teknim®
Fire and Security Technologies

TFP-22xx Series

Intelligent Addressable Fire Alarm Panels
Installation & User Manual

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*** Sub Models**

TFP-2211	**Intelligent Addressable Fire Alarm Panel. 1 loop, Networkable.**
TFP-2212	**Intelligent Addressable Fire Alarm Panel. 2 loop, Networkable.**
TFP-2214	**Intelligent Addressable Fire Alarm Panel. 4 loop, Networkable.**

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1 - Introduction

This manual contains installation instructions, specifications, and panel configuration information for the TFP-22xx series Teknim Intelligent Addressable Panels.

TFP-22xx Teknim intelligent addressable panels are available in 1, 2, and 4 loop options. In the TFP-22xx series panels, up to 240 devices per loop can be used in the 1 and 2 loop panels, and up to 127 devices per loop in the 4 loop panel. All devices operate using the Teknim Flashlink protocol.

TFP-22xx series panels comply with the EN-54-2/4 standards. Before installation, the operation manual must be read without fail and such installation must be carried out by the authorized persons in accordance with the installation instructions.

Every TEKNIM design undergoes multiple production control stages before reaching users. These include incoming quality tests for electronic components, In-Circuit Test (ICT) control after assembly, two-stage production functional testing, and final quality inspection. Each stage follows specific rules and standards.

Finally, before starting the installation, check that the complete items listed below are fully included in the package:

- TFP-22xx panel,
- 2 pcs (TFP-22xx), 4K7 siren end-of-line resistors,
- Battery cable,
- Battery mounting bracket and 1 screw,
- 4 sets of screw & dowel for wall-mounting,
- User manual,

2 - Warnings

- The panel is equipped with printed circuit boards comprising digital analogue circuits. Therefore it should not be used before reading the complete operation manual thoroughly.
- In case of any malfunctions or any need that the panel requires maintenance, then services for such maintenance and repairs must be provided by the authorized services belonging to the manufacturing company or by the persons/organizations authorized by the manufacturing company.
- The cable lines for the supply line of the panel, siren line, and the detector line should be as specified in this manual.
- Do not attempt to change connections during when the panel supply power is switched on.
- Proper panel grounding shall be absolutely in place and functioning.
- In no way, shall ~230 VAC 50Hz mains voltage be applied to the inputs/outputs of the loop line, connectors of the siren line, and the connectors of the battery.

Warning: Do not start installation before reading and understanding the complete operation manual!

3 - Technical Specifications

Supply	
Voltage	230 / 110 VAC (+%10 / -%15)
Frequency	50 / 60 Hz (±%5)
Mains Input Fuse	6A
Output Voltage	24 VDC ± %2
Output Fuse	6A (F1)
Cable Type	3 x 1,5mm² (Phase, Neutral, Ground)
Backup Power Supply	2 x 12V, 7Ah dry type leak-proof (Recommended Yuasa NP7-12, 12V7Ah) 2 x 12V, 12Ah dry type leak-proof
Backup Power Supply Cutoff Voltage	20,5 VDC
Backup Power Supply Internal Resistance Fault	2.2 ohm (Ri max.)
Maximum Current to be drawn from the Backup Power Supply	3A, when the main power supply is not connected
Backup Power Supply Fuse	6A (F2)
Charging Voltage	27,6 VDC @20°C, with temperature compensation
Charging Current	500mA (with current limiting resistor)
Imin	TFP-2211 – 130mA (1 Loop) TFP-2212 – 180mA (2 Loop) TFP-2214 – 280mA (4 Loop)
ImaxA	1A
ImaxB	1,5A
Outputs	
Monitored Siren Outputs	2 units 24VDC Typ. (Range 17Vdc – 27.6Vdc) - (TFP-22XX)
Siren Fuse	2 pcs. 500mA (F6, F7)
Siren End of Line Resistor	4K7 ohm, %5, 1/4W
General Fault and Fire Relay	2 pcs.
General Fault Relay	1 pcs. NC/NO dry contact, 30V, 2A
Fire Relay	1 pcs. NC/NO dry contact, 30V, 2A
Auxiliary Output (AUX)	1 pcs. 24VDC (Range 17Vdc – 27.6Vdc)
Auxiliary Output (AUX) Fuse	1 pcs. 500mA (F4)
Cable Type	2 x 0,8mm² J-Y(St)Y…Lg 2 x 1,5mm² J-Y(St)Y…Lg (Recommended)
Loop Information	
Number of Terminals	240 pcs. for 1 or 2 loop (maximum) 127 pcs. for 4 loop (maximum)
Output Voltage	32 VDC (Range 8Vdc – 35Vdc)
Cable Length / Cross Sectional Area	1000m 0,8mm² Cross Sectional Area (@250 mA) 2000m 0,8mm² Cross Sectional Area (@75 mA) 1500m 1,0mm² Cross Sectional Area (@250 mA) 2500m 1,5mm² Cross Sectional Area (@250 mA) 3000m 2,5mm² Cross Sectional Area (@250 mA)
Repeater Panel Connection	
Output Current	500mA (maximum)
Output Voltage	24VDC
Cable Length	1 km / 4 x 0,8mm² J-Y(St)Y…Lg (recommended)
Environmental Conditions	
Climate Class	3K5 (EN 60721-3-3:1995)
Temperature	-10°C ~ +55°C (14°F ~ 131°F)
Humidity	95% RH (maximum)
IP Class	IP30
Physical	
Color	RAL7035 TEXTURE
Dimensions (H x W x D)	381 x 385 x 137 mm
Weight	6,41 ~ 6,78kg (w/o battery)

Communication	
Communication Path 1 (Panel and Ethernet)	
Since the Ethernet function is embedded in the card, no additional communication protocol is required.	
Communication Path 2 (Ethernet and Cloud or ARC)	
Protocol Information	TCP/IP
Connection Type	**Temporary (ARC):** The connection is established temporarily when specific events like alarm statuses occur, or at certain intervals, and it is terminated after data transmission is completed. **Permanent (Cloud):** The connection remains open continuously, enabling real-time data communication with cloud-based systems. This type of connection is ideal for remote monitoring and control.

* Specifications of the device is subject to changes without prior notice.

4 - TFP-22xx Series Intelligent Addressable System

TFP-22xx series Intelligent Addressable systems are two types of fire detection systems that can connect up to 240 devices in 2 loop, per loop and 127 devices in 4 loop, which can be divided into 72 zones as having 1, 2 or 4 loops. Each loop to which 240 devices can be connected, is capable of performing fire detection and communication functions on 2500 meter long (with 1,5mm² x-sectional area) line. The panel also features 2 monitored siren outputs, 1 pieces dry contact fault relay, 1 pieces dry contact alarm relay and 1 piece of 24V AUX output.

TFP-22xx series Intelligent Addressable systems can be configured with menu buttons available on the panel. In addition, it is programmable through Ethernet connection using the Teknim Addressable Fire Detection System Configuration Software. In addition to this, panel access through internet connection, and monitoring facility through the Teknim Fire Detection System Monitoring Software are also provided. The Teknim Addressable Fire Detection System Configuration Software provides technical teams with ease of use for the configuration process.

With TdNET protocol support, it provides such possibility that up to 16 panels can be networked.

"The performance parameters specified in the EN 54-21 standard and detailed in Annex A of the standard are met in alignment with the requirements of the alarm transmission system and routing equipment characteristics."

4.1 - Panel Properties

- 72 programmable zones,
- Wide graphic display with 240 x 64 pixel resolution and LED indicators,
- Feature to assign different delays to each zone,
- Easily conducted zone test,
- Easily manageable loop configuration and information menus,
- Automatically searches the entire loop and even finds new connected devices,
- System configuration that can be performed via panel or computer,
- 12000 events can be stored in memory,
- Flashlink protocol support,
- TdNet network protocol support,
- 240 or 127 devices per loop (can be configured as mixed connection with smoke detectors, heat detectors, alarm buttons, sirens, input and output modules),
- With the TdNET Network structure, a total capacity of 7680 devices and 1152 zones can be reached,
- 2 independent and delay-assignable/monitored siren outputs,
- With peer-to-peer communication network feature equal access right to the panels and possibility to send commands,
- TFP-1240/TFP-1245 Remote panel monitoring and management with smart addressable repeater panel connection,
- With bidirectional, intelligent loop control feature, to be able to precisely locate the breaks that may occur on the line,
- 1 pc. alarm outputs, 2A NC/NO dry contact,
- 1 pc. fault outputs, 2A NC/NO dry contact,
- Ethernet connector for computer connection (panel configuration and monitoring),
- Fast addressing with portable programming device,
- Day(time)/Night(time) mode,

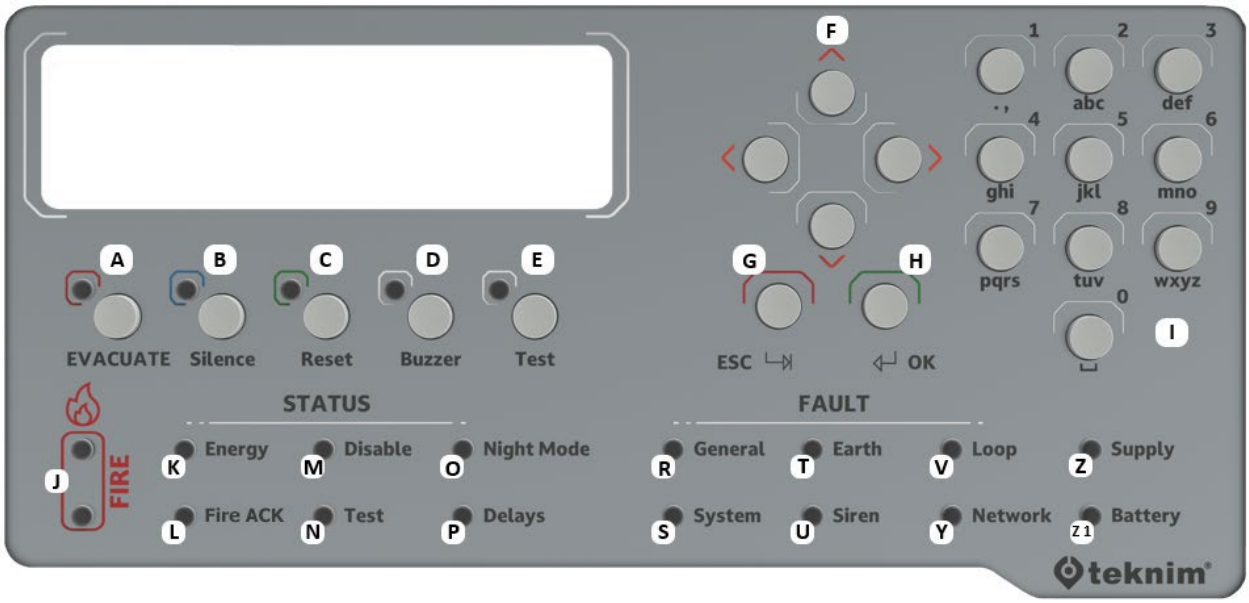
- Disabling zones, devices and outputs,
- Multi-language support,
- Functional menu keys for ease of use.

TFP-2211	Intelligent Addressable Fire Alarm Panel, 1 Loop, Networkable, supports 240 devices
TFP-2212	Intelligent Addressable Fire Alarm Panel, 2 Loop, Networkable, supports 480 devices
TFP-2214	Intelligent Addressable Fire Alarm Panel, 4 Loop, Networkable, supports 508 devices

4.2 - Panel User Interface

This chapter describes the indicators and buttons on the panel.

Figure 1 : Control Panel User Interface



The letters displayed in the Figure 1 : Control Panel User Interface are respectively listed below.

Table 1 : User Interface Button Functionality

Label	Function	
[A]	EVACUATION	May be used in Level-2 and Level-3. Starts the evacuation procedure, activates sirens. Panel enters into alarm status.
[B]	SILENCE	May be used in Level-2 and Level-3. Mutes sirens in case of alarm.
[C]	RESET	May be used in Level-2 and Level-3. Reset command is sent to all devices connected to the panel. It restores the panel in alarm or fault status to normal operating status.
[D]	BUZZER	Mutes Buzzer in the event of an error or an alarm.
[E]	TEST	LCD, LED and Buzzer test. (test duration 5 seconds)
[F]	UP-DOWN	Used to scroll up and down on menus and lists.
	LEFT-RIGHT	Used to move to the right or left between forms.
[G]	ESC	It includes functions such as exit, back, cancel, and so on. Used to access the "Status" window on the main screen.
[H]	OK	It includes input, confirm, save and similar functionality. Used to enter menu in the main screen.

		if kept pressed for a long time on the main screen password entry window will open or switch to Level-1
[I]	Numeric Keypad	Numbers 0-9. Allows entry of values directly on forms. Provides fast access by entering the number of rows in the list.

Table 2 : LED Indicators

Label	Name of LED	LED - Permanent Light	LED - Blinking Light	Color
[J]	FIRE	N/A	Indicates that the panel is in alarm status (250 ms)	Red
[K]	Energy	Indicates that the system is being supplied from any source	N/A	Green
[L]	Fire ACK	Indicates that the fire alarm information has been acknowledged by cloud users	N/A	Red
[M]	System Out-of Service	Indicates that zones or devices or outputs are disabled	N/A	Yellow
[N]	Test	Indicates that one or more zones are in a test state	N/A	Yellow
[O]	Night Mode	Indicates that the system is in night mode.	N/A	Yellow
[P]	Delays	Indicates that the output delays are active.	N/A	Yellow
[R]	General Failure	Indicates that there is a system error. (system error lights up together with associated LED)	Reveals that there is any error in the system	Yellow
[S]	System Failure	Indicates that there is a system error.	N/A	Yellow
[T]	Earth Fault	N/A	Indicates that there is a malfunction in the ground connection	Yellow
[U]	Siren	Indicates that the siren is in the disabled state	Indicates that there is a malfunction in the siren	Yellow
[V]	Loop	Indicates that the loop PCB is disabled.	It shows errors related to the loop PCB such as loss, open circuit, short circuit.	Yellow
[Y]	Network	Indicates the panel is included in the network.	Displays the error status of the network.	Yellow
[Z]	Supply Failure	N/A	Indicates that there is a malfunction in the power supply	Yellow
[Z1]	Battery Failure	N/A	Indicates that there is a malfunction in the battery	Yellow

LCD should be checked for more detailed error description of the LED indicators above,

5 - Installation

This section describes the mechanical and electrical connection techniques of TFP-22xx series panels. Caution: Do not start installation until you have read all of this entire manual!

5.1 - Recommended Cables

It is recommended to employ the cables specified in the "**Table 3: Recommended Cable Specifications**" for wiring installations and all electrical connections.

Table 3 : Recommended Cable Specifications

Cable	Cable Properties	Maximum
Supply	3 x 1,5mm²	N/A
Loop Line	0,8mm² cross-section 0,8mm² cross-section 1,0mm² cross-section 1,5mm² cross-section 2,5mm² cross-section	1000m (@250 mA) 2000m (@75 mA) 1500m (@250 mA) 2500m (@250 mA) 3000m (@250 mA)

The maximum permissible cable lengths for the loop line differ according to the type of cable used and the loop load.

5.2 - Installation

For installation, a clean and dry place should be chosen where the panel is not exposed to shocks, vibration and intense heat. Care should be taken in the selection of the place in such a way that it should be easily accessible and useable by the system user. The panel is required to be installed at a height where LCD display and indicators are at the eye level. Cable entries are available at the back and top of the panel to make surface-mounted and or flush-mounted cable connections.

1 Loosen A1 screws shown in "**10.1 Appendix-Mechanical / Figure 37 : Panel Front Cover Screws**" with the Allen key supplied together with the panel.
2 Using the panel as the template, mark the wall from the A2 screw holes shown in "**10.1 Appendix-Mechanical / Figure 38 : Mounting Screw Holes".**
3 Drill the holes marked on the wall and complete the anchoring process with minimum 8-mm dowel and 4-mm screws.
4 Then proceed to battery and cable connection procedures.

WARNING !
All external connections to the panel (except the mains connection) must be made using fire-resistant shielded cables. The shield of each cable must be connected to the earth bar inside the case.

5.3 - Power Supply Input

The panel main power supply input should be connected to the 195~250 VAC 50 Hz mains voltage and grounding connection must be in place and functioning. Utmost care should be taken that grounding resistance is not greater than 10 ohms. The main supply input fuse of the panel must be 6A. Also, the panel supply cable must be of the type 3x1.5 NYM or 3x1.5 NYA. The electrical connection should be made in accordance with the tag as shown in "**10.1 Appendix-Mechanical / Figure 39 : Electrical Connections**".

WARNING!
Making or removing connections are not allowed under any circumstances when the system is energized.

5.4 - Battery Connection

The panel is supplied with 2 units of 12V sealed lead acid battery and at least, this type of battery should be used. Battery must be placed and installed as shown in "**10.1 Appendix-Mechanical / Figure 40 : Battery Connection"** where the battery terminals are facing each other and it must be anchored tightly through the screw holes on the battery brackets marked B1.

For the battery connection, terminals marked B3 and B5 in "**10.1 Appendix-Mechanical / Figure 40 : Battery Connection**" are connected to each other with the jumper cable supplied along with the panel. And then, terminals marked B2 and B4 are connected to the battery power supply socket with battery power supply cable.

5.5 - Watch Battery

The clock battery provided with the panel is soldered to the electronic board at the location indicated by C1 in "**10.2 Appendix-Electrical / Figure 44 : Watch Battery Connection**" This battery ensures the accurate maintenance of the time and date information when the device is powered off. When the battery is depleted, it needs to be replaced. Please seek technical support regarding this matter.

5.6 - Inputs and Outputs

Relay Outputs: The panel has 2 dry-contact relay output that can withstand a current of 2A at 30 VDC. These dry-contact relays are fire relay (normally non-energized) and fault relay (normally energized).

Important Note: The relays of the fire alarm panel are signal relays. If these relays are to operate a device as command relays, a contactor should be placed in between. If a contactor is not used when the relay outputs are used in an application that draws high current, then the panel may be damaged and this situation is outside the warranty scope.

Siren Outputs: The panel has 2 siren outputs of 24 V DC 500 mA equipped with an automatic return and fuse protection. The panel will start giving errors in cases when too much current is drawn through this output. This output is being monitored by the end of line resistor against open circuits and short circuits. The cable of the siren power supply line must be of 2x1.5-mm2 cable. Connections are demonstrated in "**10.2 Appendix-Electrical / Figure 45 : Siren Connection**".

Alarm Relay: In case of a fire alarm initiated from the detection zones or "Evacuation" button on the front of the panel is pressed, it is activated by changing contacts and used to control another system. In order for the active relay to be restored, the fire status has to be eliminated and the "Reset" button on the panel has to be pressed.

Error Relay: It is activated by changing contacts in case of a fault alert originating from the system and when the power is not supplied to the panel. Error relay automatically returns to its previous position with the elimination of the fault status.

AUX Output (External Supply Output): The panel has 1 24VDC 500mA external supply output with automatic fuse protection. In case of any blackouts, the external supply output is supplied until the battery reaches the cutoff voltage.

5.7 - Loop Expansion Card Connection

TFP-22xx Teknim Intelligent Addressable panels support 2 or 4 loops. In order to add a new loop card to a single loop panel;

1 Make sure that there is no power on the panel in the first place.
2 Unscrew the three screws marked "L1" in "**Figure 41 - Loop Card, Network Card and Repeater Panel Connection Points**" and screw the elevation parts supplied together with the "TFC-1201 Loop Card" into this place.
3 Insert the flat cable supplied together with the card to the connector marked "L2".
4 Screw the loop card into the elevation parts.
5 Connect the other end of the flat cable to the connector marked "L3" in **"Figure 43 - TFC-1201 Loop Card".**
6 Change the settings of the DIP switch represented by 'L4' according to the table below."

7 Finally, power up the panel and change the loop activation parameter to "Yes" as described in "**7.9.6 - Loop Parameters**".

Table 4 : Loop Card DIP Switch Address Setting

DIP Switch 1	DIP Switch 2	DIP Switch 3	Address
Closed	Closed	Open	1
Closed	Open	Closed	2
Closed	Open	Open	3
Open	Closed	Closed	4

5.8 - Loop Lines

TFP-22xx Teknim Intelligent Addressable panels can be handled within 3 optional categories as 1, 2 or 4 loop devices. TFP-22xx series 2-cycle panels can support 240 devices per cycle, 4-cycle panels can support 127 devices per cycle, and all devices operate with the technique Flashlink protocol.

The connection form of the loop line and devices (Class A) is shown in "**10.2 Appendix-Electrical / Figure 46 : Loop Connection**". The unused loop line must be deactivated through the panel or using the "Teknim Loop Configuration" software. If there is no connection made to the loop, the panel will issue a "Loop X Open Circuit" error.

All devices connected to the loop line communicate with the "Teknim Flashlink Protocol". All addressable devices supporting this protocol can be connected to the loop line.

A short circuit isolator or addressable devices with short circuit isolator is required to be employed for every 20 devices on the loop line which all devices are connected as demonstrated in **"10.2 Appendix-Electrical / Figure 46 : Loop Connection"**. Short circuit isolators prevent all loop devices from being switched off in case of any short circuit that may occur in the loop circuit.

The loop cable must be kept away from high-voltage cables that may cause interference in the field environment.

Connect the loop devices with high current consumption as close to the panel as possible.

Every device connected in the loop line must be addressed with the TFCM-1801 addressing module.

