Elkron FAP54xx Multiprocessor Modular Control Panel for Fire User Guide

ELKRON
The key to security

Quick start guide

Control panel for fire detection

Contents

1 FAP54xx Multiprocessor Modular Control Panel for Fire
2 SAFETY REQUIREMENTS
3 FIELD MODULE INSTALLATION
4 INSTALLING THE CONTROL PANEL
5 SWITCHING ON THE CONTROL PANEL AND INITIALISING THE LINES
6 CE LABELS
7 TECHNICAL SPECIFICATIONS
8 Documents / Resources
8.1 References

FAP54xx Multiprocessor Modular Control Panel for Fire

Through the following QR Code, it is possible to download the complete versions of the control panel manuals.

http://qrcode.urmet.com/default.aspx?sito=Elkron&prodElkron=157445&lingua=en

PREFACE
This booklet provides the minimum information required to install the FAP54xx series fire alarm control panel.
In this document there are only present some essential indications about product.
For further and detailed information, refer to manuals concerning FAP54xx control panels.

SAFETY REQUIREMENTS

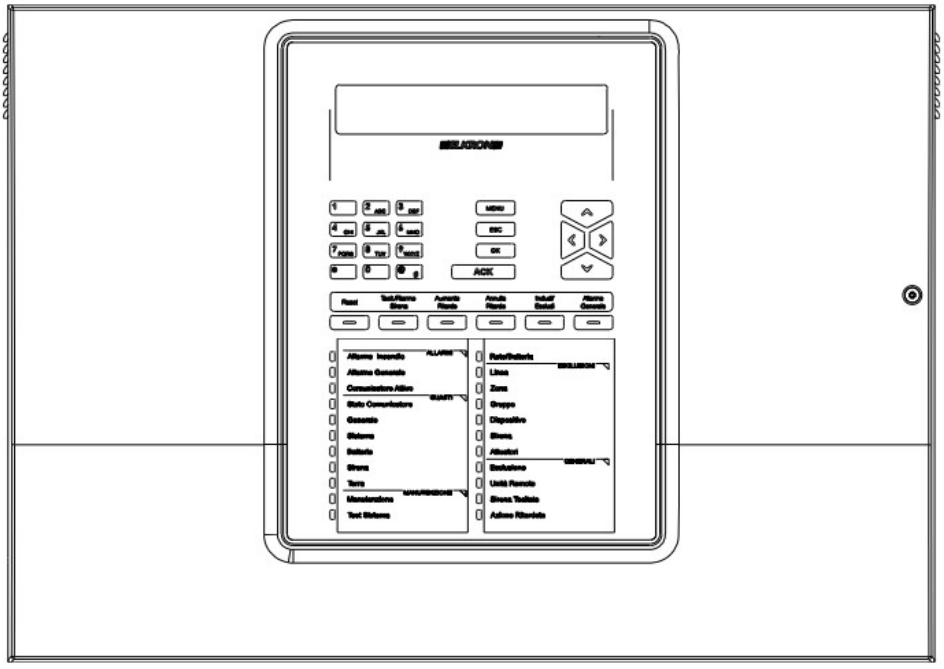
WARNINGS
Read the notes in this manual carefully. This manual contains important information on safe installation, use and maintenance.

- This equipment must only be used for the use for which it was expressly designed, i.e. for fire alarm control panel systems.
- This device was designed to be compliant with the standards in force. All other use is improper use. The manufacturer cannot be held responsible for damage deriving from improper, incorrect or unreasonable use.
- The system must be built in compliance with the regulations in force. All devices in the system must be exclusively used for the purpose for which they were designed.
- Check that the device is intact after removing it from the packaging.
- Keep the packaging (plastic bags, polystyrene, etc.) away from children. Packaging is potentially dangerous.
- Make sure that the plate data corresponds to the power specifications before connecting the device to the mains.
- This device shall be fitted by the installer inside an electric cabinet which might include also other devices,

