



FIRE DETECTION AND ALARM SYSTEM

Conventional alarm control panels

CCE-200



User, installation and commissioning manual

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1 Introduction.

The Easy Detect conventional alarm control panels in the BASIC CCE-200 range have been designed in accordance with the EN54/2 and EN54/4 standards. This range of alarm control panels is available in versions with 2, 4, 6, 8 and 10 non-expandable zones. Its compact size, ease of use for end customers, and quick and easy installation and programming make it suitable for end users as well as installation and maintenance companies.

These BASIC alarm control panels have five easy-to-use, intuitive and clearly visible keys to be operated by the end customer, in the event of an alarm or fault (activate sounders, silence sounders, buzzer mute, lamp test and reset).

This manual contains all the technical information necessary to install the system correctly and information to allow the user to operate the alarm control panel.

Maintenance information and a troubleshooting guide for common problems are also included.

It automatically alerts surveillance personnel if there is a fire or a malfunction. It uses conventional fire detectors.

1.1 Glossary of symbols.

The following pictograms are included in this manual for ease of understanding.

PRECAUTIONS



Earth connection. This connection is essential, and the earthing must be installed correctly.



Electrostatic-sensitive electronic equipment. When handling the electronic circuit, it is necessary to wear an anti-static wrist strap to avoid damaging it.



Possibility of «HIGH VOLTAGE» **electric shocks**. Take precautions to avoid personal injury.



Lead batteries. Risk of explosion in the event of a short circuit and risk of corrosion if there is a leak.



External radiation source, motors, radio stations, etc.



Warning, caution.

ATTENTION

You must follow the instructions carefully to avoid personal injury and damage to the equipment

1.2 Contents of the packaging.

Once the alarm control panel has been removed from its original packaging, make sure that it contains the following items:

- 1 alarm control panel (BASIC version).
- 4.7K Ω end-of-line resistors (one for each zone plus two for the sounder outputs).
- 1 5x20 2 A fuse.
- 1 5x20 0.5 A fuse.
- Keys.
- 1 basic instruction manual.
- 1 sheet with multi-language cards for language customisation.
- 1 battery jumper.

Before starting the installation, make sure that the contents of the packaging are correct and in a good condition. If there is any problem with the product, repack it and contact your dealer.

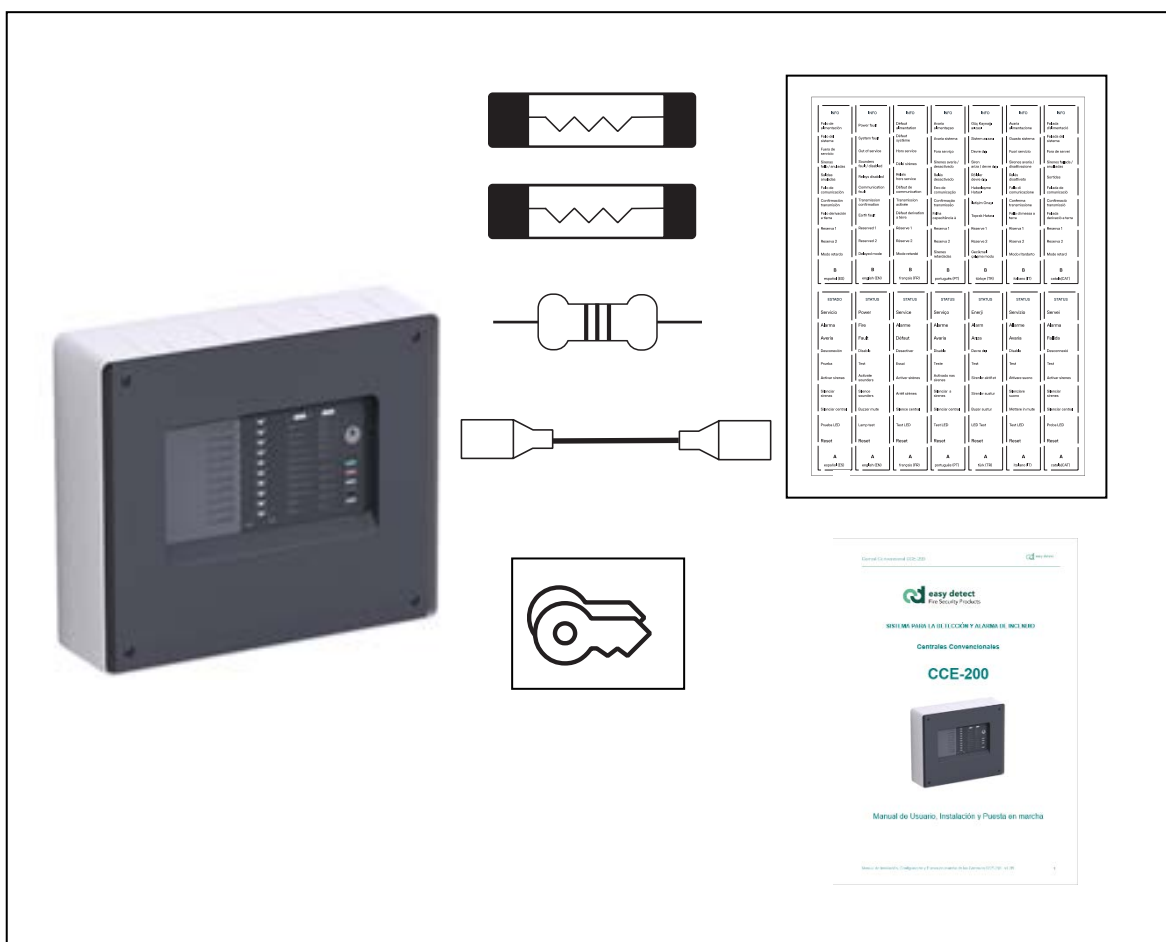


Fig. 1 Contents of the packaging

1.3 Description of CCE-200 range.

The CCE-200 BASIC range of conventional alarm control panels is as follows:

- CCE-202 2 detection zones
- CCE-204 4 detection zones
- CCE-206 6 detection zones
- CCE-208 8 detection zones
- CCE-210 10 detection zones

Only the terminal block used to connect the detection zones will vary, depending on the zones that are available.

1. Mains power supply input (230 VAC)
2. Disable earth leakage monitoring
3. Power supply cable and battery input
4. Power supply fuse
5. F6 battery fuse
6. Delay switch
7. CPU fault buzzer override
8. COM1 connector
9. Sounder 1 output fuse
10. Zone texts
11. Sounder 2 output fuse
12. Alarm relay
13. Fault relay
14. Sounder output 1
15. Sounder output 2
16. 24 V auxiliary output
17. 24 V resettable output
18. External auxiliary input
19. 24 V power supply output fuse
20. Detection zones connection
21. Cable tie mount
22. Main indicators
23. Access level key
24. COM2 connector
25. Vertical expansion card housing area
26. Main control keypad
27. Batteries
28. Quick-release battery connector
29. Battery-powered push-button

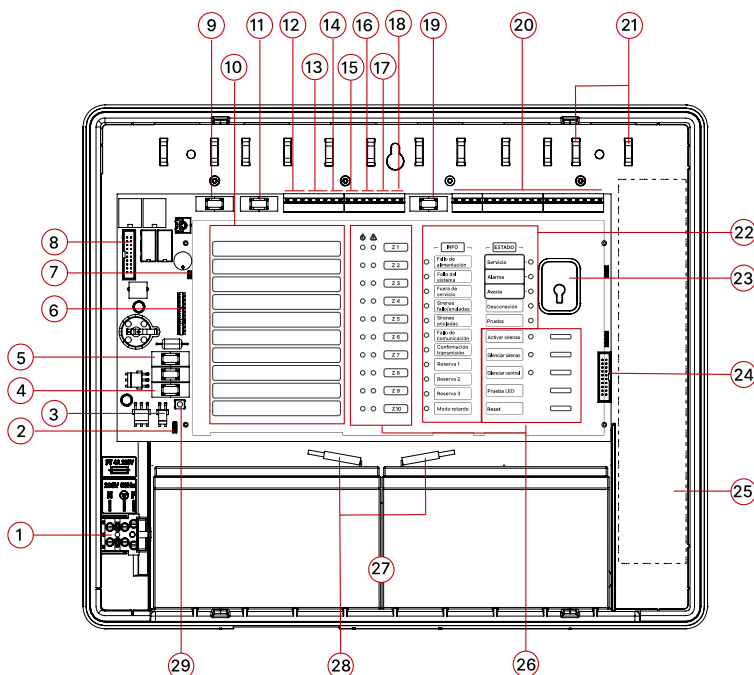


Fig. 2 Components of the CCE-200 Basic alarm control panel

Regardless of the number of zones, the entire range shares the following functions:

- Individual connection/disconnection by zone.
- Individual test mode by zone.
- Sounders on/off.
- Sounder activation time delay.
- Monitored mains supply, batteries and outputs.
- Different alarm for manual call point and/or detector in the same zone.
- Auxiliary input to activate sounders.
- Option to connect TRE-200 relay expansion card.
- Option to connect TSE-200 sounder expansion card.

Inputs/Outputs:

- 1) Detection zone input.
- 2) Configurable auxiliary input (activation option, sounders, reset, etc.).
- 3) 24 V resettable output.
- 4) 24 V auxiliary output.
- 5) Two monitored sounder outputs, with configurable delay.
- 6) Main alarm and fault relay (voltage-free contacts).

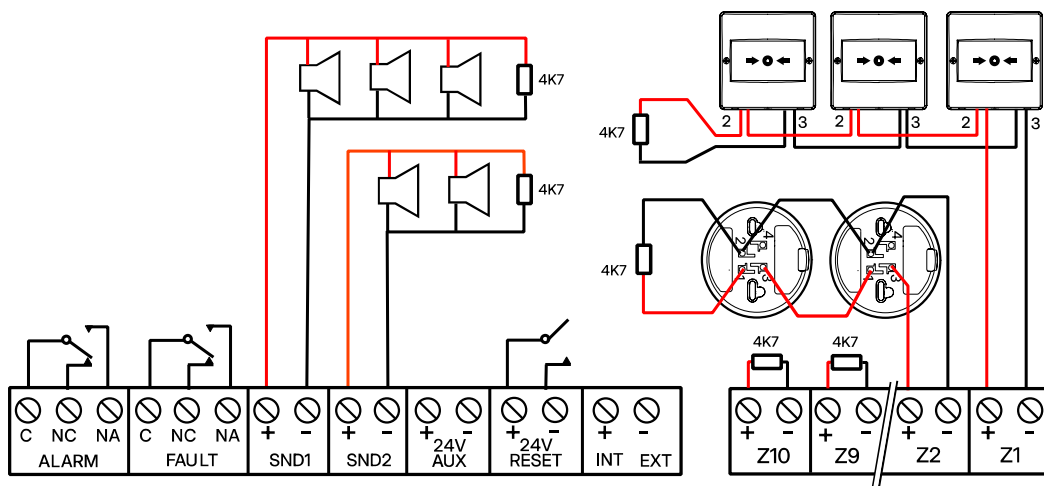


Fig. 3 CCE-200 alarm control panel input/output connection terminals

1.4 Applicable regulations.

The CCE-200 range of conventional alarm control panels has been designed in accordance with the EN54-2 and EN54-4 standards.

EN54-2 has basic requirements and optional requirements. The options with requirements included in the design are:

SUBJECT	PARAGRAPH	NAME
Outputs	7.8	Output to fire alarm devices
Outputs	7.11	Delay to outputs
Tests	10	Test mode. <ul style="list-style-type: none"> • Test condition indication • Indication of zones in test condition

1.5 Safety precautions and warnings.

PLEASE READ CAREFULLY BEFORE PROCEEDING

These precautions explain how to use the device correctly and safely, thereby preventing any harm to yourself or others. This section has been divided into a WARNING section and a CAUTION section according to the likelihood and nature of any potential injury or damage. These warnings and precautions relate to your safety and help you to minimise the risk of damaging the device. Therefore, read these sections carefully before proceeding with the installation.