5.8.1 - Class A Loop Connection

Class A loop lines are connected as shown in **"10.2 Appendix-Electrical / Figure 46 : Loop Connection"** and should be monitored against short circuit - open circuit conditions.

5.8.2 - Class B Loop Connection

Class B loop lines refer to "the end of line, or, in other words, a connection type the return of which is not connected". Class B connection form is to be monitored against short circuit condition. This warning message can not be issued even when there is any open circuit condition.

Important Note: Class B loops are not compatible with EN54-13. Class B loop can not support more than 32 devices.

5.9 - Network Card Connection

TFP-22xx series Teknim Intelligent Addressable panels are networkable systems. In order to activate the panel's network feature, a new network card must be installed on the panel motherboard. For this;

1 Make sure that there is no power on the panel in the first place.
2 Unscrew the three screws marked "N1" in "**Figure 41 - Loop Card, Network Card and Repeater Panel Connection Points**" and screw the elevation parts supplied together with the "TFC-120 Loop Card" into this place.
3 Insert the flat cable supplied together with the card to the connector marked "N2".
4 Screw the loop card into the elevation parts.
5 Connect the other end of the flat cable to the connector marked "N3" in **"Figure 42 - TFC-1209 Network Card"**.

6 Finally, power up the panel and change the TdNET mode as described in "**7.10 - TdNET Functions**" in order to activate the card.

5.10 - Repeater Panel Connection

TFP-22xx series Teknim Intelligent Addressable panels support 1 repeater panel connection. For repeater panel connection;

1 Make sure that there is no power on the panel in the first place.
2 Insert the repeater panel cable into the connector marked "R1" as shown in "**Figure 41 - Loop Card, Network Card and Repeater Panel Connection Points**" making sure that the cable routing of the repeater panel cable is correct.
3 Power up the panel and check if panel is operative.
4 There isn't any requirements for configuration in order to deploy the repeater panel.

The cable cross section between the TFP-1240/ TFP-1245 Repeater panel and the TFP-22xx panel should be at least 4x0.8mm² and the cable length should be at most 1000m.

5.11 - LTE Module Installation and Antenna Connection

1 Make sure that there is no power on the panel in the first place
2 For LTE Module connection, make sure the flat cable is correctly positioned and insert one end into the connector labeled **"N4"** in **"Figure 43.1: TXM-5474 LTE Card"**. Insert the other end into the connector labeled **"N2"** in **"Figure 41: Loop Card, Network Card, LTE Card, and Repeater Panel Connection Points"**.
3 Select the appropriate spacer from the screw kit included with the LTE Module and attach it to the sections labeled **"N1"** in **"Figure 41: Loop Card, Network Card, LTE Card, and Repeater Panel Connection Points"**
4 Then, place the LTE Module in the section labeled **"N1"** in **"Figure 41: Loop Card, Network Card, LTE Card, and Repeater Panel Connection Points"**, and fasten it with spacer screws.
5 Attach the antenna provided with the product to the antenna connector labeled (**"N5"** in **"Figure 43.1: TXM-5474 LTE Card")** by turning it clockwise. **Note:** The recommended GSM antenna cable length should be less than 3 meters.
6 Power the panel and ensure the LTE module is operating.

6 - Configuration

This section contains information on the configuration and use of the fire detection system.

6.1 - Panel Activation

Activation is a process that enables access to the programming menu for the first installation of the addressable fire detection system. In order to perform this process, a 4-digit password activation code is required.

The activation code is the first password of the programming menu, and such password can be changed later.

Re-activation code must be generated for the forgotten programming password.

6.1.1 - Activation Process:

1 Enter "000" on the panel. (Press "0" key 3 times)
2 In the window displayed, type the 4-digit activation code you have created after seeing the "Enter password:" command and see the information that the panel is activated on the screen.

6.1.2 - Generation of The Activation Code:

1 Visit b2b.bilgibayim.com web address and login to the system with dealer user name and password.
2 Enter the panel activation menu and generate a new activation code for the panel you want to activate by entering the desired information in the form that opens.

6.2 - User Levels

Some features of the panel are restricted by user levels and there are 4 user levels in the panel.

6.2.1 - Level 1

Level 1 is defined as the default user level with the most basic features. The panel will be offering "Level-1" if the user is not logged in. Authorizations provided to a level 1 user is listed below. For schematic representation refer to "**10.3 Appendix-Menu / Table 20 : Level 1 Menu Flow**".

- Displaying alarm list,
- Displaying error list,
- Displaying the alert list,
- Displaying the disabled devices,
- Displaying the unoccupied zones,
- Displaying event log,
- Test for LCD, Indicators and Buzzer,
- Muting buzzer.

6.2.2 - Level 2

A user enters "Level-2" with a level 2 password that may be defined by the Level 3 user. Authorizations to which a level 2 user is entitled, is listed below. The "Level-3" user can restrict the "Level-2" user's powers in the "Permissions" section. For schematic representation refer to "**10.3 Appendix-Menu / Table 21 : Level 2 Menu Flow**".

- Level-1 authorizations,
- Night/Day/Auto mode function,
- General delays On/Off function,
- Deactivating and reactivating devices/zones/outputs,
- Time setting,
- Zone testing,
- Device LED test,
- Displaying alarm counter,
- Displaying (contact) information regarding Technical service,
- Displaying the device list.

In order to exit from the level-2, select "Menu » Exit" or keep pressing on the" ESC "key for a long while on the main screen.

6.2.3 - Level 3

All the authorizations and functionality with regard to the system (except scenario management) are made available at this level. Users of this level are authorized persons trained to install and maintain the system.

In order to switch to Level-3, it is necessary to have Level-3 password in the first place. If the panel is being configured for the first time, Level 3 password is the activation code at the same time.

In order to enter Level-3, select "Menu » Enter " and enter the 4-digit Level-3 password using the keypad.

If the password is correct, the message "Access level 3 active" will be displayed on the screen. If the password is incorrect, the "Wrong Password!" warning will be displayed.

In order to exit from level-3, select "Menu» Exit" or hold down the" OK "key for a long while are in the main screen. The message "Access level 1 active" will be displayed on the screen when exiting.

Authorizations to which a level 2 user is entitled, is listed below. For schematic representation refer to **"10.3 Appendix-Menu / Table 22 : Level 3 Menu Flow".**

- Level-2 authorizations,
- Defining device parameters and label,
- Defining zone parameters and label,

- General delay parameters,
- Zonal delay parameters,
- Displaying panel values,
- Panel parameters,
- Date time settings,
- Loop functions,
- TdNET functions,
- Users,
- Service time setting,
- Alarm depencies setting,
- IP settings.

6.2.4 - Level 4

Level-4 can be entered via a special apparatus and software provided by the manufacturer. At this level the user can access the memory where the program is located and reset the operational data of the field.

6.2.5 - Level Timeout

If one enters a level and leaves it unattended in active status, and if there is no operation performed in the panel, then panel will activate the timeout period and user level automatically switches to Level-1 during the time-out period for security purposes.

Table 5 : Level Timeout Periods

User Level	Timeout Period
Level-2	6 minutes
Level-3	30 minutes

In order to restore user levels, the level-login procedure must be followed from the very beginning.

6.2.6 - Entering an incorrect Password

If the user enters the password incorrectly 5 times, the system cancels the user password entry for 30 seconds for security reasons. In other words, it blocks for 30 seconds and the user is warned about the block time. Users can use their password again after the 30-second block period has expired.

6.2.7 - Forgetting Password, setting New Password

If the password is forgotten, the "level-3" user can change the passwords of all users. If the password "level-3" is forgotten, follow the steps under the heading "**6.1-Panel Activation**".

6.3 - Configuration using the Computer

Establish the connection with the computer as shown in **"10.4 Appendix-Level / Figure 47 : PC Ethernet Connection"** and run the "Teknim Addressable Fire Detection System Configuration Software". Teknim recommends the use of "Teknim Addressable Fire Detection System Configuration Software" in order to get the best result for the installation of fire system.

Software users are authorized persons trained to install and maintain the system.

Advantages of using software:

- Configuration files can be quickly created and applied to the panel,
- Applicable panel configuration files can be downloaded, edited, stored,
- Advanced level scenario rules can be created.

Information on the use of the software can be found in the "Teknim Addressable Fire Detection System Configuration Software" document.

6.3.1 - Connection Settings

In order to use the "Fire Detection System configuration Software with Teknim addressable", IP settings must be made first. Under this configuration, automatic and manual IP configuration can be done. The manual configuration option should be used only if the panel is to be connected directly to a computer. However, the IP address can be configured automatically or manually if the panel is connected to a network to gain access over the network.

6.3.2 - Ethernet Settings

Follow the guidelines below to change the default values:

1 First, enter the main screen.
2 Select "Menu » Programming » "Network Settings" » "Ethernet Settings".
3 Select "Automatic IP" form with direction keys and press "OK"
4 Select "Automatic IP" value as "ACTIVE"
5 Press "ESC" to save the new value.

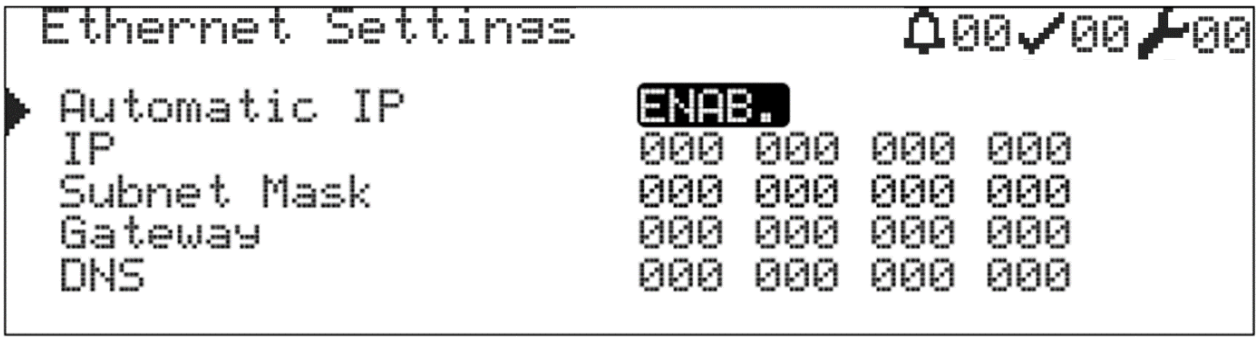


Figure 2 : Automatic IP Settings

Within a short period of time, the panel will receive an automatic IP over the network it is connected to. To check it, you can enter the IP settings menu again or look at the IP viewing page by pressing "011" from the home screen.

Manual IP setup, follow these instructions:

1 First, enter the main screen.
2 Select "Menu » Programming » Network Settings » Ethernet Settings.
3 With the direction keys, the "Auto IP" form is selected and the "OK" key is pressed.
4 Automatic IP value is selected as "PASSIVE" and "OK" is pressed.
5 Then "IP, subnet Mask, Gateway, DNS information is also entered to complete the IP settings.
6 Press the "ESC" key to save the new values.

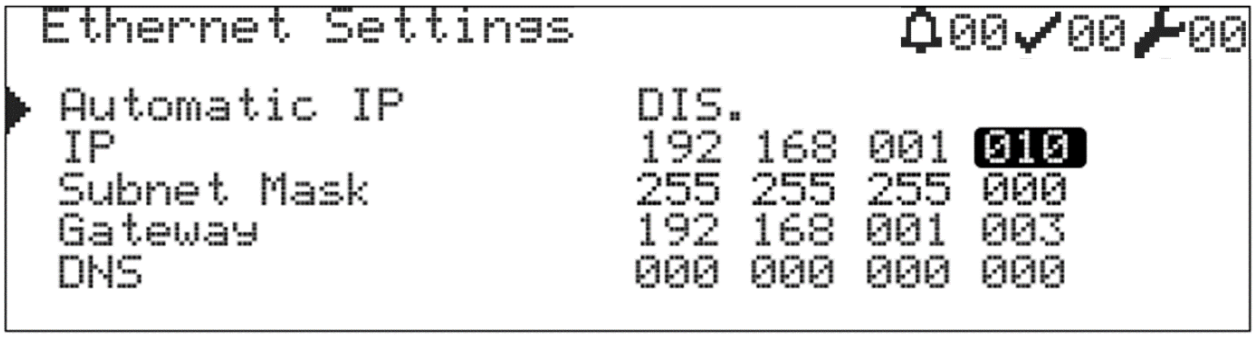


Figure 3 : Manually entered IP Settings

If it is connected directly to a computer, it is enough to fill in the "IP" information. The "Subnet mask, Gateway, DNS" information should be entered as "0". However, if the panel is to be connected to an external IP system such as AHM or Cloud over a network, information such as "Subnet mask, Gateway, DNS" must be filled in.

After saving, the socket connection is out of service for approximately 5 seconds and is reactivated with new values and resume communicating.

6.3.3 - LTE Settings

The activation and APN settings of the LTE module are configured through this menu.

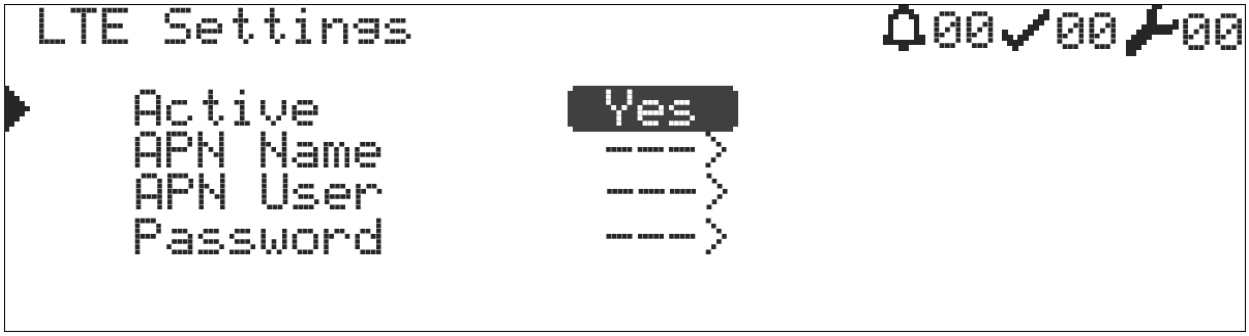


Figure 4 : LTE Settings

To change the LTE settings, follow the instructions below:

1 Start by navigating to the home screen.
2 Select "Menu > Programming > Network Settings > LTE Settings."
3 Choose the "Active" form and press the "OK" button.
4 Select "YES" for the Active form.
5 Press the "ESC" key to save the new value.

6.3.4 - Port Settings

A port value must be given to the panel to allow external connections in the panel. The port value is "10". To change the port value, follow the instructions below:

1 First, enter the main screen.
2 Select "Menu » Programming » Network Settings » Command Port Settings.
3 Select the "Port" form and press the "OK" key.
4 Enter the new port value and then press "OK" again.
5 Press the "ESC" key to save the new value.



Figure 5 : Command Port Setting

6.3.5 - ARC Settings



Figure 6 : ARC Setting Values

Follow the guidelines below to change the default values:

1 First, enter the main screen.
2 Select “Menu » Programming » ”Network Settings” » “ARC Settings”.
3 Navigate the forms with the arrow keys,
4 Go to the form to be changed and press "OK",
5 Use arrow keys to enter a new value and press the "OK" key.
6 Numeric keypad can also be used to enter the new value,
7 Press "ESC" key to save new values.

6.3.6 - Remote Connection



Figure 7 : Remote Connection Values

Follow the guidelines below to change the default values:

1 First, enter the main screen.
2 Select “Menu » Programming » ”Network Settings” » “Remote Connection”.
3 Navigate the forms with the arrow keys,
4 Go to the form to be changed and press "OK",
5 Use arrow keys to enter a new value and press the "OK" key.
6 Numeric keypad can also be used to enter the new value,
7 Press "ESC" key to save new values.

6.3.7 Communication Manager



Figure 8 : Communication Manager

The selection of using either the Ethernet module or the LTE module for cloud and AHM connectivity is configured through this menu. Follow the instructions below to change the Communication Manager value:

1 Start by navigating to the home screen.
2 Select "Menu » Programming » Network Settings » Communication Manager."
3 Choose the "Main Source" form and press the "OK" button.
4 Enter the new value using the directional keys and press "OK."
5 Press the "ESC" key to save the new value.

6.4 - Configuration through Panel

The TFP-22xx series panels are configured with some default values at the factory before leaving. The default configuration values are shown below.

Table 6 : Default Panel Parameters

Panel Parameters	Value
Panel Address	1
Panel Label	Panel
Mode	Night
Language	Turkish
LED Blink	Yes
Zone Startup	1
Aux Reset	Passive
Earth Detection	Active
Alarm Status Settings	
Maximum number of LED in Alarm State	30
Siren Reactivation Same Zone Alarm	Active
Siren Reactivation New Zone Alarm	Active
Siren Sound in Case of Gas Alarm	Active
Test Status Settings	
Activate Siren	No
Activate Buzzer	No

Delays	
General Delay	
General Delay	Closed
Delay Mode	Automatic
Delay Time	0
Zone Based delay	
Zone	1
Delay	Zonel

Although addressable devices are connected to the loop line, there is no device added in the memory of a newly installed panel. All devices are supplied with the following default parameters listed in the tables.

Table 7 : Default Device Parameters

Device Parameters	**Value**
Type	--
Zone	1
Label	[Device xxx]
Smoke Sensitivity	
Night	High
Day	High
O.Activation	No

Table 8 : Default Loop Parameters

Loop Parameters	**Value**
Active	Yes (No, for 1-loop panels)
Disable	No
Label	[Loop xx]
Wiring	Class A

Table 9 : Default Zone Parameters

Zone Parameters	Value
Label	[Zone xx]

Table 10 : Default Output Parameters

Output Parameters	Value
Disabled	No

6.4.1 - Panel Configuration Sequence

The following steps should be followed for panel configuration.

1 Login to Level-3,
2 Panel clock setting,
3 Panel date and night/day setting,
4 Panel parameters setting,
5 General delay setting,
6 Zonal delay setting,
7 Addition of new devices,
8 Device parameters
9 Zone parameters
10 TdNET (Network) parameters

6.4.2 - Login to Level-3

System administrator is required to first login to Level 3 in order to make configuration settings. For the procedure for login to Level-3, refer to the topic "**Level 3**".

6.4.3 - Panel Time Settings

The proper setting of the panel clock and date ensures real-time traceability of the panel. Otherwise, event log entries will not reflect the real-time events of the panel. The zone setting for UTC difference and daylight saving (DST) is also done through this window. The following steps should be followed for panel clock settings.

1 First, go to the main screen and follow the instructions below,
2 Select "Menu »Time Settings",
3 Navigate forms using arrow keys,
4 Go to the form to be changed and press "OK",
5 Use arrow keys to enter a new value and press "OK" key,
6 Press "ESC" key to save new values.



Figure 9 : Time, UTC, DST Setting

The zone selection activates the panel's daylight saving (DST) feature. Allows the automatic time change to be applied in the selected region. Setting the UTC difference correctly ensures that the automatic time change occurs at the correct time.
Regions to choose from:

- Lebanon
- Israel

- Europe
- Disable

6.4.4 - Panel Date and Day/Night Setting

The proper setting of the panel Date and Day/Night ensures real-time traceability of the panel. Otherwise, event log entries will not reflect the real-time events of the panel. It is also important to enter these values individually for each day, "Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday" as the start and end times on a day-by-day basis are the factors that determine the " Day/Night" mode of the panel. "Date, Time, Day Start and End Hours" settings can be made through the time and date settings window. The following steps should be followed for panel time and date settings.

1 First, go to the main screen and follow the instructions below,
2 Select "Menu » Programming » Date and Day/Night Setting",
3 Navigate forms using arrow keys,
4 Go to the form to be changed and press "OK",
5 Use arrow keys to enter a new value and press "OK" key,
6 Press "ESC" key to save new values.

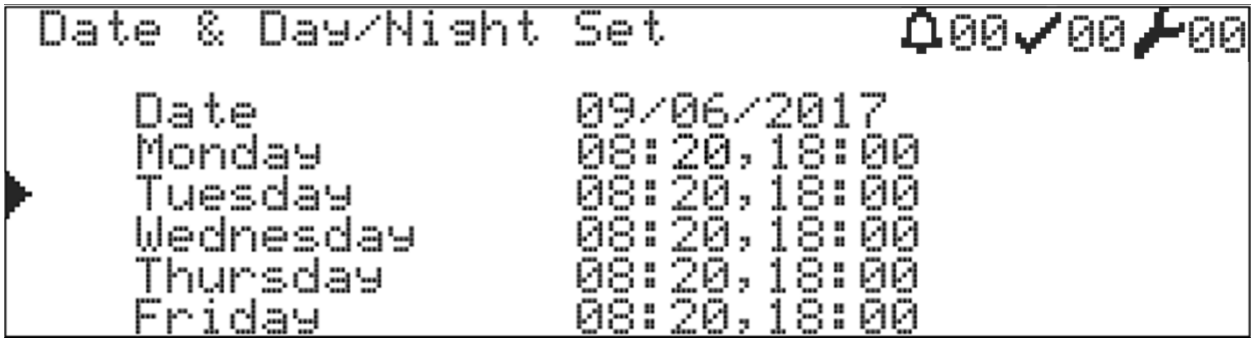


Figure 10 : Date and Day/Night Setting

6.4.5 - Panel Parameter Settings

It is necessary to set the values shown in "**Table 6 : Default Panel Parameters**" after completing the time and date setting. This step may be skipped if the default values are suitable for the proper system operation. The following guidelines are followed for changing default panel parameters.