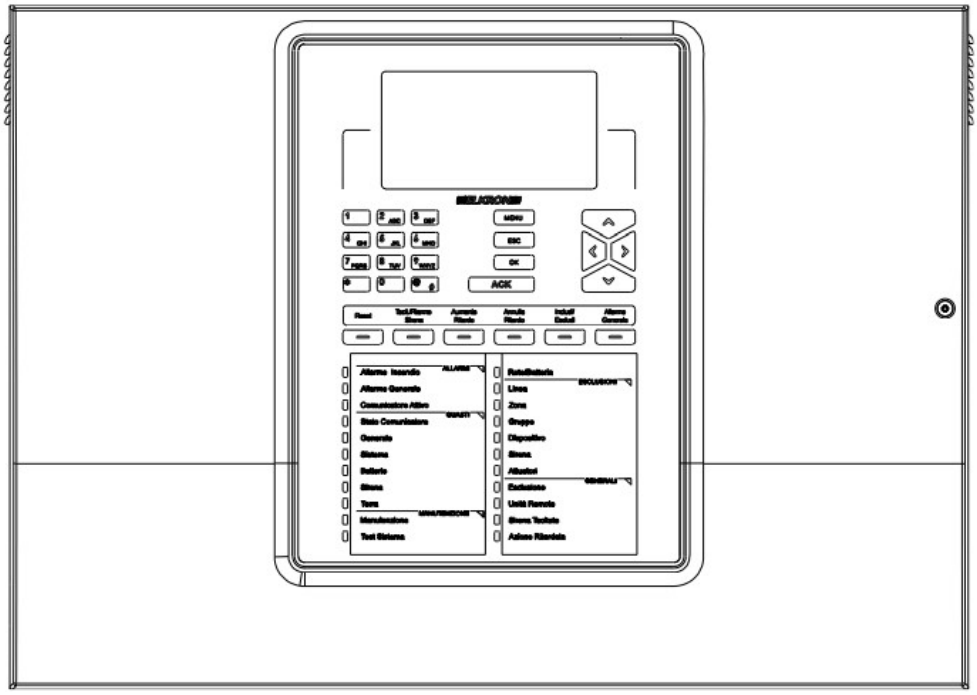
therefore it shall be suitably identified.

- During installation of the control panel, be very careful not to accidentally damage the control and command board.
- Keep the ventilation or cooling openings and slots free.
- Disconnect the device from the mains before cleaning or maintenance. Do not use spray products to clean the device.
- Disconnect power from the circuit breaker in the event of failure and/or malfunctioning of the device. Do not tamper with the device.
- Exclusively contact a service centre authorised by the manufacturer for repairs.
- Do not install the device in environments exposed to dripping or splashing.
- Do not install the control panel near heat sources (radiators, convectors, heating plants, etc.)
- Do not use power extension wires.
- Have the device checked and repaired by qualified personnel in the case of infiltration of fluid or objects inside the device.
- Exclusively use the spare parts supplied by the manufacturer for repairs.
- Installers must make sure that user's information is applied to the connected devices.
- Disrespect of these precautions can effect safety of the device.
- Keep this manual with the device at all times.

