



**Efire-ECP**

**4 ZONE EXPANDING  
FIRE ALARM CONTROL PANEL**

**INSTALLATION AND  
USER'S GUIDE**



**EN 54-2**

**EN 54-4**



**WARNING: PLEASE READ THESE INSTRUCTIONS CAREFULLY  
BEFORE YOU OPERATE OR COMMISSION THE DEVICE.**

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## SPECIFICATIONS

- The basic 4 zones can be converted into 8, 12 and 16 zones by expanding these 4 x zone boards.
- 32 products can be connected to each zone (there is no limitations for buttons).
- The delays of the sounder and relay output can be programmed such to be 15, 30, 45 and 60 seconds. (Day/Night Mode)
- 2 x short circuit protected sounder outputs. Max. 20 Efire series sounders or flashers can be connected to each sounder line (max. 0.5 A).
- Security Level access is provided with keylock.
- 24 V DC output max. 1 A, short circuit protection and tracking.
- 2 relay outputs for Fire and Failure
- 2 inputs for remote reset and evacuation.
- 1.7 A @ 28.5 V DC power supply.
- A separate button for each process and easy usage.
- Without intervention tracking possibility for all incurred events.
- Reporting of all events until the last resetting.
- EN 54-2 and EN-54-4 compliance.

## OPTIONAL FEATURES

- Repeating panel connection / Repeating Communication Board.
- Zone specific 4 x Relay Boards.
- 8 x Relay Expanding Boards for Expanding Relay Outputs.
- E-SM Sounder Expanding Boards in order to obtain 3 + 3 sounder outputs.
- Phone Call Module and Communicator (communication module with AHM).

## TECHNICAL FEATURES

Main Supply	: 230 VAC 50 Hz
Max. Current	: 1,7 A@230 VAC
Supply Voltage	: 50mA
Main Fuse	: 21 - 30 VDC
Max. Battery	: 4 A (Glass)
Zone Number	: 7 Ah@2X12 VDC (max.) veya 2 Ah@2X12 VDC (min.)
Zone Capacity	: Expandable as 4, 8, 12, 16 zones
Line End Element	: Each zone 32 detectors (according to EN 54-2)
	: 100µF Electrolytic Capacitor (Pole free capacitor is included into the packaging. If poled capacitors need to be used, attention must be paid to the poles.)
Fire Alarm Resistance	: 470 - 680 Ω
Sounder Output	: 2 X 27,5V DC 0,5 A (Protected)
Failure Relay	: 1 A Nc / No Telecom Relay
Alarm Relay	: 1 A Nc / No Telecom Relay
Aux Supply Output	: 24 VDC, 0,5 A (Protected)
Start up Time	: 30 sec
Warning Sound Level	: 70 dB/m
IP Classification	: IP30
Coverage Material	: ABS
Mounting Type	: Surface or Embedded
Operating Temperature	: (-10C) - (+55C)
Relative Humidity (Max.)	: %0 - 95
Weight	: 2 kg
Dimensions	: 440X355X110mm

## WARNINGS

- The technical features of the product aren't affected by temperature, humidity, natural and artificial light changes within the ranges indicated in the specifications.
- The product doesn't require periodical maintenance. It is recommended to subject it to periodical annual controls.
- The alarm system won't eliminate any danger.
- Avoid contact with water and chemical cleaning agents.
- Protect against falling, impacts and humidity.
- Don't touch it with wet hands.
- Protect against unauthorized access.
- The wiring connections must be performed when disconnected from power supply.
- Don't supply 230 V AC to any connector except the 230 V AC connector indicated in the Wiring Diagram.
- The maintenance of the product must be performed only by authorized personnel.
- Never use a driller when there are electronic boards (PCB) inside.
- The Line End Capacitor in the packaging shall be used. The Poled Electrolytic Capacitor possible to be used when this should be lost may never be connected reverse. The panel will trigger an alarm in case of reverse connection.
- Keep the room, where the panel is installed, aerated.
- Use the device only with 230 V AC mains. Remind to make the grounding connection of the device for the health of the device and persons. Where possible, connect the device to an UPS.
- Protect the power cable against crushing and breaking risks.
- Feed the device from a fuse separate from the other power lines.
- Take care on that no liquid or other objects possible to cause short circuit enters into the device due to fire and electrical shock risks.
- Don't allow unauthorized personnel to open the panel. There is a risk of electrical shock.
- Contact your seller or authorized service in case of any defect.
- Our company will not accept any responsibility when the warnings are not complied with.