1 First, enter the main screen,
2 Follow such menu path as "Menu » Programming » Parameters",

The correspondence of the parameter values under this menu is explained below.

Important Note: Up to 25 sirens can be added to the panel. A maximum of 14 sirens can operate simultaneously during an alarm. This limit can be configured by the user.

* Panel Address

Panels constituting and connecting to a network can communicate with each other through their addresses. Therefore, every panel is required to possess a unique address. Otherwise the network will not operate at all. If the panel is not included in the network, the address should be assigned to as "1".

* Night(time)/Day(time) Mode

In order to change day and night mode, go to the "Mode" form and press "OK" button. Night/Day functionality is operative by being dependent upon the time values in the time parameters defined in the automatic mode. Delays introduced to the outputs, and detector sensitivities are taken into account as per day or night mode.

If the panel is included in a network and set as the main panel "Day/Night Mode" is issued to all network panels.

Table 11 : Night/Day Mode

Value	Definition
Nighttime	The sensitivity of the fire detection devices is set to the default nighttime sensitivity. If the delay feature is activated during the nighttime, the outputs are activated without delay in the event of a fire.
Daytime	The sensitivities of the fire detection devices are set to the default daytime sensitivity. If the delay feature is activated during the daytime, the outputs are activated at the end of the default delay time in case of a fire.
Automatic	The day/night value of the panel is automatically changed according to the default day start/end time settings.

* Language Settings

The panel is manufactured with a predetermined language package. To change the language option, navigate to the "Language" form and press the "OK" button.

Language options:

Language Pack 1	Language Pack 2	Language Pack 3	Language Pack 4	Language Pack 5
Turkish	Turkish	Turkish	Turkish	Turkish
English	English	English	English	English
Dutch	Spanish	Romanian	Hebrew	Estonian
French	Italian	Lithuanian	Russian	Romanian
German	Portuguese	German	French	Lithuanian

Select one of the language options available in your package and press the "OK" button again.

* Loop Devices Status LED

All loop devices will initially turn on and off the status LEDs at 20 second intervals as default. If this status LED is required to be changed, then;

1 Select "LED Blink" form,
2 Change it to either "Yes" or "No",
3 Press "OK" key afterwards.

* Siren Repeat in New Zone Alarm

When a new alarm condition occurs, the siren is activated and if it is muted, such feature as to whether the sirens will be reactivated or not based on an alarm originating from a new zone can be optionally changed. For this:

1 Select the "Siren Repeat" form under the "New Zone Alarm" option,
2 Change it to either "ACTIVE" or "PASSIVE",
3 Press "OK" key afterwards.

* Siren Repeat in Same Zone Alarm

If the sirens are muted and a new alarm comes back from a previously alarmed area, it can be optionally changed whether the sirens are re-engaged. For this:

1 Select the "Siren Repeat" form under the "Same Zone Alarm" option,
2 Change it to either "ACTIVE" or "PASSIVE",
3 Press "OK" key afterwards.

* Maximum LED in the Alarm State

In the event of an alarm, it determines the number of LEDs that can be lit at most. The maximum can be 30.

* Siren Play in Case of Gas Alarm

It determines whether the sirens will be active in case of gas alarm.

* Sirens during Testing Process

Whether the sirens will be activated or not for each detector set to alarm status during the course of zone alarm testing, can be changed by means of this option. For this:

1 Select "Activate Siren" positioned under the option "Under Test",
2 Change it to either "Yes" or "No",
3 Then press "OK" key.

* Buzzer during Testing Process

Whether the buzzer will be activated or not for each detector set to alarm status during the course of zone alarm testing, can be changed by means of this option. For this:

1 Select "Activate Buzzer" positioned under the option "Under Test",
2 2 Change it to either "Yes" or "No",
3 Then press "OK" key.

* Zone Start Address

Each panel can be divided into 72 zones within itself. The zone start address can be used as a distinguishing feature in order to avoid confusion regarding the zone addresses between the panels, especially in networked systems. Addresses can be selected as 1, 73, 145, 217, etc..... As an example, suppose the selected zone start address is 145, and alarm number 1 on the instrument panel lights up, then this means that there is an alarm message coming from the area 145. The remaining LEDs are maintained in a logical manner.

* Aux Reset

When the "Reset" button is pressed on the panel, it ensures that the "AUX" output remains in the reset state for 5 seconds. To reset the output when "Reset" is pressed:

1 "Res.Aux" form is selected
2 Change to "ENABLE" and then press the "OK" button.

To keep the output constant at 24VDC when "Reset" is pressed:

1 "Res.Aux" form is selected
2 Is changed to "DISABLE" and then "OK" button is pressed.

* Earth Detection

Where masking of the earth fault is desired:

1 "Earth Det." form is selected
2 It is changed to "DISABLE" and then "OK" button is pressed.

6.4.6 - General Delay Setting

The delay time can only be activated by the detectors. Alarm information provided by the alarm buttons will directly activate the outputs, disregarding the delay times. This delay feature is required to be activated in the first place before

such feature can be used. In addition, this feature can be changed to active/passive by night/day mode. Independent delay times can be applied to each zone.

In order to activate the delay feature:

1 Go to "Menu » Programming » Delays » General Delay" menu,
2 Select "General Delay" form and change it to "ON",
3 Select "Delay Mode" form and select one of the following options, i.e. "ALWAYS", "NIGHTTIME" or "DAYTIME",
4 Select "Period" forms and delay period is set in the form of "hh:mm". The delay time can be entered as "09:59" at most.
5 Finally, save the values by pressing the "ESC" key.

Table 12 : Delay Mode

Value	Definition
ALWAYS	The delay is always active during the daytime and nighttime
NIGHTTIME	Delays become active when the panel enters nighttime mode
DAYTIME	Delays become active when the panel enters daytime mode



Figure 11 : General Delay Window

6.4.7 - Zone Based Delay Setting

If a special delay time other than the general delay time for any zone is required to be introduced, or delays are required to be cancelled, a zone-specific delay should be applied to the zone in question. In order to set some zone-specific delays:

1 Go to "Menu » Programming » Delays » Zonal Delay" menu,
2 Select the "Zone" form and enter the number of the zone required to be changed,
3 Select the "Delay" form and change it in a "ZONAL" manner,
4 "Period" form is displayed when "ZONAL" is selected,
5 Select "Period" forms and delay period is set in the form of "hh:mm". The maximum delay time that can be entered is "09:59". If no zonal delay is desired, then the delay time should be entered as "00:00".
6 Finally, save the values by pressing the "ESC" key.

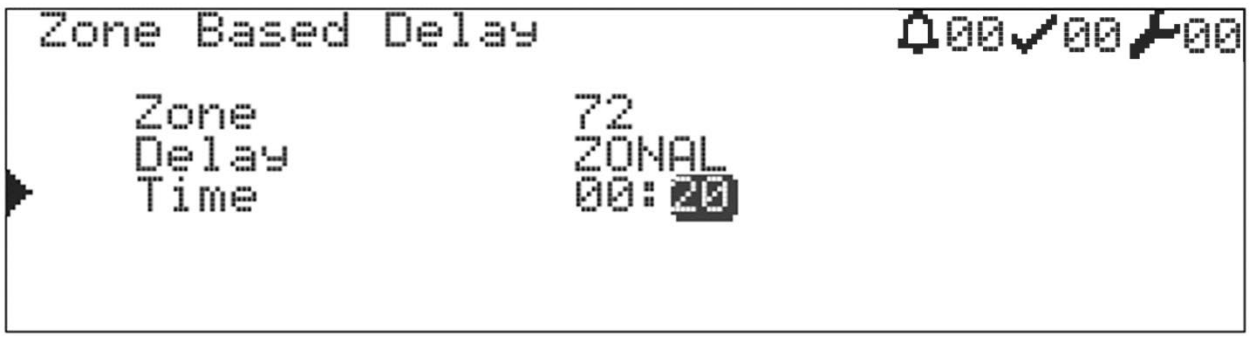


Figure 12 : Zone Based Delay Window

6.4.8 - Outputs Delay

After the panel enters the alarm state, the user-defined outputs delay is displayed on the LCD panel as indicated below.

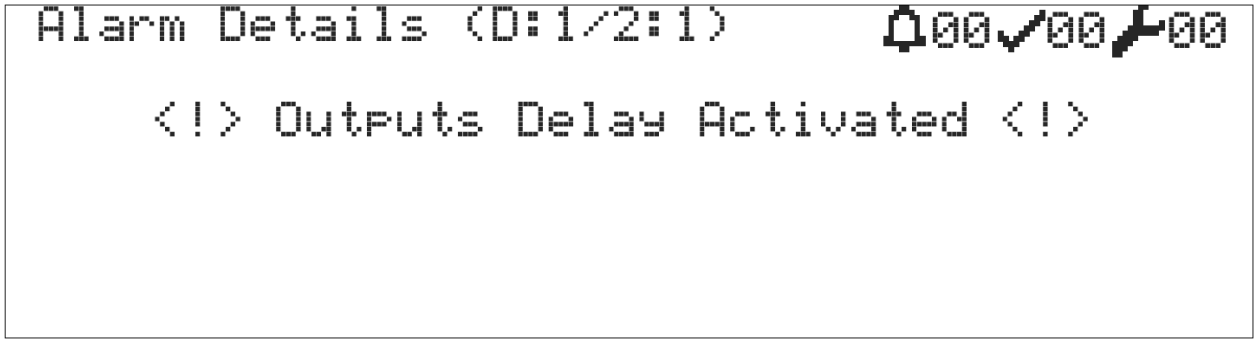


Figure 13 : Outputs Window

6.4.9 - Addition of New Devices

It was mentioned earlier that there is not any added device in the memory of a new panel under the heading **"6.4 Configuration through Panel "**. How to add the devices which have been addressed and connected to the loop line, to the system will be told under this heading. Teknim TFP-22xx series panels can do the procedure for adding devices very simply and quickly. For addition of new devices, refer to "**7.9.4. Add Device**".

6.4.10 - Device Parameters

The parameters of the new devices added in the previous step are configured in the same way as the values in the following table; "Table 8 : Default Device Parameters". Only the device type value received from the newly added devices is changed during the loop query. Once this value has been changed, it is stored in the panel memory as a non-modifiable value. In order to change the device type, it is necessary to delete the device from the loop in the first place. Lack of authorization to change the device type will prevent the use of wrong device and such condition will give an alert as **"Type Error"** in case another type of device is used instead of the former device.

If configuration is made through a computer, the device type is stored directly as an un-modifiable value, without any need for loop query.

The device parameters and their associated meanings will be discussed under this heading.

1 Go to "Menu » Programming » Device Programming » Loop Selection" menu,
2 Select the device required to be programmed, and press "OK" key.

* Device Zone

The "zone" form is selected and the number of the zone where the device is required to be, is entered. Value that can be entered may be ranging from 1 to 72, since the TFP-22xx series panels can be divided into 72 zones.

* Device Label

The label may set the best example to identify the advantages of using an addressable fire detection system. The labeling of the devices will ensure to detect quickly a fire alarm situation to be experienced. For this reason it is very important to give a name to the devices. The TFP-22xx series panels allow labels having a maximum of 16 characters for each device. In order to write a label:

1 Select "Label" form; hereafter proceed to the page where labels are written,
2 write a 16-character label on the label page using the keypad,
3 After the operation is finished, press the "ESC" key and the label will be saved.

* Day/Night Sensitivity

In day and night modes, it may be desirable to change the fire detection sensitivities of the detectors. For this reason, nighttime and daytime sensitivity can be adjusted separately. For this:

1 Select "Night" and "Day" forms under the "Sensitivity",
2 Select one of such values "LOW", "MEDIUM" or "HIGH".

The high sensitivity will allow the detectors to respond more quickly to the fire. Other options will reduce reaction speeds relative to this.

* Type of Input Activation

The input activation type is a parameter that is valid only in modules with input capability (Input Module, Input/Output Module with External Supply, Dry Contact Input-Output Module). When "alarm/active/input detection" information is generated in the input module, it specifies how such information will be evaluated by the panel. Such information can be evaluated in the following manner:

1 Alarm : Generates fire alarm information such as detectors when the activation information reaches the panel.
2 Evacuate : It acts as if the panel Evacuate button is pressed when the activation information reaches the panel.
3 Reset : The panel is reset when the activation information reaches the panel.
4 Mute : The panel is muted when the activation information reaches the panel.
5 Error : The panel gives an error message about the device when the activation information reaches the panel.
6 N/A : Activation information is not evaluated.

Input modules can be employed in scenarios regardless of activation information.

To set the activation type:

1 Go to "Menu » Programming » Device Programming" menu,
2 Select a module equipped with "Input" feature and press "OK" key,
3 Select "Input Activation" form and select one of such values "Alarm", "Evacuate", "Reset", "Mute", "Error", "Scenario",
4 Press first "OK" then "ESC" key.

* Type of Monitoring

Type of monitoring is a parameter that is valid only in modules with input capability (Input Module, Input/Output Module with External Supply, Dry Contact Input-Output Module). It indicates that the input will operate as either "Normally Open" or "Normally Closed". The input value of the module is evaluated according to this parameter.

1 NO Circuit : Normally Open Circuit - the input circuit connection is open circuit and the activation information is transmitted to the panel when the input circuit returns to the closed position.
2 NC Circuit : Normally Closed Circuit - the input circuit connection is closed circuit and the activation information is transmitted to the panel when the input circuit returns to the open position.

In order to set the type of monitoring:

1 Go to "Menu » Programming » Device Programming" menu,
2 Select a module offering "Input" feature and press "OK" key,
3 Select the "Type of Monitoring" form and select one of such values "NO Circuit", "NC Circuit",
4 Press first "OK" then "ESC" key.

* Latching Type

Latching type is a parameter that is valid only in modules with input capability (Input Module, Input/Output Module with External Supply, Dry Contact Input-Output Module). It specifies that the status changes that occur in the input module will be continuously monitored, and that the situations that occur will always be reported to the panel or the status change will be evaluated once until a reset command is delivered to the module.

1 Latching : The change in status (input or error value) in the input module is evaluated once transmitted to the panel. The input values are not changed, even though a new situation occurs, until a reset command is delivered.
2 Non-Latching : The change in status (input or error value) in the input module is continuously evaluated and every new situation that occurs, is reported to the panel.

In order to set latching type:

1 Go to "Menu » Programming » Device Programming" menu,
2 Select a module offering "Input" feature and press "OK" key,
3 Select the "Latching Type" form and select one of such values as "Latching", "Non-Latching",

4 Press first "OK" then "ESC" key.

* Ton Level

Tone level selection is the parameter that is valid only for the addressable fire alarm sounder and the addressable fire alarm beacon sounder. Under this menu, the tone level can be adjusted as "Low, Normal, High". By adjusting these values, the volume of the siren tone at the time of the alarm is adjusted.

To adjust the Tone Level:

1 Go to the "Menu » Programming » Device Programming" menu.
2 Addressed siren whose tone level will be adjusted is selected and "OK" button is pressed.
3 "Tone Level" line is selected and "OK" button is pressed.
4 One of the "Low, Normal, High" options is selected from 4 levels.
5 Press "OK" and then "ESC" button

* Ton Select

Tone selection is the parameter valid only for the addressable fire alarm sounder and the addressable fire alarm beacon sounder. Under this menu, 42 different tones can be set as tone selection. By setting this selection, the type of siren tone at the time of the alarm is set.

To set the Siren Tone:

1 Go to the "Menu » Programming » Device Programming" menu.
2 Addressed siren whose tone type will be set is selected and "OK" button is pressed.
3 "Tone Selection" line is selected and "OK" button is pressed.
4 One of 42 siren tones is selected.
5 Press "OK" and then "ESC" button

* Flash Mode

Flash mode is the parameter valid only for the addressable fire alarm flasher and the addressable fire alarm flasher sounder. Under this menu, the flashing speed of the flash can be adjusted from the "Slow, Normal, Fast" modes as the flash mode selection. By setting this selection, the flash rate at the time of the alarm is adjusted.

To set the Flash Mode:

1 Go to the "Menu » Programming » Device Programming" menu.
2 The siren with the address to be set flash mode is selected and the "OK" button is pressed.
3 "Flash Mode" line is selected and "OK" button is pressed.
4 One of the "Slow, Normal, Fast" modes is selected.
5 Press "OK" and then "ESC" button

* Flash Level

Flash level is the parameter valid only for the addressable fire alarm flasher and the addressable fire alarm flasher siren. Under this menu, the brightness of the flash can be adjusted by selecting the flash intensity selection "Down, Normal, Bright". By adjusting this selection, the flash brightness at the time of the alarm is adjusted.

To adjust Flash Intensity:

1 Go to the "Menu » Programming » Device Programming" menu.
2 Select the addressable siren for which the flash level will be adjusted and press the "OK" button.
3 "Flash Level" line is selected and "OK" button is pressed.
4 Select one of the "Down, Normal, Bright" selections.
5 Press "OK" and then "ESC" button

* Siren Test

Siren test feature is only valid for addressable fire alarm siren, addressable fire alarm beacon siren and addressable fire alarm flasher. With this menu, it is possible to test the addressable siren.

To use the siren test feature:

1 Go to the "Menu » Programming » Device Programming" menu.
2 Addressed siren to be tested with siren is selected and "OK" button is pressed.
3 "Siren Test" line is selected and "OK" button is pressed and it is set to "ON" position.
4 When the siren is in test mode, you can also test the siren by changing the "Tone Level, Tone Select, Flash Mode, Flash Level" parameters.
5 After the siren test is over, the "Listen to Siren" line is selected again and the "OK" button is pressed and the test is stopped by selecting "Stop".
6 Press "OK" and then "ESC" button

* Device Select

1 Go to the "Menu » Programming » Device Programming" menu.
2 The siren device selected and the "OK" button is pressed.
3 One of the "Siren" , "Flash" , "Siren+Flash" devices is selected.
4 Press "OK" and then "ESC" button

Important:

The number of sounders that can be connected is limited according to the current consumption in the loop. Based on current consumption in alarm state, a maximum of 8 sounders can be added to a loop.
If more than 8 sounders are connected, it will be shown as "new device alert" on the display and will not be added to the panel.

* Type of Output Activation

The output activation type is a parameter that is valid only in modules with output capability (Output Module with External Supply, Input/Output Module with External Supply, Dry Contact Input-Output Module and Dry Contact Output Module). The output activation type specifies how the output modules will operate when alarm or error information is generated:

1 **General Alarm :** In case of any alarm or in case of evacuation, output modules are pulled. It will not restore until the "Reset" key is pressed.
2 **General Siren :** In case of any alarm or in case of any evacuation, output modules are pulled immediately if there is not delay time, and at the end of the delay time, if there is any delay time. It does not restore until the "Reset" or "Mute" key is pressed.
3 **General Error :** In case of any error the output modules are pulled. Output returns to its former position in case the error is disappeared.
4 **Zone Alarm :** Output modules are pulled when a zonal fire situation occurs or when the evacuation is active. It will not restore until it is reset.
5 **Zone Siren :** Output modules are pulled at the end of the delay time when a fire in their own zone occurs or when the evacuation is activated. It does not restore until the "Reset" or "Mute" key is pressed.
6 **Zone Error :** In case of any error in their own zone the output modules are pulled. Output returns to its former position in case the error is disappeared.
7 **Zone Output :** It is used when an independent output is needed in scenarios.
8 **N/A (Not Available) :** No evaluation is made in any case.

Output modules can be employed in the scenarios regardless of their activation type.

The module with output activation enabled is displayed in the activation tab of the LCD screen.

In order to set activation type:

1 Go to "Menu » Programming » Device Programming" menu,
2 Select a module equipped with "Input" feature and press "OK" key,
3 Select "Output Activation" form and select one of such values "General Alarm", "General Siren", General Error", " Zone Siren", "Zone Error" and "Scenario",
4 Press first "OK" then "ESC" key.

* Reset Time

The reset time setting is only a valid parameter for conventional zone and siren modules. When the "Reset" button is pressed from the panel, all conventional devices connected to the zone output of the module are de-energized during

the specified "Reset time". This will ensure that conventional devices are resetted. The reset time can be entered in [0–255] seconds.

To set the reset time:

1 Go to "Menu" Programming
2 The conventional module to be set the reset time is selected and the "OK" key is pressed
3 Select the "Reset time" form and enter a second value between [0–255
4 "OK" followed by "ESC

The default reset time is as follows:

Table 13 : Default Conventional Module Reset Time

Parameter	Value
Reset Time	5 sec.

* The current [mA]

Current values are only valid for conventional zone and siren modules. Under this menu, the current values for the conventional zone "normal Circuit, short Circuit and Alarm" can be set. By adjusting these values, other brand conventional products can be integrated into the system.

To set the current values:

1 Go to "Menu" Programming
2 The conventional module to be set current values is selected and the "OK" key is pressed
3 One of the forms "normal circuit", "short circuit", "Alarm" is selected and a shaft amp current value is entered between [0–100
4 "OK" followed by "ESC

The default current values are as follows:

Table 14 : Default Conventional Module Current Values

Current	Value
Normal Circuit	4 mA
Short Circuit	50 mA
Alarm	20 mA

6.4.11 - Zone Parameters

Apart from device parameters, there are zone labels and disabled parameters related to zones. Under this heading, the zonal parameters and their associated meanings will be discussed. In order to set zone parameters firstly:

1 "Go to "Menu » Programming » Device Programming" menu,
2 Select the zone required to be programmed and press "OK" key.