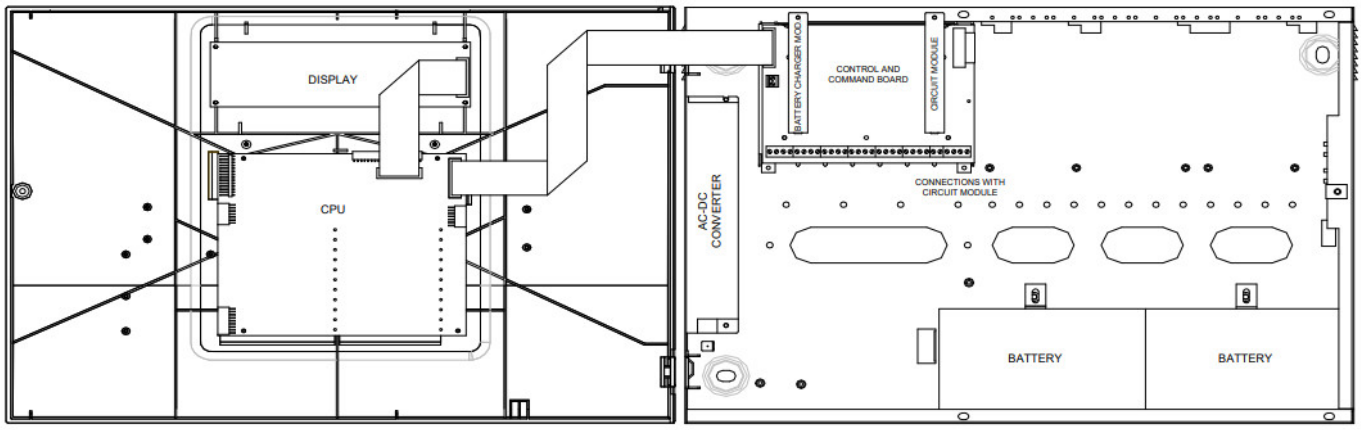
FRONT PANEL OF FAP541



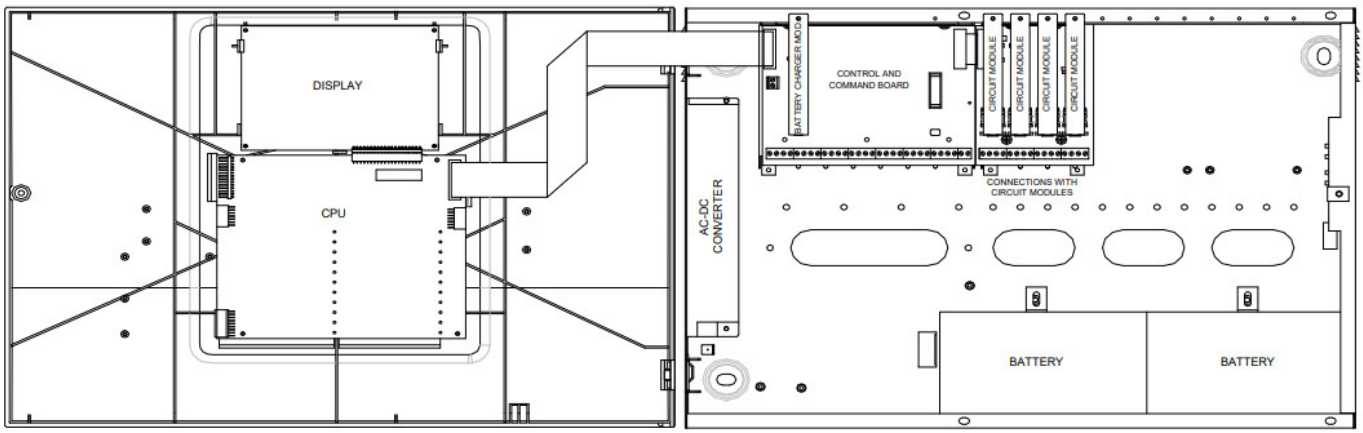
FRONT PANEL OF FAP544 – FAP548 – FAP5416



