FIRE DETECTION

ELKRON. THE HI-PROTECTION COMPANY

((((((ELKRON))))))

FAP500 DIGITAL SYSTEM

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FAP500 SYSTEM

From Elkron research, FAP 500 series is born, i.e. a new smoke detection digital system. Within Elkron fire system there is included from today FAP 500 series, i.e. a new modular, flexible digital system, EN54-approved and available in 4 control unit models with 1 to 8 loops, all with extension capability. System main evolution, differentiating the system from anything else present on the market, is the capability of self-learning the address in any installation mode. In addition, the system is provided with a short circuit isolator integrated in all components. FAP 500 system enables both easily interface to shut off systems and assure an excellent protection level. This is why, with FAP 500, Elkron fire system is also a Hi-protection system.

System high flexibility.

FAP500 system is a clear evolution over control units present on the market, as enabling to connect all control unit models to the network, interface to shut off systems and assure an excellent performance level joined to simple installation, programming and management. The system is modular, flexible and includes 4 control unit models:
• control unit with 1 loop (FAP 541)
• control unit with 2 loops with extension capability to 4 (FAP 544)
• control unit with 4 loops e with extension capability to 8 (FAP 548)
• control unit with 8 loops with extension capability to 16 (FAP 5416)

The line can be connected in 3 different ways, guaranteeing the point (detector, device, pushbutton, etc...) to be automatically pre-learned:
• line with closed loop
• open lines (entering/exiting connection)
• open lines (parallel connection)

Easy programming.

Thanks to this flexibility, all system needs can be best met, so making installation step much easier. Each configuration type can be easily programmed via either control unit keyboard or PC.
All control units are prearranged for communicating within the network through a LAN TCP/IP interface, a communication port for Master/Slave functions, a printer connection port, an optically isolated RS485 port for interfacing repeater panels and shut off control units, an USB port for downloading data and system configuration via PC, a communication interface for transmitting events via GPRS/GSM/PSTN.
All is under control, remotely too, thanks to new software platform enabling Elkron systems to interact among one another and remotely transmit all system information.
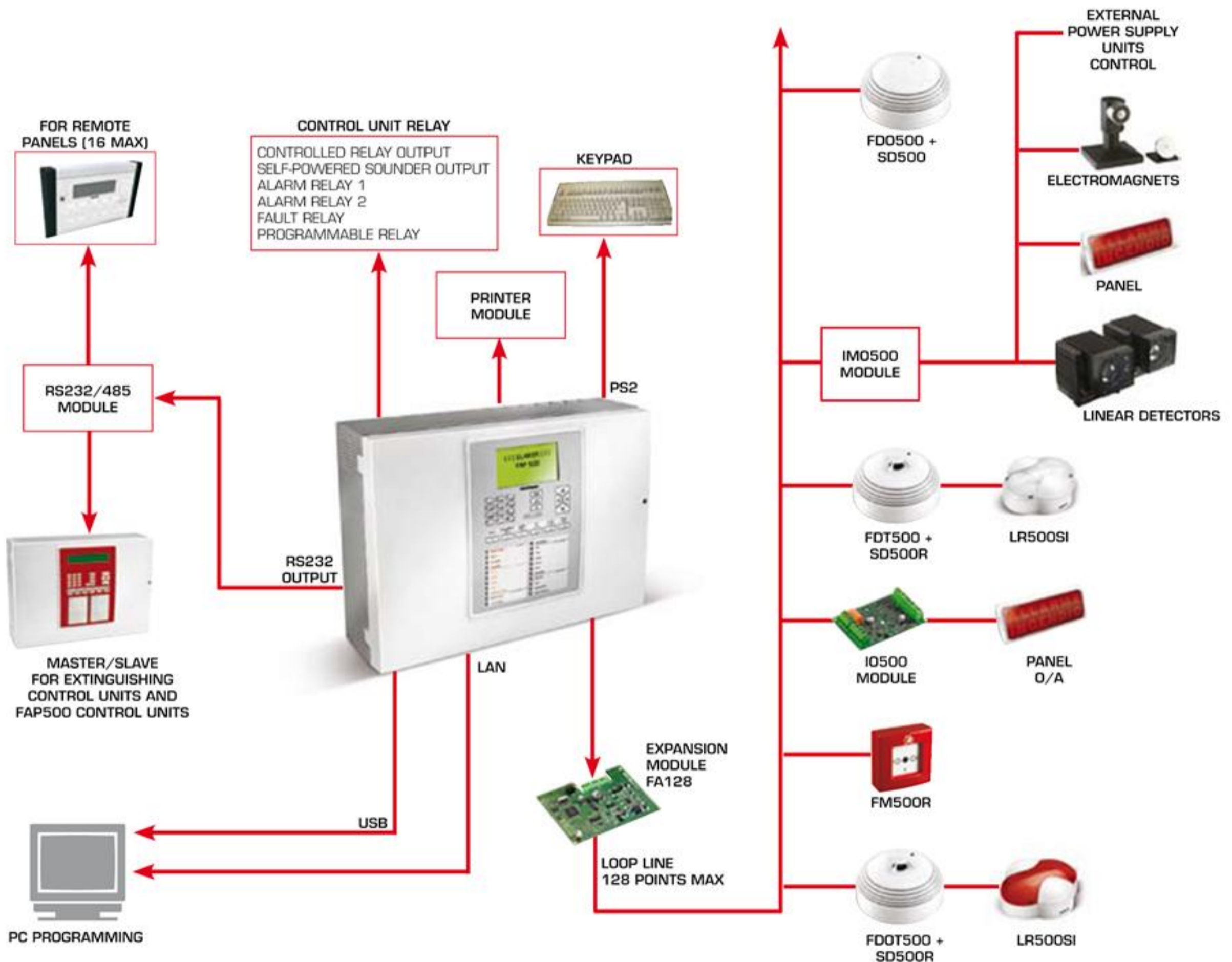
FAP500 DIGITAL SYSTEM