* Zone Label

It may not be enough to just label the devices for some systems. For example, "Meeting Room" displayed on the screen will not be sufficient in order to locate a fire just started in any meeting room in a building having more than one meeting rooms. In addition to this, another label specifying the floor where the meeting room is located, will be more meaningful in locating the room much easier. In such case, there will be a message saying "Meeting Room 1st Floor" on the screen.
In order to enter the zone label;

1 Select "Label" form; from here go to label generation page,
2 16-character label is generated in the label page using the keypad,
3 After the operation is finished, press the "ESC" key and then the label will be saved.

6.4.12 - Alarm Depencies

False fire alarms in fire alarm systems have become a significant waste of resources worldwide. Therefore, fire alarm systems have developed solutions to minimize such occurrences. These solutions are typically detector or panel-

focused. The use of advanced sensors, filters, and algorithms in detectors helps prevent false alarm signals. Alarm dependency refers to the solutions developed for the panel, which performs decision-making functions in the system.

Configuration is done at two levels: general and specific. The priority order of configurations is Specific Alarm Dependency > General Alarm Dependency. If any alarm dependency is not active, pre-alarm signals will directly trigger the panel to sound the alarm.

* General Alarm Dependency Setting:

1 Go to the "Menu > Programming > Alarm Dependencies" menu.
2 Select the "General Alarm Dependency" configuration and press the "OK" button.
3 Choose the "Active" form and select one of the options: "ALWAYS," "DAY," "NIGHT," or "OFF."
4 Select the "Mode" form and choose either "TYPE A" or "TYPE B" as determined by the standard.
5 Select the "Confirmation Time" form and enter a value between 300 and 1800 seconds.
6 Select the "Inhibition Time" form and enter a value between 0 and 60 seconds.

Table 15 : General Alarm Dependency Mode

Value	Definition
ALWAYS	Alarm is continuously active, both day and night.
NIGHT	Alarm becomes active when the panel enters night mode.
DAY	Alarm becomes active when the panel enters day mode.
OFF	Alarm is inactive when the panel enters off mode.

Table 16 : General Alarm Dependency Type

Mode	Scope	Pre-Alarm Signal Threshold
Type A	Zone	2
Type B	Panel	2

* Specific Alarm Dependency Setting

1 Go to the "Menu > Programming > Alarm Dependencies" menu.
2 Select the "Specific Alarm Dependency" configuration and press the "OK" button.
3 Select "ID" and define a specific alarm dependency in the range of 1-5.
4 Choose the "Active" form and select one of the options: "ALWAYS," "DAY," "NIGHT," or "OFF."
5 Select the "Zone" form and choose a zone number between 1-72.
6 Select the "Mode" form and choose either "TYPE A" or "TYPE B" as determined by the standard.
7 Select the "Confirmation Time" form and enter a value between 300 and 1800 seconds.
8 Select the "Inhibition Time" form and enter a value between 0 and 60 seconds.

Table 17 : Specific Alarm Dependency Type

Mode	Scope	Pre-Alarm Signal Threshold
BY-PASS	Zone	1
TWO DEVICE	Zone	2
DUAL DEVICE	Device	2

7 - Using the Panel

In this section you will find information about using the panel and other features of the panel.

7.1 - Status Window

The status window is the message window showing the "Fire", "Error" and "Warning" messages related to the instantaneous operational data of the panel. Messages displayed in the status window are of great importance in terms of maintaining and managing the panel. The user is required to take measures against warning messages if there is any message, and if user can't take measures, then he must notify the senior executives.
In order to access the status window:

1 Go to "Main Screen" and press "ESC" key,
2 The menus regarding "Fire, if any, "Errors", if any and "Warnings", if any, will be listed in the status window.
3 In order to get more detailed information, select the relevant option with "UP" and "DOWN" keys, then press "OK" button to get detailed message list.

7.1.1 - Fire Window

In order to reach the fire list, select "Fire Alarm" in the "STATUS" window and then press "OK" button. All resulting fires will be listed within this window together with the fire sequence number, label and zone label.

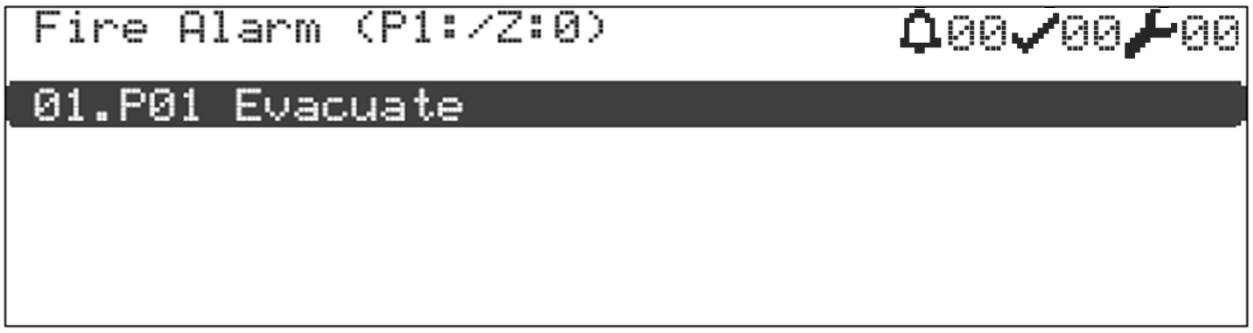


Figure 14 : Evacuation Warning Message

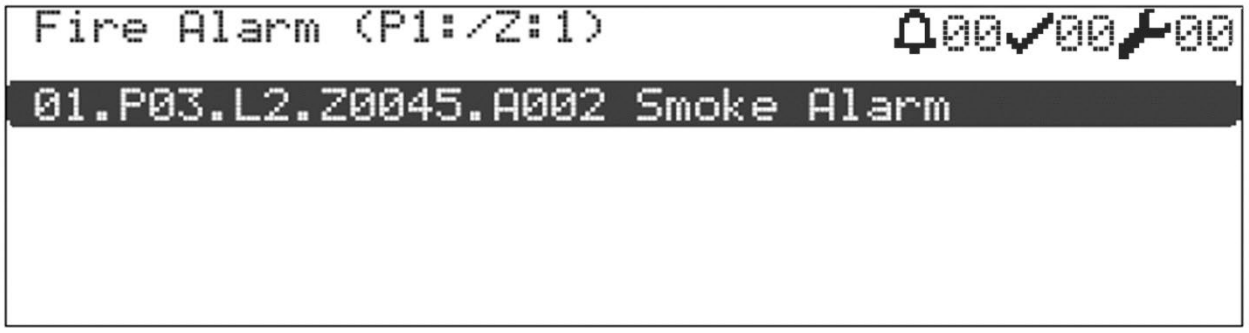


Figure 15 : Smoke Alarm Warning Message

For more detailed definition about the fire, a fire is selected from the fire list with the "UP" and "DOWN" keys and the definitions of these spaces can be reached together with the loop address, zone address and locale address of the fire by pressing the "OK" key. At the same time, the user can see the alarm details without pressing any key when the fire alarm is triggered.

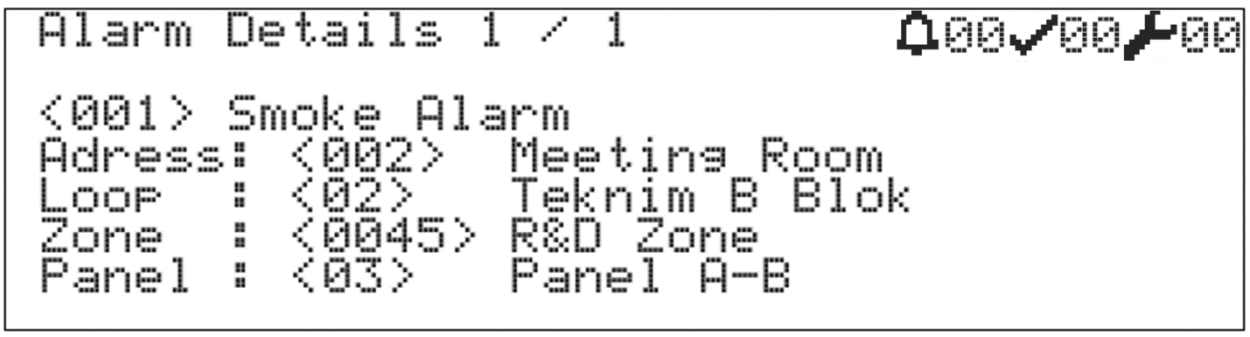


Figure 16 : Alarm Detail Window

7.1.2 - Error Window

Errors are the types of data that will affect the direct functioning of critical functions such as fire detection/notification on the system. In order to access error list, select "Errors" in the "STATUS" window and press "OK" button. Any errors that occur will be listed within this window. If there are more than 99 errors, the excess of the errors will not be included in the list.



Figure 17 : Error Reporting

For more detailed definition about the error, an error is selected from the error list using "UP" and "DOWN" keys and the definitions of these spaces can be reached together with the loop address, zone address and locale address of the error by pressing the "OK" key.

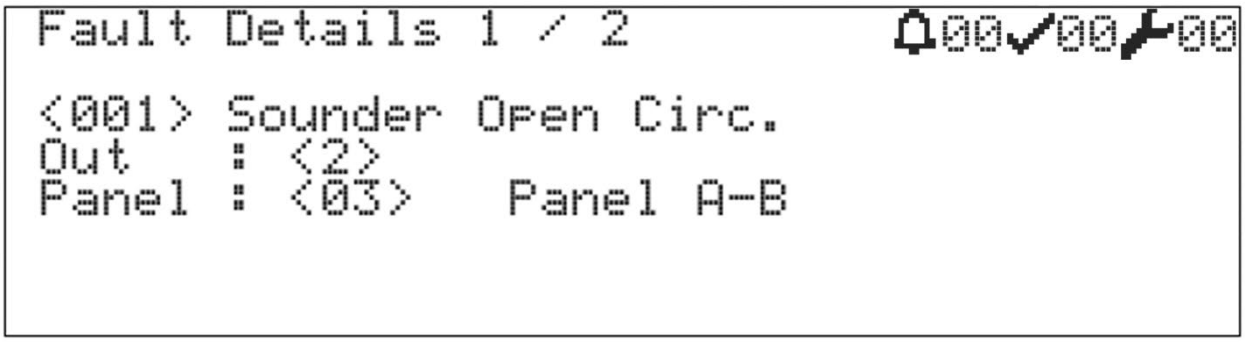


Figure 18 : Error Detail Window

The types of errors that may occur are listed below:

1. **No Battery**
   It is stated that there is no battery under 2V. "No battery" is displayed on the error screen. The event is saved as "No battery" in the memory.
2. **Empty Battery**
   Voltage under 20.5V is considered to be empty. "Battery empty" is displayed on the error screen. The event is stored in the memory as "Empty Battery".
3. **High Battery Resistance**
   Internal resistance value of the battery is above the specified value. The battery must be replaced.
4. **No SMPS**
   Either SMPS is not connected or there is no mains.
5. **Battery Charging Circuit**
   This error is given if the charging voltage is above the appropriate voltage value for the battery charge. Compensation is taken into account.
6. **High Voltage in the Earthing System**
   There is an undesired connection in the earthing system. Earthing system may have been short-circuited with a line with (+) power supply or potentially high voltage.
7. **Low Voltage in the Earthing System**
   There is an undesired connection in the earthing system. Earthing system may have been short-circuited with a line with (GND) power supply or potentially low voltage.
8. **Siren [X] Open Circuit**
   The siren line has been opened, broken or connected with no terminating resistor.
9. **Siren [X] Short Circuit**

The two terminals of the siren line were short-circuited.

10 **Device [X] N/A**
The device may be removed, defective, or remained in the open circuit section of the loop. Such error will also be seen in case the excess current is drawn through the loop line. If the device was removed, then install the device to its place, but wait 40 seconds after the installation in order to see whether the error is eliminated.

11 **Device [X] CRC**
Loop line may be over-affected by the environmental factors. Check the earthing system. If other devices under the same conditions don't give this error, replace it with the other devices to check whether the error is repeating. If the error persists, the device may be defective. If the error doesn't persist, try to protect the affected part of the line from environmental factors.

12 **Device [X] NACK**
The occurrence of this error is the same as the occurrence of "N/A" and "CRC" errors. This error will be experienced during the installation of the system and during programming of the device.

13 **Device [x] Short Circuit**
indicates that input is short-circuited in the input modules and connected load terminals are short-circuited in the output modules.

14 **Device [x] Open Circuit**
indicates that input terminals is open-circuited in the input modules. It indicates that connected load terminals is open-circuited in the output modules.

15 **Device [x] External Supply Problem**
indicates there is a problem in the external supply input of the output modules.

16 **Device [x] General Error**
"General Error" will be displayed on the screen when an input is detected if activation type is selected as "Error" for the input modules.

17 **Device [x] Dirtiness**
There is dirt on the smoke detector. It needs to be cleaned.

18 **Device [x] Type Error**
This error is generated in cases when another type of device is connected to an address other than the current configuration.

19 **Loop Card [X] N/A**
Loop card doesn't respond to motherboard queries. There may be a problem with the cable connection between the motherboard and the loop card. The loop card may be defective or locked. In such case, restart and test the panel.

20 **Loop Line [X] Open Circuit**
There may be a discontinuity in the line or the input and output terminals of the line may not be connected. Locate the discontinuation point by carrying out "Loop Control" from the loop functions. An expression like «O:xxx, I:yyy» will be displayed on the screen after finishing the loop control. xxx: corresponds to the number of devices from the beginning of the loop up to the discontinuation point, yyy: corresponds to the number of devices from the end of the loop up to the discontinuation point.

21 **Loop Line [X] Short Circuit**
The loop line is short-circuited. Locate the point of short circuit by tracing the isolators.

22 **Network N/A (Not Available)**
The network card does not respond to the motherboard queries. There may be a problem with the cable connection between the motherboard and the network card. The network card may be defective or locked. In such case, restart and test the panel. Check the LED status on the network card.

23 **Network Open Circuit**
It indicates that there is an open connection on the network line. For the detection of the open point, the LEDs on the network card must be checked.

The error window automatically opens in case where when there is no fire alarm condition but the time-out period, which is initiated when no key is pressed on the panel, exceeds 25 seconds.

7.1.3 - Warning Window

Warnings are the data types used for situations which have no effect on the critical functions such as fire detection and notification, but, again, gives information that some functions are left inactive or that a function performed is valid.

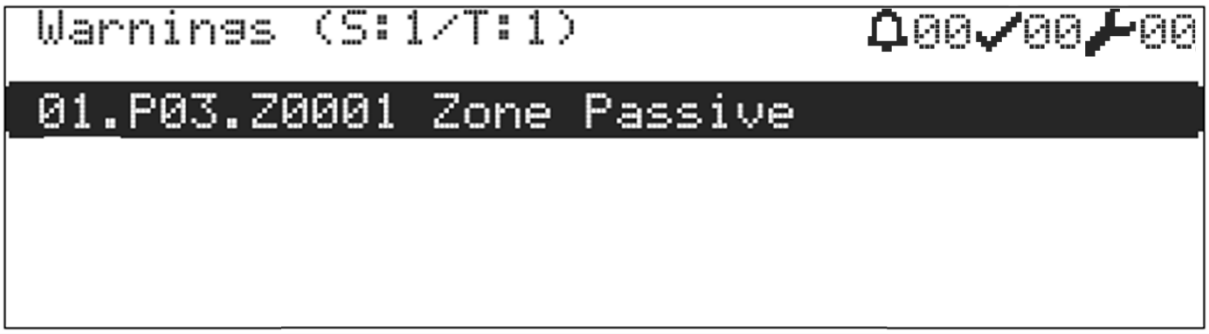


Figure 19 : Warnings Window

For more detailed definition about the warning, a warning is selected from the warnings list with the "UP" and "DOWN" keys and the definitions of these spaces can be reached together with the loop address, zone address and locale address of the warning by pressing the "OK" key.

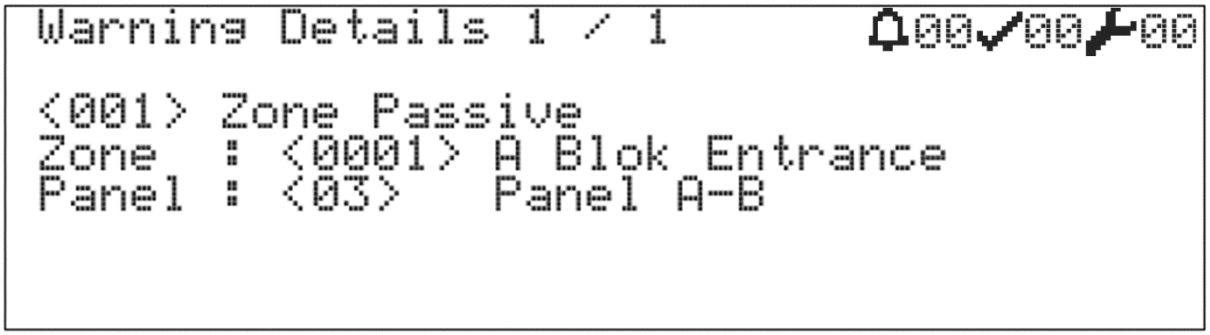


Figure 20 : Warning Details Window

The warning window is used to notify the system user of the existence of the data listed below.

- Disabled devices
- Disabled zones
- Disabled outputs
- Disabled loops
- Zones under testing
- Newly detected devices
- Scenario rules becoming effective

7.2 - Event Log

The event log is the section where situations that are important to the Teknim addressable panel are recorded and displayed. In the event log, records are divided into 10 categories and each category is evaluated with different events within itself. Records can be deleted using the Teknim Addressable Fire Detection System Configuration Software.

The "D." expression that can be seen in the event log lists specifies that the event entry is restored from the state (Restore).

Table 18 : Event Log Categories

Category	Event
Devices	Alarm Smoke Alarm Heat Alarm Smoke & Heat Alarm Button Alarm Input Module Alarm Conventional Module Alarm Gas Alarm Device N/A Device Configured CRC Error Short Circuit Open Circuit Load Error External Supply Error Type Error Error Configuration
Loop	Loop N/A Loop Inactive Loop New Devices Loop Short Circuit Loop Open Circuit Loop Init. Loop Configured
Panel	Panel Init. Reset Evacuation Panel Configured System Error Panel N/A Service Warning
SMPS	Power Supply N/A Charging Circuit Error
Battery	Battery N/A High Battery Resistance Empty Battery
Sirens	Short Circuit Open Circuit
Zone	Zone Configured
Network	Open Circuit Network N/A (Lost) Network Configured
Outputs	Short Circuit Open Circuit Passive

Scenario	Active
Earthing	Low High
User	Active Passive Configuration

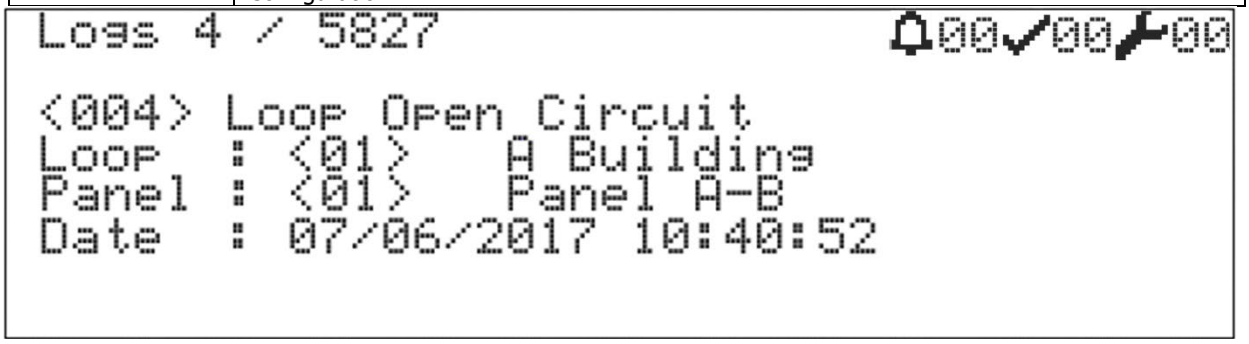


Figure 21 : Sample Event Memory Window

7.3 - Disable Menu

Disable menu is used to put devices, zones, siren outputs and loop lines into the "Disabled" state.

7.3.1 - Disabled Devices

Deactivated devices continue to communicate with the panel, but do not participate in the process of a fire situation. The fire detection process continues when the disabled state is removed from the device.

In order to disable any device, switch to at least level 2, and then follow the steps below;

1 Go to "Menu » Disable » Disabled Devices" menu,

2 Select the required device from the list and change the status into "PASSIVE",

3 Change the device status into "ACTIVE" if you want to reactivate the device.

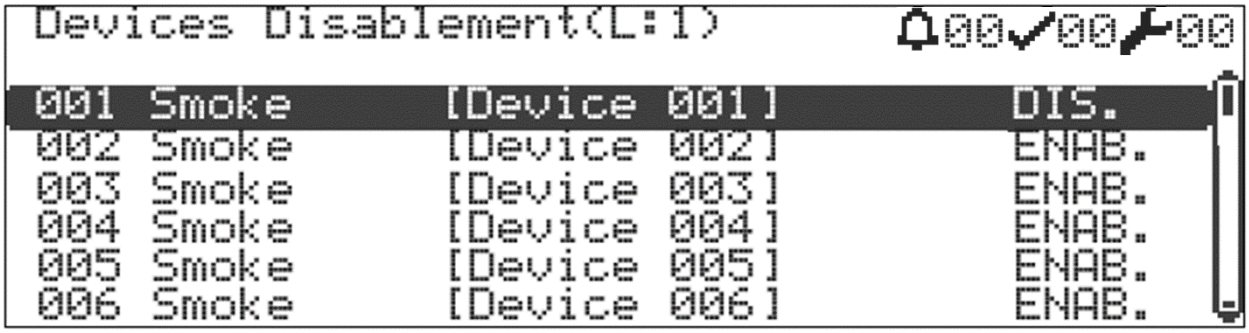


Figure 22 : Disabled Devices Window

7.3.2 - Disabled Zones

Devices located in the disabled zones continue to communicate with the panel, however they do not participate in a fire state. When disabling provision imposed on the zone is removed, the devices in the zone resume fire detection.