## PANEL INSTALLATION

The **Efire-ECP** has a design, which is compliant with both Surface Mounting and Flush Mounting. There is space left on the back and top for cable entrances. Never use a perforating device (driller etc.) when there are electronic boards (PCB) inside. Per ZONE = Max. 32 Detectors + Unlimited Manual Call Points 4 x screws must be used at the marked positions for surface mounting. (We recommend to use the template in order to determine the location easily.)



## COMMISSIONING

The **Efire-ECP-RP** is manufactured ready-to-use as a standard conventional Fire Alarm panel. In its default settings are;

- All zones, sounders, auxiliary 24 V DC output, relay outputs ready in the system active.
- There are no delays related to the sounders and relays

## ISSUES TO BE CONSIDERED PRIOR TO COMMISSIONING

1. Be sure that the LINE END capacitors are connected in the correct direction to the connectors of all zones.
2. Remove the main fuse.
3. Connect the main supply cable.
4. Don't connect anything else than the grounding line to the grounding connection. Place the batteries into their bearings. (Don't perform the wiring connections.)
5. Insert the main fuse.
6. Connect the batteries. Be sure that the poles of the batteries are connected correctly.
7. The failure needs to be determined when the yellow "Failure" LED should light on. Contact the Technical Service.
8. When everything is normal, the green "System Enabled" LED will light up constantly.
9. Press on the Light Test Button and ensure that all buzzers and indicators are operating.
10. Disconnect the main fuse and the batteries.
11. Remove the Line End Capacitor connected to the zone to be wired.
12. Check whether there are any short circuits or open circuits at the cables of the Zone line where the Detectors and Buttons are connected to and the lines where the Sounders are connected to. Control the Zone cables and be sure that the Line End Capacitor is connected in the correct direction to the last device.
13. The operation of all detectors, fire notification buttons, sounders, relays and all devices connected to the system needs to be controlled by the technical service.
14. Connect the panel's main fuse (glass fuse) and the batteries. Supply mains power.

## FAILURE INDICATORS

The buzzer is enabled along with the failure indicator (yellow LED) on the **Efire-ECP** with regards to any situation. The buzzer may be disabled by the elimination of the failure or by pressing on the Buzzer Off Button.

**1.Failure (Yellow):** The failure indicator will constantly light yellow in case of any existing failure of the Fire Notification System.

**2.Zone Failure (Yellow):** A long flash (1 sec) will light up when there are any short circuits, open circuits in the zone line and when there should be no LINE END CAPACITOR installed. A short flash (0.5 sec) will light up until resetting when the failure is eliminated.  
Energy Failures

**3.Power Failure (Yellow):** This will light up constantly in case of mains cut-off or tripped main fuse.

**4.Battery Failure (Yellow):** This will light up constantly when the batteries are not connected, discharged or in case of a failure at the charging circuit. A short flash (0.5 sec) will light up until resetting when the failure is eliminated.

**5.24 DC (AUX) Failure (Yellow):** Indicates the short circuit at the 24 V output. A short flash (0.5 sec) will light up until resetting when the failure is eliminated.

