC-PF4-SC	Four-zone conventional fire alarm control panel with fire routing
NC-PF8, NC-PF8-SC	Eight-zone conventional fire alarm control panel with fire routing

[1] -SC variants include a fireman's key.

Fire routing on the four- and eight-zone models is not available for all operating modes. For more information, see "Sunder and fire routing delays" on page 2.

Operating modes

Supported operating modes are shown in the table below. The default operating mode is EN 54-2.

Table 1: Operating modes

Operating mode	Region
EN 54-2 (default)	European Union
EN 54-2 Evacuation	European Union (Spain)
EN 54-2 Scandinavia	European Union (Scandinavia)
BS 5839-1	United Kingdom
NBN S 21-100	Belgium
NEN 2535	The Netherlands

The choice of operating mode used depends on your location and the specific regional requirements of your fire alarm system.

As there is no visual indication of the active operating mode, your installation or maintenance contractor should provide full details of your configuration.

Sounder and fire routing delays

Sounder and fire routing delays are not available for all operating modes. See the table below for delay availability for each operating mode.

Table 2: Sounder and fire routing delays

Operating mode	Sounder delay	Fire routing delay	Extended fire routing delay
EN 54-2	Yes	Yes	Yes
EN 54-2 Evacuation	Yes	No	No
EN 54-2 Scandinavia	Yes	Yes	Yes
BS 5839-1	Yes	No	No
NBN S 21-100	Yes (evacuation sounders)	Yes (warning sounders)	No
NEN 2535	No	Yes	Yes

Note: Fire routing is not available on any two-zone control panel.

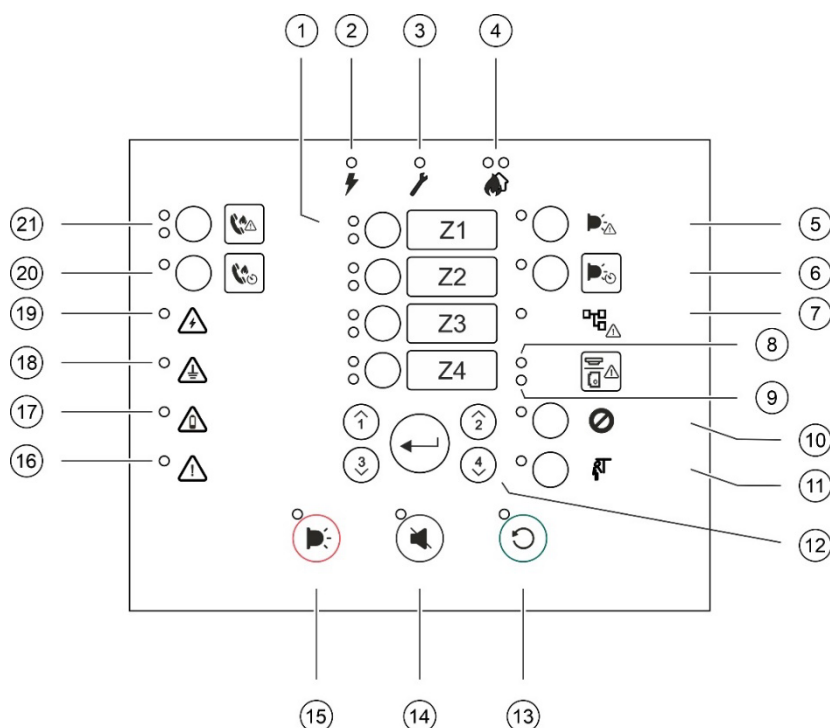
Control panel overview

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

Note: Regional variants include changes to interface buttons and LEDs – see “Regional variants of interface buttons and LEDs” on page 5.