WARNING

Always follow the basic precautions listed below to avoid the possibility of serious injury or even death due to electric shock, short circuits, damage, fire or other hazards.

These precautions include, but are not limited to:

- Do not handle the inside of the alarm control panel when the system is being powered at 230 VAC. It must only be handled by trained personnel.
- Do not attempt to repair the electronic circuit yourself.

If the equipment is returned to the factory for repair, use its original packaging and do not include the batteries.



CAUTION

- Do not install the equipment near sources of heat or strong vibrations, or in places exposed to extreme temperatures (cold/heat).
- Do not install the alarm control panel in the vicinity of other electrical devices that may produce high levels of interference that would impede the proper operation of the alarm control panel.
- Mount the alarm control panel flush and at eye level.
- Do not machine the cable inlets anywhere not designed for this purpose.
- Check that the characteristics of the mains socket match those of the system.
- It is essential to connect the earth connection.
- Disconnect the mains and batteries in the event of a malfunction and request assistance from trained personnel.

1.6 Compatibility with other equipment.

CCE-200 fire detection and alarm control panels are compatible with all ranges of Easy Detect conventional fire detectors and manual alarm call points.

Although other detectors may work correctly, we cannot guarantee the proper operation of all of them due to the large number of models available on the market.

2 Installation guide.

2.1 Installation.

This section of the manual describes the exact steps to be followed to correctly install the CCE-200 range of alarm control panels. The installer must carefully read the entire contents of this manual before starting to install the system. Failure to follow the instructions correctly may result in damage to the equipment.

The CCE-200 range of alarm control panels has been developed in accordance with the EN-54-2 and EN-54-4 standards. It is essential that the system in which this alarm control panel is installed has been designed by trained personnel, in accordance with the EN-54-14 standard and the corresponding municipal bylaws.

2.1.1 Tools required.

- Flat-head screwdriver for terminal strips.
- Phillips screwdriver for the front housing screws.
- Wire stripping pliers.
- Multimeter.
- Drill, drill bits, plugs and screws, suitable for the type and thickness of the wall where the alarm control panel is to be mounted.
- Drill bits and/or hole punchers suitable for the conduit or cable inlets to be machined.
- Spirit level.

2.1.2 Removing the alarm control panel cover.

First remove the front housing of the alarm control panel after removing the four fixing screws.

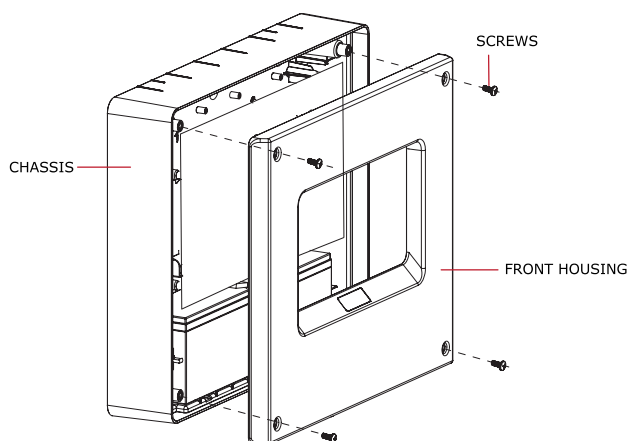


Fig. 4 To open the CCE-200 alarm control panel, remove the screws from the cover

2.1.3 Location of the alarm control panel.

The alarm control panel must be installed in a clean, dry, vibration-free location where the temperature is between 5 and 40°C and the non-condensing relative humidity - in the worst-case scenario - does not exceed 95%, the risk of fire is low and the site is protected by the fire detection system and there is no risk of mechanical damage.

2.1.4 Wall-mounting the alarm control panel

Prior recommendations:

- Place the alarm control panel at a minimum height of 1.5 m and in an easily accessible place where the light indicators are clearly visible.
- Determine whether the cable entry will be from the back (recessed conduit) or from the top (exposed conduit), in order to prepare the necessary openings.
- Make sure that once it is secured to the wall, the alarm control panel can be opened unimpeded by any obstacle.

- Remember that the weight of the alarm control panel with the batteries inserted is considerable, so you should use strong fasteners.

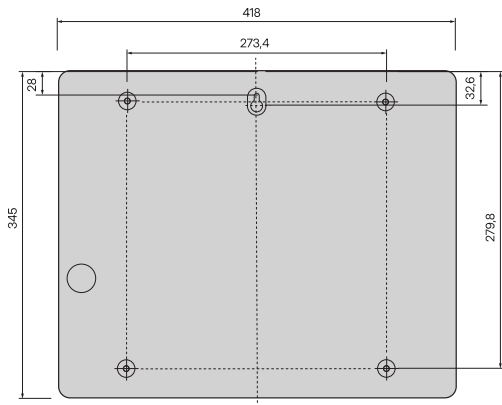


Fig. 5 Dimensions for wall-mounting the casing

Steps to follow:

- 1.- Place the plastic chassis of the alarm control panel on the wall, make sure it is level (use the central hole at the top to make this adjustment) and mark the position of the 4 screws with a pencil.
- 2.- Remove the alarm control panel from the wall. Now drill the holes and insert the plugs to secure the alarm control panel.
- 3.- Place the alarm control panel in the correct position and secure it with suitable screws. You can now start connecting and configuring the alarm control panel.



ATTENTION: Do not use the alarm control panel as a drill guide..

REMEMBER: Before mounting the chassis on the wall, prepare the necessary cable inlets. Do not drill holes in any part of the alarm control panel's casing that is not designed for this purpose and make sure that no iron filings or iron shavings enter the alarm control panel, as this may damage the electronic circuits.

2.1.5 Preparing the cable entry points.

Before machining, it is advisable to remove the circuit from the alarm control panel to prevent any damage. To do this, remove the four screws that secure it to the casing, as well as the power and battery connectors.

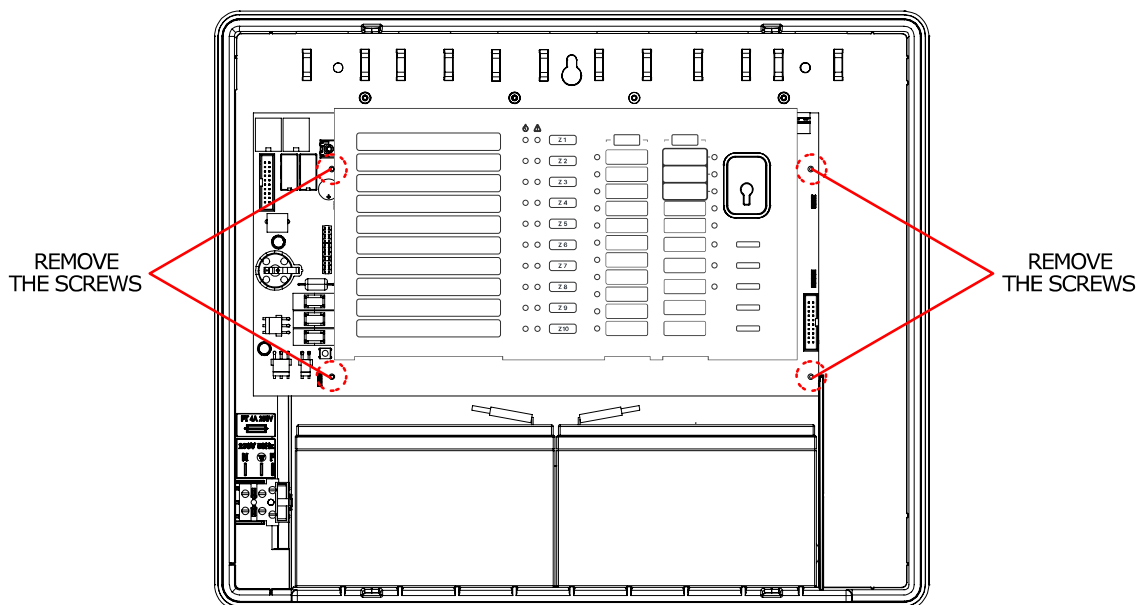


Fig. 6 PCB mounting screws

Cable entry points can be machined into the top and rear of the chassis.

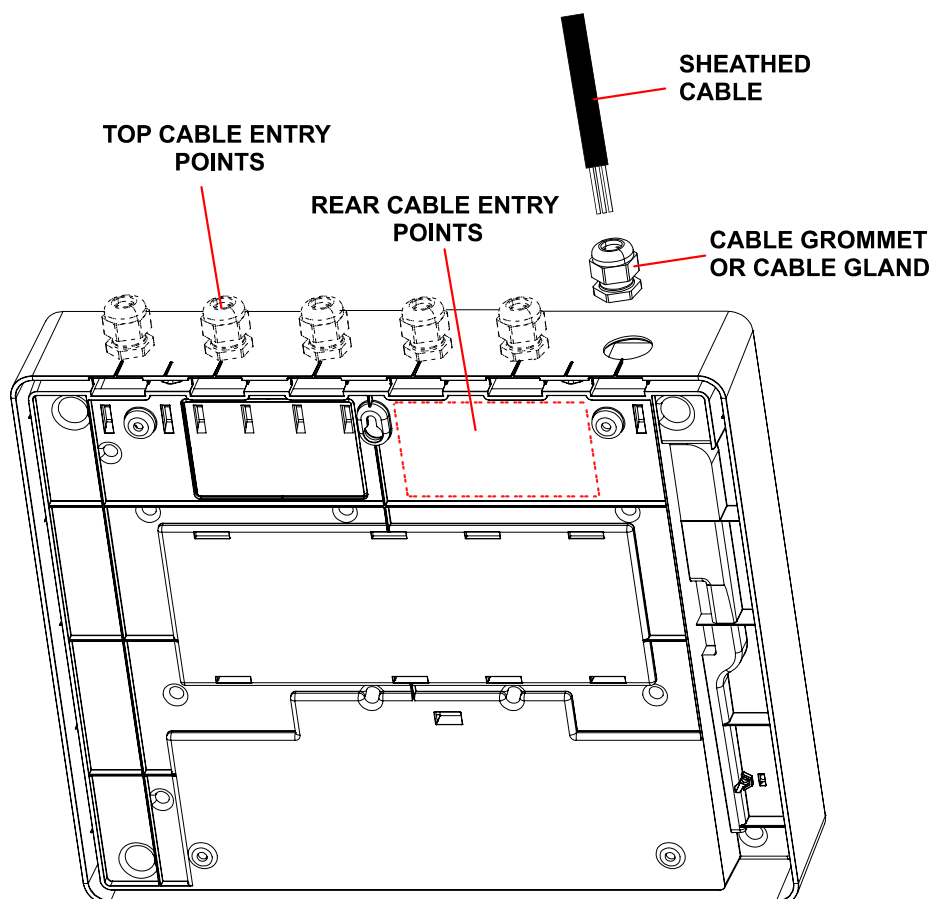


Fig. 7 Areas designated for cable entry at the rear and top.

Holes must be of a suitable diameter for the conduit or cable being used and should only be made in the specified areas.

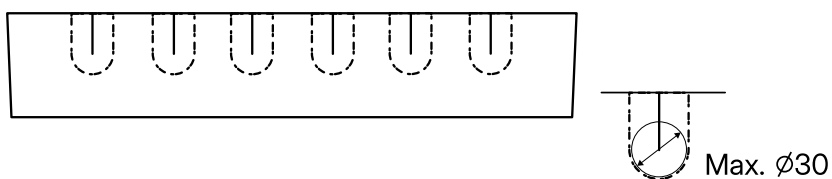


Fig. 8 Areas designated for cable entry at the top and maximum drilling diameter.

2.1.6 Language customisation.

The CCE-200 system makes it easy to customise the desired language.

Take the sheet of cut-out cards that are supplied with the alarm control panel, select the desired language and cut out the respective cards with a pair of scissors.

Insert each of them in the corresponding position on the cover according to their letter: (A & B).

The CCE-200 model also includes a blank card (letter C) to customise the text for each zone.