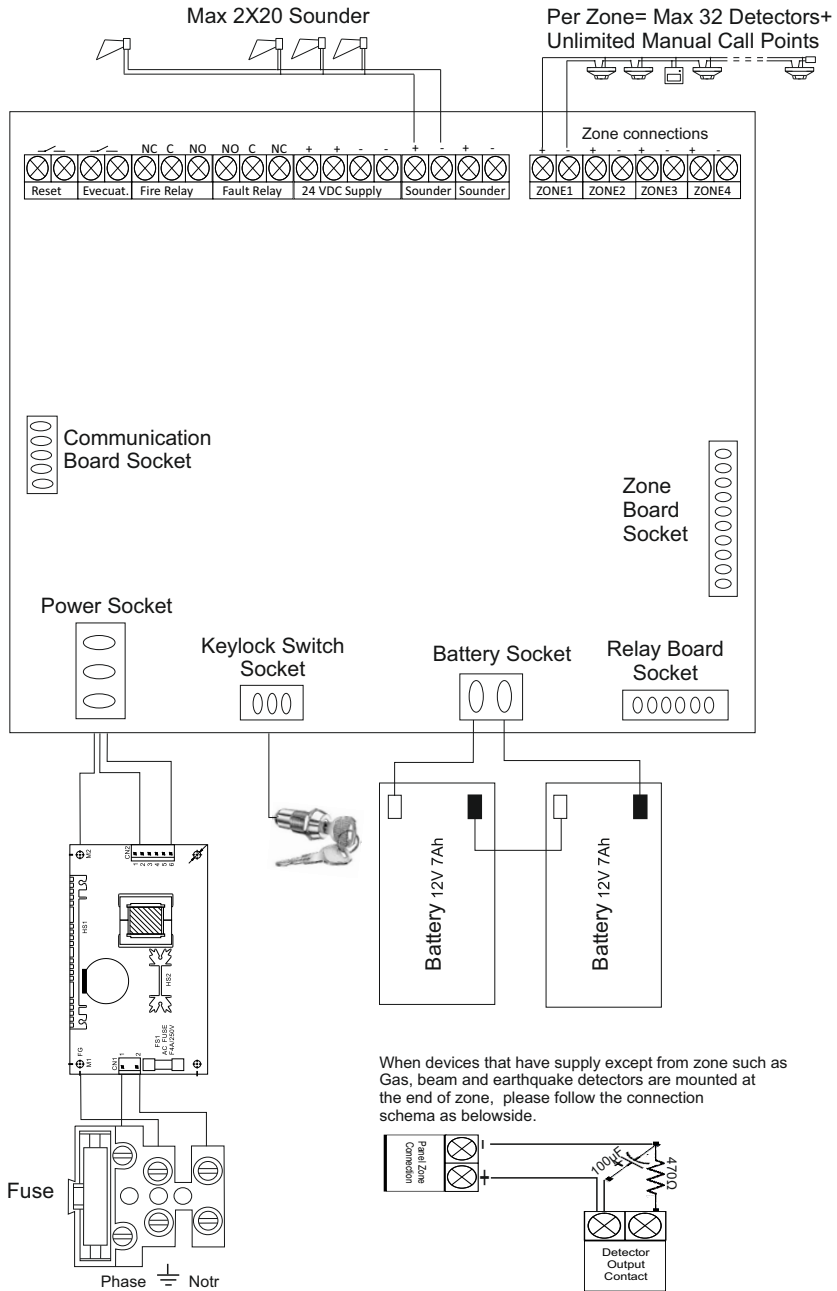
**6.Grounding Failure (Yellow):** Indicates a power leakage or that the grounding line is not connected correctly. A short flash (0.5 sec) will light up until resetting when the failure is eliminated.

**7.System Failure (Yellow):** Notify the Technical Service.

**Note:** The yellow colour is not always a failure.

The yellow colour is also used for disabled conditions.

## WIRING DIAGRAM

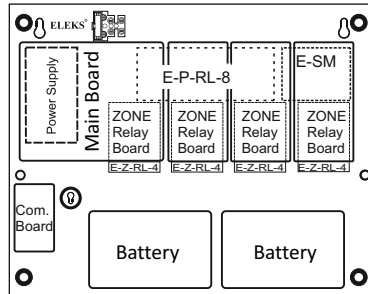


## Features Possible to Be Added By Installation

It is possible to add features like zone expanding, adding relay outputs to required zones, multiplying relay outputs and sounder outputs and communication with the repeating panel by acquiring the respective boards on the **Efire-ECP** after the manufacture when needed.

The following instructions need to be complied with during these processes

Layout Diagram



### E-ZM-4: 4XZone Expanding Board

Panel internal zone expanding board. Each board includes

4 zones. There are deactivation button and fire (red) and

failure/test/disabled (yellow) LEDs on it.

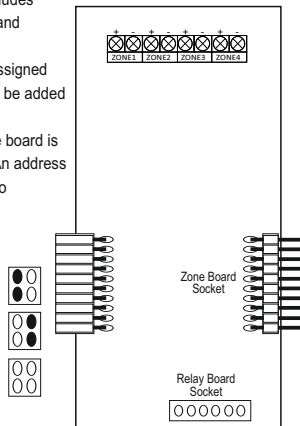
The mounting is easy and the operating principle is assigned by the system. Optionally E-Z-RL-4 Relay boards can be added to the zone boards.