User interface for two- and four-zone control panels

Figure 1: User interface for two- and four-zone control panels



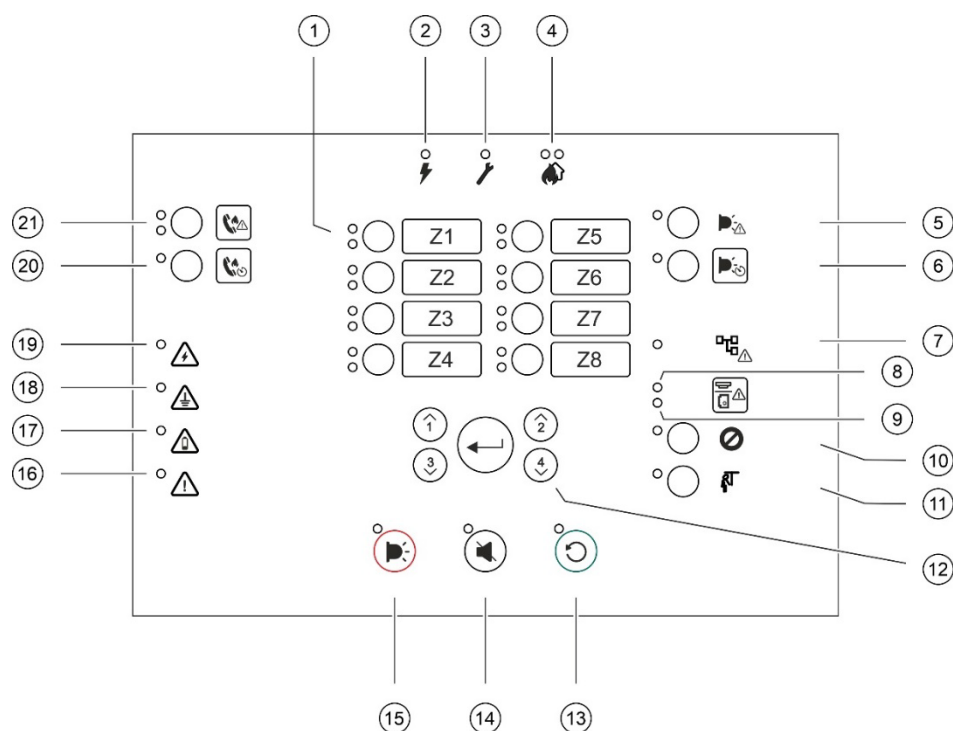
- | | |
|--|--|
| 1. Zone buttons and LEDs (Z1, Z2, etc.) | 12. Configuration controls |
| 2. ⚡ Supply LED | 13. ↺ Reset button and LED |
| 3. 🔧 General Fault LED | 14. 🔊 Panel Silence button and LED |
| 4. 🔥 General Fire Alarm LEDs | 15. 🔊 Sounder Start/Stop button and LED |
| 5. 🔊 Sounder Fault/Disable/Test button and LED | 16. ⚠ System Fault LED |
| 6. 🔊 Sounder Delay button and LED | 17. ⚠ Out of Service LED |
| 7. 📡 Networking Fault LED | 18. ⚠ Earth Fault LED |
| 8. 📡 Service Detector LED [1] | 19. ⚠ Supply Fault LED |
| 9. 📡 Expansion I/O Fault/Disabled LED | 20. 📞 Fire Routing Delay button and LED [2] |
| 10. ⛔ General Disable button and LED | 21. 📞 Fire Routing ON/ACK and Fault/Disable/Test button and LEDs [2] |
| 11. 🛠 General Test button and LED | |

Notes

- [1] This feature is only available for installations using compatible Aritech detectors.
 [2] Two-zone control panels do not include fire routing or warning sounders for NEN 2535.

User interface for eight-zone control panels

Figure 2: User interface for eight-zone control panels



- | | |
|--|--|
| 1. Zone buttons and LEDs (Z1, Z2, etc.) | 12. Configuration controls |
| 2. ⚡ Supply LED | 13. ↺ Reset button and LED |
| 3. 🔧 General Fault LED | 14. 🔊 Panel Silence button and LED |
| 4. 🔥 General Fire Alarm LEDs | 15. 🔊 Sounder Start/Stop button and LED |
| 5. 🔊 Sounder Fault/Disable/Test button and LED | 16. ⚠ System Fault LED |
| 6. 🔊 Sounder Delay button and LED | 17. ⚠ Out of Service LED |
| 7. 📡 Networking Fault LED | 18. ⚠ Earth Fault LED |
| 8. 📡 Service Detector LED [1] | 19. ⚡ Supply Fault LED |
| 9. 📡 Expansion I/O Fault/Disabled LED | 20. 🔊 Fire Routing Delay button and LED |
| 10. ⚠ General Disable button and LED | 21. 🔊 Fire Routing ON/ACK and Fault/Disable/Test button and LEDs |
| 11. 🔧 General Test button and LED | |

Notes

[1] This feature is only available for installations using compatible Aritech detectors.

Regional variants of interface buttons and LEDs

Regional variants include the following changes to interface buttons and LEDs.