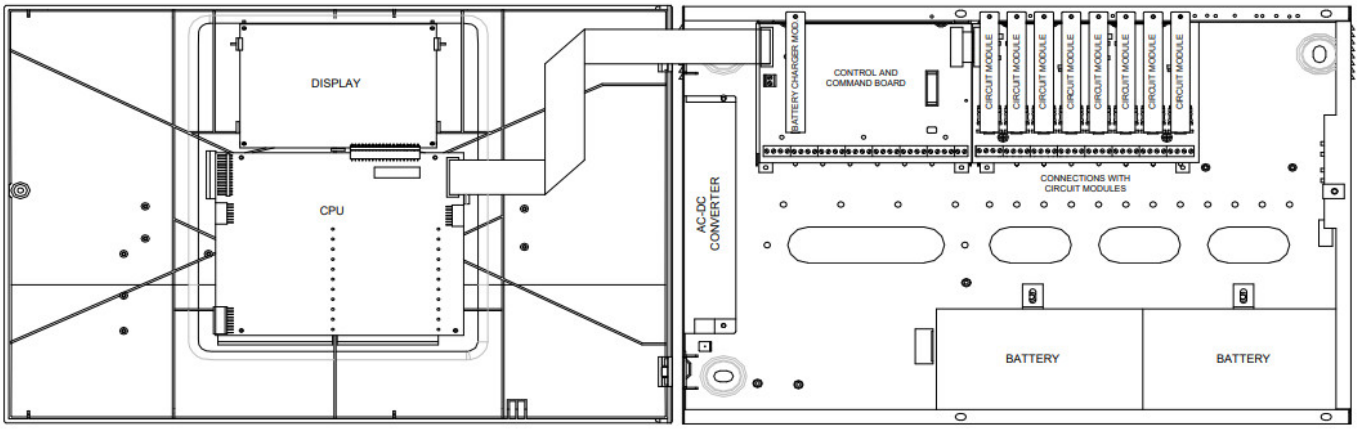
FRONT VIEW FAP541



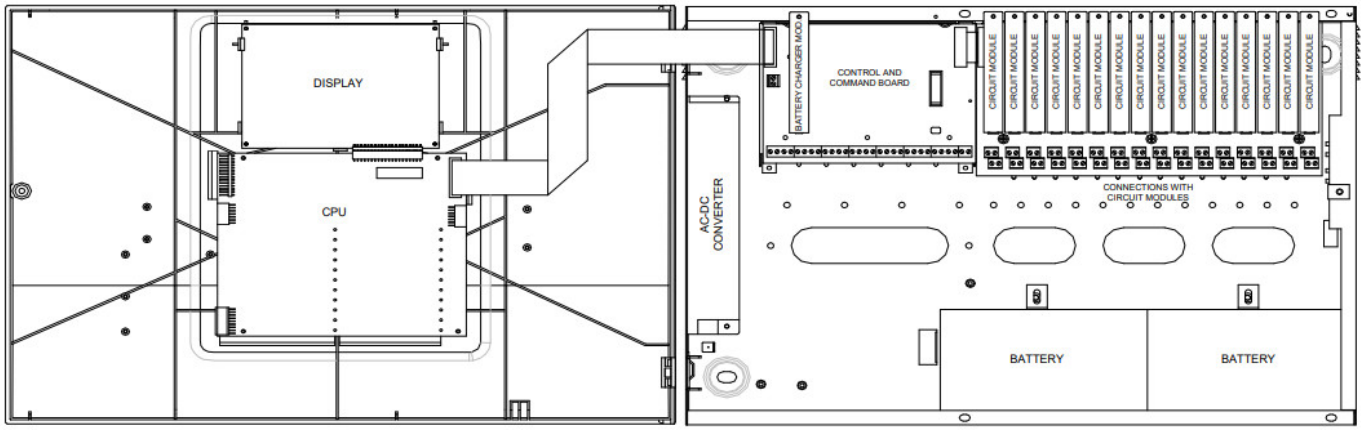
FRONT VIEW FAP544



FRONT VIEW FAP548



FRONT VIEW FAP5416



FIELD MODULE INSTALLATION

Firstly, install the field modules (detectors, manual buttons, input and output modules, audible and optical fire alarms) as shown in the fire alarm system design.
Connect the field devices using specific fire alarm wires that meet the following specifications:

- Suggested cable: 2 x 1.5mm2 shielded
- Maximum length: 2000m
- Cable total resistance: less than 100Ω

The wiring of each detection line of the system can be in class A (loop line) or class B (open line) according to the design and regulations of the country where the fire alarm system is being installed.
Analyses the critical situations which, in the event of a line failure (short circuit and/or line opening), could cause an excessive number of devices to go out of service.
For the mechanical, electrical and location installation of each device, refer to the design and technical documentation accompanying the device and follow the manufacturer's information and instructions.