Zone expanding can be performed by that every zone board is serially connected to the left side of the main board. An address needs to be assigned to each zone board according to the assembly order. Follow the order below during the addressing.

Jumper is placed to the left for addressing the 1st zone board.

Jumper is placed to the right for addressing the 2nd zone board.

No jumper is placed for addressing the 3rd zone board.



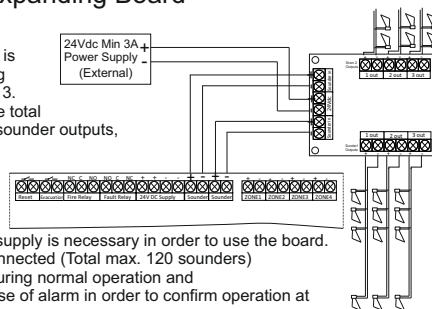
### Technical Specifications

Current	10 ± 1mA
Zones #	4
Zone Silence Current	5mA
AlAlarm Current	60mA max.
End of Line Component	Capacitor(100uF/35V)
Max. Detector/Zone	32
Humidity (Max.)	95%
Operating Temp.	-10°C - 55°C
Weight	50g
Dimensions	65mm x 135mm

Attention: The correct communication with the Repeating Panel will not be achieved when the order is not complied with!

### E-SM: Sounder Expanding Board

Sounder expanding board. It is the sounder board expanding the sounder output from 1 to 3. It is capable to expanding the total 2 sounder outputs to total 6 sounder outputs, being 3+3.



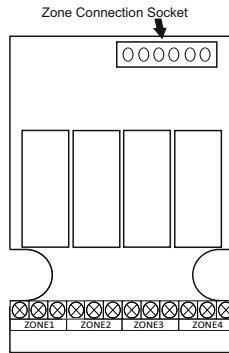
An external 24 V DC power supply is necessary in order to use the board. Total 20 sounders can be connected (Total max. 120 sounders)  
The green LED is enabled during normal operation and the red LED is enabled in case of alarm in order to confirm operation at the sounder outputs.

### Technical Specifications

Supply Voltage	24V ±2V
Silence Current	2mA @ 24V
Triggering #	2X1
Triggering Voltage	16V - 24V DC
Trigger Current	2mA@16V-15mA
Output Voltage	23,7V @ 24V
Output Current	0,5A
Output #	2X3
Operating Temp.	-10°C - 55°C
Weight	35gr
Dimensions	53mm X 73mm
Humidity (Max.)	95%

## E-Z-RL-4: Zone Relay Board

Relay board for the zone. Each board includes 4 relays. One relay matches with each zone, depending on the zone board. The relay triggers and the LED on the board lights up green in case of a fire signal.

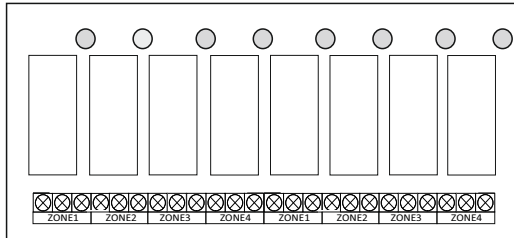


### Technical Specifications

Current	130 ± 10mA
Contact #	4 x (NC-C-NO)
Max. Voltage	250 VAC - 30 VDC
Max. Current (Resistive Load)	10 A
Max. Switching Power	2500 VA - 300 WATT Resistif Load
Max. Switching Speed	20 Switches/min
Max. Humidity	95%
Operating Temp.	-10°C - 55°C
Weight	85gr
Dimensions	65mm x 80mm

## E-P-RL-8: 8'li Panel Relay Board

Relay board for the panel. Expanding the number of the dry contact outputs of the panel (fire or failure) from 1 to 8. The red LED is active when fire/failure is triggered. External 24 V DC is required for the operation of the board.

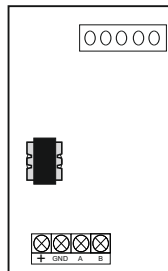


### Technical Specifications

Current	140 ± 5mA
Contact #	8 x (NC-C-NO)
Max. Voltage	240 VAC - 28 VDC
Max. Current (Resistive Load)	1 A
Humidity (Max.)	95%
Operating Temp.	-10°C - 55°C
Weight	85g
Dimensions	54mm x 142mm

## E-NW-485: Haberleşme Kartı

Provides a perfect communication between the repeating panels and main panels with each other which allow the easier observation and control of the panel placed into the system room in emergency cases. This board, mounted both into the main panel and the repeating panel allows an easy communication in long distances to the RS485 protocol.