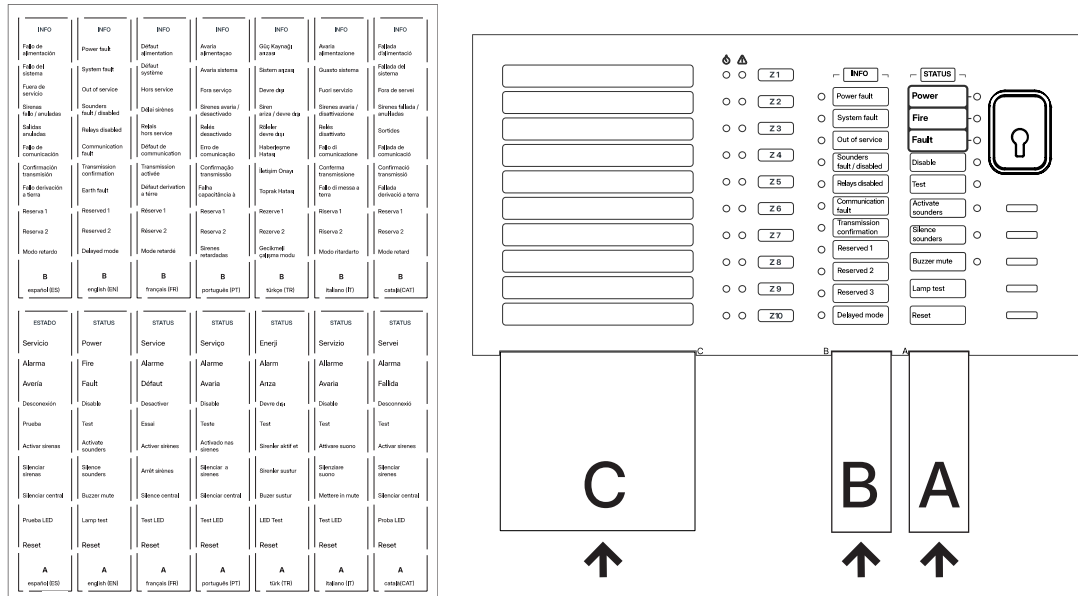


Fig. 9 Customising the language and zone text in the CCE-200 alarm control panel

2.2 Electrical connections and wiring.

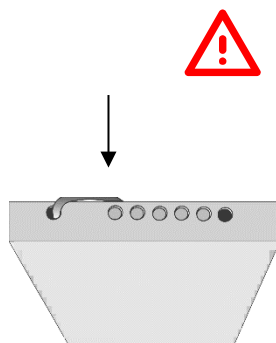


Fig. 10 Mains input

Warnings

- The alarm control panel must be connected to the mains via an external double-pole circuit breaker.
- The cross-section of the mains cable must be at least 1.5 mm² and the mains voltage must be 230 VAC.
- To avoid any crossing of wires and interference, the mains cable must be separated from the cables that connect the zones.

RECOMMENDATION: To secure the connections it is recommended to use cable grommets or M20 cable glands.

This secures the cable to the alarm control panel, and it is also advisable to use cable ties to keep the cables attached to the alarm control panel.

Once the alarm control panel is attached to the wall, you must start connecting the cables. The connectors for the zones, mains supply and additional components are connected to the motherboard via the upper holes. The hole furthest away from the others is for the mains supply.

If the system is exposed to high electrical interference, a **ferrite bead** should be used, placed as close to the connection as possible (see figure 11).

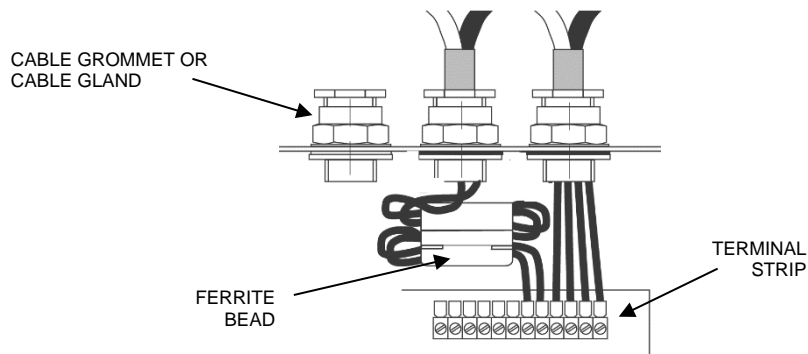


Fig. 11 Example of a connection, using a cable gland and ferrite bead

In standard installations it is recommended to use twisted pair cables, in installations where there may be electromagnetic interference, it is advisable to use twisted pair and shielded cables. Connect the shield of the shielded cable to earth and make sure that the installation is properly earthed.

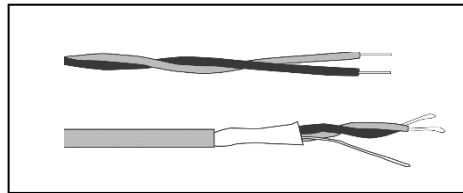


Fig. 12 Cable types

2.2.1 Alarm control panel power supply.



Warnings

- Avoid making connections while the mains power supply is on.
- Disconnect the external double-pole circuit breaker.

For your safety, first connect the mains supply and then the batteries.



Attention: Do not connect the alarm control panel to the mains until it has been commissioned.

The alarm control panel has two power supply systems, the mains supply and the batteries. The steps to connect each of them are detailed below.

2.2.1.1 Mains voltage.



To connect the mains voltage, use the cable entry point on the left-hand side of the casing, using the existing conduit to the connection terminals. See Figure 13.

Keep the wiring isolated from the rest of the system components.

It is advisable to leave the longest earth cable when connecting the mains terminal strip so that it is the last one to be disconnected if it is suddenly pulled out.

Secure the cables to the chassis of the casing using cable ties, as shown in Figure 14.

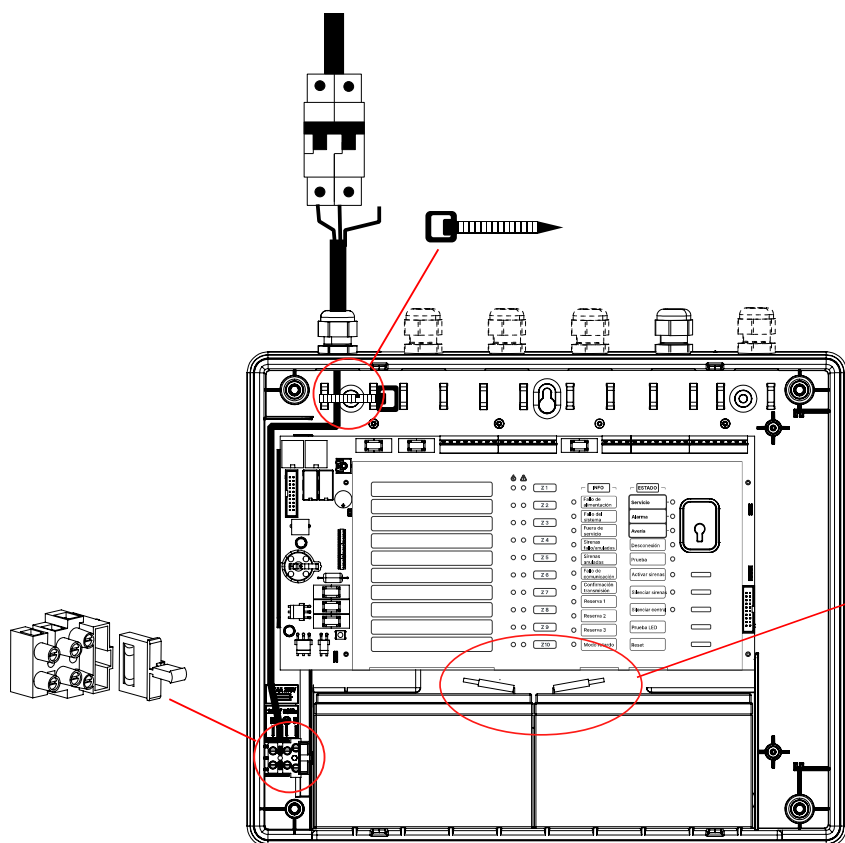


Fig. 13 230 VAC power supply

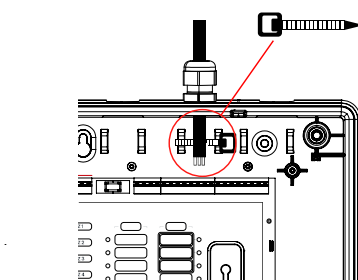


Fig. 14 Cable tie fastening

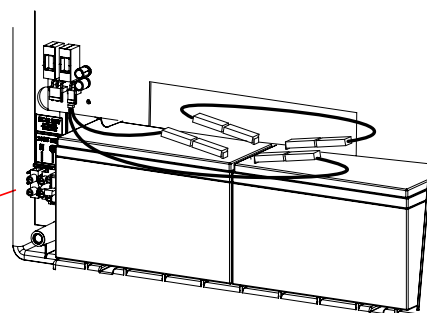


Fig. 15 Connecting the batteries

RECOMMENDATION: To ensure that the mains power cable is properly secured, it is recommended to use cable ties that are fastened to the housing.



Warning Do not use the mains fuse to connect and disconnect the alarm control panel from the power supply, use the circuit breaker.

2.2.1.2 Batteries.



CCE-200 PLUS alarm control panels require two 12 V - 7 Ah batteries, connected in series to obtain 24 V, which is required to ensure its proper operation. Use the battery jumper supplied with the alarm control panel to connect the (+) terminal of one battery to the (-) terminal of the other battery.

Place the batteries in the space reserved at the bottom of the alarm control panel's casing.



Connect the cables, according to the corresponding colours (red positive, black negative). The battery jumper cable that is supplied with the alarm control panel must be connected between the two batteries and the two cables from the alarm control panel must be connected to each of the batteries. See Figure 15.

2.2.2 Detection zone.

The alarm control panel has connection terminals for 1 or 10 detection zones, depending on the model.

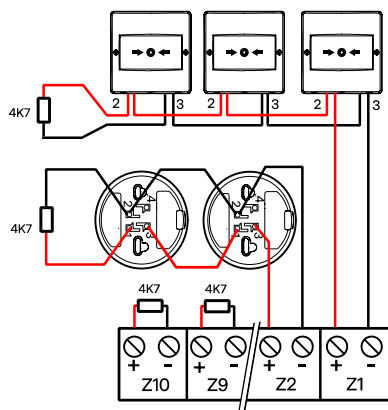


Fig. 16 Detection zone wiring

IMPORTANT:

- Each detection zone can support a maximum of 32 detectors and 20 manual call points.
- Detectors and manual call points can be connected to the same line. The alarm control panel will be able to distinguish between them.
- Zone lines must have a beginning and an end.
- An end-of-line (EOL) 4K7Ω resistor must be fitted to the last detector or manual call point.
- Shunting or placing the end-of-line resistor at the zone output of the alarm control panel is not possible.
- If a detection zone is not in use, the 4K7 end-of line resistor must be placed on the terminals of the zone that is not being used.

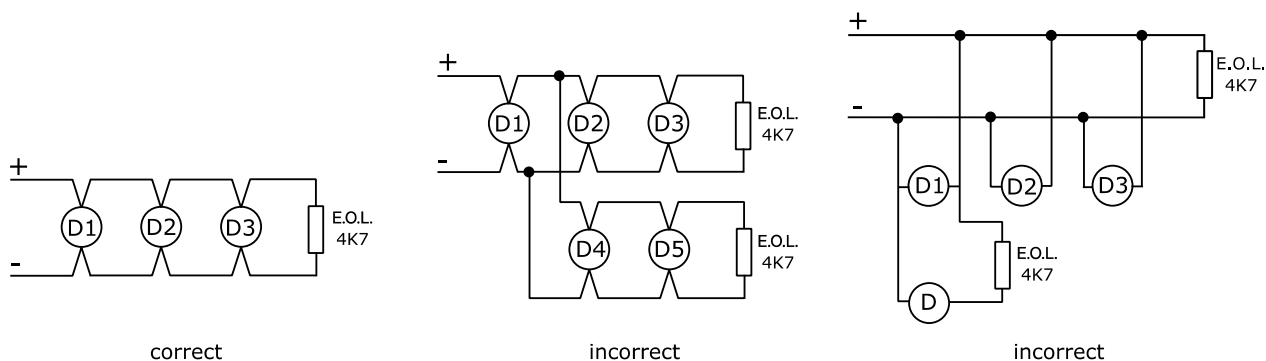


Fig. 17 Examples of zone wiring

2.2.2.1 Detectors.

The available range of conventional point fire detectors is as follows:

- **DOE-120** Conventional optical detector.
- **DOT-130** Conventional optical/thermal detector.
- **DTE-110** A1 class conventional thermal detector.
- **DTE-115** C class high-temperature thermal detector.