Item	EN 54		NEN 2535		NBN S 21-100	
6		Sounder Delay		Fire Protection Fault/Disable/Test		Evacuation Sounder Delay
8		Service Detector		Fault Warning Fault/Disabled		Service Detector
15		Sounder Start/Stop		Sounder Start/Stop		Evacuation Start/Stop
20		Fire Routing Delay		Fire Routing Delay		Warning Sounder Delay
21		Fire Routing ON/ACK		Fire Routing ON/ACK		Warning Sounders Start/Stop

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 and Figure 2 on page 4.

Operational features described here may not be available to all users. Further information on control panel operation and access restrictions can be found in the topic “Control panel operation” on page 16.

Table 3: Operator controls and LED indicators

Item	Icon	Control/LED	LED colour	Description
1		Zone buttons and LEDs	Red/Yellow	Disables or tests a zone (when pressed with the General Disable or General Test button). A red LED indicates an 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 yellow LED indicates a fault, test, or disablement in the corresponding zone. A flashing yellow LED indicates a fault. A steady yellow LED indicates that the zone is disabled or is being tested.
2		Supply LED	Green	Indicates that the system is powered up correctly.
3		General Fault LED	Yellow	Indicates a fault. The corresponding zone, device, or function fault LED also flashes.
4		General Fire Alarm LEDs	Red	Indicates a fire alarm. Flashing LEDs indicate that the fire alarm was activated by a detector. Steady LEDs indicate that the fire alarm was activated by a manual call point. The corresponding zone alarm LED indicates the source of fire alarm.
5	 	Sounder Fault/Disable/Test button and LED — or — Evacuation Fault/Disable/Test button and LED for NBN S 21-100)	Yellow	Disables or tests sounders (when pressed with the General Disable or General Test button). A flashing LED indicates a fault with the sounders or evacuation sounders. A steady LED indicates that the sounders or evacuation sounders are disabled or are being tested.

Item	Icon	Control/LED	LED colour	Description
6		Sounder Delay button and LED	Yellow	Enables or disables a previously configured sounder or evacuation sounder delay. Cancels a delay as it counts down and activates sounders or evacuation sounders.
	— or —	— or —		
		Evacuation Sounder Delay for NBN S 21-100		A steady LED indicates that a sounder or evacuation sounder delay is configured and enabled. A flashing LED indicates that a sounder or evacuation sounder delay is counting (sounders will be activated when the configured delay elapses).
	— or —	— or —		
		Fire Protection Fault/Disable/Test button and LED for NEN 2535		The button has no function. A flashing LED indicates a fault. A steady LED indicates that the feature is disabled or is being tested.
7		Networking Fault LED	Yellow	The control panel is not connected to a fire network if this LED is off. A flashing LED every 10 seconds indicates the control panel is connected to a fire network with no faults. A steady LED for 30 seconds indicates the control panel is showing local information. A continuous steady LED indicates the control panel connection to the network has been disabled. A flashing LED indicates network faults.
8		Service Detector LED	Yellow	Indicates a fault of detectors requiring service (only for detectors supporting CleanMe functionality). For zone information, press and hold the Panel Silence button – a flashing yellow Zone LED indicates a zone with a detector that requires service.
	— or —	— or —		
		Fault Warning Fault/Disabled LED for NEN 2535		A flashing LED indicates a wiring fault of the fault warning output. A steady LED indicates that the feature is disabled.
9		Expansion I/O Fault/Disabled LED	Yellow	Indicates that an installed expansion board has a fault or is disabled. A flashing LED indicates a fault with an expansion board. A steady LED indicates that an expansion board is disabled.

Item	Icon	Control/LED	LED colour	Description
10		General Disable button and LED	Yellow	Disables a zone, sounders, fire routing, fire protection and fault warning (NEN 2535 only), or expansion I/O boards (when pressed with the corresponding button). A steady General Disable LED and the corresponding zone, sounders, or fire routing Fault/Disable/Test LED indicates a disablement.
11		General Test button and LED	Yellow	Tests a zone, sounders, fire protection (NEN 2535 only) or fire routing (when pressed with the corresponding button). A steady General Test LED and the corresponding zone, sounders, or fire routing Fault/Disable/Test LED indicates a test.
12		Numeric keypad and Enter button	N/A	Used to enter the operator user level password. The Enter button is also used to disable or test selected features (when pressed with the General Disable or Test button). For control panels in a network with repeater functionality, the Enter button is used to show control panel local events.
13		Reset button	Yellow	Resets the control panel and clears all current system events (except expansion I/O board fault communication). A steady LED indicates that operator user level is active (see “User levels” on page 16).
14		Panel Silence button and LED	Yellow	Silences the control panel buzzer and acknowledges all current events. A steady LED indicates that all current events were acknowledged.