In order to disable any zone, switch to at least the level 2, and then follow the steps below;

1 Go to the "Menu » Disable » Disabled Zones" menu,

2 Select the required zone from the list and change the status into "PASSIVE",

3 Change the zone status into "ACTIVE" if you want to reactivate the zone.

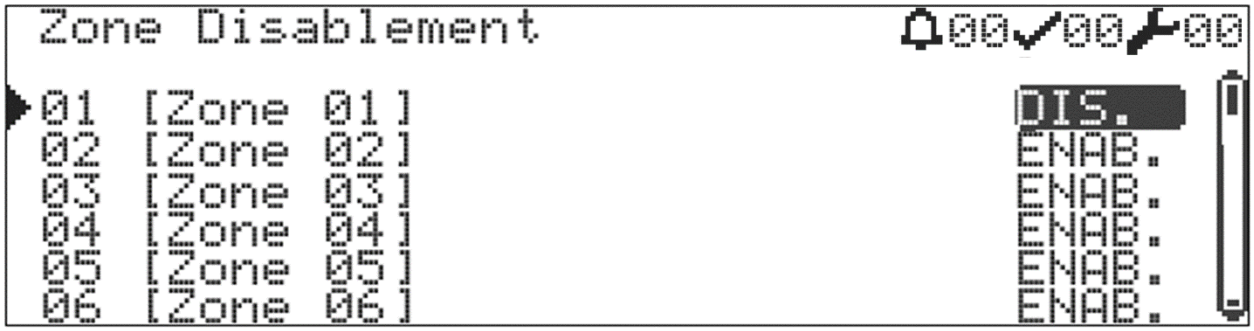


Figure 23 : Disabled Zones

7.3.3 - Disabled Sirens

Deactivated siren outputs will not be active in case of any fire and scenario situations. However, siren outputs will be continuously monitored for short-circuit and open-circuit conditions.

- The designation "(N)" positioned next to the outputs means normal siren output.
- The designation "(P)" implies that it's a programmable siren output.

In order to disable any output, switch to at least level 2, and then follow the steps below;

1 Go to the "Menu » Disable » "Disabled Outputs" menu,
2 Select the required output from the list and change the status into "PASSIVE",
3 Change the output status into "ACTIVE" if you want to reactivate the output.

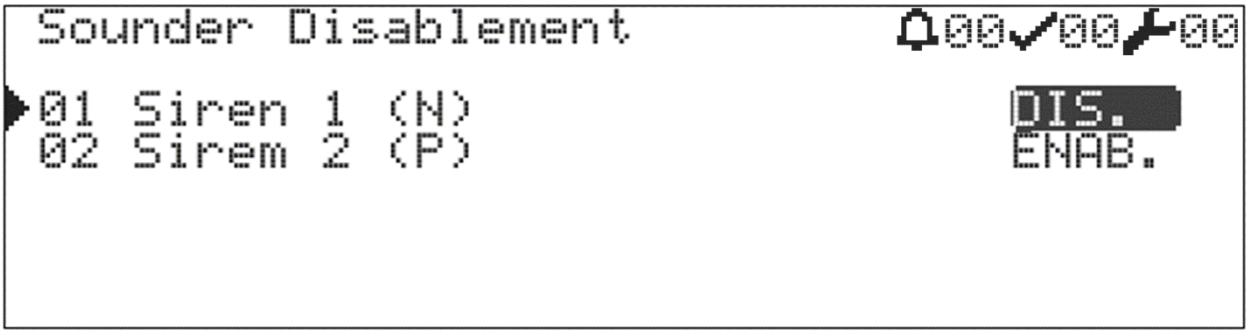


Figure 24 : Disabled Sirens Window

7.3.4 - Disabled Loops

Disabling the loop causes all devices that are connected the that loop, to be disabled. However, the loop card and the panel motherboard continue to communicate with each other.

In order to disable a loop, switch to at least level 3, and then follow the steps below;

1 Go to "Menu » Programming » Loop Functions » Loop Parameters" menu,
2 Change the option "Disable" into "Yes",
3 Then press the "ESC" key in order to complete the saving process,
4 Change the disable option into "No" if you want to reactivate the loop.

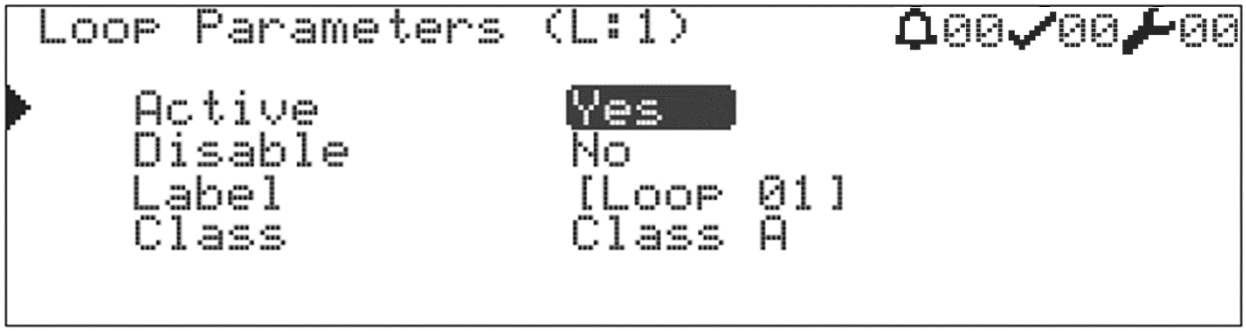


Figure 25 : Loop Parameters

7.4 - Zone Test

Zone testing is a feature that is used to test the alarm functions of fire detection devices. In cases where the settings depicted under topics of the "**6.4.5 Sirens Under Testing"** and **"6.4.5 Buzzer under Testing**" are fulfilled, sirens or buzzer sounds for 10 seconds for the zone positioned within the scope of every test alarm and thereafter the system resets.

The zone test is automatically terminated after 1 hour in case of any possibility that the zone may have been forgotten in the testing process. Then more one region cannot be put into the test state at the same time. Smoke detectors in the test-put area provide a faster response to test fumes or test sprays by shutting down the algorithm that controls the rejection of transient signals to prevent false alarms and reducing the number of verifications.



Figure 26 : Zone Test Settings Window

7.5 - Device LED Test

The device LED test is used in cases where a need is arisen to determine the address/place of the devices or to check whether the communication is healthy. The limit for maximum number of LED to be lit can be set by the "**6.4.5 Maximum LED in Case of Alarm**" parameter. All LEDs that are lit, will automatically go out when the device is exited from the LED test window.

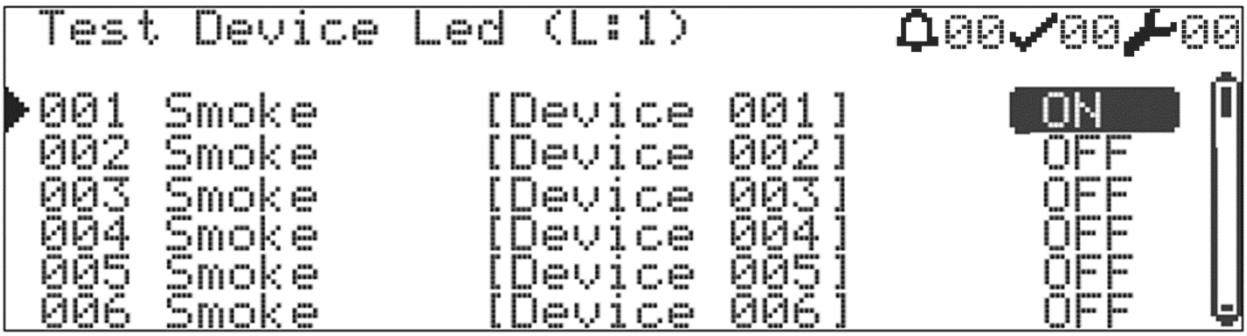


Figure 27 : Device LED Test Window

7.6 - Displaying Technical Service Contact Information

Technical service contact information can be used to notify events that are outside the intervention of a level 2 user when an emergency occurs. Contact information can only be accessed by level 2 users. This information consists of executive name, company name, company address/web address and telephone number.

Switch to the Level 2 in order to display, and then;

1 Go to "Menu » Contact Information" menu.

7.7 - Alarm Counter

It keeps the number of alarm states that the panel has been on the alert ever since the first installation.

7.8 - Panel Status

The panel status window can display the power supply output voltage, battery voltage, battery/cabinet temperature, siren voltages, versions and serial numbers of the motherboard and LCD cards, panel IP address and port number.

7.9 - Loop Functions

All functions related to the loop are available within this menu.

7.9.1 - Device List

The devices included in the loop are listed and used for display purposes only.

7.9.2 - Loop Control

This function is used to determine the location of discontinuities in the loop line. For this:

1 Go to "Menu » Programming » Loop Functions » Loop Control" menu,
2 Press "OK" key in order to perform loop control,
3 The loop control scans the entire line and determines the number of devices detected on the part of "Loop Output" and on the part of "Loop Input", and this process takes about 20 seconds,
4 A new "Operation in Progress" window will come up again after the detection process, while the remaining devices in the system will be reconfigured, and wait for the configuration to finish.
5 The following expression will be displayed at the end of process.

- B: XXX, S: YYY

6 XXX: corresponds to the number of devices from the beginning of the loop up to the discontinuation point,
7 YYY: corresponds to the number of devices from the end of the loop up to the discontinuation point.
8 In this way, location of the discontinuity can be determined.

7.9.3 - Loop Information

The loop information window provides access to the such status information related to the selected loop as loop input/output voltages, loop current, loop scan time, categorical numbers of the types of added devices, and version information of the loop card.

7.9.4 - Add Device

1 Go to "Menu » Programming » Loop Functions » Loop Selection » Add Device" menu,
2 Number of the devices to be newly added, will be displayed on the screen,
0 will be displayed if there is no newly added device; in such case it must be ensured that the devices are connected to the line and addressed correctly.
3 The number of new devices displayed on the screen should be the same as the number of devices connected to the line, if not, the page must be updated by switching to the previous menu and accessing the "Add Device" menu once more.
4 Press "OK" key and wait for all devices to be updated.

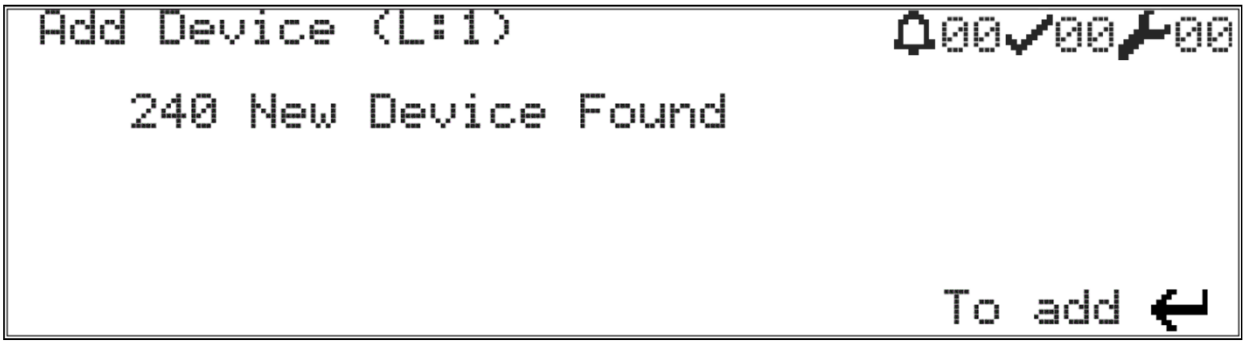


Figure 28 : Addition of New Devices

You should re-enter the "Add Device" menu and check whether a new device is added or not in order to make sure that the process is completed properly.

You can visit the "Device List" menu to verify the correctness of the added devices.

This procedure is also applicable to any new device that will be integrated into the system later on.

7.9.5 - Delete Device

In order for a device to be deleted from the loop, such device must be removed from the loop in the first place and there must be an error message notifying that the device is missing. Assuming that the foregoing conditions are met, for deleting a device:

1 Go to "Menu » Programming » Loop Functions » Loop Selection » Delete Device" menu,
2 Number of the missing devices must be displayed on the screen,
3 If number of the missing devices is not correct, the number must be updated by switching to the previous menu and accessing the "Add Device" menu once more.
4 Press "OK" key and wait for all devices to be deleted.

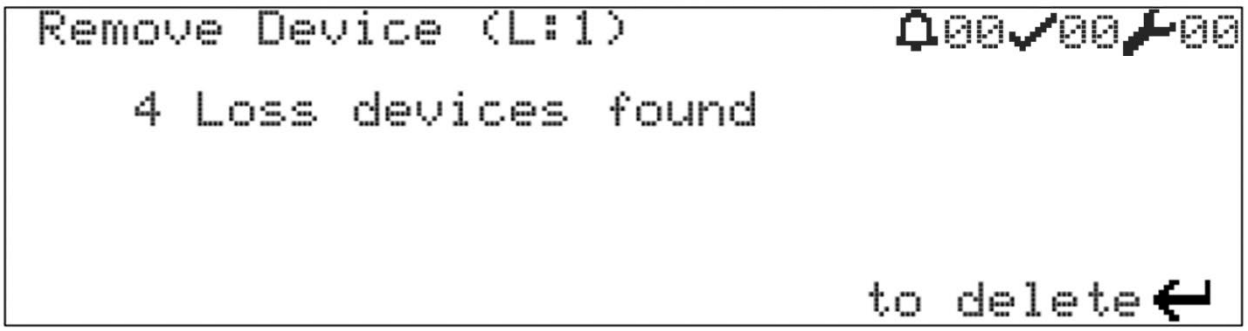


Figure 29 : Delete Device Window

7.9.6 - Loop Parameters

Loop parameters are delivered with the following default values.

Table 19 : Default Loop Parameters

Parameter	Value
Label	Loop [X]
Connection	Class A
Disabled	No
Active	Yes (No for single loop panels)

In order to change the loop parameters, follow the instructions provided below:

1 Go to "Menu » Programming » Loop Functions » Loop Selection » Loop Parameters" menu,
2 Select "Active" form and change the option to either "NO" or "YES",
3 Select "Disable" form and change the option to either "NO" or "YES",
4 Select "Connection" form and change the option to either "Class A" or "Class B",
5 Select "Label" form and type the desired label,
6 Finally press "ESC" key in order to save the values.

For detailed information on loop connection, read the topic, "**5.8 Loop Lines**".

* Loop Active Parameter

It is a parameter that determines whether the Loop card will be processed by the motherboard. If the panel has 1 loop, the active parameter of the second loop is set to "No" as default. The fact that the active parameter of the second loop is set to "No", will ensure that the said loop will not be taken into consideration at the start up and at the subsequent processes. If the panel is equipped with a second loop card, this parameter should be changed to "Yes" for the operation of the loop card.

* Loop Disabled Parameter

It works in a way analog to the loop card active parameter. Unlike loop card active parameter, the panel gives warnings regarding the disabled status in cases when the card is disabled.

* Loop Connection Parameter

Loop connection features "Class A" and "Class B" options. For more information about Class A and Class B, refer to the following topics, "**5.8.1 Class A Loop Connection**" and "**5.8.2 Class B Loop Connection**".

* Loop Panel Parameter

It is used to create clearer expressions in the alarm, errors and warnings window. The expression to be written on the screen when a loop-related condition occurs is the label defined in this very parameter.

7.10 - TdNET Functions

TdNET is a multi-master protocol and communication technology that works with Token-Passing topology that provides the network infrastructure of Teknim addressable fire detection systems. A network is created with up to 16 devices supporting the TdNET protocol. In order to connect the TFP-22xx panels to the network line, the **TFC-1209 TdNET Network Card** must be integrated through the P2 port on the motherboard.

For more information about TdNET, refer to the TFC-1209 TdNET Network Card Operating Instructions Manual.

7.10.1 - TdNET Map

It lists the control panels which the panel requires to see on the network. If a panel previously added to the network is no longer detected, it will be displayed as "Panel N/A" (Not Available) on the error screen.

TdNET list is displayed on the screen when the TdNET Map is accessed, and a panel is selected from such list and addition to and deletion from the network memory with either "ACTIVE" or "PASSIVE" option, of the selected panel can be achieved.

In order to add a panel to the map, follow the instructions provided below:

1 Go to "Menu » Programming » TdNET Functions » TdNET Map" menu,
2 Select the panel required to be added using Up and Down keys,
3 Press "OK" key and change the form value to the "ACTIVE",
4 Press "OK" and thereafter "ESC" key in order to save and complete the process.

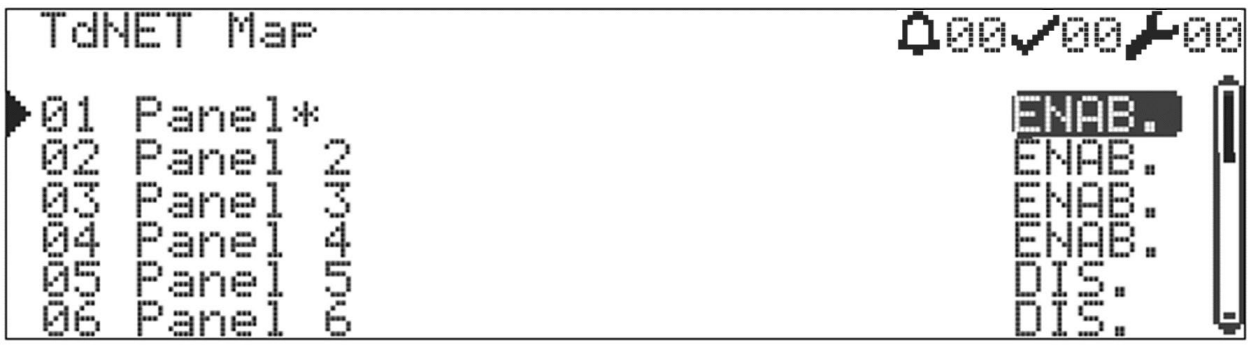


Figure 30 : TdNET Map Only Panel 2, 3 and 4 are Being Monitored

7.10.2 - TdNET Parameters

The general settings of the panel for TdNET are made with the TdNET parameters menu. All parameters included in this menu are reviewed in detail below.

1 TdNET Mode

a. **Independent:** Default value. The panel will not send any messages to the network line. It does not evaluate any messages coming through the network. However, it continues to listen to the devices available on the network.
b. **Station:** Evaluates all error, alarming, warning information coming from any zone located on the network. Every panel selected as a station continually communicates error, alarming, warning information to the network line without making any adjustments.
c. **Main Panel:** İs same as the station mode. It also sends time synchronization, night/day mode, delay active /the passive commands to network line. There should be only one main panel on the network line.

2 **Event Memory:** can be selected as ACTIVE/PASSIVE. It is specified that whether the data received from the network will be recorded in the event log.
3 **Time Synchronization:** can be selected as Local/Network. The time and date settings are achieved through the network or provided locally.
4 **Night/Day Mode:** can be selected as Local/Network. When the network is selected, the panel changes the day/night mode in line with the commands delivered via the network.
5 **Delays:** can be selected as Local/Network. When the network is selected, the panel changes the delay mode in line with the commands delivered via the network.
6 **Connection:** can be selected as Class A / Class B. When Class B is selected, the panel does not evaluate the open circuit faults of the network line and the network line continues to operate as a Token-Bus.

7.10.3 - Incoming Commands

Incoming commands are used to determine whether the commands delivered from the panels added to the TdNET map should be evaluated, or not. These are "Alarm", "Error", "Warnings", "Reset", "Buzzer Muted", "Siren Muted", "Evacuation" commands. All incoming commands are set to "PASSIVE" as default.

In order to set incoming commands, the panel to be set must be added to the TdNET map in the first place. Later on, follow the instructions provided below:

1 Go to "Menu » Programming » TdNET Functions » Incoming Commands" menu,
2 Select a panel appeared to be active in the list and enter the commands window with "OK" key,
3 Select either "ACTIVE" or "PASSIVE" status option for "Alarm", "Error", "Warnings", "Reset", "Buzzer Muted", "Siren Muted", "Evacuation" commands,
4 Finally press "ESC" key and save the values.