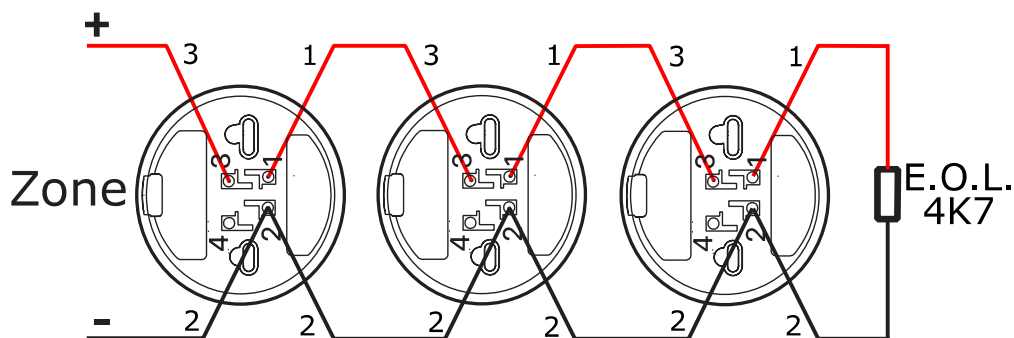


Fig. 18 Wiring of a detection zone

2.2.2.2 Action indicator lights on detectors.

When detectors are installed in enclosed areas, it is advisable to use action indicator lights to inform people on the outside that the detector's alarm has been triggered. The PIE-100 action indicator light is used. This must be connected between the PR output and the detection line (-).

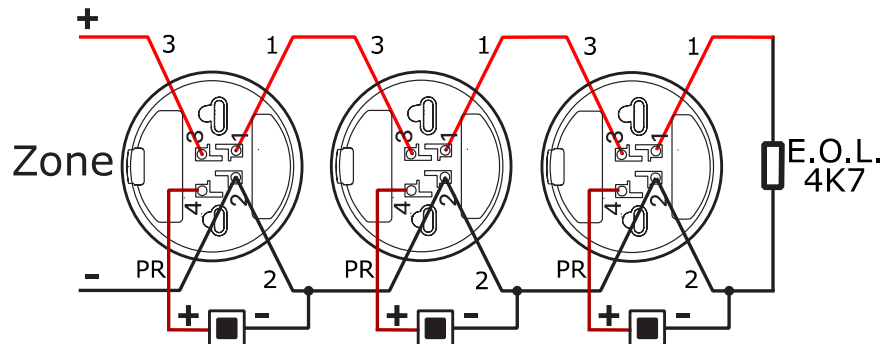


Fig. 19 Wiring of detectors with action indicator lights

2.2.2.3 Manual call points.

Manual call points must be installed on the walls of emergency exit routes, at intervals not exceeding 30 m and at a height between 1.2 m and 1.5 m above the floor. They must be clearly visible, identifiable and accessible.

NOTE: The manual call point requires a $100\sim 180\Omega$ -2 W resistor in series with the NO (normally open) contact; the DMCL05 or PM20L manual call point is already included inside. The resistor is responsible for preventing short circuits from occurring when the manual call point is pressed and when the value is appropriate for the alarm control panel to indicate a manual call point alarm condition.

If manual call point with a higher load resistor value is used, the alarm control panel will signal that the zone is in an alarm state but will not override any programmed delays, in a process similar to activating a detector.



If a dry contact is connected to the zone, it must be an NO (normally open) contact with a $100\sim 180\Omega$ -2W resistor placed in series.

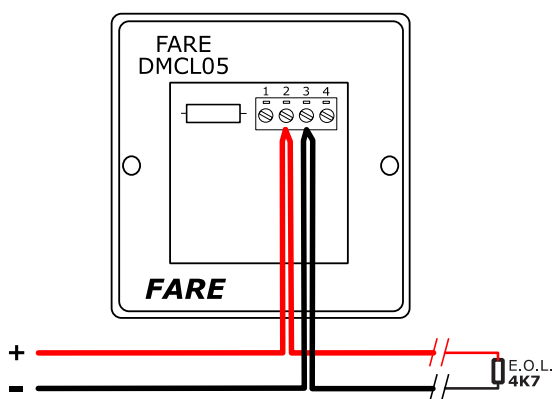


Fig. 20 Wiring of a DMCL05 (FARE) manual call point.

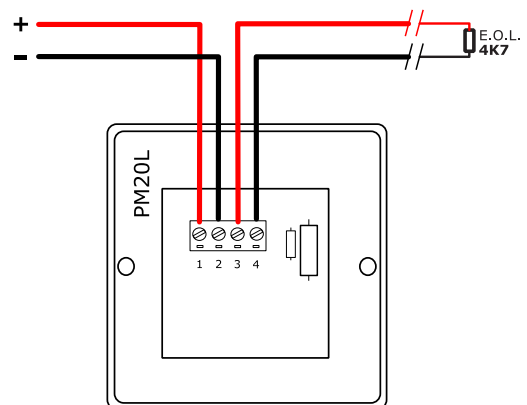


Fig. 21 Wiring of a PM20L manual call point.

2.2.3 Auxiliary input

The auxiliary input allows both sounder outputs to be activated immediately.

This input can be used by connecting a normally open (NO) push-button or contact. When the circuit is closed and the input state change confirmation time remains closed, the sounder outputs will be activated.



The sounder outputs will remain activated until the external input enters an open state.

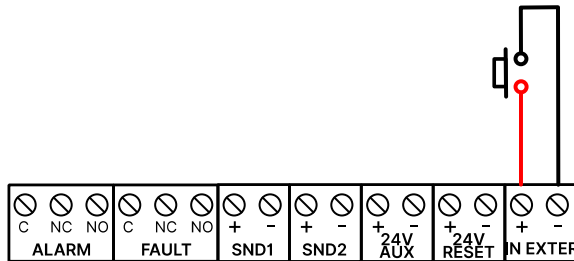


Fig. 22 Auxiliary input wiring

2.2.4 24V auxiliary output.

The "24V AUX" output provides 24V auxiliary power to the external auxiliary circuits required by the system. It is protected by a fuse and the maximum current allowed is 500 mA.

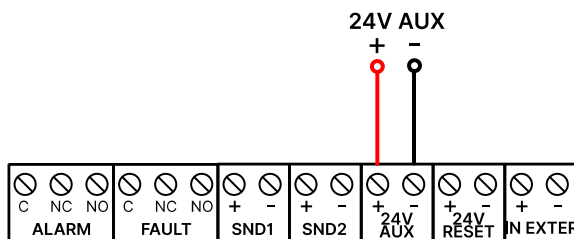


Fig. 23 24V auxiliary output wiring

For equipment that needs to be continuously powered, an auxiliary power supply should be used to increase the system's runtime when running on batteries.

2.2.5 24V resettable output.

The "24V RESET" output allows you to connect devices that need to be restarted via the power supply, such as some types of light barriers. This output has 24V in standby power and when a reset is triggered from the keypad, it disconnects the 24V for 3 seconds.

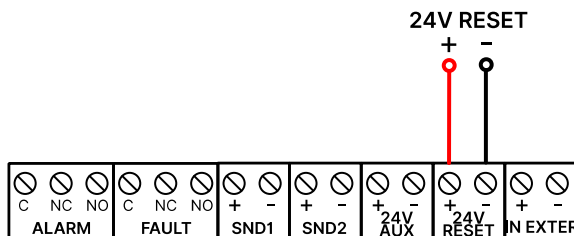


Fig. 24 24V resettable output wiring

2.2.6 Main alarm and fault relays.

The CCE-200 PLUS alarm control panel has two relay outputs to relay alarm and fault states, with voltage-free C, NC, and NO contacts.

The fault relay is normally energised.

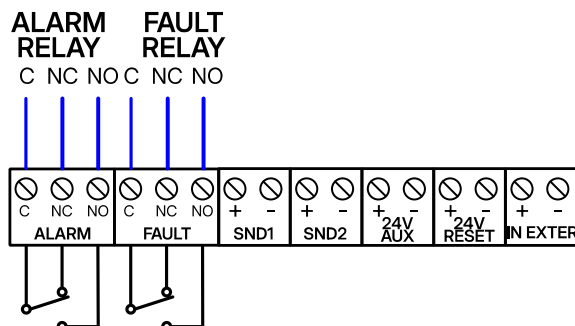


Fig. 25 Main alarm and fault relays

2.2.7 Evacuation sounder outputs.

The alarm control panel has two sounder outputs marked as SND1 and SND2, which are activated simultaneously or individually, depending on the chosen configuration.

Each of these outputs can be used to create a monitored sounder circuit, providing 24 V of power with 500 mA maximum consumption per sounder.

Monitoring is performed using a 4K7 end-of-line resistor, placed at the end of the sounder line.

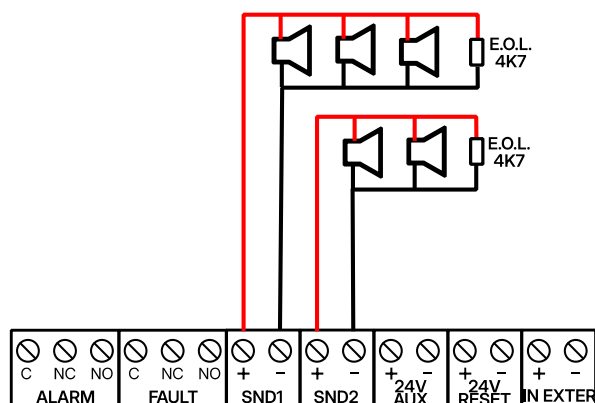


Fig. 26 Sounder output wiring

As a rule, the sounder outputs are activated:

- Instantly when any of the zones enters an alarm state due to a manual call point being pressed.
- With a time delay, when any of the zones enter an alarm state due to a detector being activated.
- When activating the external auxiliary input, if configured for this action.
- When the "Activate sounders" key is pressed.

The sounder outputs will remain activated until the "Silence sounders" key is pressed, or the alarm control panel is reset.



In the event of a fault indication, check the condition of the 500 mA F3 SND1 and F2 SND2 fuses.

Warnings



- Sounder outputs will only be activated if they were previously in a standby state.
- You must use polarised sounders or install a diode in series for proper line monitoring detection. Install the end-of-line resistor on the last sounder.

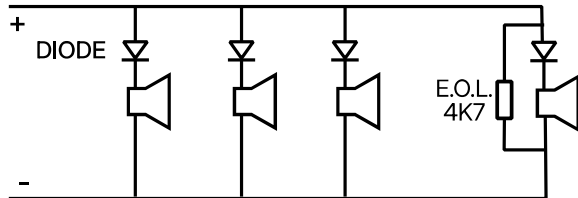


Fig. 27 Wiring of non-polarised sounders

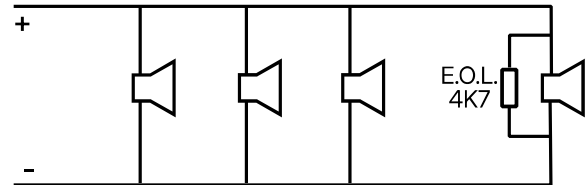


Fig. 28 Wiring of polarised sounders

2.3 Configuration options.

2.3.1 Delayed mode configuration.

The alarm control panel has a selector switch on its motherboard to set the delay time for automatic sounder activation. This can be set from 0 to 10 minutes, in 1-minute increments, by placing the selector switch in the desired delay time position.