Item	Icon	Control/LED	LED colour	Description
15		Sounder 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 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 sounders are active (or will be activated shortly) • Flashing indicates that a delay is counting (sounders are activated when the configured delay elapses or when the delay is cancelled) • Off indicates that the sounders are off (or will be deactivated shortly) Notes: To prevent the immediate silencing of sounders when an alarm is first reported, the Sounders Start/Stop button may be temporarily prevented when a configured fire sounder delay is counting down. Depending on the size of your installation, the processing of commands to start or stop sounders may take a few seconds to travel through the system. For example, the LED may be steady before the sounders are audible.
	— or —			
		Evacuation Start/Stop button and LED for NBN S 21-100		Activates or deactivates evacuation sounders. A steady LED indicates that evacuation sounders are active.
16		System Fault LED	Yellow	Indicates a control panel processor failure.
17		Out of Service LED	Yellow	Indicates that control panel power supply conditions put fire detection zones and inputs out of service. Other system functions remain operational (including networking and output activation). 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	Icon	Control/LED	LED colour	Description
18		Earth Fault LED	Yellow	Indicates an earth isolation fault.
19		Supply Fault LED	Yellow	Indicates a fault with the power supply. A flashing LED indicates a battery or battery fuse fault. A steady LED indicates a mains or mains fuse fault.
20	 	Fire Routing Delay button and LED — or — Warning Sounder Delay for NBN S 21-100	Yellow	Enables or disables a previously configured fire routing or warning sounders delay. (For warning sounders, this cancels a delay as it counts down and activates sounders.) A steady LED indicates that a fire routing or warning sounders delay is configured and enabled. A flashing LED indicates that a fire routing or warning sounders delay is counting (fire routing will be activated when the configured delay elapses).
21		Fire Routing ON/ACK button and LED	Red	Cancels a previously configured delay and activates fire routing. A flashing LED indicates that fire routing has been activated. A steady LED indicates that the fire routing signal has been acknowledged by the remote monitoring equipment.
		— or — Warning Start/Stop button and LED for NBN S 21-100		Activates or deactivates warning sounders. A steady LED indicates that warning sounders are active.
21	 	Fire Routing Fault/Disable/Test LED — or — Warning Fault/Disable/Test LED for NBN S 21-100	Yellow	Indicates that fire routing is in a fault condition, is disabled, or is being tested. A flashing LED indicates a fault. A steady LED indicates that the function is disabled or is being tested.

Audible indicators

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

Table 4: Audible indications

Indication	Description
The control panel buzzer sounds continuously	Indicates a fire alarm or a system fault
The control panel buzzer sounds intermittently	Indicates all other faults

Summary of status indications

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

Standby (normal status)

Standby, or normal status, is indicated as follows:

- Supply LED: On steady.
- Sounder or Evacuation Delay LED: On steady if a sounder or evacuation delay was enabled.
- Fire Routing or Warning Delay LED: On steady if a fire routing or warning delay was enabled.
- Control panel buzzer: Off.

Fire alarm

Fire alarm status 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 red if the alarm was activated by a detector. Steady red if the alarm was activated by a manual call point. Shows which zones are in alarm.
- Sounder Delay LED: On steady if a sounder delay was enabled. Flashing while the delay is active (counting down). On steady when the sounders are active (sounding).
- Fire Routing Delay LED: Flashing slow when a fire routing delay is active (counting). Flashing fast when an extended fire routing delay is active (counting).
- Fire Routing ON/ACK LED: Flashing when fire routing is activated. On steady when the fire routing signal has been acknowledged by the remote monitoring equipment.
- Control panel buzzer: Sounding continuous.

Alarms activated by a manual call point always take priority over alarms activated by a detector. If an alarm is activated by both devices, the Fire Alarm LEDs and Zone alarm (red) LEDs are on steady.

For NBN S 21-100 operation, additional indicators are:

- Evacuation Delay LED: On steady if an evacuation delay was enabled. Flashing while the delay is active. On steady when evacuation sounders are active (sounding).
- Warning Delay LED: Flashing slow when a warning sounders delay is active (counting).
- Warning Start/Stop LED: On steady when sounders are active (sounding).

Evacuation

This function is available only for EN 54-2 evacuation and NBN S 21-100 operation.

In evacuation status, the panel activates the sounders without detection of a zone alarm. The status is indicated as shown below.