FAP500 SYSTEM

FAP 500 SERIES CONTROL UNITS
The new control unit FAP544 is modular that is possible to expand the standard configuration with functions and peripherics. It is possible to manage a minimum of 2 up to 4 addressed loop.

Connectibility
RS485 communication port
Communication port for LAN TCP/IP network
Printer connection port
Communication port for MASTER/SLAVE connection
Connection for 16 remote panels
Managing configuration / programming / remote assistance sw via PC
Managing graphic maps / remote management
External communication via GPRS
External communication via PSTN

FOR REMOTE PANELS (16 MAX)

CONTROL UNIT RELAY
CONTROLLED RELAY OUTPUT
SELF-POWERED SOUNDER OUTPUT
ALARM RELAY 1
ALARM RELAY 2
FAULT RELAY
PROGRAMMABLE RELAY

KEYPAD

EXTERNAL POWER SUPPLY UNITS CONTROL

FDO500 + SD500

ELECTROMAGNETS

PANEL

PRINTER MODULE

PS2

RS232/485 MODULE

IMO500 MODULE

LINEAR DETECTORS

RS232 OUTPUT

FDT500 + SD500R

LR500SI

MASTER/SLAVE FOR EXTINGUISHING CONTROL UNITS AND FAP500 CONTROL UNITS

LAN

IO500 MODULE

PANEL O/A

EXPANSION MODULE FA128

FM500R

USB

LOOP LINE 128 POINTS MAX

FDOT500 + SD500R

LR500SI

PC PROGRAMMING

FAP500 DIGITAL SYSTEM

1 LOOP LINE CONTROL UNIT

FAP541 Control Unit

FAP541 cod. SC6100121
Microprocessor control unit with 1 loop line
- Configuration: 1 loop line (class A) or 2 open lines (class B)
- Possibility of managing up to 128 points for loop (64 for open line).
- Point self-learning and point logic address.
- Backlit graphic display 4 x 40 characters
- Event log: 1000 events
- Chronological history directly shown on display.
- 10 passwords programmable on 3 levels.
- 480 programmable zones.
- USB port for local PC connection for programming via SW
- Possibility of monitoring detector signal/noise ratio level
- Real time clock with built-in buffer battery
- Non volatile memory
- Control unit outputs: 5 (alarm 1, alarm2, failure, programmable (mains failure/exclusion)
- Internal buzzer
- Programmable alarm threshold: for zone, for individual point
- Exclusion of individual point /zone
- Power supply: 230Vca
- Max. current: 1.5A@24Vcc
- Battery charge limit and battery charge check
- Battery housing: 2 12 @12Vcc batteries
- Possibility of implementing at least 2 Km loop with 2 x 1.5 mm² screeened cable
- Noise immunity up to 30Vm
- Common dialogue protocol for all system control units
- Dimensions: 490 (L) x 350 (H) x 145 (D) mm
- COMPLIANT WITH EN54 STANDARDS, part 2 and part 4