The activation delay is only applied when a zone goes into an alarm state upon the activation of a detector. When activated by alarm manual call point, the sounder outputs are activated instantly.

The "Delayed mode" LED lights up on the front of the alarm control panel to indicate a delay time other than 0.

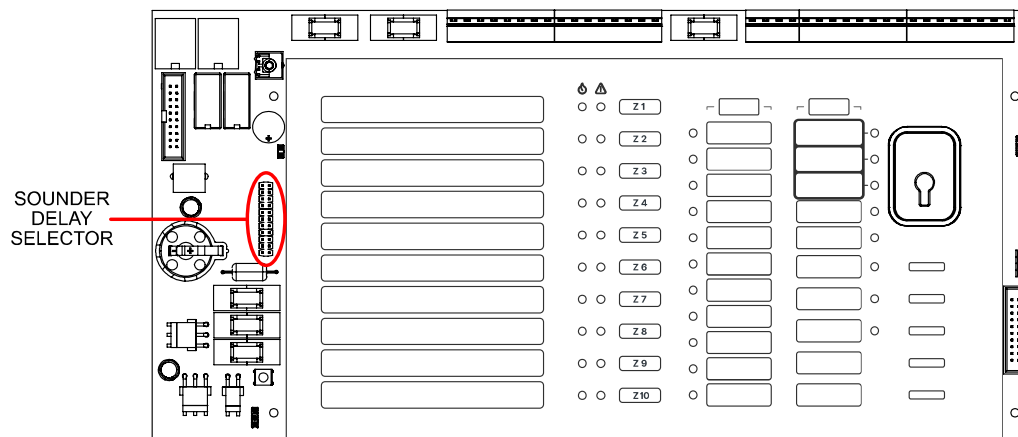


Fig. 29 Location of the selector used to configure delayed mode

2.3.2 Locking the key to Access level 2.

The alarm control panel has a selector switch that locks the operation of the Access level key, leaving it set to Access level 2 when the switch is placed in the "ON" position.

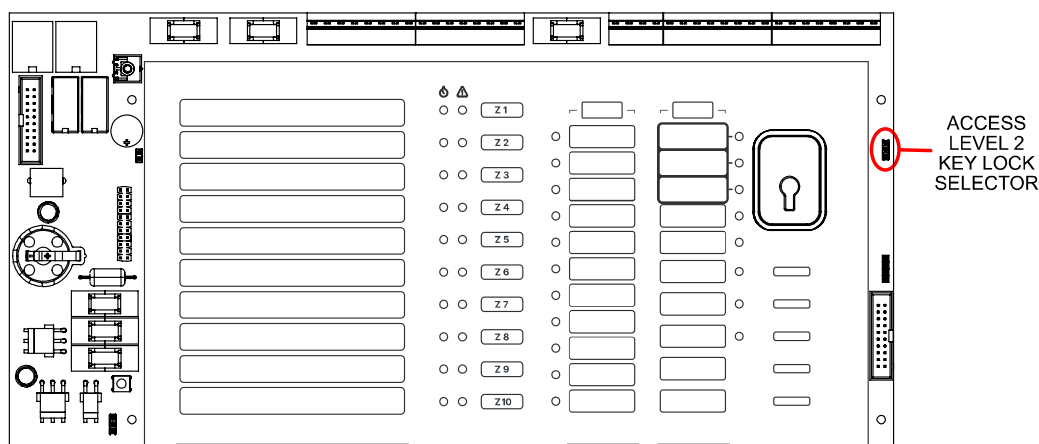


Fig. 30 Location of the Access level 2 key lock selector



Using this option does not comply with the EN 54-2 standard.

2.3.3 Overriding the buzzer for system malfunctions.

The alarm control panel has a switch that allows you to override the buzzer in the event of a "System malfunction" if it is left in the open (off) position. The indicator light and fault relay light remain on.

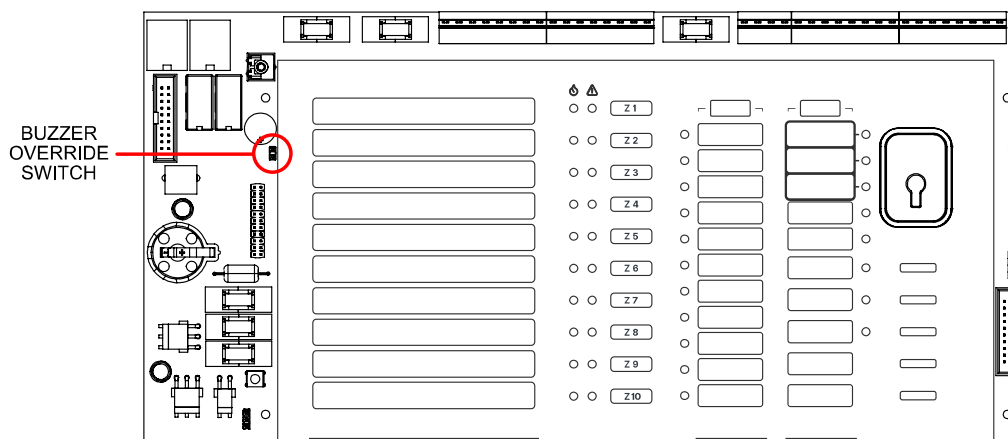


Fig. 31 Location of the buzzer override switch for system malfunctions



Using this option does not comply with the EN 54-2 standard.

2.3.4 Overriding earth fault detection

The alarm control panel has a switch that allows you to override earth fault detection if it is set to the "OFF" position. It may sometimes be necessary to disable detection if there is a component connected to the alarm control panel that is causing this earth leakage (for example, a connection to a computer's serial or USB port).

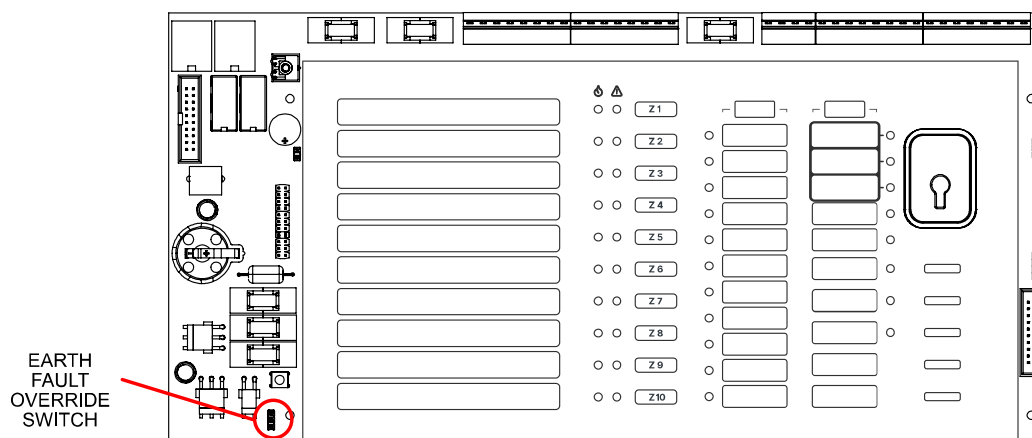


Fig. 32 Location of the earth fault override switch



Using this option does not comply with the EN 54-2 standard.

2.4 Function expansion cards.

The CCE-200 alarm control panel can be expanded with up to two sounder and/or relay output cards, which will be associated with the detection zones.

The cards are installed at the bottom of the CCE-200 alarm control panel's casing in the spaces reserved for them (marked as 1 and 2), by securing them with the 4 screws provided.

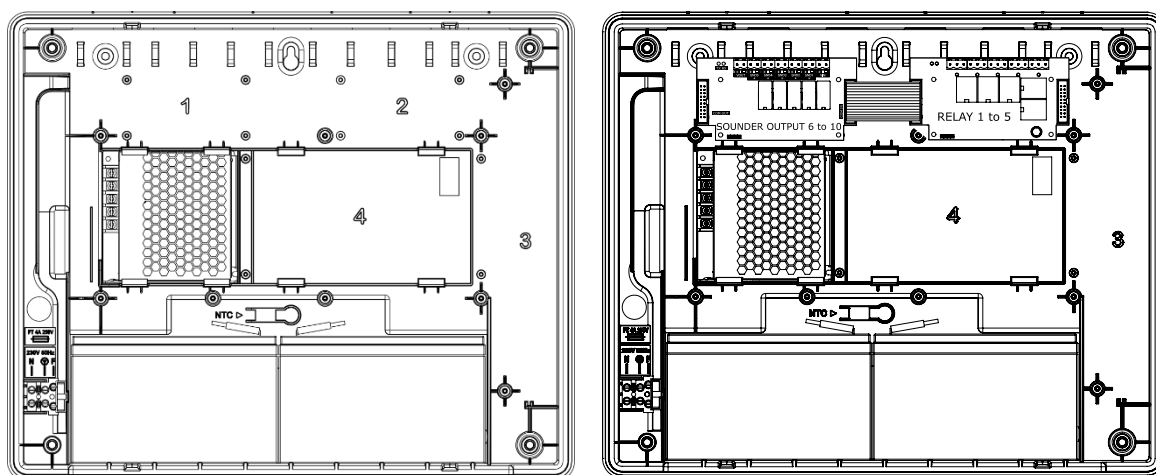


Fig. 33 Location of the expansion cards at the bottom of the casing.

A second expansion card is connected using the 20-way flat ribbon cable from the COM OUT connector on card 1 to the COM IN connector on card 2.

The first expansion card is connected to the motherboard of the alarm control panel via the 20-way flat ribbon connector, from the COM IN connector of the card to the COM2 port of the alarm control panel

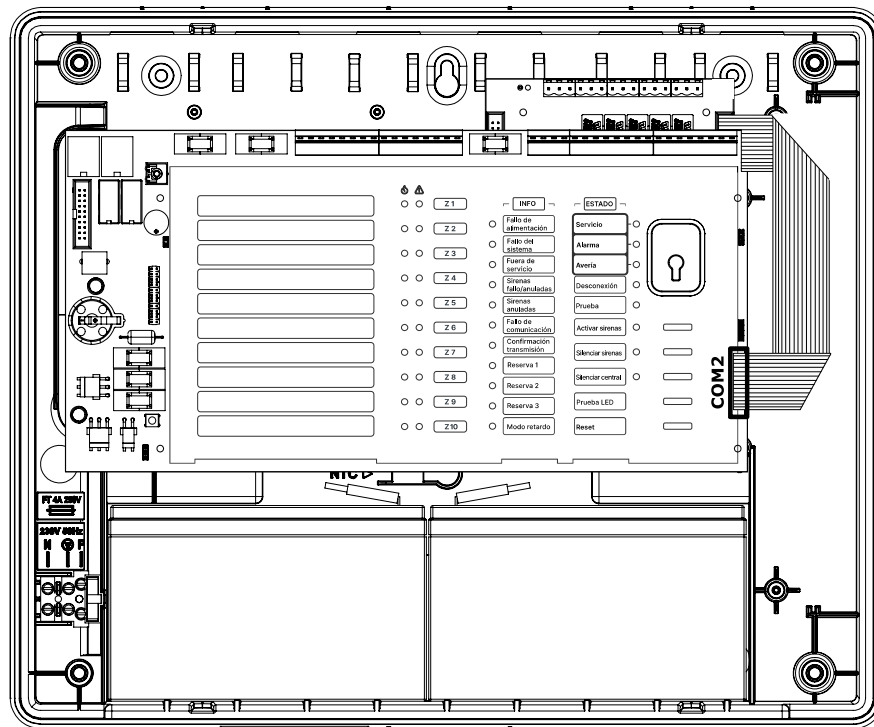


Fig. 34 Connection of flat ribbon to COM2 connector

2.4.1 TSE-200 Five-zone sounder expansion card.

Five-zone sounder expansion card, with a monitored output and 4K7 end-of-line resistor.