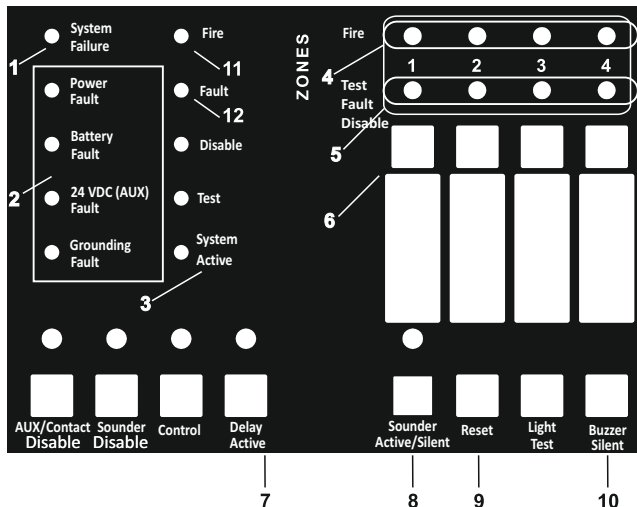
### Technical Specifications

Communication Type	Rs485 - Half Duplex
Insulation	Galvanic
Communication Speed	4800 Baud Rate
Voltage - Current	24V@ 60+ - 5mA
Operating Temp.	-10C - + 55C
Humidity (Max.)	%95
Dimensions	420mm x 750mm
Weight	30gr



## Fast Usage Guide

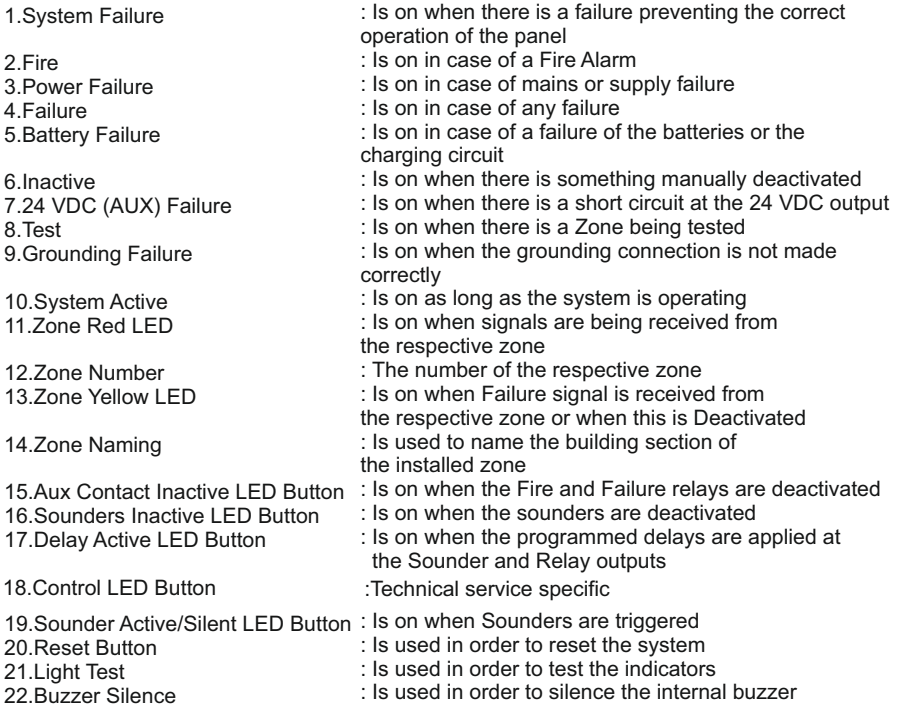
Only the **System Active Indicator (3)** will constantly light up when there should be no failure or fire status on the panel and none of the disabled, delay processes are being used