For EN 54-2 evacuation and NBN S 21-100 operation:

- General Fire Alarm LEDs: On steady.
- Sounders: Active (sounding).
- Sounder Start/Stop LED: On steady.
- Control panel buzzer: Sounding continuous.

For NBN S 21-100 operation, additional indicators are:

- Evacuation Start/Stop LED: On steady when the evacuation sounders are active (sounding).
- Warning Start/Stop LED: On steady when warning sounders are active (sounding).

Fault

General fault indication:

- General Fault LED: Flashing.
- Corresponding zone, function, or device LED: Flashing yellow.
- Control panel buzzer: Sounding intermittent.

Mains power fault and mains fuse fault indication:

- General Fault LED: Flashing.
- Supply Fault LED: On steady.
- Control panel buzzer: Sounding intermittent.

Battery power and battery fuse fault indication:

- General Fault LED: Flashing.
- Supply Fault LED: Flashing.
- Control panel buzzer: Sounding intermittent.

Earth fault indication

- General Fault LED: Flashing.
- Earth Fault LED: On steady.
- Control panel buzzer: Sounding intermittent.

Note: Contact your installation or maintenance contractor to investigate the cause of all reported faults.

Disablements

Disabled zones are indicated as follows:

- General Disable LED: On steady.
- Corresponding Zone LED: On steady yellow.
- Control panel buzzer: Off.

Disabled sounders (or evacuation for NBN S 21-100) are indicated as follows:

- General Disable LED: On steady.
- Sounder LED: On steady yellow.
- Control panel buzzer: Off.

Disabled fire routing (or warning for NBN S 21-100) is indicated as follows:

- General Disable LED: On steady.
- Fire Routing LED: On steady yellow.
- Control panel buzzer: Off.

Disabled expansion boards are indicated as follows:

- General Disable LED: On steady.
- I/O LED: On steady yellow.
- Control panel buzzer: Off.

Disabled fire protection is indicated as follows:

- General Disable LED: On steady.
- Fire Protection LED: On steady yellow.
- Control panel buzzer: Off.

Disabled fault warning is indicated as follows:

- General Disable LED: On steady.
- Fault Warning LED: On steady yellow.
- Control panel buzzer: Off.

Tests

A zone test is indicated as follows:

- General Test LED: On steady.
- Corresponding Zone LED: On steady yellow.
- Control panel buzzer: Off.

A sounder test (or evacuation test for NBN S 21-100) is indicated as follows:

- General Test LED: On steady.
- Sounder LED: On steady yellow.
- Control panel buzzer: Off.

A fire routing test (or warning test for NBN S 21-100) is indicated as follows:

- General Test LED: On steady.
- Fire Routing On/Ack LED: On steady yellow.
- Control panel buzzer: Off.

A fire protection test is indicated as follows (NEN 2535 only):

- General Test LED: On steady.
- Fire Protection LED: On steady yellow.
- Control panel buzzer: Off.

Out of service

The control panel is out of service when there is insufficient or no mains or battery power. Zone and input detection does not operate, but the rest of the system is operational. In this state, the control panel may receive network events which activate its outputs.

Out of service is indicated as follows:

- Out of Service LED: On steady.
- Supply Fault LED: Flashing if there is no mains power and the battery voltage is insufficient. On steady if the mains power is insufficient and no battery power is detected.
- Control panel buzzer: Sounding intermittent.

When power is re-established the control panel returns to its former status.

Note: When the control panel indicates *out of service*, your fire alarm system is partly inactive and your site is not properly protected. Contact your installation or maintenance contractor immediately to investigate 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 operational tasks to respond to fire alarms and/or faults at the control panel. No password is required.

See “Public user level operation” on page 17 for more information.

Operator user

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

The default password for the operator/maintenance user 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 corresponding 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 sounder (or evacuation for NBN S 21-100) delay
- Cancel an active fire routing (or warning for NBN S 21-100) delay
- Perform a control panel LED and buzzer test
- Display local indications only (for control panels with repeater functionality)

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 buzzer was silenced and that all current events are acknowledged.

Cancelling an active sounder delay (or evacuation delay for NBN S 21-100)

If a sounder delay (or evacuation delay for NBN S 21-100) is enabled and active, press the Sounder Delay button (or Evacuation Delay button for NBN S 21-100) to cancel the delay and activate sounders immediately.

Sounders (for EN 54-2 evacuation) and evacuation (for NBN S 21-100) can cancel the delay and activate sounders immediately by pressing the Sounder Start/Stop button (or evacuation Start/Stop button for NBN S 21-100).