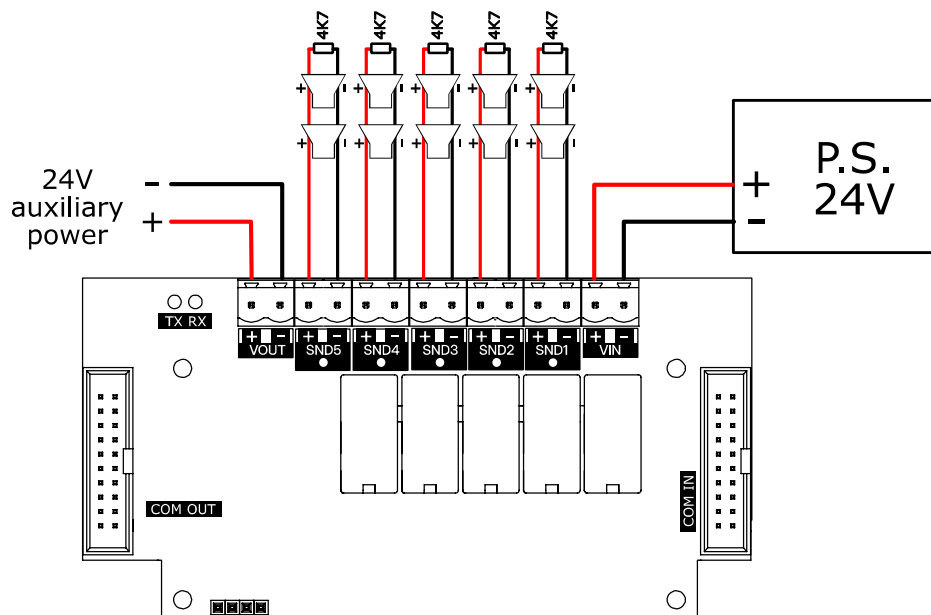


Fig. 35 TSE-200 5-zone sounder expansion card

It requires a 24 V auxiliary power supply to operate. The auxiliary power supply will provide the necessary current to activate the connected sounders.

It has removable connection terminals, separate for each evacuation sounder output, and auxiliary power input and output. The auxiliary power supply can be connected from the VOUT terminal on card 1 to the VIN terminal on card 2.

It has an indicator light for the activation status of each output and the transmission and reception of communications with the alarm control panel. If the sounder output is faulty due to an open line or short circuit, the indicator light flashes. If the output is activated, it lights up steadily.

Up to two TSE-200 or TRE-200 cards can be connected per alarm control panel, depending on the number of zones, up to a total of 10 expansion outputs. The outputs are numbered in the order in which they are connected from the alarm control panel.

2.4.1.1 Operation.

The evacuation outputs will be activated as configured in the alarm control panel:

- Evacuation output assigned to the alarm state of each zone.
- Pressing the "Activate sounders" key will activate all sounder outputs simultaneously.

The sounder outputs will remain activated until the "Silence sounders" key is pressed, or the alarm control panel is reset.

2.4.1.2 Evacuation output characteristics.

- Monitored output with 4K7 end-of-line resistor.
- Individual fault detection for open lines (breaks) and short circuits (crossed wire).
- The output cannot be activated if it has a fault condition due to an open line or short circuit.
- Monitoring of auxiliary supply voltage.
- Output voltage when activated 24VDC
- Maximum output current 2A

2.4.2 TRE-200 Five-output voltage-free relay expansion card

This 5-output relay expansion card provides normally open and closed voltage-free contacts.

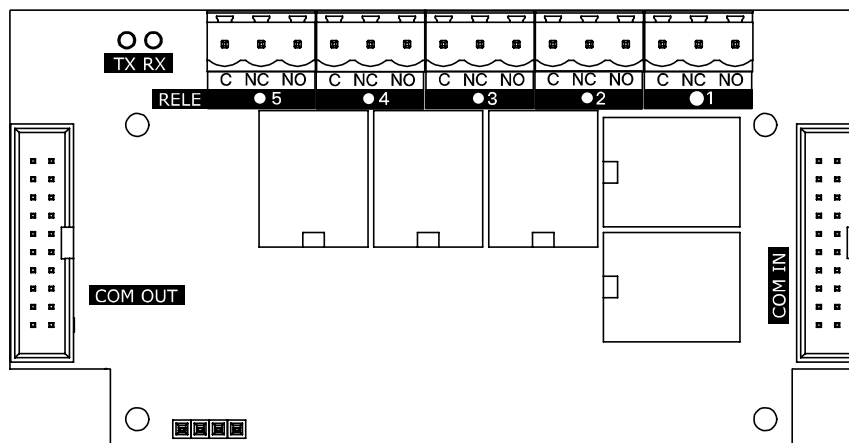


Fig. 36 TRE-200 Five-output relay expansion card

Maximum contact switching capacity: 5 A/250 VAC

It has an indicator light for the activation status of each output and the transmission and reception of communications with the alarm control panel.

3 Commissioning.

3.1 System verification.



WARNING:

Before supplying mains power to the alarm control panel, check all of the following points:

- Check that the alarm control panel has been installed correctly (see section 2.1.4).
- Make sure that there are no breaks or short circuits in the zone lines.
- Check that the end-of-line resistor is present (see section 2.2.2).
- If manual call points are installed, they must have 100~180-ohm 2W resistors placed in series (see section 2.2.2.3).
- If used, check the motherboard output connections and the various outputs available:
 - external auxiliary input (see section 2.2.3).
 - 24 V aux. output (see section 2.2.4).
 - 24 V resettable output (see section 2.2.5).
 - main relays (see section 2.2.6).
- Ensure that the sounder lines are connected in the correct polarity and have 4K7 end-of-line resistors (see section 2.2.7).
- Set the sounder activation delay as required (see section 2.3.1).
- Review the configuration of any special operating modes that have been programmed.
- Verify that the mains voltage is 230 VAC using a voltmeter. Also check that the voltage of the batteries is above 24 V.

3.2 Power supply to the system

REMEMBER: The alarm control panel's mains supply input must be protected by a 10 A external circuit breaker.

Once all connections and installations have been checked, the correct order in which to connect the system is as follows:

1. Connect the mains power supply (see section 2.2.1.1).
2. Connect the batteries (see section 2.2.1.2).

While doing this, all indicators should be off except the green power light. If you have configured a sounder delay, the delayed mode light should also come on.

If any condition other than the above is detected, investigate the source of the problem in the system and correct the fault before proceeding (see section 6 Troubleshooting guide).

3.2.1 Battery power only



If it is not possible to obtain mains power and only battery power is available when starting up the system and carrying out operation tests, press the **"Battery-powered push-button"** button to start the alarm control panel.

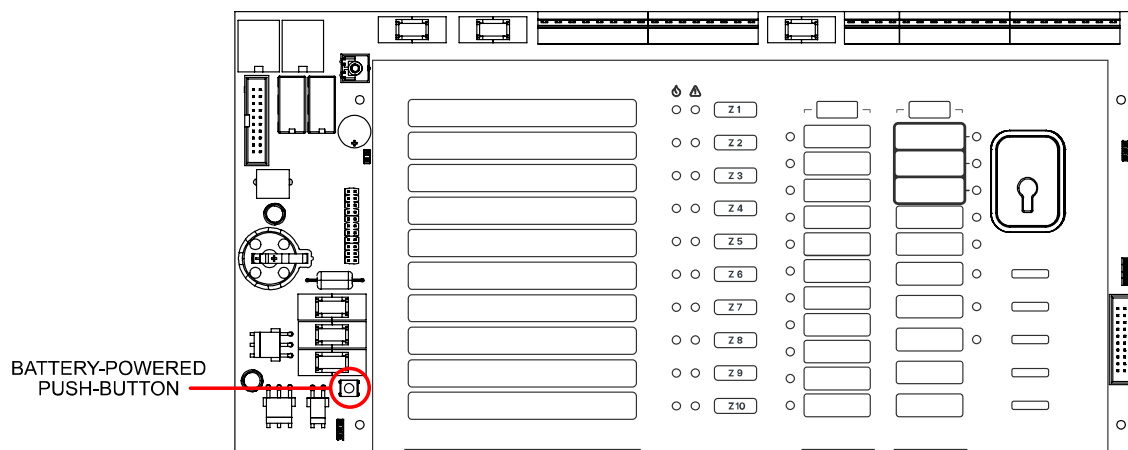


Fig. 37 Battery-powered push-button

3.3 Functional tests.

The procedure for performing functional tests on all of the system's components is described below.

3.3.1 Access level.

When the access level key is set to Access level 1, the Power LED will be lit steadily. Only the "Buzzer mute" key will work and the key can be removed from the lock.

When the access level key is set to Access level 2, the Power LED will be flashing, and all of the alarm control panel's keys will work. The key cannot be removed from the lock.

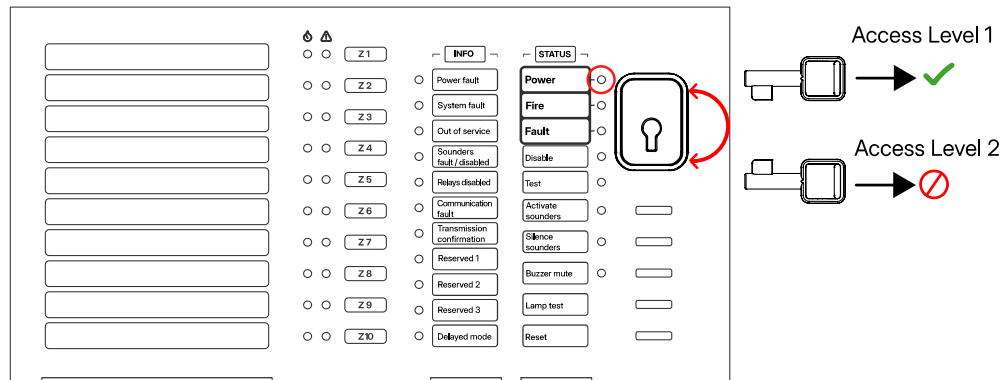


Fig. 38 Access level key position

3.3.2 Detection zones.

3.3.2.1 Fault due to an open line.

Check that each detection zone is being monitored by removing the last detector from each zone. The alarm control panel should provide the following indications.

- The fault LED of the respective zone will flash.
- The general fault LED will flash.
- The buzzer sounds intermittently.
- The fault relay is activated.

Place the detector in the socket, and the alarm control panel should enter standby mode, resetting all indicators and muting the buzzer.

In zones with only manual call points, or where the last item in the loop is a manual call point, perform the test by disconnecting the end-of-line resistor.



This test can also be performed on any item in the loop of the detection zone, with the same results.

Repeat this test for all of the system's zones.

3.3.2.2 Fault due to a short-circuited line.

Check that each detection zone is being monitored by short-circuiting the final item in each zone, at the end-of-line resistor. The alarm control panel should provide the following indications.

- The fault LED of the respective zone will flash.
- The general fault LED will flash.
- The buzzer sounds intermittently.
- The fault relay is activated.

Remove the short circuit and the control panel should enter standby mode, resetting all indicators and muting the buzzer.



Repeat this test for all of the system's zones.

3.3.2.3 Detector alarm.

Trigger the activation of a detector in the detection zone. The detector and alarm control panel should provide the following indications:

- The detector's indicator light should be lit red.
- If an action indicator light has been connected to the detector, it should light up.
- The alarm LED of the zone will flash.
- The general alarm LED will flash.
- The buzzer sounds continuously.
- The alarm relay is activated.
- The evacuation sounder outputs are activated, depending on the selected time delay.

The alarm will continue to be indicated until the alarm control panel is rebooted.

- To stop the buzzer, press the "Buzzer mute" key. The indicator light is activated.
- To stop the evacuation sounders, press "Silence sounders". The key must be in the Access level 2 position (power LED flashing). The indicator light is activated.
- To reset the alarm control panel, press the "Reset" key. The key must be in the Access level 2 position (power LED flashing). If the detector continues to detect an alarm condition, the entire alarm process will restart.



Repeat this test for all of the detectors in all of the system's zones.

The detector alarm can be simulated in the zone by placing a 1K 1W resistor in parallel to the zone.