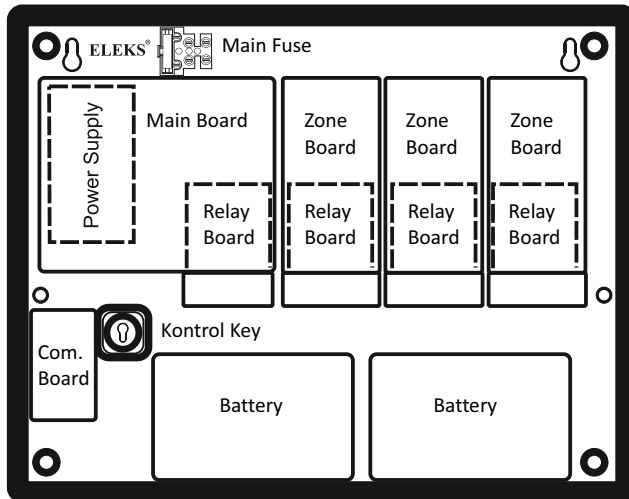
### WHAT TO DO IN EMERGENCY CASES

1. The key is turned to green position and the Sounder Active/Silent button (8) is pressed on when it is intended to be used for evacuation.
2. Press on the Buzzer Silent button (10) in order to silence the internal buzzer.
3. Determine whether there is a failure or fire status (11 and 12). When both are active, then fire (11) red has priority.
4. When the signal comes from the zones, determine and control the origin zone of the signal with (Zone) (4 and 5).
5. Turn the key to the green position in order to be able to intervene to the panel. The System Active indicator (3) (green) will start to flash.
6. Press on the Sounder Active/Silent button (8) in order to silence the sounders.
7. Press on the Sounder Active/Silent button (8) in order to reactivate the sounders. (The sounders are activated when the Sounder Active/Silent Indicator lights up (red).)
8. Press on the Reset (9) button in order to reset the panel.
9. Check the indicators (1, 2 and 5) in order to determine the reason for the failure when Failure (12) is on.
10. Control the situation and be sure that the failure is eliminated by the authorized personnel. And press on the Reset (9) button in order to reset the panel.
11. Contact the Technical Service when the failure sustains.
12. Turn the key to the red position in order to prevent any unauthorized intervention. Don't leave it on the panel.

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## MOUNTING DIAGRAM



- Supply Input** : The connection of the Grounding and Supply must be performed via de Main Contactor
- Battery Input** : 2 x 12 V, 7 Ah, leak-free type Lead-Acid batteries should be connected serially with the cable with connectors inside the product. The batteries are automatically charged by the product.
- Reset and Evacuation** : Separate buttons are connected for remote access.
- Fire Relay** : Dry contact output
- Failure Relay** : Dry contact output
- Zone Board** : The 1st zone board needs to be mounted with jumpers on the pins marked with 1, the zone board with jumpers on the pins marked with 2 by paying attention to the markings on the zone board to be added. No jumpers are placed for the 3rd zone board.
- 24 V DC Supply Output** : Drawing more than 500 mA current will result in the failure of the product. Supply is maintained until the batteries are discharged when there should be no mains.
- Sounder Supply Line** : It should be 2 x 1.5 mm<sup>2</sup> cables.
- Zone Inputs** : Indicate possible fire notification from any detector, the line cut-off and short circuit failures.

## BATTERY SELECTION

Batteries according to the number of devices in the Fire Notification System need to be selected. Smallest and largest batteries able to be selected are:

Least capacity 2 X 2Ah 12V DC

Highest capacity 2 X 7Ah 12V DC

Always use leak-free type Lead-Acid batteries

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## PANEL USAGE

There are 3 different usage levels and these are tracked via the System Active LED.

1st Level when constantly on

2nd Level when long flashing

3rd Level when short flashing

### 1. Light Test (1st and 2nd Level)

The light test button is pressed and all illuminated indicators and the buzzer are activated for a short term.

### 2. Buzzer Silence (1st and 2nd Level)

The audio warning of the panel is deactivated temporarily by pressing on the Buzzer Silence Button in case of a Failure or Fire.

### 3. Sounder Active/Silent (2nd Level)

This is used order to silence the sounders when the risk is eliminated.

It is used in order to activate the sounders when an evacuation is intended.

(The sounders trigger automatically in case of fire.)

The Sounder Active/Silent LED enables along with the sounders.

### 4. Delays Active/Passive (2nd Level)

It provides that the delay durations set previously for the sounder and relay outputs are activated or deactivated. The sounder and relay outputs will react after the set delay duration when the Active/Passive LED is on.