A sounder delay (or evacuation delay for NBN S 21-100) is indicated as follows:

- Steady Sounder Delay LED (or Evacuation Delay LED for NBN S 21-100): A delay is enabled.
- Flashing Sounder Delay LED (or Evacuation Delay LED for NBN S 21-100) during a fire alarm: A configured delay is active (sounders are activated when the configured delay elapses or when the delay is cancelled).

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

Cancelling an active fire routing delay (or warning delay for NBN S 21-100)

If a fire routing delay (or warning delay for NBN S 21-100) is enabled and active, press the Fire Routing ON button (or Warning Start/Stop button for NBN S 21-100) or the Fire Routing Delay button (or Warning Delay button for NBN S 21-100) to cancel the delay and activate fire routing (or warning for NBN S 21-100) immediately.

A fire routing delay (or warning delay for NBN S 21-100) is indicated as follows:

- Steady Fire Routing Delay LED (or Warning Delay LED for NBN S 21-100): A delay is enabled.
- Flashing Fire Routing Delay LED (or Warning Delay LED for NBN S 21-100) during a fire alarm: A configured delay is active. Fire routing (or warning for NBN S 21-100) is activated when the configured 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 (or warning for NBN S 21-100) immediately.

Performing a control panel LED indicator and control panel 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:

- General Fault LED: Flashing.
- System Fault LED: Flashing.
- All other LEDs: On steady.
- Control panel buzzer: Sounding continuous.

The test continues 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.

Note: Devices connected to the control panel fault relay will also be activated for the duration of this test.

Displaying local indications only

For control panels connected in a fire network and with repeater functionality, an indication is activated if any control panel in the network being repeated has the feature activated. For zone indications which are global in the fire network, it is not required to repeat other control panels to show their zone indications.

Therefore all control panels display the local and remote information. If you need to show only local status in a control panel:

- Press the Enter button for at least 3 seconds.
- A steady Networking Fault LED indicates network remote indications are disabled momentarily.
- Only local information is shown for 30 seconds. After this time, the Networking Fault LED turns off and the control panel shows global (local and remote) information according to its configuration.

Example 1

If you have a 16-zone conventional system with two 8-zone conventional control panels where both panels repeat each other, and you need to identify which panel has a supply fault you should press Enter for 3 seconds. The control panel without the supply fault will turn off the supply fault indication.

Example 2

If you have a 16-zone conventional system with two 8-zone conventional control panels which are not repeating each other, then one panel has a zone range of 1 to 8 and the other panel has a zone range of 8 to 15. Sharing zone 8 will allow activating outputs of one control panel with events of zone 8 in the other panel.

If there is a defective device causing false alarms in zone 8 of panel 1, you can disable it and keep some detection active (zone 8 of panel 2 operational). The zone 8 yellow LED will activate in both panels. Afterwards, an alarm in zone 8 of panel 2 will cause both panels to activate and the zone 8 red and yellow LEDs in both panels will be active.

Pushing Enter for 3 seconds in panel 1 will cause the red LED indication of zone 8 to disappear, indicating that the control panel has zone 8 disabled. At this point, you will know the alarm is from zone 8 of panel 2. You can confirm this by pushing Enter for 3 seconds in panel 2. In this case, the yellow LED indication disappears.

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 17 are also available at the operator user level.

This user level lets you:

- Reset the control panel
- Stop or restart sounders (or evacuation for NBN S 21-100)
- Silence sounders before activation
- Start sounders in evacuation mode of operation
- Enable or disable a configured sounder delay (or evacuation delay for NBN S 21-100)
- Enable or disable a configured fire routing delay (or warning delay for NBN S 21-100)
- Enable or disable a configured extended fire routing delay
- Test a zone [1]
- Disable or enable a zone [1]
- Test sounders (or evacuation for NBN S 21-100)
- Disable or enable sounders (or evacuation for NBN S 21-100) [1]
- Test fire routing (or warning for NBN S 21-100)
- Disable or enable fire routing (or warning for NBN S 21-100) [1]
- Disable or enable other features (all expansion boards, fire protection and fault warning outputs)

[1] These operations can be performed when the control panel is in alarm.

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.

Stopping or restarting sounders (or evacuation for NBN S 21-100)

To stop the sounders (or evacuation for NBN S 21-100), press the Sounder Start/Stop button (or Evacuation Start/Stop button for NBN S 21-100). To restart stopped sounders (or evacuation for NBN S 21-100), press the button again.

A steady Sounder Start/Stop LED indicates that the sounders are active (sounding).