INSTALLING THE CONTROL PANEL

The control panel is intended for indoor use and designed to be mounted on the wall. It must be positioned at a height that facilitates both keypad use and optimal viewing of the display.
Use four screws and 6-mm dowels (not supplied) to fix the control panel to the wall.
Several openings are provided in the bottom of the casing for passing through the wires coming from the field, such as the de tection lines and the various low-voltage connections with other devices in the system.
A pre-cut hole is provided in the bottom of the casing for passing through the mains power wire.

Mains power

Use the pre-cut hole in the lower part of the control panel casing to pass through the mains power wire.
Fix the mains power wire to the bottom of the casing using the cable tie (supplied).
Connect the phase (F), neutral (N) and earth (GND) conductors to the respective terminals of the AC/DC converter power supply unit.
It must be possible to cut off the mains power (both phase and neutral) upstream using a suitable external disconnector with a contact separation of at least 3 mm.
It is advisable to keep the power wires separate from the low-voltage wires and connections of the fire alarm system.

Batteries

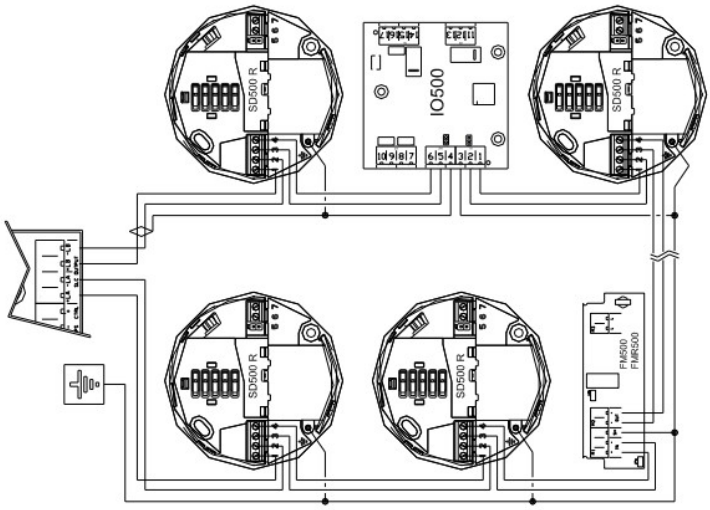
There are two sealed lead batteries with a capacity of 12Ah and a voltage of 12V inside the control panel.
The battery to be used must:

- Be of the VRLA (Valve Regulated Lead Acid) type
- Have an enclosure with flammability class UL94V-1 or better
- Be compliant with standards IEC 60896-21:2004, IEC 60896-22:2004

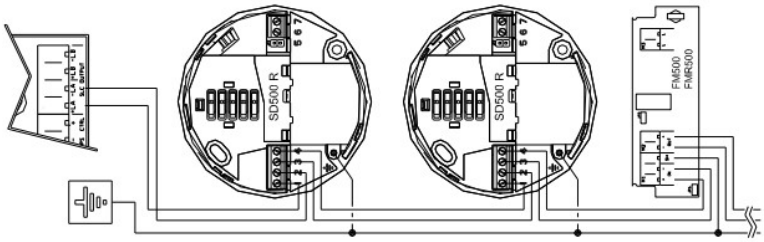
The batteries replacement must be performed by qualified personnel only.
The batteries must be connected in series and connected to the +BAT and -BAT terminals of the control module (MCC) using the supplied wires.
After establishing the electrical connection, apply the temperature probe on the batteries and secure them with the clips on the bottom of the casing.

Detection circuits

Use the holes at the bottom (wall side) to pass through the wires of the detection circuits and the various services.
Each loop-type detection circuit must be connected, respecting polarity, to the SLC LA and LB terminals near the respective circuit module.
In the case of an open line, connect to terminals LA or LB (at most for two open lines connect max. 128 devices in total to terminal s LA and LB).
The detection circuit screening must be connected to the metal bottom of the control panel connected to electrical earth.
For loop lines, only one end must be earthed and the other left unconnected.