(The default value is set to 15 seconds. Contact the technical service for changes.)

### 5. Deactivated (2nd Level)

#### a. Sounders Deactivated

The operation of the sounders can be prevented with the Sounders Deactivated Button.

The sounders will not trigger when the Sounders Deactivated LED is on.

#### b. Aux Contact Output Deactivated

The operation of the auxiliary contact outputs can be prevented with the Aux Contact Deactivated Button.

The auxiliary contacts will not change position/provide output when the Aux Contact Deactivated LED is on.

#### c. Zone Deactivated

The respective zone is deactivated or reactivated with the Zone Deactivated Button.

The zone is deactivated when the Zone Deactivated LED is on.

No failure and fire signal will be received by the panel from the deactivated zone and the panel output will not be influenced.

### 6. Reset (2nd Level)

This deletes the report notifications and in case of fire, the fire notifications incurred on the panel after the solution of the problem in cases like failure, fire on the panel. It resets the panel to the last settings.

## SETTING PROCESSES

Only the Technical Service may activate this level. Always contact the Technical Service when it is intended to perform these processes.

#### 1. Zone Test

#### 2. Programming the relay delay durations

#### 3. Programming the sounder delay durations

#### 4. Resetting the default settings (Factory Reset) can be performed.

## SERVICE REQUIRING FAILURE CASES

Since a wrong intervention is likely to cause other failures, please call the service when;

- a non operating indicator is determined during the Light Test process,
- the power cable or plug should be damaged,
- any liquid enters into the device or when something should fall on
- it is subjected to water or rain
- the device fell down or the box is harmed
- there is a perceivable performance change at the device
- the device doesn't operate as indicated.
- All parts to be used (battery, supply unit etc.) must be as indicated in the technical specifications.

Eleks Ltd. Şti. will not assess situations like the usage of the device except the conditions indicated, the non-compliance with the warnings, intervention to the device by unauthorized persons, wrong electrical installations within the scope of the warranty.

## FREQUENTLY ASKED QUESTIONS

Q1 What means the short flashing of the LEDs?

A1 The LEDs will flash in two different ways and these are explained below;

Long Flash (1 sec): when there is a failure in the zone, when the key is in the green position.

Short Flash (0.5 sec): when there is any failure and amended again until the system is reset.

This sign is the Reporting process.

Q2 All connections are complete, but the panel sets over to fire status?

A2 The panel will set over to alarm when the used Line End Capacitor at the ZONE connections are poled electrolytic capacitors, connected reverse.

Q3 The buttons don't function?

A1 Turn the key to the green position.

Q4 Why do we need to used with a key?

A4 By setting an access prevention with a key in order to avoid a malfunction of the fire system in case of an unauthorized access, it is aimed to allow the authorized person to use the panel easily with a single movement.

Q5 How can I deactivate a zone?



A5 The authorized person can deactivate the zone by turning the key to the green position and pressing on the button of the zone intended to be deactivated. The yellow LED will be on uninterruptedly while the zone is deactivated.

Q6 How can I deactivate the contact and sounder outputs?

A6 It is possible to deactivate all Main Panel Fire and Failure relay outputs with the Aux Contact Deactivated button and the Sounder outputs with the Sounders Deactivated Button on the left lower side by taking the key to the green position by an authorized person. The yellow LED will be on uninterruptedly in all deactivated situations.

Q7 How can I connect the repeating panel?

A7 Please refer to the user's guide of the repeating panel.

 1922 15 1922-CPR-0434	<b>EN 54-2 / EN 54-4</b> Control and indicator device for fire sensing and fire alarm systems in buildings / power source device <b>Efire-ECP</b> DOP Number: ELEKS -002.00	<b>Provided Options</b> Fire Alarm Devices, Fire Extinguishing Equipments Outputs for failure direction devices Notification for delays Test Mode Standard inputs/outputs	<b>AUTHORIZED SERVICE</b>  <b>ELEKS®</b> Elektrik Elektronik Sistemleri San. ve Tic. Ltd. Şti. Şerifali Mah. Bayraktar Bulvarı Emin Sok. No.3 Yükarı Dudullu - Ümraniye / İSTANBUL Tel : 0216 463 47 28 - 29 - 30 Fax : 0216 463 47 31
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