Silencing sounders before activation (sounders silence disable time)

A flashing Sounder Start/Stop LED indicates that a configured sounder delay is counting down and that sounders can be silenced (before activation) by pressing the Sounder Start/Stop button. (Not available for NBN S 21-100.)

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

The disable time starts to count down when the control panel enters alarm status and the configured sounder delay starts.

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

During the time between the end of the configured disable time and the end of the configured sounder delay (when the Sounders Start/Stop LED is flashing), pressing the Sounders Start/Stop button silences sounders (before activation).

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

Starting sounders in evacuation mode

If the control panel has been configured in EN 54-2 evacuation mode, sounders can be started without a fire alarm by pressing the Sounders Start/Stop button.

If the control panel has been configured in NBN S 21-100, evacuation sounders can be started without a fire alarm by pressing the Evacuation Start/Stop button.

Sounder functionality is subject to previous 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 confirm all configuration details for your site.

Note: Sounders are always restarted when the control panel detects a manual alarm and it was in automatic alarm state.

Enabling or disabling a configured sounder delay (or evacuation delay for NBN S 21-100)

To enable a configured sounder delay (or evacuation delay for NBN S 21-100), press the Sounder Delay button (or the Evacuation Delay button for NBN S 21-100). To disable the delay, press the button again.

Note: Availability of this feature is subject to configuration and its functionality may vary for each zone. Contact your fire system installation or maintenance contractor to confirm your configuration details.

Enabling or disabling a configured fire routing delay (or warning delay for NBN S 21-100)

To enable a configured fire routing delay (or warning delay for NBN S 21-100), press the Fire Routing Delay button (or the Warning Delay button for NBN S 21-100). To disable the delay, press the button again.

Note: Availability of this feature is subject to configuration and its functionality may vary for each zone. Contact your fire system installation or maintenance contractor to confirm your configuration details.

Enabling or disabling a configured extended fire routing delay

If configured, the extended fire routing delay is enabled or disabled at the same time as the standard fire routing delay.

In NEN 2535 operating mode, the extended fire routing delay becomes the active delay when sounders are stopped (by pressing the Sounder Start/Stop button) and remain stopped when the standard fire routing delay time has elapsed.

In EN 54-2 Scandinavia operating modes, the extended fire routing delay becomes the active delay when an extended fire routing delay switch is activated while the standard fire routing delay elapses. (This delay option is also available for EN 54-2 and NEN 2535 operating modes if configured during installation. Contact your fire system installation or maintenance contractor to confirm your configuration details.)

Testing a zone

To test a zone, press the General Test button, and then press the corresponding zone button. The maximum number of zones that may be tested at the same time is four.

A zone in test is indicated as follows:

- General Test LED: On steady.
- Zone LED: On steady yellow.

When an alarm is activated in a zone in test:

- Zone alarm LEDs are steady or flashing, depending on the source of the alarm.
- Fire routing and other zone-dependent functions are not activated.
- Unless configured otherwise, the sounders are activated for 5 seconds and the Sounder Start/Stop LED is steady (optional).
- Unless configured otherwise, the control panel buzzer sounds continuously (see note).
- if no other zones are in alarm, the control panel will reset automatically after 5 seconds and clear alarms for the zone in test. If other zones are in alarm, a manual reset is required.

To end the test, press the Test button, and then press the Zone button again. If no action is taken, the zone exits the test automatically after 1 hour.

If there is a fire alarm in the zone in test, the alarm state remains when the zone test ends.

If there is a fire alarm in another zone not in test, 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. Contact your fire system installation or maintenance contractor to confirm your configuration details.

Disabling or enabling a zone

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

A disabled zone is indicated as follows:

- General Disable LED: On steady.
- Zone LED: On steady yellow.

To enable the zone, press the General Disable button, and then press the Zone button again. If a disabled zone contains a device in alarm, the zone will not be enabled until the control panel is reset.

Notes:

If it is the only zone in alarm, no fire alarm or fault is indicated for the disabled zone and any linked fire outputs are stopped.

If one or more zones are in alarm when the zone is enabled, the zone enters into alarm and re-activates the stopped fire outputs.

Testing sounders (or evacuation for NBN S 21-100)

To test sounders (or evacuation for NBN S 21-100), press the General Test button, and then press the Sounder Fault/Disable/Test button (or Evacuation Fault/Disable/Test button for NBN S 21-100).

Sounders (or evacuation for NBN S 21-100) can only be tested when the control panel is in standby state.