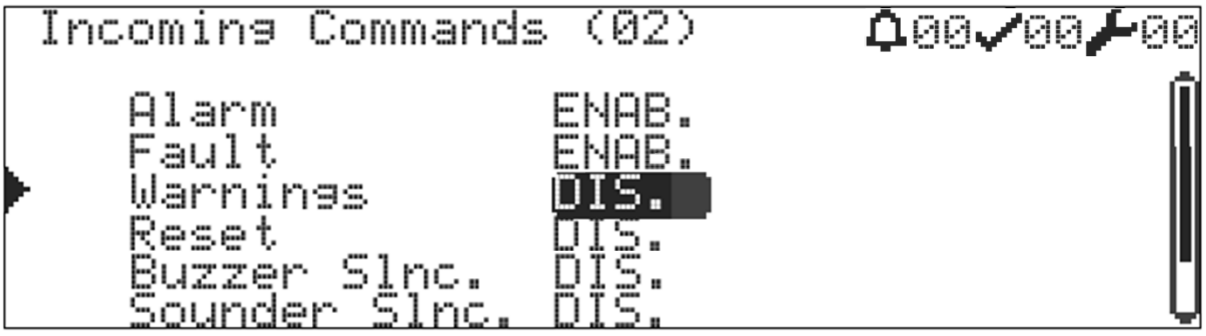


Figure 31 : TdNET Incoming Commands

7.10.4 - Outgoing Commands

All panels operating in the Station and Main panel mode will continuously transmit "Alarm", "Error" and "Warning" information to the network line as default. In addition to this, they transmit "Reset", "Buzzer Muted", "Siren Muted", "Evacuation" commands to the network line as required. Follow the instructions provided below in order to set these commands:

1 Go to "Menu » Programming » TdNET Functions » Outgoing Commands" menu,
2 Select either "ACTIVE" or "PASSIVE" status option for "Reset", "Buzzer Muted", "Siren Muted", "Evacuation" commands,
3 Finally press "ESC" key and save the values.

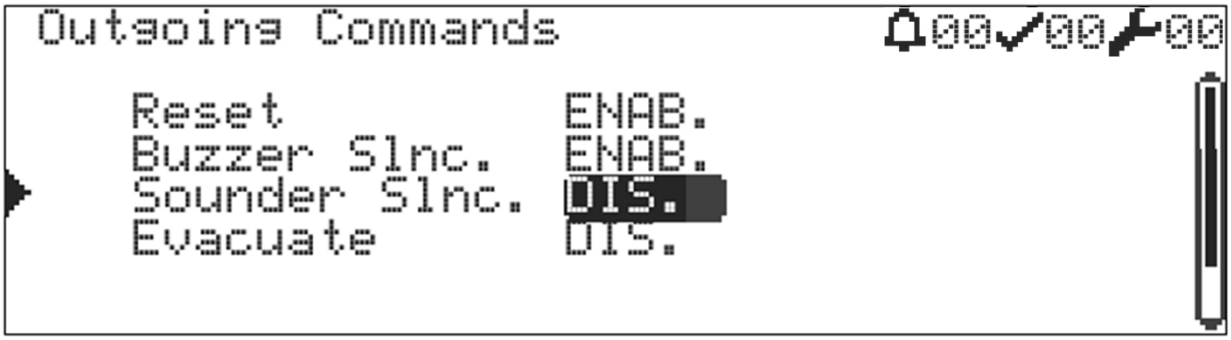


Figure 32 : TdNET Outgoing Commands

7.11 - Users

The TFP-22xx panels have a total of 7 users. All users can be set as level 2 and level 3 users and can be selected as active/passive.

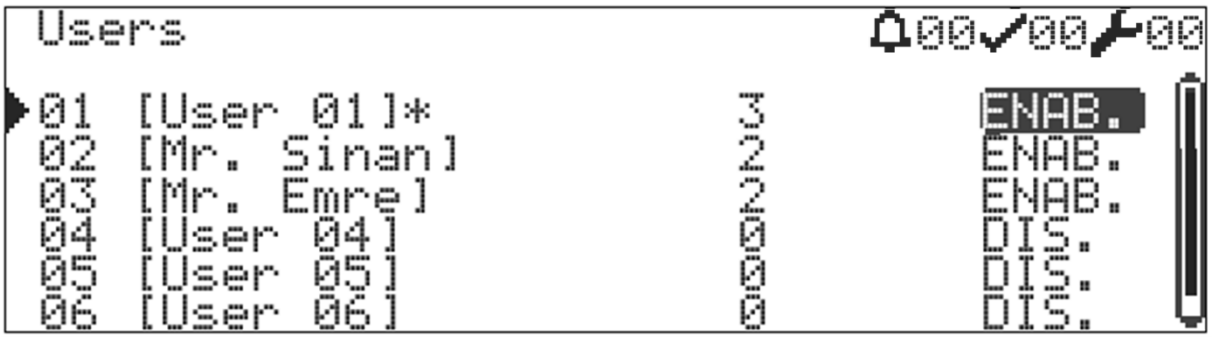


Figure 33 : Users List

In order program the users:

1 Go to "Menu » Programming » Users" menu,
2 Select any of the users with "OK" key,
3 Change the "Status" form to "ACTIVE" in the user programming window that opens. PASSIVE users can not login to the panel.
4 Change the "Label" form as required,
5 Change the "Level" form to "2" or "3",
6 Define a 4-digit password in the "Password" form,
7 Finally press "ESC" key and save the values.

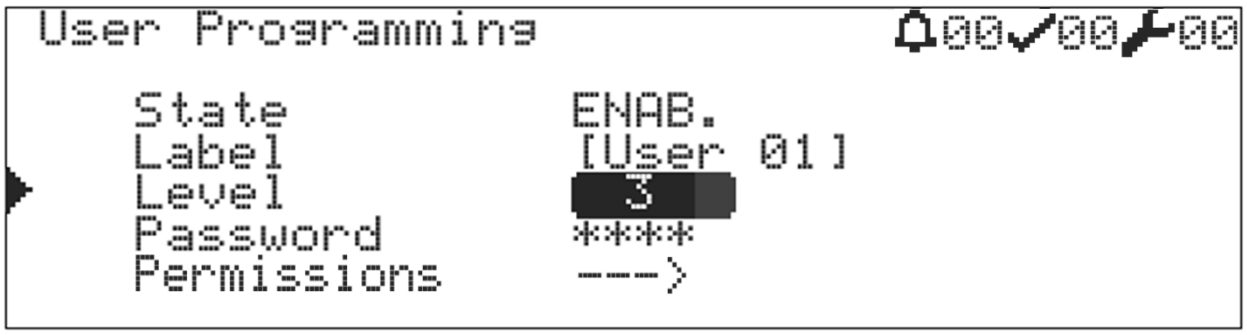


Figure 34 : User Programming Window

7.11.1 - Permissions

Permissions menu is only available for level 2 users under the "User Programming" window. When a user other than the 2nd level user enters the "User Programming" window, they cannot display the "Permissions" line. The selection of which menus 2nd level users will have access to and which buttons they can use can be made under this menu.

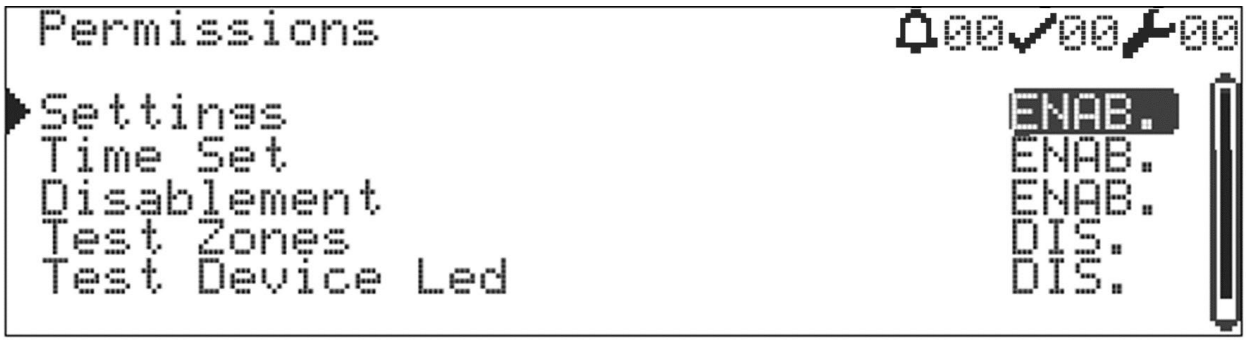


Figure 35 : User Permissions Window

Permissions that can be set for a level 2 user:

- Settings menu,
- Clock Setting menu,
- Disabled menu,
- Zone Test menu,
- Device Led Test menu,
- Device List menu,
- Siren Mute/Repeat button,
- Reset button,
- Evacuation button

7.12 - Service Warning

The panel has a feature that gives a service warning on a specified date.

In order to set the service time:

1 Go to "Menu » Programming » Service" menu,

2 In order to activate the service warning feature, change the "Service Error" form to "ACTIVE". If "Service Error" is selected as "PASSIVE", the panel will not give service warnings.

3 Set the Date and Time forms to the time that the service reminder is requested,

4 Finally press "ESC" key and save the values.

The panel starts giving service warnings 24 hours before the specified time. The service warning is displayed in the "Errors" window and an sound warning is given at the same time.

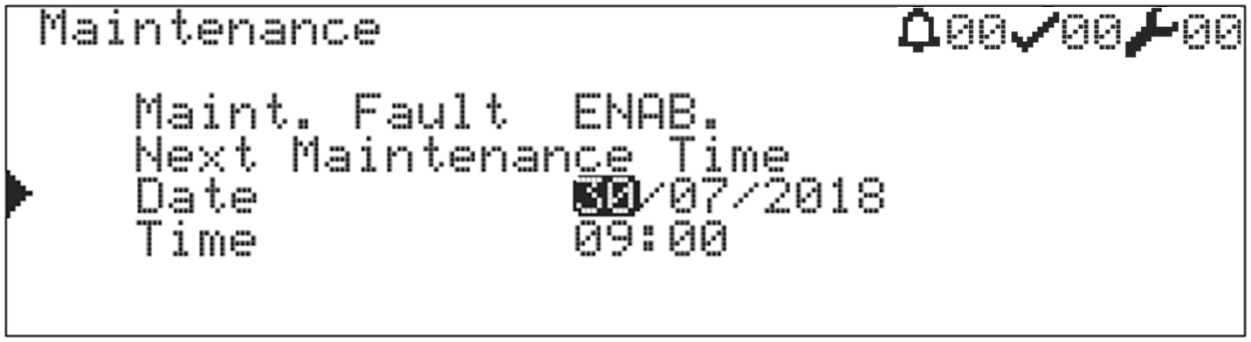


Figure 36 : Service Setting Window

8 - Software Update

Follow the instructions below to upload the firmware file provided by Teknim to the panel:

1 Provide ethernet connection between panel and computer as shown in "**10.4 - - Attachment-Computer Connection**"
2 Run the "Teknim Updater" program downloaded from the www.teknim.com website on your computer.
3 Enter the connection information from the Settings menu
4 Set the "CONFIG SW2" dip switch positions on the panel board to "1: DOWN, 2: UP, 3: UP" respectively
5 Press the "CPU RESET" button on the panel board. In this case the panel will start with "Bootloader"
6 Then press the "Connect" button
7 Select the latest firmware version you downloaded from Teknim website by pressing the Browse button. All hardware to be updated will be selected in the list of devices. You can optionally deselect hardware that you do not want to be updated.
8 Press the "WRITE" button
9 Do not perform any operation on the panel and software until the programming is completed.
10 After programming is complete, set the "CONFIG SW2" dip switch positions to "1: DOWN, 2: DOWN, 3: UP" respectively
11 Press the "CPU RESET" button on the panel board. The panel will start with the newly installed software

Caution: Before updating the panel software, back up the panel configuration data with the configuration software in case of any errors that may occur during the update.

Caution: To update the panel software, the batteries must be connected to the panel. Otherwise the panel will not enter bootloader mode.

9 - Conditions requiring Maintenance, Repair, or Servicing

Maintenance and repair of the Intelligent Addressable fire alarm systems must be carried out by authorized personnel in accordance with the instructions.

In the event of any malfunction or in any of the following situations, please contact your authorized service or your dealer.

- When the power cord or plug is damaged,
- When any fluid flows into or object falls into the device,
- When exposed to water or rain,
- If the device is dropped or the enclosure is damaged
- If there is a change in the performance of the device to a noticeable extent,
- If the device gives a service warning,
- If the device does not operate normally according to the operating instructions given in the operation manual, incorrect attempts may result in further malfunction, so you should call for service.

WARNING!
Do not attempt to repair the device on your own. You may be subjected to electrical shock when you open the cover of the device. In case of any malfunctions, contact your dealer or authorized service agency. Technical interventions in the device should be carried out only by the qualified and authorized service personnel. The device should be cleaned with a dry cloth. No chemicals should be used.

9.1 - Maintenance and Inspections the Users can Do

The user has maintenance, diagnostics and control mechanisms for some error conditions. These will be explained in the subparagraphs.

9.1.1 - Loop Line Open Circuit Error

If you see this error on the screen, it may be one of the following reasons:

- There is a discontinuity in the loop line at any point,
- Loop output cable not connected
- Loop input cable not connected

In order to remove the error, it is necessary to identify the error correctly.

1 Check that the loop input and output cables are connected correctly. If there is a cable connection error, correct it and make sure that the error is resolved so not displayed on the screen anymore. If the error is not resolved, then proceed to step 2.
2 Loop control is required and do it. This function is described in the topic "**7.9.2 - Loop Control**".

9.1.2 - Device Loss Fault

If you see this error on the screen, it may be one of the following reasons:

- The device has been removed from its place,
- Device is out of order, and does not respond to loop query.

Go up to the device having the address displayed on the screen and check if the device is properly placed onto its base. If it is not properly placed, please place it according to the instructions. Ensure that the error on the screen disappears within 20 seconds. If the error is not resolved, the device is defective and must be replaced.

9.1.3 - Regular Inspections

* Daily

The authorized person should check the panel on a daily basis and see if there are any faults. The green "Energy" and "System Enables" LEDs on the panel should be lit.

* Weekly

Fire alarm systems should be subjected to test weekly.

Each week, a normally operating alarm button should be activated and if there is any problem in the fire detection and alarm system of the panel, this problem must be noted down.

Tests should be performed on the same day of the week and a different alarm button should be used for each test. The results of the tests should be recorded.

After the test is finished, the activated alarm button should be restored to its former state.

Important Note: Before testing the fire alarm system, auxiliary outputs is supposed to be isolated from the system.

* Quadrennial

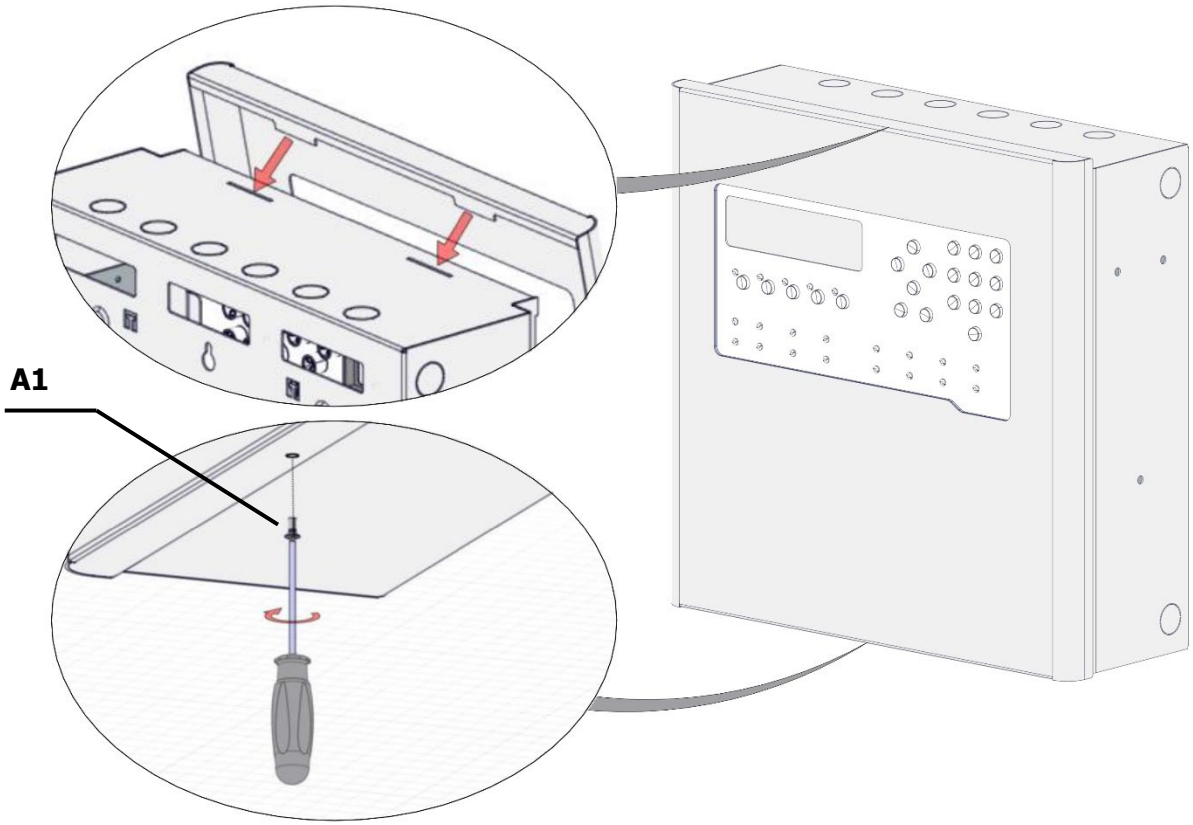
The TFP-22xx series Intelligent Addressable fire detection panels contain 2 units of dry-type leak-proof batteries as a redundant backup supply against any mains power failure. The average lifetime of these batteries is 4 years. Batteries should be replaced after this period.

10 - Appendices

Appendices are divided into 4 categories as Mechanical, Electrical, Menu and Level.

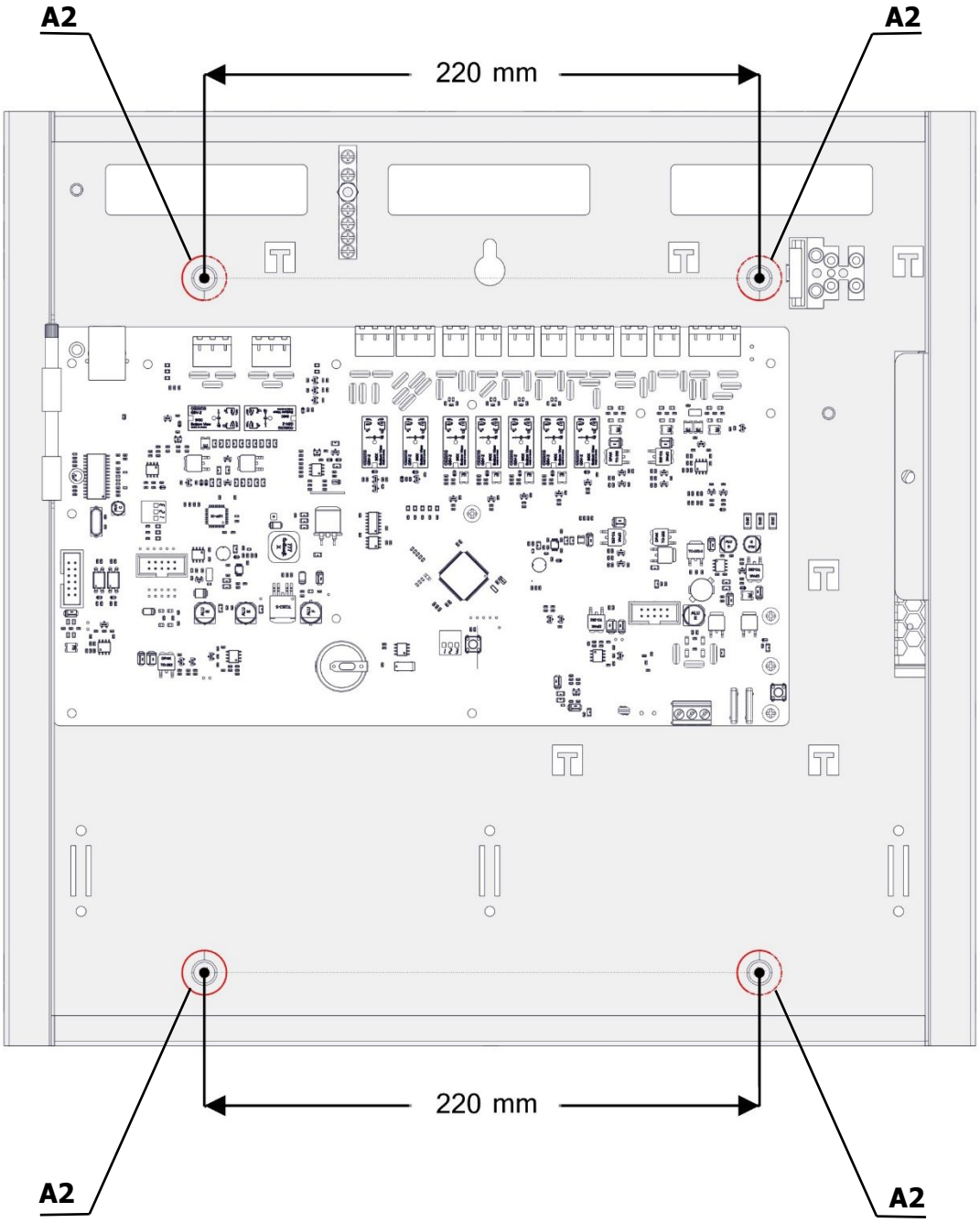
10.1 - Appendix-Mechanical

Figure 37 : Panel Front Cover Screws



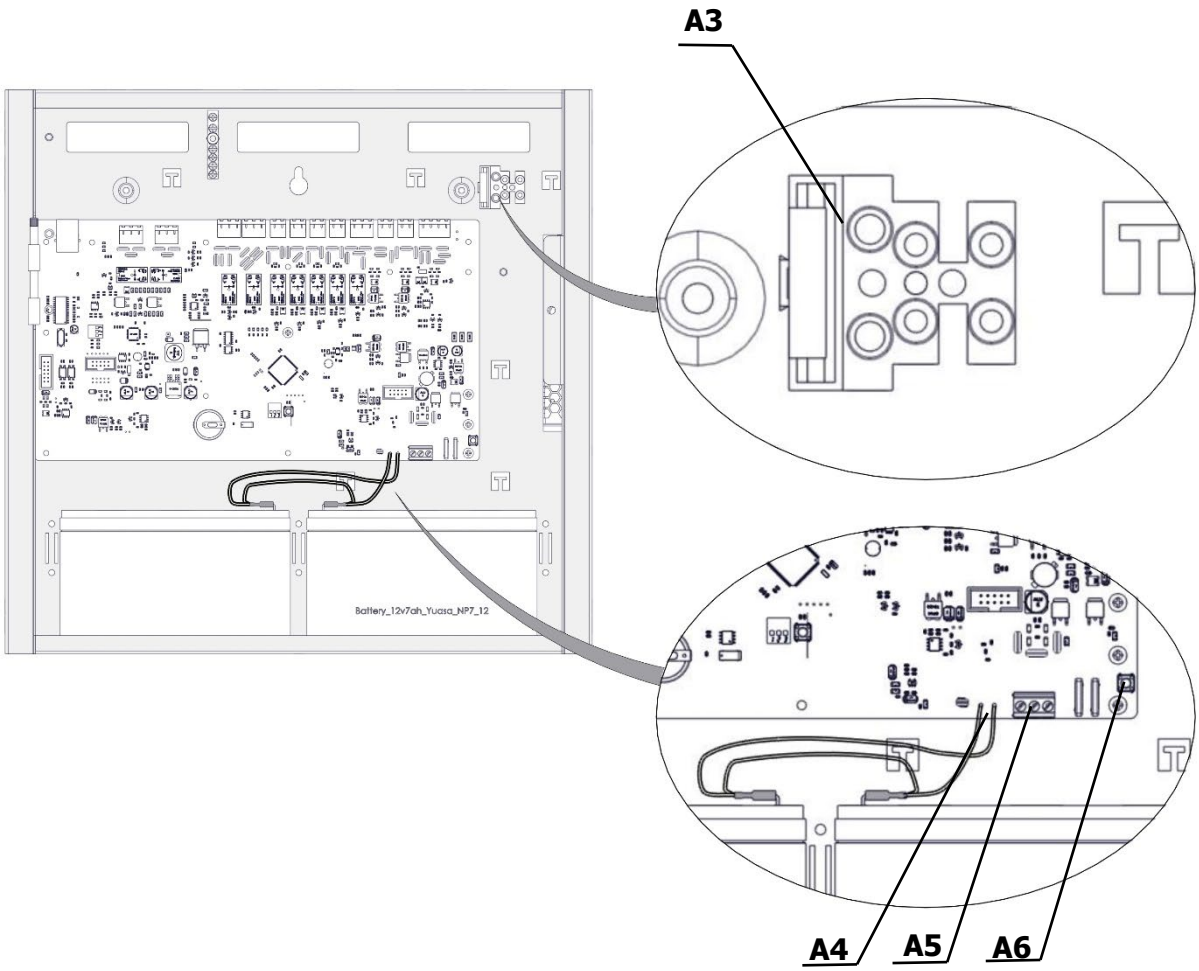
A1 Front cover mounting screw.