Device connection on loop line (Class A)



Device connection on open line (Class B)

SWITCHING ON THE CONTROL PANEL AND INITIALISING THE LINES

With the system fully wired, including batteries, power the control panel through the mains disconnector. The display will switch on and the “power” indicator light will appear on the front panel of the control panel.
Wait for the fault message prompting you to update the time and date of the internal clock of the control panel to appear. To update the clock, enter the service menu by pressing the “MENU” key. Enter the default password “22222” followed by the “OK” key pressing the keys on the display.
After updating the clock, press the “RESET” button and wait for the message “MONITORING NOT POSSIBLE” to appear on the display.
Then switch to the programming phase using the “MENU” key.
Select “[1] PROGRAMMING”, confirm by pressing “OK”, enter the password “33333” and press the “OK” key.
In the main programming menu, press the “ACK” button to acquire the programming step and switch off the buzzer.
Proceed with line initialisation by selecting the following items “[1] CIRCUIT”- “[2] CONFIGURE SINGLE CIRCUIT”.
Enter the number of one of the lines to be initialised and confirm with “OK”.
Select the loop or open line configuration type and then the initialisation mode “[1] AUTO-ADDRESSED MODE”. Press “OK” to confirm.
The control panel will initialise the selected line and at the end it will display the list of detected devices. Press the “OK” key is confirmed.
Press the “ESC” key several times to go back to the line number entry screen and allow other detection lines to be initialised.
In the event of errors or line faults signalled by the control panel, refer to the installation and/or programming manual for details of the error or fault.

Functional check – monitoring phase

At the end of the initialisation phase of all the lines, a functional check can be carried out on the entire system to validate all the connections.
To do this, it is necessary to start the scanning phase, i.e. the functional phase of the fire alarm system during which all the devices are controlled and monitored to perform the required measurements (smoke detection,

temperature control, alarm generation by manual button, etc.).
Before scanning, however, it is necessary to associate all devices, with the exception of output modules and fire alarms, to a zone other than the default zone (480).
To do this, go to programming and in the “[2] ZONE” menu (accessible from the main programming menu) select “[2] ASSOCIATE DEVICE TO ZONE”.
When prompted to enter the zone number, press key 1 followed by “OK” (zone no.1).
Select the line on which the devices are present and press “OK”.
The first device available on the selected line will be displayed and associated with zone 1 by pressing the “OK” key again.
The next device on the same line will be automatically displayed. In turn, it can be associated with zone 1 by pressing the “OK” key again, and so forth.
The association procedure for devices in the current line ends when the first device in the line, already associated with zone 1, is displayed again.
In this case, press the “ESC” key and enter the next line for the association of the devices to zone 1 and so forth for all the lines of the fire alarm system.
When you have finished associating all devices on all lines to zone 1, press the “ESC” key until you reach the return scan request menu that can be opened by pressing “OK”.
During the scanning phase, the date and time will be shown on the display if all connections are correct but no error or faul t messages will be displayed. Let the system run without any active event for a few minutes, then switch back to the programming phase and proceed to the logical programming of the fire alarm system.
Refer to the installation and/or programming manual in the event of faults.

Programming from the control panel
The programming phase is used to configure the behaviour of the control panel in managing input devices (detectors, input modules, manual buttons) and output devices (output modules, fire alarms) in managing and signalling a fire alarm condition.
Refer to the programming manual for a detailed description of the functions and possibilities offered by the control panel.
Programming from personnel computer
The control panel can also be programmed and configured using the configurator software, by directly connecting a PC through the USB port. Proceed by reading the configuration present in the control panel by downloading it to the PC.
Configure all the features of the fire alarm system and save the configuration on the PC itself (programming can also be done with the control panel disconnected from the PC).
Finally, transfer the new configuration present in the PC to the control panel to end the configuration process.
Refer to the programming manual and the configurator software for a detailed description of the functions and possibilities offered by the control panel.