The test is indicated as follows:

- General Test LED: On steady.
- Sounder Fault/Disable/Test LED (or Evacuation Fault/Disable/Test LED for NBN S 21-100): On steady.
- The sounders (or evacuation for NBN S 21-100) emit the audible 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 Sounder Fault/Disable/Test button (or Evacuation Fault/Disable/Test button for NBN S 21-100) again.

If there is a fire alarm the fire panel will exit the test and responds to the alarm as configured.

Disabling sounders or enabling sounders (or evacuation for NBN S 21-100)

To disable sounders (or evacuation for NBN S 21-100), press the General Disable button, and then press the Sounder Fault/Disable/Test button (or Evacuation Fault/Disable/Test button for NBN S 21-100).

Disabled sounders (or evacuation for NBN S 21-100) are indicated as follows

- General Disable LED: On steady.
- Sounder Fault/Disable/Test LED (or Evacuation Fault/Disable/Test LED for NBN S 21-100): On steady.

To enable the sounders, press the General Disable button, and then press the Sounder Fault/Disable/Test button (or Evacuation Fault/Disable/Test button for NBN S 21-100) again.

Note: Disabled sounders (or evacuation for NBN S 21-100) do not indicate a fault or operate if there is a fire alarm.

Testing fire routing (or warning for NBN S 21-100)

Note: Always notify the fire brigade of any planned fire routing tests.

To test fire routing (or warning for NBN S 21-100), press the General Test button, and then press the Fire Routing ON/ACK button (or Warning Start/Stop button for NBN S 21-100).

The test is indicated as follows:

- General Test LED: On steady.
- Fire Routing On/Ack LED (or Warning Start/Stop LED for NBN S 21-100): On steady yellow.
- Fire Routing On/Ack LED: Flashing red.
- Sounders: Test signal (3 seconds on, 5 seconds off)

To end the test, press the General Test button, and then press the Fire Routing On/Ack button (or Warning Start/Stop button for NBN S 21-100) again.

If there is a fire alarm the fire panel will exit the test and respond to the alarm as configured.

Disabling or enabling fire routing (or warning for NBN S 21-100)

To disable fire routing (or warning for NBN S 21-100), press the General Disable button, and then press the Fire Routing On/Ack button (or Warning Start/Stop button for NBN S 21-100).

Disabled fire routing (or warning for NBN S 21-100) is indicated as follows:

- General Disable LED: On steady.
- Fire Routing On/Ack LED (or Warning Start/Stop LED for NBN S 21-100): On steady yellow.

To enable fire routing (or warning for NBN S 21-100), press the General Disable button, and then press the Fire Routing ON/ACK button (or Warning Start/Stop button for NBN S 21-100) again.

Note: Disabled fire routing (or warning for NBN S 21-100) does not operate or indicate a fault if there is a fire alarm.

Disabling or enabling other features

The following may also be disabled:

- All installed expansion boards
- Fire protection output (NEN 2535 mode only)
- Fault warning output (NEN 2535 mode only)

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

Disablement is indicated as follows:

- General Disable LED: On steady.
- Corresponding LED: On steady yellow.

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.

Note: Disabled expansion boards will not operate or indicate a fault if there is a fire alarm.

Maintenance

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

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 fire alarm 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 fire alarm 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 EN 54-2, EN 54-4, BS 5839-1, NBN S 21-100, and NEN 2535 standards.

In addition, all models comply with the following EN 54-2 optional requirements:

Table 5: EN 54-2 optional requirements

Option	Description
7.8	Output to fire alarm devices Note: 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.
7.9.1	Output to fire alarm routing equipment [1]
7.9.2	Alarm confirmation input from fire alarm routing equipment [1]
7.10	Output to fire protection equipment (type A) [2]
7.11	Delays to outputs
7.13	Alarm counter [3]
8.4	Total loss of the power supply
8.9	Output to fault warning routing equipment [2]
10	Test condition

[1] Excluding two-zone models.

[2] NEN 2535 operating mode only.

[3] Dutch models only.

EN 54-13 European compatibility assessment of system components

These control panels form part of a certified system as described by EN 54-13 when installed and configured for EN 54-13 operation as described by the manufacturer in the corresponding installation documentation.

Contact your installation or maintenance contractor to determine if your fire system is compliant with this standard.

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).

Conformity	
Notified/Approved body	0370
Manufacturer	Carrier Manufacturing Poland Spółka 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	24
Declaration of Performance number	
NC-PF2, NC-PF2-SC	BCN-3100001
NC-PF4, NC-PF4-SC	BCN-3100002
NC-PF8, NC-PF8-SC	BCN-3100003
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