Figure 38 : Mounting Screw Holes



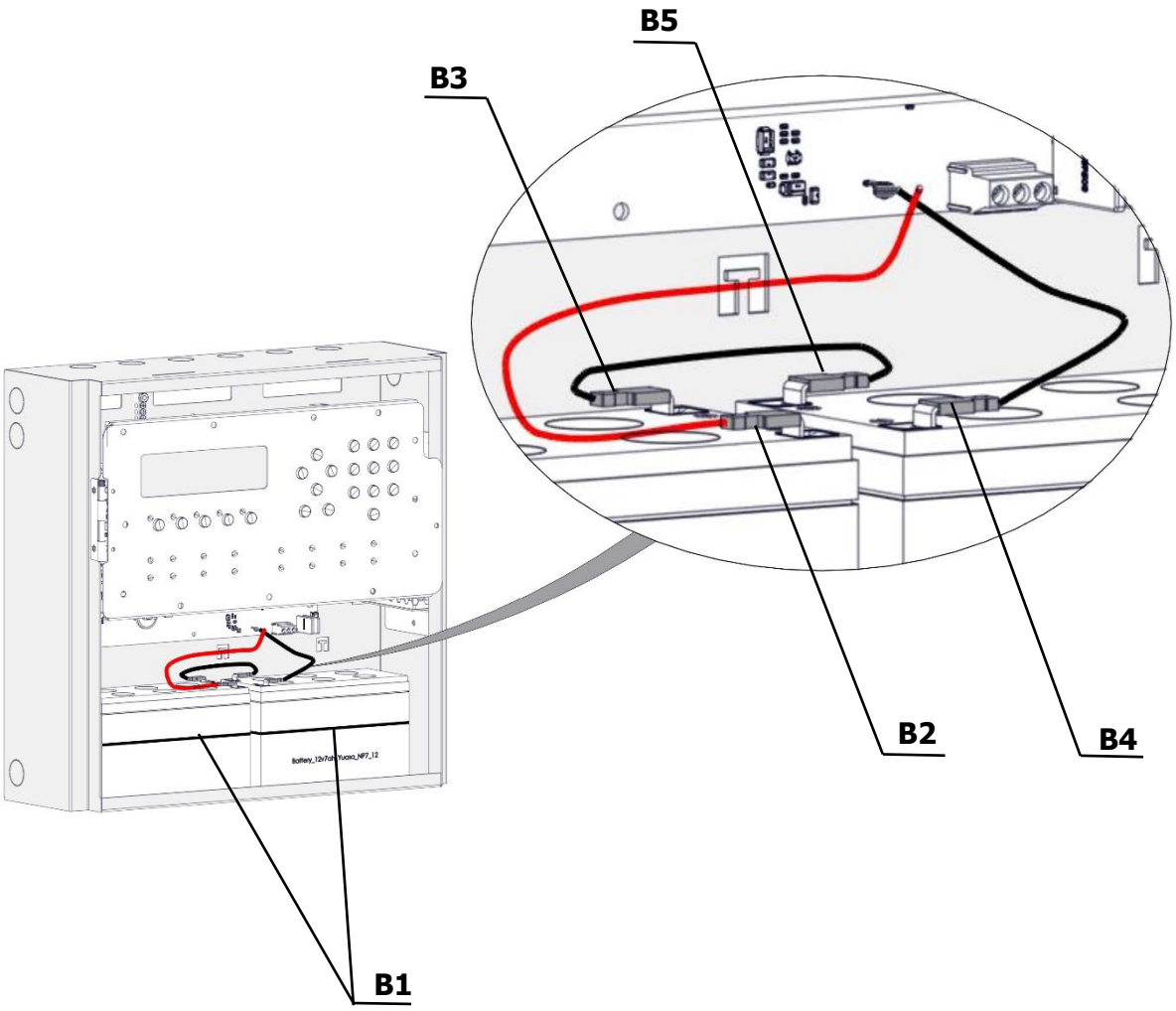
A2 Mounting Screw Hole

Figure 39 : Electrical Connections

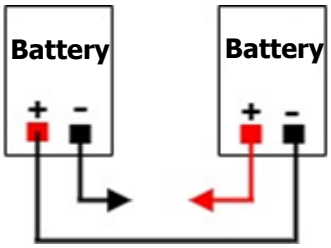


- **A3** 195~250 VAC 50 Hz input connector.
- **A4** The battery connection cable
- **A5** Power Connection Connector 195~250VAC 50Hz.
- **A6** Battery Start Button Battery (Batt) Start Switch When 195~250VAC. 50Hz. İs Not Available.

Figure 40 : Battery Connection

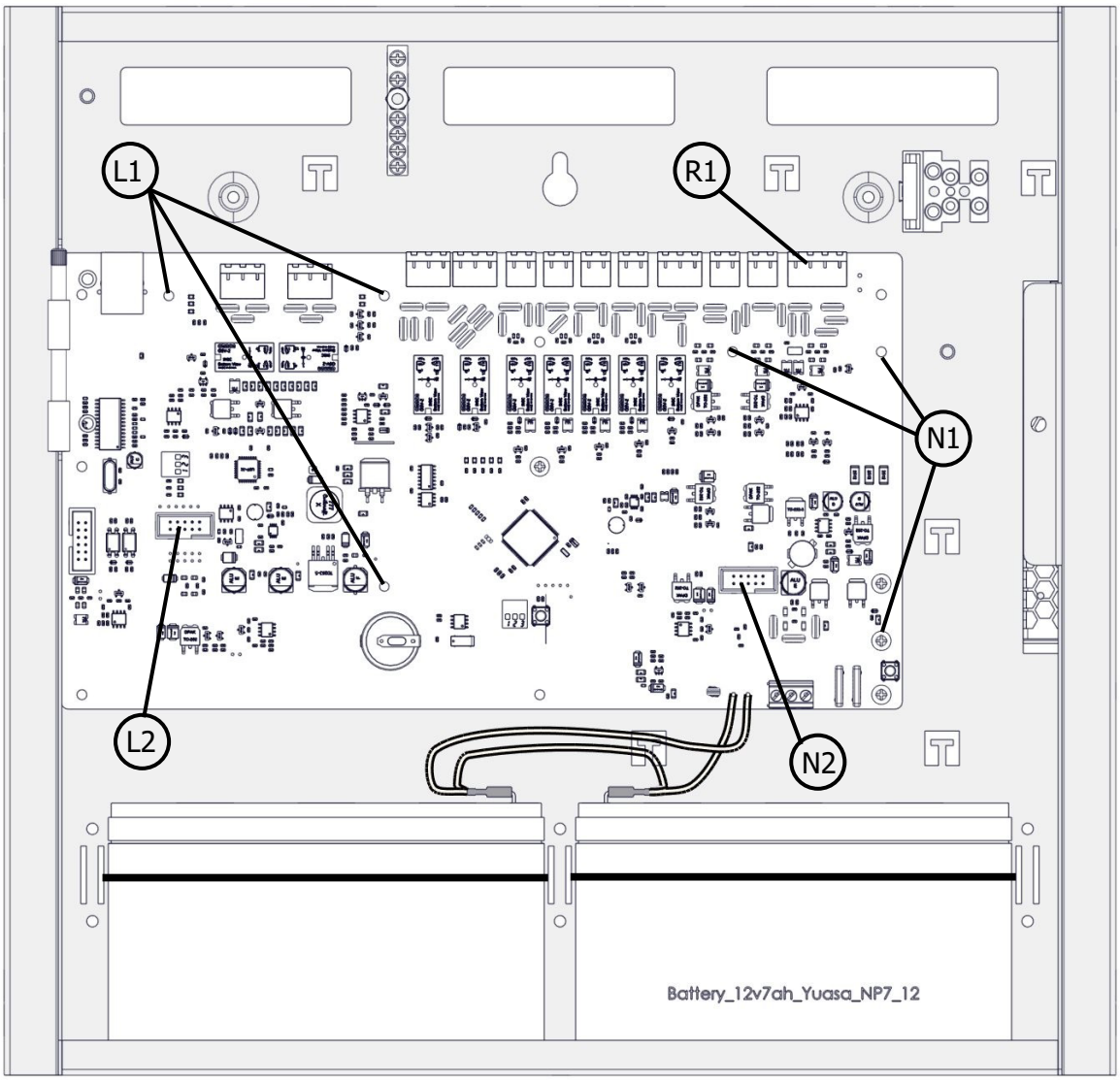


2X12V 7A
Battery Connection Diagram



- Secure the batteries to the panel using the battery cable tie shown in B1
- B3 and B5 are connected with battery jumper cable
- B2 and B4 are connected to the battery supply socket with the battery supply cable