CE LABELS

According to the EN54 standards, below are reported the CE labels containing all the necessary information:

CE 10 0051 ELKRON is a trademark of URMET S.p.A. Via Bologna, 188/C – 10154 Torino – Italy 10 DoP FAP541 Fire detection and fire alarm control panel EN 54-2: 1997 + A1:2006 EN 54-4: 1997 + A1:2002 + A2:2006 100-240 V~ -15/+10%, 50/60 Hz, 3 A V out: 26 V⎓, ± 10%, 4.85 A Circuit module: 1 Options with requirements list: 7.8 Output to fire alarm device 7.9 Output to fire routing equipment 7.11 Delay to outputs 7.12 Co-incidence detection 8.3 Fault signals from points 8.9 Output to fault warning routing equipment 9.5 Disablement of addressable points 10 Test condition	CE 10 ELKRO is a trademark of U Via Bologna, 188/C – 1 10 DoP FAP Fire detection and fire a EN 54-2: 1997 EN 54-4: 1997 + A1: 100-240 V~ -15/+10% V out: 26 V⎓, ± Circuit module: Options with requi 7.8 Output to fire 7.9 Output to fire rou 7.11 Delay to 7.12 Co-incidenc 8.3 Fault signals 8.9 Output to fault warnin 9.5 Disablement of ad 10 Test cor
CE 10 0051 ELKRON is a trademark of URMET S.p.A. Via Bologna, 188/C – 10154 Torino – Italy 10 DoP FAP548 Fire detection and fire alarm control panel EN 54-2: 1997 + A1:2006 EN 54-4: 1997 + A1:2002 + A2:2006 100-240 V~ -15/+10%, 50/60 Hz, 3 A V out: 26 V⎓, ± 10%, 4.85 A Circuit module: 4 up to 8 Options with requirements list: 7.8 Output to fire alarm device 7.9 Output to fire routing equipment 7.11 Delay to outputs 7.12 Co-incidence detection 8.3 Fault signals from points 8.9 Output to fault warning routing equipment 9.5 Disablement of addressable points 10 Test condition	CE 10 ELKRO is a trademark of U Via Bologna, 188/C – 1 10 DoP FAP5 Fire detection and fire a EN 54-2: 1997 EN 54-4: 1997 + A1: 100-240 V~ -15/+10% V out: 26 V⎓, ± Circuit module: Options with requi 7.8 Output to fire 7.9 Output to fire rou 7.11 Delay to 7.12 Co-incidenc 8.3 Fault signals 8.9 Output to fault warnin 9.5 Disablement of ad 10 Test cor

TECHNICAL SPECIFICATIONS

Mains power supply:……100-240V~ – -15/+10% – 50/60Hz – 3A
Operating temperature:
……-5°C ÷ +40°C
Maximum non-condensing operating relative humidity:….
……93% +2/-3%
Degree of protection of the metal/plastic casing:……..
……..IP30
(*) = Power supply: CAT III 4000 V
Use cables that comply with local, national, European and international safety regulations.

The cables used must comply with IEC 60332-1-2 if they have a cross-section of 0.5 mm2 or more, or with IEC 60332-2-2 if they have a cross-section of less than 0.5 mm2.

KEY TO SYMBOLS

Symbol	Meaning
⎓	Direct current voltage.
~	Alternating input voltage.
⚠	The lightening symbol in a equilateral triangle indicates the presence of dangerous voltag e. Do not open the device.
⚠📖	See the installation manual of the device.

DIRECTIVE 2012/19/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 on waste electrical and electronic equipment (WEEE)

The symbol of the crossed-out wheeled bin on the product or on its packaging indicates that this product must not be disposed of with your other household waste.
Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment.
The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment.
For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

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MADE IN ITALY

Documents / Resources

	Elkron FAP54xx Multiprocessor Modular Control Panel for Fire [pdf] User Guide FAP541, FAP544, FAP548, FAP5416, FAP541, FAP54xx Multiprocessor Modular Control Panel for Fire, FAP54xx Modular Control Panel for Fire, Multiprocessor Modular Control Panel for Fire, Multiprocessor Modular Control Panel, Modular Control Panel for Fire, Control Panel for Fire, M odular Panel for Fire, Modular Control Panel, Modular Panel, Control Panel, Panel

References

- Home Page - Elkron
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- Professional Video Door Phone and Intrusion Alarm Systems | Urmet SpA

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- User Manual