3.3.2.4 Manual call point alarm.

Trigger the activation of a manual call point in the detection zone. The manual call point and alarm control panel should provide the following indications:

- The manual call point's indicator light should be lit red.
- The alarm LED of the zone will be steadily lit.
- The general alarm LED of the zone will be steadily lit.
- The buzzer sounds continuously.
- The alarm relay is activated.
- The evacuation sounder outputs are activated.

The alarm will continue to be indicated until the alarm control panel is rebooted.

- To stop the buzzer, press the "Buzzer mute" key. The indicator light is activated.
- To stop the evacuation sounders, press "Silence sounders". The key must be in the Access level 2 position (power LED flashing). The indicator light is activated.
- Reset the manual call point using the supplied key.
- To reset the alarm control panel, press the "Reset" key. The key must be in the Access level 2 position (power LED flashing). If the manual call point remains in an alarm condition, the entire alarm process will restart.



Repeat this test for all of the manual call points in all of the system's zones.

The manual call point alarm can be simulated in the zone by placing a 100Ω-2W resistor in parallel to the zone

3.3.3 Evacuation sounder outputs.

Make sure that the "Sounder fault/disabled" indicator light is off.

The key must be in the "Access level 2 position" (power LED flashing), press the "Activate sounders" key. The indicator light will be lit and the sounders will begin to sound.

To stop the evacuation sounders, press "Silence sounders". The indicator light is activated.



Check the operation of both evacuation sounder outputs.

3.3.4 Auxiliary input.

If the external input is used, when it is activated, the sounder outputs will be activated.

The sounder outputs will remain activated until the auxiliary input is reset.

3.3.5 Power failure.

3.3.5.1 Mains voltage failure.

Disconnect the power supply by operating the external circuit breaker. After a few seconds, the following will be activated in the alarm control panel:

- "Power failure" indicator light flashing.
- "General fault" indicator light flashing.
- Buzzer sounding intermittently.
- Fault relay.

To stop the buzzer, press the "Buzzer mute" key. The indicator light is activated.

Reconnect the power supply. The alarm control panel will enter standby mode.

You can speed up this process by pressing the "Reset" key. The key must be in the Access level 2 position (power LED flashing).

3.3.5.2 Mains voltage failure.

Disconnect the batteries by removing one of the cables. After a few seconds, the following will be activated in the alarm control panel:

- "Power failure" indicator light flashing.
- "General fault" indicator light flashing.
- Buzzer sounding intermittently.
- Fault relay.

To stop the buzzer, press the "Buzzer mute" key. The indicator light is activated.

Reconnect the batteries. The alarm control panel should enter standby mode after a certain period of time.

You can speed up this process by pressing the "Reset" key. The key must be in the Access level 2 position (service LED flashing).



If the batteries are not sufficiently charged or are not in good working order, the fault indication will remain.

4 User guide.

For ease of operation, the functions of all of the alarm control panel's indicators and controls are listed below. The available operating modes and what to do in the event of an alarm or fault are also explained.

4.1 Indicator lights.

CCE-200 alarm control panels have the following indicator lights.

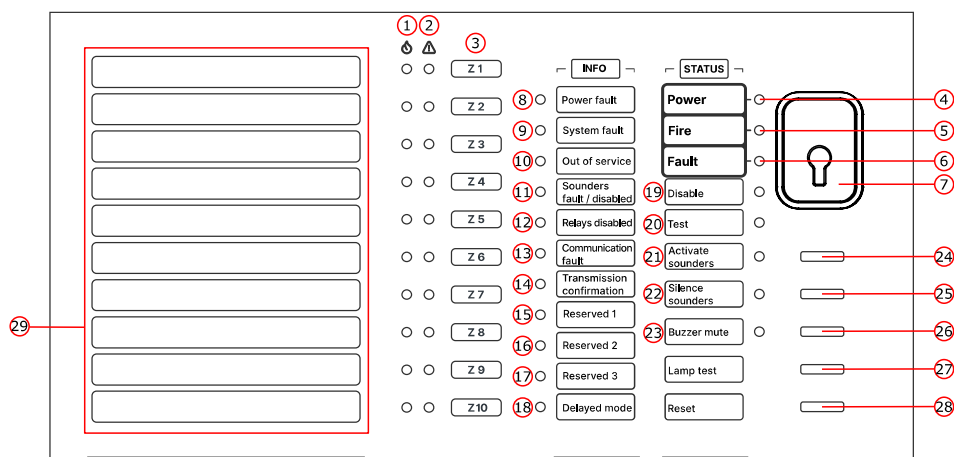


Fig. 39 Front of CCE-200 alarm control panel

1	Zone alarm	Red	Indicates the specific zone that is in an alarm state. <ul style="list-style-type: none"> Flashing, the alarm has been activated by a detector. Steady, the alarm has been activated by a manual call point.
2	Zone fault/disconnected/test:	Yellow	Indicates that the individual zone is in one of the following states: <ul style="list-style-type: none"> Flashing (1 Hz), zone fault due to open line or short circuit. Rapid flashing (2 Hz), the zone is in test mode. Steady, the zone is disconnected.
3	Z1 to Z10	Keys	Individual keys for each zone, to select the normal/test/disconnected operating modes
4	Power	Green	Indicates that the alarm control panel is operational, and shows the access level mode selected with the key: <ul style="list-style-type: none"> Steady, Access level 1 Flashing, Access level 2
5	Alarm	Red	General alarm indicator <ul style="list-style-type: none"> Flashing, the alarm has been activated by a detector. Steady, the alarm has been activated by a manual call point.
6	Fault	Yellow	General fault indicator
7	Access level	Key	Access level key to operate the alarm control panel. <ul style="list-style-type: none"> Access level 1. Only the "Buzzer mute" key is enabled Access level 2. All keys are enabled
8	Power failure	Yellow	General power failure indicator, caused by: <ul style="list-style-type: none"> Mains voltage failure Battery failure Power supply failure Earth fault
9	System malfunction	Yellow	CPU malfunction

10	Out of service	Yellow	Supply voltage below 22 V, insufficient for the alarm control panel to operate correctly.
11	Sounder fault/disabled	Yellow	General sounder output indicator: <ul style="list-style-type: none"> • Flashing, either of the 2 outputs is faulty. • Steady, 2 outputs disconnected.
12	Outputs disabled	Yellow	There is no power at the 24 AUX and 24 V resettable outputs. Fault in fuse F1 (24 V AUX output).
13	Communication failure	Yellow	
14	Transmission confirmation	Yellow	
15	Reserve 1	Yellow	
16	Reserve 2	Yellow	
17	Reserve 3	Yellow	
18	Delayed mode	Yellow	A delay time of 1 to 10 minutes has been selected before activating the sounders when a detector is triggered
19	Disconnected	Yellow	General indicator of disconnected zones. At least one zone of the alarm control panel is disconnected
20	Test	Yellow	General indicator of zones in test mode. At least one zone of the alarm control panel is in test mode
21	Activate sounders	Red	Sounder outputs activated automatically or by pressing the "Activate sounders" key
22	Silence sounders	Yellow	The sounders have been reset by pressing the "Silence sounders" key.
23	Buzzer mute	Yellow	The alarm control panel's audible alert has been muted by pressing the "Buzzer mute" key.
24	Activate sounders	Key	Access level 2. Sounder outputs activated automatically or by pressing the "Activate sounders" key. It flashes when there is a time delay prior to activation.
25	Silence sounders	Key	Access level 2 Pressing it resets the evacuation sounder output. A second press disconnects the sounder outputs.
26	Buzzer mute	Key	Pressing it resets the alarm control panel's audible alert (buzzer)
27	LED test	Key	Access level 2. When pressed, it tests the indicator lights and buzzers on the alarm control panel, activating them for a few seconds.
28	Reset	Key	Access level 2 Pressing it resets the system. All zones and outputs are put in standby mode and another analysis of the system is started.
29	Detection zone text		In this area, you can write a description of the detection zones.

4.2 Audible alerts.

The alarm control panel has an audible alarm (buzzer) that is activated differently depending on the type of alert

- **Alarm indicator:** Continuous internal buzzer.
- **Fault indicator:** Intermittent internal buzzer.

The status of the buzzer will be updated based on the last status reported. If the fault indication disappears, the buzzer will automatically be muted.

If the buzzer is muted manually by pressing the "Buzzer mute" key, this will be indicated by the indicator light, until a new state is indicated or the alarm control panel is reset.

4.3 Access level key.

The alarm control panel has an access level key so that only authorised personnel can operate it, in accordance with EN54-2.

Access level 1	Free access	<ul style="list-style-type: none"> • The key can be removed from the lock. • The Power LED is steadily lit. • Only the "Buzzer mute" key is enabled.
Access level 2	Access authorised personnel for	<ul style="list-style-type: none"> • The key must be in the ON position and cannot be removed. • The Power LED flashes. • All of the alarm control panel's keys are enabled.

4.4 Control keys.

4.4.1 Zone key (Z1 to Z10).

These allow you to change the operating mode of the respective detection zone. Each time it is pressed, the mode changes, which is signalled by the zone's fault LED.

Operating mode	Fault LED
Normal	Off (on standby) Flashing (1 Hz) (fault condition)
Test	Rapid flashing (2 Hz)
Disconnected	Steady

4.4.2 Buzzer mute.

Stops the internal buzzer when it is activated and the corresponding indicator light comes on.

4.4.3 Activate sounders.

Acts on the sounder outputs. Access level 2.

- If the sounder outputs are on standby
The sounder outputs are activated.
- If the sounders are activated with a time delay (flashing sounder LED)
The time delay is overridden, and the output is activated immediately.
- If the sounders are disconnected (sounder fault/disabled LED is lit)
It enables sounder activation, switching off the "Sounder fault/disabled" LED.
To activate them, press the key again.

4.4.4 Silence sounders.

Acts on the sounder outputs. Access level 2.

- If the sounders are activated It deactivates the sounder outputs, and the "Silence sounders" indicator light is lit
- If the sounders are not activated Pressing the key twice in succession disables the sounders, activating the "Sounder fault/disabled" LED.

4.4.5 Lamp test.

It performs functional testing of the indicator lights and buzzers on the alarm control panel, activating them for a few seconds. Access level 2.

4.4.6 Reset.

Reboots the system, any unresolved alarms or faults will be signalled again. Access level 2.

4.5 Normal operating mode.

4.5.1 Standby mode.

When the alarm control panel is on standby, the power indicator is on (steady or flashing) and all other audible and light indicators are off.

The way in which the power LED is lit depends on the Access level selected with the key.

4.5.2 Alarm state.

When the alarm control panel detects a zone that is in an alarm state, triggered either by a detector or a manual call point, the alarm control panel will indicate this as follows:

- The alarm LED of the zone will either flash (detector) or be steadily lit (manual call point).
- The general alarm LED lights up.
- The buzzer sounds continuously.
- The alarm relay is activated.
- The evacuation sounder outputs are activated, depending on the selected time delay.

4.5.2.1 Operations available in alarm mode.

When the alarm control panel enters alarm mode, the following operations can be performed:

- Mute the internal buzzer by pressing the "Buzzer mute" key. The "Buzzer mute" indicator light will come on.
- Mute the sounders with the "Silence sounders" key. The "Silence sounders" indicator light will come on.
- Activate the sounders or override the programmed time delay by pressing the "Activate sounders" key. The "Activate sounders" indicator light will come on.
- Reset the system with the "Reset" key. You should not reset the system until the cause of the alarm has been located and resolved. The status LED of the detector or manual call point that triggered the alarm will be lit red.

If the cause of the alarm is still present, the detection zone can be disconnected by pressing the Zone key (Z1 to Z10) until the fault LED is steadily lit. The alarm control panel must then be reset using the "Reset" key.



Except when muting the buzzer, the key must be in the Access level 2 position.

4.5.3 Fault state.

When the alarm control panel detects a fault, the type and location of the fault will be indicated with:

- The fault LED of the component that suffered the fault lights up. This may be:
 - Detection zone. Flashing.
 - Power failure due to mains or battery failure.
 - Sounder output fault. Flashing.
- The general fault LED lights up.
- The buzzer sounds intermittently.
- The fault relay is activated.