Figure 41 : Loop Card, Network Card and Repeater Panel Connection Points



L1 Mounting Holes for the Loop Card

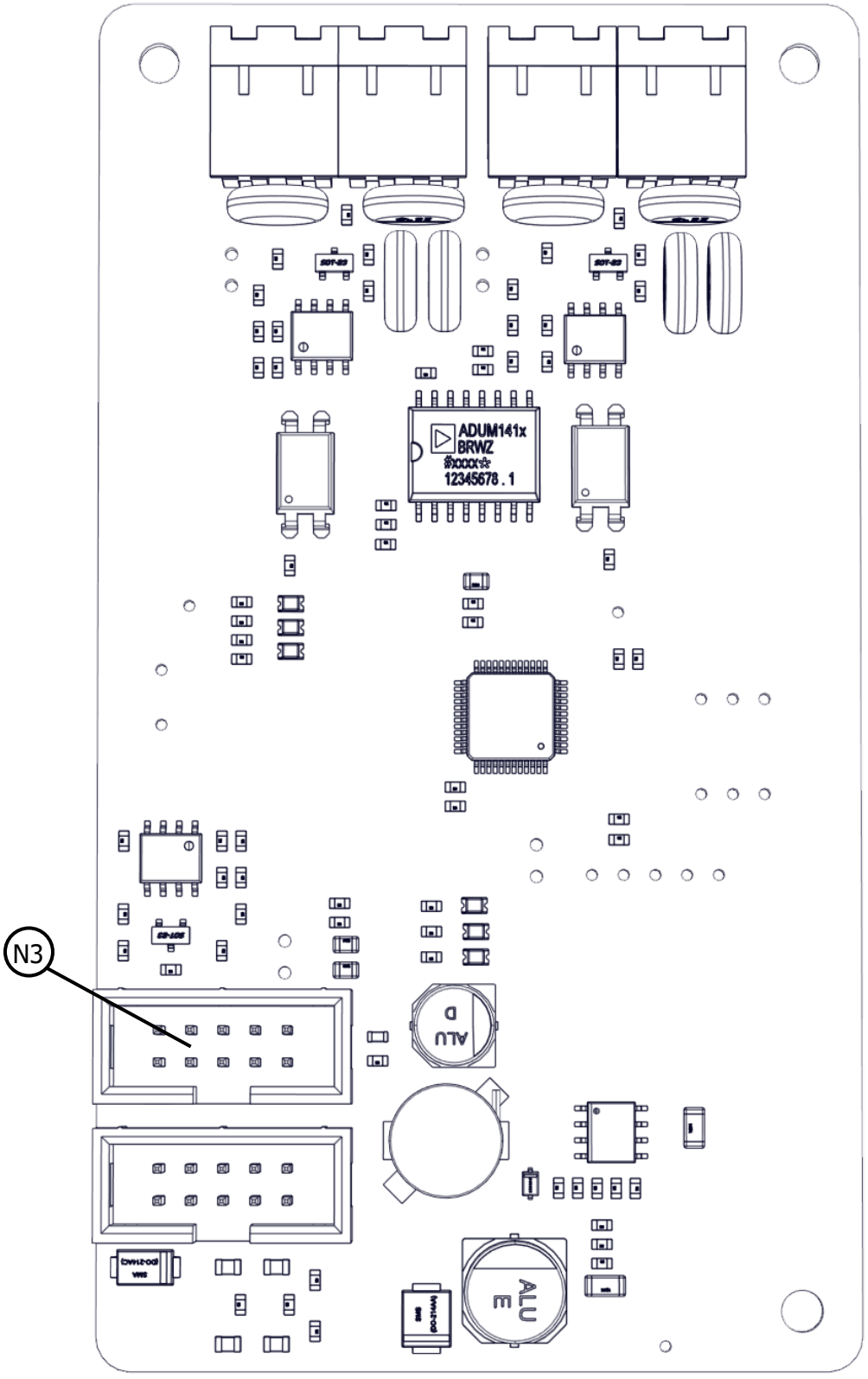
L2 Loop Card Connector

N1 Network and LTE Card Mounting Holes

N2 Network LTE Card Connection Connector

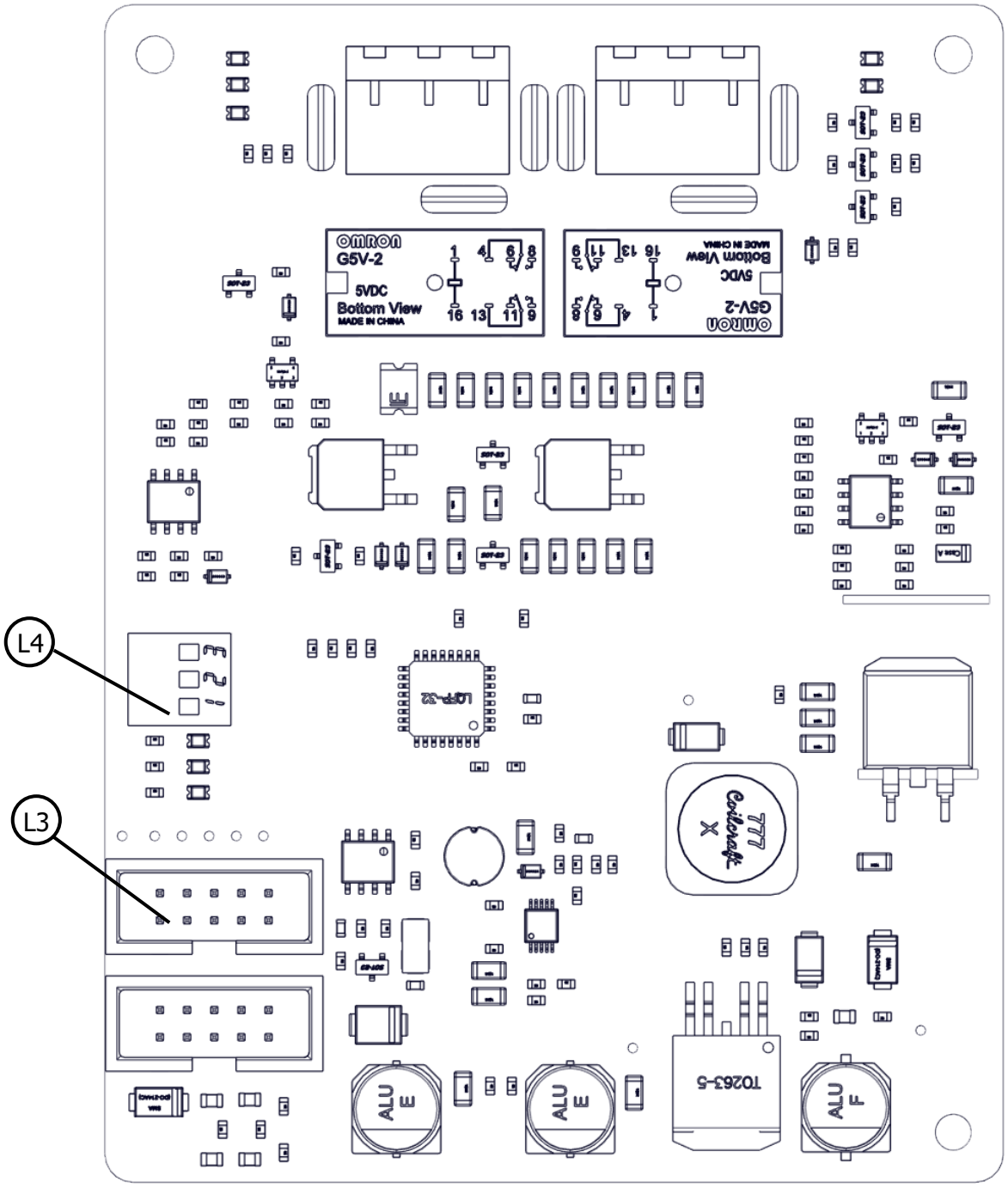
R1 Repeater Connector

Figure 42 : TFC-1209 Network Card



N3 Network Card Connector

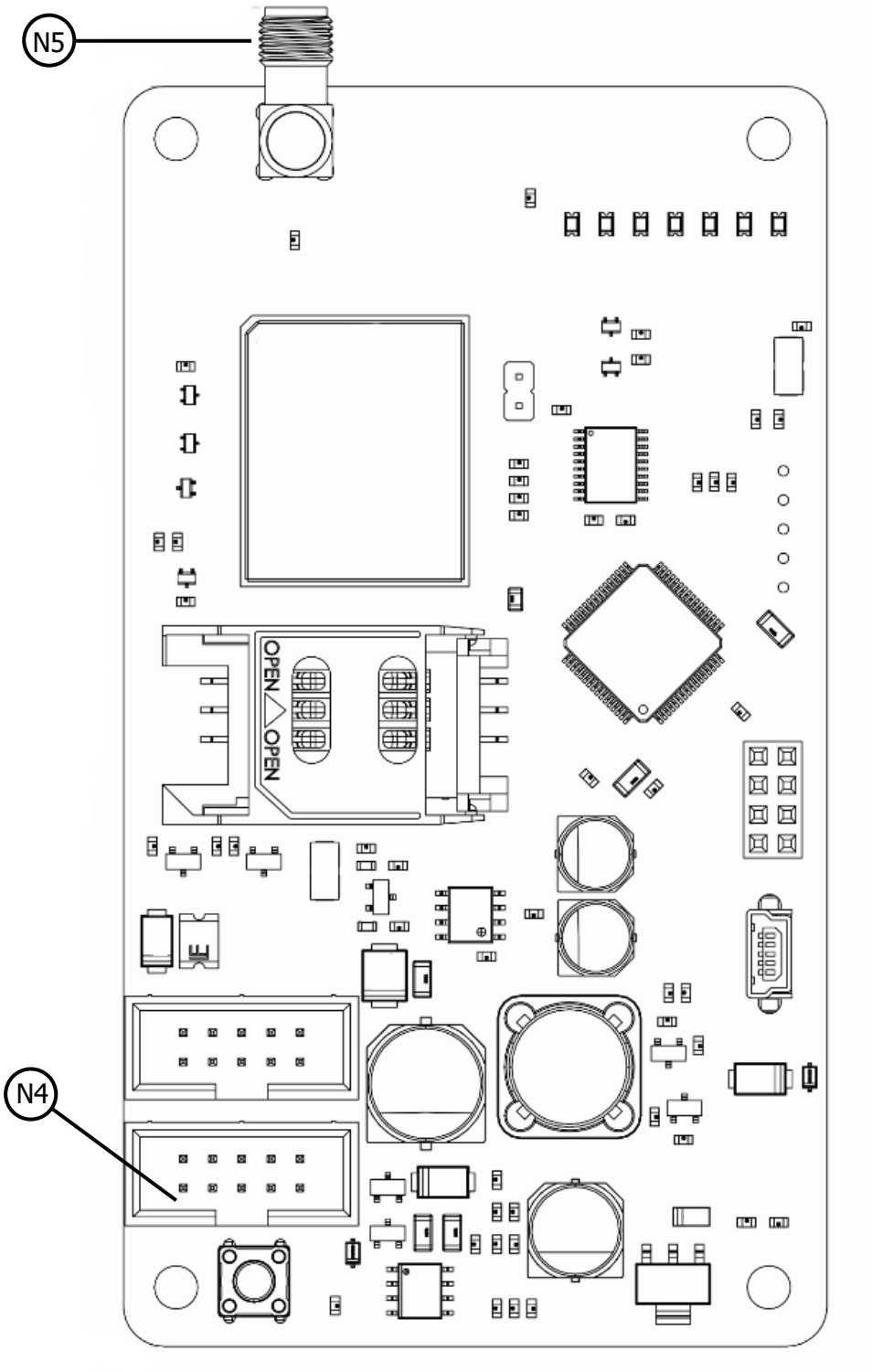
Figure 43 : TFC-1201 Loop Card



L3 Loop Card Dip Switch Address Configuration

L4 Loop Card Connector

Figure 44.1 : TXM-5474 LTE Card

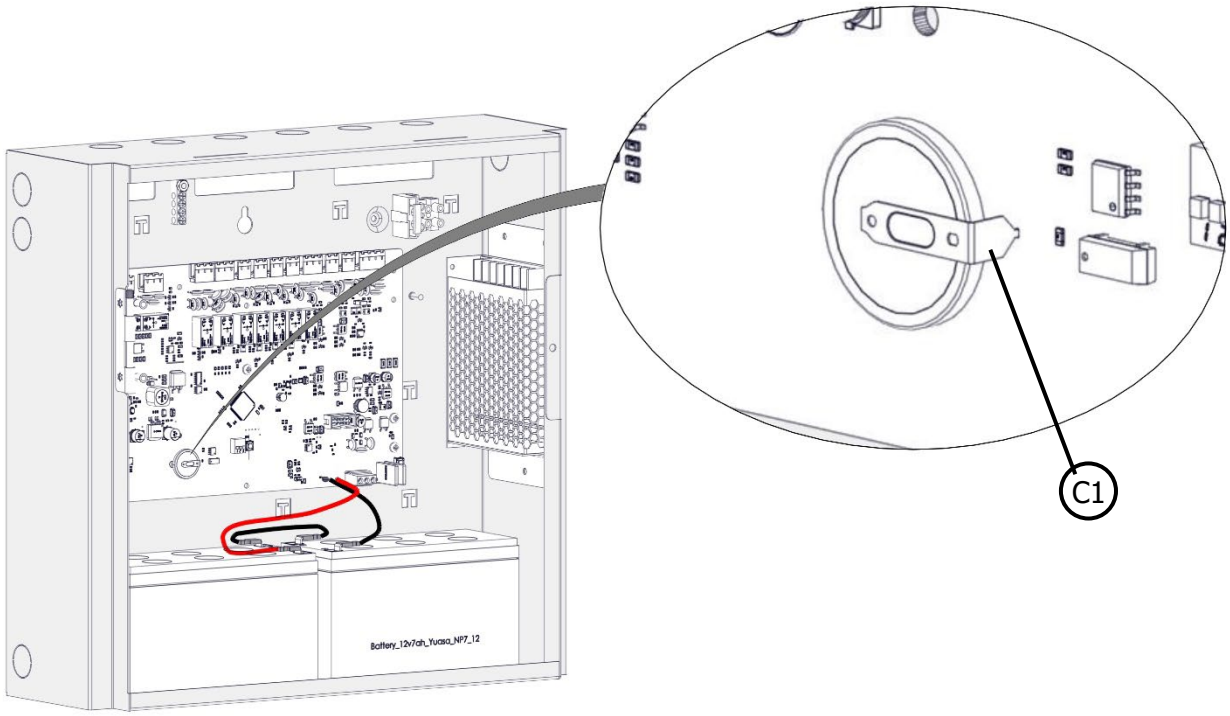


N4 LTE Card Connection Connector

N5 LTE Card Antenna Connection Connector

10.2 - Appendix – Electrical

Figure 45 : RTC Battery Connection



* Battery connection is variable.

Figure 46 : Sounder and Repeater Panel Connection

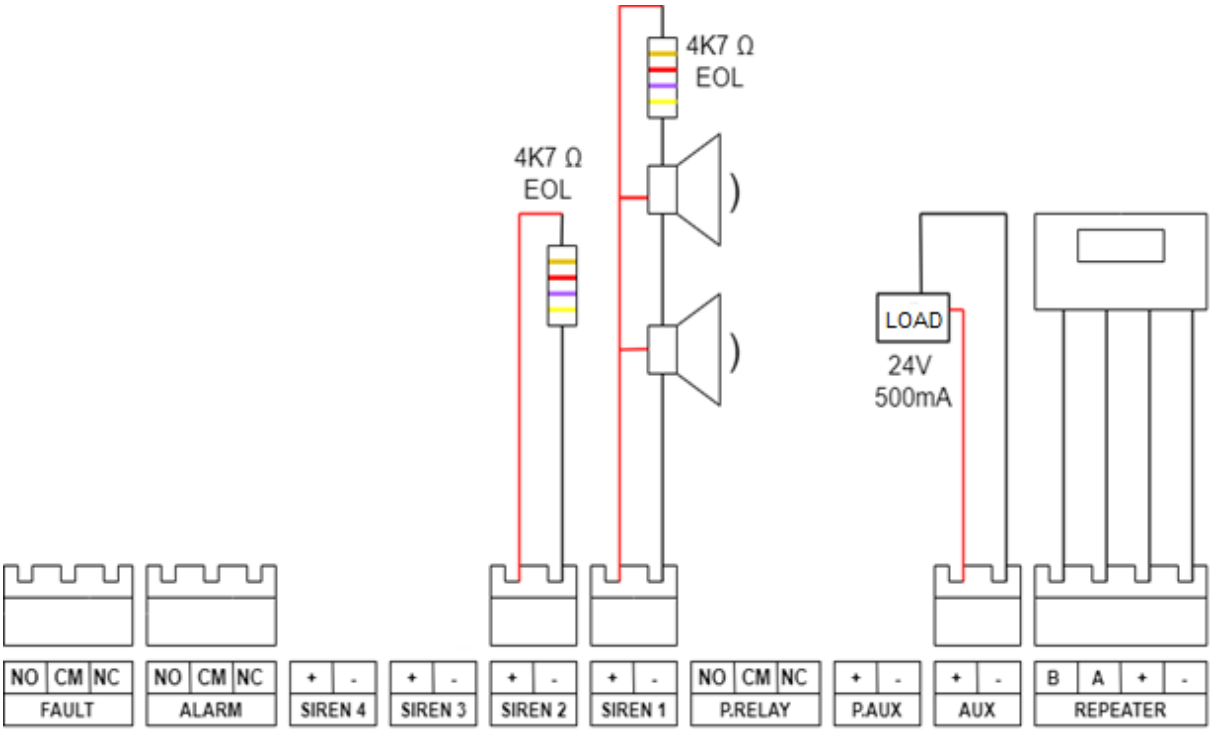
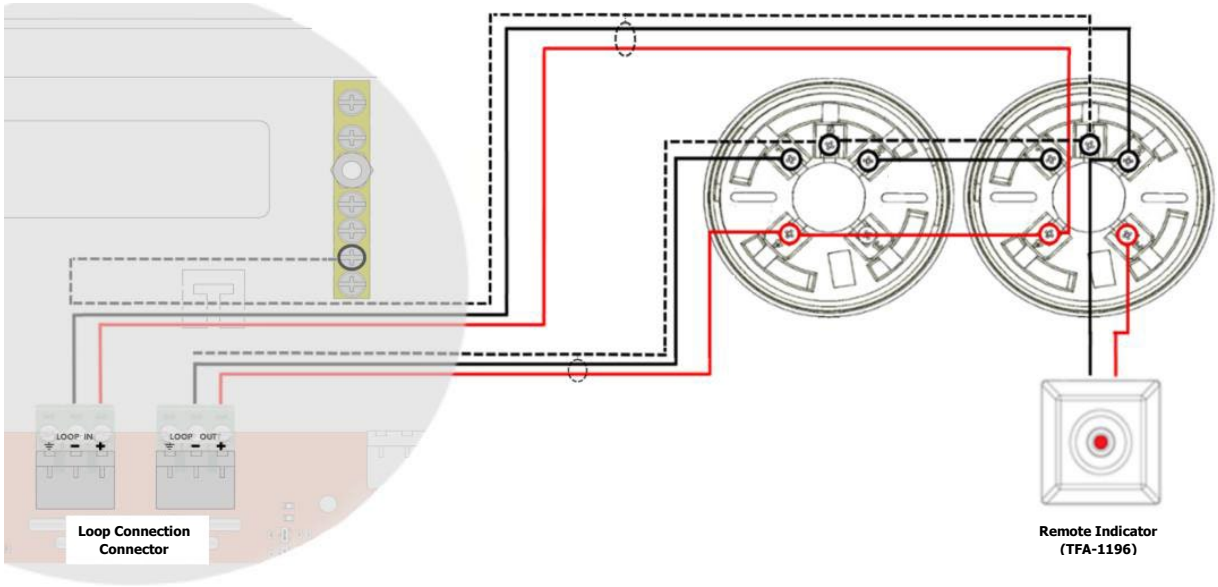


Figure 47 : Loop Connection



10.3 - Appendix – Menu

Table 20 : Level 1 Menu Flow

Main Menu	01.Logs	Log Page
		Log Page 2
		…
		Log Page N
	02.Enter	...

Table 21 : Level 2 Menu Flow

Main Menu	01.Logs	Log Page	
		Log Page 2	
		…	
		Log Page N	
	02.Settings	Mode: Auto/Night/Day	
		General Delay: ON / OFF	
	03.Time Set	Time	
		UTC Offset	
		Region	
	04.Contact Info	Address, Company Name, Phone number, e-mail	
	05.Disablements	01.Devices Disablement	Device List [1-240] ENAB./DIS.
		02.Zones Disablement	Zone List [1-72] ENAB./DIS.
		03.Sounder Disablement	Sounder 1-2 ENAB./DIS.
	06.Test Zones	Zone List [1-72] TEST / NORMAL	
	07.Test Device Led	Device List [1-240] ON / OFF	
	08.Alarm Counter	Alarm Counter : N	
	09.Device List	Device List [1-240]	
	10.Exit		

Table 22 : Level 3 Menu Flow

Main Menu	01.Logs	Log Page		
		Log Page 2		
		…		
		Log Page N		
	02. Settings	Mode: Auto/Night/Day		
		General Delay: ON / OFF		
	03.Time Set	Time		
		UTC Offset		
		Region		
	04.Contact Info	Address, Company Name, Phone number, e-mail		
	05.Disablements	01.Devices Disablement	Device List [1-240] ENAB./DIS.	
		02.Zones Disablement	Zone List [1-72] ENAB./DIS.	
		03.Sounder Disablement	Sounder 1-2 ENAB./DIS.	
	06.Test Zones	Zone List [1-72] TEST / NORMAL		
	07.Test Device Led	Device List [1-240] ON / OFF		
	08.Alarm Counter	Alarm Counter : N		
	09.Programming	01.Device Settings	Device List [1-240] EDIT *(Features may vary depending on the terminal used.*	Zone: [1-72]
				Label: [Device NNN]
				Sensitivity
				Day: High/Medium/Low
				Night: High/Medium/Low
				Disablement: DIS./ENAB.
				Activation Type
				Monitoring Type
				Latch Type

		02.Zone Settings	Zone List [1-72]	Label: [Zone NN]
		03.Delays	01.General Delay	General Delay : ON/OFF
				Delay Mode: Always/Night/Day
				Time: NN:NN
			02.Zone Based Delay	Zone: [0-72]
				Delay: GENERAL/ZONAL
				time : 00:00
		04.Panel Status	Power: xx.x VDC	
			Bat. : zz.z VDC	
			Temp. : aa C	
			SYST.: yy.y VDC	
			SNDR.1: bb.b VDC	
			SNDR .2: bb.b VDC	
			Main Board Ver.: X.X.X.X.X.X	
			Display Ver.: Y.Y.Y.Y.Y.Y	
			IP	
			Port	
			Adress	
			MAC	
		05.Parameters	Adress : 01-16	
			Label :	
			Mode: Auto/Night/Day	
			Language: Turkish/English	
			Led Blink: No/Yes	
			Zone Start:	
			Aux Reset	
			Earth Detection	
			Case Of Alarms Parameters	Max Led.

				In Same Zone Alarm Re-sound
				In New Zone Alarm Re-sound
				In Case Of Gas Alarm Plat Siren
			In Case of Test Parameters	Play Siren
				Play Buzzer
		Date & Day/Night Setting	Date: XX/XX/XXXX	
			Day/Night : XX/XX/XXXX	
			Monday: XX:XX, YY:YY	
			Tuesday: XX:XX, YY:YY	
			Wednesday: XX:XX, YY:YY	
			Thursday: XX:XX, YY:YY	
			Friday: XX:XX, YY:YY	
			Saturday: XX:XX, YY:YY	
			Sunday: XX:XX, YY:YY	
		07. Loop Functions	Device List	
			Loop Check	O:xxx, I:xxx
			Loop Info	TFD-1250
				TFD-1260
				TFD-1270
				TFD-1251
				TFD-1261
				TFD-1271
				TFB-1166
				TFM-1011
				TFM-1221
				TFM-1431
				TFM-1661

				TFD-1170
				TFS-1182
				TWM-1885
				TWM-1886
				TWD-1850
				TWB-1866
				TWM-1887
				TWS-1815
			Add Device	XXX New Device
			Remove Device	XXX Loss Devices
			Loop Parameters	Active: Yes/No
				Disablement: Yes/No
				Label: [Loop XX]
				Class: Class A / Class B
		08.TdNET Functions	TdNET Map	Panel 1-16: ENAB./DIS.
			TdNET Parameters	TdNET Mode: Station / Main Panel / Standalone
				Logging: ENAB./DIS.
				Time Sync : Network / Local
				Night/Day: Network / Local
				Delays: Network/Local
				Wiring: ClassA / ClassB
			Outgoing Commands	Alarm : ENAB./DIS. Fault : ENAB./DIS. Warning : ENAB./DIS. Reset : ENAB./DIS. Buzzer Slnc.: ENAB./DIS. Sounder Slnc.: ENAB./DIS.

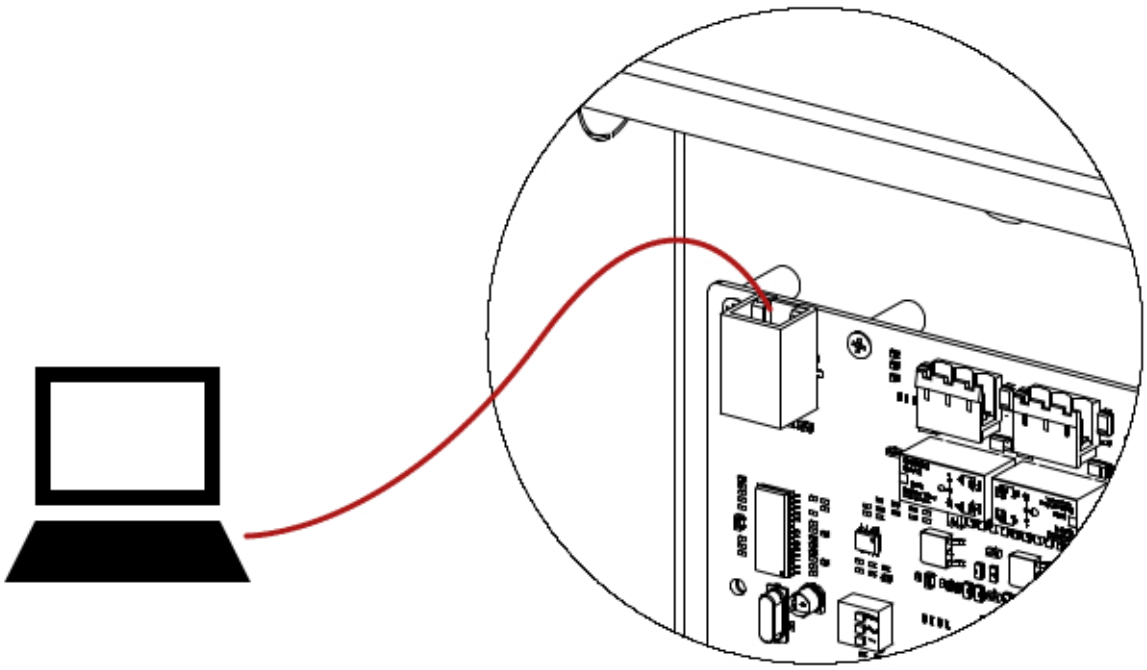
				Evacuate : ENAB./DIS.
			Incoming Commands	Reset : ENAB./DIS. Buzzer Slnc.: ENAB./DIS. Siren Slnc.: ENAB./DIS. Evacuate : ENAB./DIS.
		09.Network Settings	Ethernet Settings	Automatic IP: ENAB./DIS. IP Subnet Mask Gateway DNS
			LTE Settings	Active: YES/NO Name User Password
			Command Port Setting	Port
			ARC Settings	Active: ENAB./DIS. Subscriber Code IP Port Protocol
			Remote Connection	Active: ENAB./DIS. IP Port
			Communication Manager	Main Source: LTE/ETHERNET
		10. Alarm Depencies	General Alarm Dependency	Active: Always/Night/Day Mode: Type A/Type B Confirmation Mode İnhibition Mode
			Specific Alarm Dependency	ID Active: Always/Day/Night Zone: [1-72] Mode Confirmation Mode İnhibition Mode

		11.Users	Users . . Users N	State: ENAB./DIS. Label : Label Level : 1/2/3 Password : ****
		12.Mainterenance	Maint. Fault : ENAB./DIS.	
			Next Maintenance Time Date : DD/MM/YY	
			Time : HH:MM:SS	
	10.Device List			
	11.Exit			

10.4 - Appendix – PC Connection

Figure 48 : PC Ethernet Connection

Note: Recommended cable for Ethernet connection is Cat5e FTP



10.5 - Appendix - EN 54 Standard

TFP-22xx Alarm panels are designed in compliance with EN 54-2 and EN 54-4 standards. In addition, the following EN 54-2 optional functions are also available.

Table 23 : EN 54-2 Optional Functions

Function	Definition
7.8	Output for fire alarm devices
7.11	Output delays
7.13	Alarm counter
8.3	Error signals from points
9.5	Disabled status of addressable points
10	Test status

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0063-CPR-232190027

TFP-2211, TFP-2212, TFP-2214

EN 54-2:1997, EN 54-2:1997/A1:2006, EN 54-2:1997/AC:1999
Control and indicating equipment for fire detection and fire alarm systems for buildings

Provided options:

Output for fire alarm devices

Output delays

Alarm counter

Error signals from points

Disabled status of addressable points

Test status

EN 54-4:1997, EN 54-4:1997/A1:2002, EN 54-4:1997/A2:2006, EN 54-4:1997/AC:1999
Power supply equipment for fire detection and fire alarm systems for buildings

EN 54-21:2006
Alarm transmission and fault warning routing equipment for fire detection and fire alarm systems in buildings.

Other technical data: see BİLGİ-TEC-230620-1 held by the manufacturer.
DoP Ref.: BİLGİ-CPR-202510-02

TSE

09254-TSE-02/02

TS EN 54-2 / 01.12.1998 – TS EN 54-2/A1 / 17.04.2007 – TS EN 54-2/AC / 03.04.2007

TS EN 54-4 / 19.06.2007 – TS EN 54-4/A1 / 19.06.2007 – TS EN 54-4/A2 / 19.06.2007

10.6 - Appendix - Maintenance Table

Date	Tested Device	Device Location	Explanation

Date	Tested Device	Device Location	Explanation

Date	Tested Device	Device Location	Explanation

11 - Issues to be Considered

11.1 - Maintenance, Repair and Cleaning to be carried out by the Consumer

There are no maintenance or repair that the consumer can perform individually. You may be subjected to electrical shock when you open the cover of the device. The device should be cleaned with a dry cloth. No chemicals should be used.

11.2 - Information on Faulty Usage

Do not allow unauthorized people to open or to change the settings of your device. Otherwise, your device may operate differently than it did originally.

11.3 - Transportation and Shipping

The device should be carried carefully so as not to subject it to any external impacts and to prevent liquid penetration. Malfunctions arising due to improper handling are outside the scope of warranty.

MANUFACTURER and SERVICE

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* 2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info.