4.5.3.1 Operations available during a fault.

The following operations can be performed when the alarm control panel is in a fault state:

- Mute the internal buzzer by pressing the "Buzzer mute" key. The "Buzzer mute" indicator light will come on.
- Reset the system with the "Reset" key.
- If the cause of the fault is still present, the detection zone can be disconnected by pressing the Zone key (Z1 to Z10) until the fault LED is steadily lit. The alarm control panel must then be reset using the "Reset" key.



Except when muting the buzzer, the key must be in the Access level 2 position.

4.5.3.2 Causes of different types of faults.

The fault in a detection zone may be due to:

- Fault due to an open line after removing a detector from its base or disconnecting a cable.
- Missing end-of-line resistor (4K7).
- Fault due to a short circuit in the wiring.
- Fault due to malfunction in connected devices, which may require auxiliary power.

The power failure may be due to:

- Lack of mains power due to:
 - Blown fuse.
 - External circuit breaker disconnected.
 - Mains voltage failure.
- Battery failure due to:
 - Battery disconnected.
 - Low battery voltage.
 - Faulty battery (increased internal resistance).
 - Blown battery fuse.

The sounder output fault may be due to:

- Fuse failure in one of the sounder outputs.
- Fault due to an open line or disconnected cable.
- Fault in the sounder's polarised diode.
- Missing end-of-line resistor (4K7).
- Fault due to a short circuit in the wiring.

4.6 Zone test mode.

The alarm control panel allows you to put the zones in test mode individually, which is done by pressing the key of the respective zone with a single press. The zone's fault LED and the general test LED will flash at a frequency of 2 Hz.



Activating an alarm state in a zone being tested will not activate the sounder outputs or the main alarm relay. The rest of the alarm control panel's areas will remain operational, and if an alarm is triggered in these areas, the sounder outputs and main relay will be activated.

If the alarm control panel detects an alarm in the zone that is in test mode:

- It will activate the zone alarm LED and the general alarm LED
- After 7 seconds, it will perform a reset by cutting off power to the detection loop for 3 seconds and will enter a standby state. This allows you to test the other detectors in the zone without having to go to the alarm control panel to reset them.
- If the alarm is triggered by a manual call point, you will need to reset it so that it does not trigger the alarm again.
- This process is repeated until the zone is no longer in test mode.



Before exiting test mode in a zone, wait a reasonable amount of time to ensure that the detectors have been properly cleaned and are free of smoke residue that could trigger false alarms.

4.7 Zone disconnection mode

The alarm control panel allows each zone to be switched off and on separately by pressing the corresponding zone key twice. When a zone is disconnected, it is shown as follows:

- The fault indicator light for the corresponding zone is activated (steadily lit).
- The general disconnection indicator light is lit (steady).

When a zone is disconnected, no events that occur in this zone will be reported by the alarm control panel and no audible alert will be sounded.

To exit zone disconnection mode, press the corresponding zone key. The indicator light will remain off in standby mode or will flash slowly (1 Hz) if there is a fault.

4.8 Out of service operation

The alarm control panel enters out of service mode when there is no mains power supply (230 VAC) and the battery power drops below 21 V. While in this mode, any alarms or faults in the system will be ignored.

It is indicated as follows:

- The power failure indicator light is illuminated (flashing).
- The out of service indicator light (flashing) is activated.
- The general fault indicator light (flashing) is activated.
- The audible alert sounds intermittently.
- The fault relay is activated.



When mains power returns and the supply voltage is higher than 21 V, operation is restored.

4.8.1 Operations available while out of service.

Mute the internal buzzer by pressing the "Buzzer mute" key.



If the alarm control panel enters this mode, disconnect the system until power is restored to prevent damage to the batteries.

4.9 What to do in the event of an alarm or fault

The conventional system is designed to ensure an effective response in the event of an alarm. For this reason, all the components are connected to the alarm control panel, continuously monitoring the status and operation of the system and alerting the user if an event or incident occurs.

Knowledge of the conventional system is necessary to be able to act correctly in the event of an alarm.

IMPORTANT: it is advisable to read these steps that must be followed in the event of an alarm, as they will be extremely helpful if the situation arises.

KEEP CALM

When an alarm condition is met, the alarm control panel activates sounders and/or buzzers to alert the user of an event.

Above all, it is important to remain calm, as the stress caused by the audible signal can prevent you from reacting correctly.

1. KEYPAD ACCESS

The person responsible for manning the system in this situation will have the key that provides Level 2 access, allowing them to control the keypad.

2. PRESS THE BUZZER MUTE KEY

The user must press the "Buzzer mute" key to mute the local audible alert. This will help them to think more calmly.

Note: if the sounders are activated and you wish to deactivate them, press the "Silence sounders" key.

3. IDENTIFY THE CAUSE OF THE ALARM

The indicator lights on the front cover of the alarm control panel will indicate the type of fault or alarm triggered in the system and its location.

4. ACT

Once the cause of the alarm has been identified, it is time to act by following the emergency plan in place at each site.

If it is necessary to evacuate the building, press the "Activate sounders" key.

5. RESET THE SYSTEM

Once the problem has been resolved, reset the alarm control panel to reboot the start-up devices.

5 Maintenance

The maintenance measures recommended in the EN54-14 standard must be performed.

5.1 System user

The system's end user must perform the following checks:

5.1.1 Daily inspection

- The alarm control panel should indicate normal operation. If not, the faults must be recorded in the logbook and the maintenance company must be notified.
- Check that any previously recorded faults have been addressed.

5.1.2 Monthly inspection

- At least one detector or manual call point must be activated to test the alarm control panel and the connected warning devices. A different zone should be tested each month.
- Any malfunctions should be noted in the logbook, with corrective action taken as soon as possible.

5.1.3 Cleaning

The alarm control panel should be cleaned with a damp cloth. Do not use solvent-based products.

5.2 Installer or maintenance company

The following checks must be carried out by the installer or maintenance company:

5.2.1 Six-monthly inspection

- Inspect the logbook entries, taking appropriate corrective action if necessary.
- Check all battery connections and their charging voltage.
- In each zone, check the alarm, fault and auxiliary functions of the control and signalling equipment.
- Visual inspection of control and signalling equipment for any build-up of moisture or other damage.
- Determine whether there have been any structural changes that could affect the operation of detectors, manual call points or sounders. If so, carry out a visual inspection.
- Any defects should be noted in the logbook, with corrective action taken as soon as possible.

5.2.2 Annual inspection

- Put the alarm control panel in test mode and make sure that all detectors and manual call points are operating as per the manufacturer's recommendations.
- Perform a visual inspection to ensure that all system connections and their fasteners are secure, undamaged and properly protected.
- Examine and test the batteries.
- Any defects should be noted in the logbook, with corrective action taken as soon as possible.

5.2.3 Batteries

Even if the batteries are in a good condition and there is no indication of a fault in the alarm control panel, they should be replaced every four years, as this is the service life specified by the manufacturers.

Always replace both batteries at the same time with batteries of the same type, voltage (12 V) and capacity (Ah).

6 Troubleshooting guide

ISSUE	CAUSE	ACTION
Power indicator light off	The alarm control panel is not receiving power	Check the mains voltage (110 V or 230 V). Check the mains fuse. Check the battery. Check the battery fuse.
"Power failure" indicator light flashing and intermittent sound	Fault in a power supply circuit	Check the mains voltage (110 V or 230 V). Check the mains fuse. Check the battery connection. Check the battery fuse. Check the battery voltage (it must be higher than 22 V). Check the battery charger voltage (27.6 V).
"System malfunction" indicator light and continuous sound	Control unit fault	Restart the system by disconnecting the batteries and the mains supply and, after a few seconds, turn the power supply back on. Contact the dealer
"Out of service" indicator light flashing and intermittent sound	The system has no mains supply, and the battery is below 22 V (minimum operating voltage)	Disconnect the battery and the mains until power can be supplied from the mains or by charged batteries
Zone fault indicator light flashing (1 Hz) and intermittent sound	The zone in question has a fault	Check the zone's end-of-line resistor (4K7). Make sure that there is no open line or short circuit in the line by measuring the voltage.
Zone fault and general disconnection indicator lights	The specified zone of the alarm control panel is disconnected	If you want to connect it, turn the key to the Access level 2 position and press the key of the disconnected zone.
Sounder fault/disabled and general disconnection indicator lights	The alarm control panel's sounder outputs are disconnected	Press the Activate sounders key if you want to connect them.
Power indicator light steadily lit. The alarm control panel's keys are unresponsive.	The alarm control panel is at Access level 1	Turn the key to the ON position to enter Access level 2. The Power LED light should be flashing.

7 Technical characteristics

CCE-200 casing:

Dimensions:	418 mm wide 345 mm high 78 mm deep
Weight	2.3 kg (without batteries)
Material	ABS

Environmental characteristics:

Operating temperature:	-5°C to +40°C.
Relative humidity:	maximum 95%, non-condensing
Protection rating	IP30
Supports climate class:	3K5 in the EN 60721-3-3:19995 standard.

Detection zones:

CCE-202:	2 zones
CCE-204	4 zones
CCE-206	6 zones
CCE-208	8 zones
CCE-210	10 zones
Maximum number of devices per zone:	32 detectors 10 manual call points
End-of-line resistor:	4K7 1/4 W
Zone output voltage:	Nominal 24 V Maximum 28 V Minimum 22 V
Maximum zone current:	75 mA
Maximum zone length:	2000 m
Zone line maximum resistance:	44 Ω
Zone line maximum capacitance:	500 nF
Recommended cable:	2X1.5 mm ² twisted pair

Sounder output:

Number of outputs:	2 separate monitored, simultaneous activation
Monitoring:	open circuit/short circuit
End-of-line resistor:	4K7 1/4 W
Maximum output current:	500 mA each.
Output voltage:	On standby: -5 V and -9 V Activated: 18 V and 28 V
Recommended cable:	2X1.5 mm ² twisted pair

Status repeater relays:

Alarm relay	NO / C / NC voltage-free contacts
Fault relay	NO / C / NC voltage-free contacts Energised on standby
Maximum contact switching capacity:	2 A, 30 VDC

24 V aux. output:

Output voltage:	24 V (18 V ~28 V)
Maximum current:	500 mA

24 V resettable output:

Output voltage:	24 V (18 V ~28 V)
Maximum current:	500 mA
Reset time (without power)	3 seconds


Power supply:

Maximum power consumed:	75 W
Input voltage:	100 - 230 VAC 50 Hz
Output voltage:	24 VDC. Set to 27.9 V
Output current:	3.2 A

Fuses

Mains fuse for 230 V:	4 A (5SF)
Sounder 1 fuse:	0.5 A 20 mm HCR (T)
Sounder 2 fuse:	0.5 A 20 mm HRC (T)
24 V aux. fuse:	0.5 A 20 mm HCR (T)
24 V reset fuse:	0.5 A 20 mm HRC (T)
Battery fuse	2 A 20 mm HCR (T)

Certificate:


EASY DETECT, S.L. Paseo de los Ferrocarriles Catalanes, 143 08940 Cornellà de Llobregat (Barcelona) - Spain C001-0370-CPR-7192
<p>CONVENTIONAL FIRE DETECTION ALARM CONTROL PANEL MODEL: CCE-202 // CCE-204 // CCE-206 // CCE-208 // CCE-210</p> <p>EN 54-2:1997, EN 54-2:1997/AC:1999, EN 54-2:1996/A1: 2006;</p> <p>Fire detection and fire alarm systems. Part 2: Control and indicating equipment</p> <p>EN 54-4:1997, EN 54-4:1997/AC:1999, EN 54-4:1997/A1:2002, EN 54-4:1997/A2:2006</p> <p>Fire detection and fire alarm systems. Part 4: Power supply equipment</p> <p>Notified body: 0370</p> <p>Optional functions with requirements:</p> <ul style="list-style-type: none"> • Output for fire alarm devices. • Output delays. • Test mode. <p>Technical data: see the documents provided by the manufacturer.</p> <ul style="list-style-type: none"> • User, installation and commissioning manual. Document: CCE-200_Manual_ESP.pdf • Quick guide. <p style="text-align: center;">www.easy-detect.com</p>