FAP541

FAP500 DIGITAL SYSTEM

4, 8 AND 16 LOOP LINE CONTROL UNITS

FAP544 Control Unit

FAP544 cod. SC6200121
Microprocessor control unit with 2 loop lines expandable to 4
- Basic configuration: 2 loop lines (class A) or 4 open lines (class B)
- Max. configuration: 4 loop lines (class A) or 8 open lines (class B)
- Possibility of managing up to 128 points for loop (64 for open line).
- Point self-learning and point logic address.
- Backlit graphic display 240*128 - 4.7 ".
- Event log: 1000 events
- Chronological history directly shown on display.
- 10 passwords programmable on 3 levels.
- 480 programmable zones.
- USB port for local PC connection for programming via SW
- Possibility of monitoring detector signal/noise ratio level
- Real time clock with built-in buffer battery
- Non volatile memory
- Control unit outputs: 5 (alarm 1, alarm2, failure, programmable (mains failure/exclusion)
- Internal buzzer
- Programmable alarm threshold: for zone, for individual point
- Exclusion of individual point /zone
- ON/OFF by password
- Power supply: 230Vac
- Max. current: 2A@24Vdc
- Battery charge limit and battery charge check
- Battery housing: two 12 @12Vdc batteries
- Possibility of implementing at least 2 Km loop with 2 x 0.75 mmC cable (screened and NOT screened)
- Noise immunity up to 30Vm
- Common dialogue protocol for all system control units
- Dimensions: 490 (L) x 350 (H) x 145 (D) mm
- COMPLIANT WITH EN54 STANDARDS, part 2 and part 4

FAP544

FAP548 Control Unit

FAP548 cod. SC6600121
Microprocessor control unit with 4 loop lines expandable to 8.
- Same as FAP544

FAP5416 Control Unit

FAP5416 cod. SC6700121
Microprocessor control unit with 8 loop lines expandable to 16.
- Same as FAP544

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FAP500 DIGITAL SYSTEM

FAP500 SYSTEM: MODULES AND ACCESSORIES

Expansion module

FA128 cod. SC3310121
1 loop expansion module
• The expansion module enables to expand the control unit by 1 loop line or 2 open lines. 128 points (detectors, push-buttons, interfaces, etc.) can be connected. The module, to be directly installed on the control unit backplane, enables the acquisition and control of the connected devices. Connection with devices can be implemented with closed loop line or with open loop line. Configuration is made during programming.

FA128

Accessories

FKP500 cod. KP5200121
Remote Panel
• The repeating panel enables active and constant monitoring of every event. The FAP500 control unit can manage up to 16 remote panels; connection to the control unit and to other panels (if any) is made by means of RS485 opto-isolated port. Panel identification address is made via on board switch. Information is displayed through backlit display with 4 lines x 40 characters. Power supplies, exclusions/reset, alarms and failures are indicated by a series of leds. The user has a keypad fitted with dedicated keys for controls from/to the control unit.

IO500 cod. SC3A00121
Multipurpose module 1 input/ 1 output
• This module enables to interface on FAP500 digital system, stable conventional detectors with dry contacts (NC/NO), to connect probes or other devices fitted with pulse controls. Moreover the same interface can pilot actuators (e.g.: panels, plates, electromagnets, sirens, etc.) and check the line control. Each input / output can be programmed.
• Power supply: 10 ÷ 24Vdc
• Absorption: 250 mA @ 24Vdc
• Relay output: 1A, 30Vdc, resistive load
• Alarm repeat output: 12mA max
• Working temperature: -5 ÷ 50 °C
• Relative humidity: 95% max non condensing

IO500

IOM500 cod. SC3B00121
Multipurpose module 4 inputs/ 4 outputs
• This interface features the same characteristics as module IO500, it enables to connect stable conventional detectors with dry contacts (NC/NO), to connect probes or other devices fitted with pulse controls and to pilot actuators (e.g.: panels, plates, electromagnets, sirens, etc.) and check the line control, but it features 4 programmable inputs and 4 programmable outputs.

RS232/485 cod. IT1410121
RS232/485 interface for MASTER/SLAVE and remote panel

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FAP500 DIGITAL SYSTEM

FAP500 SYSTEM: MODULES AND ACCESSORIES

Accessories

SOFT/FAP500 cod. SW3500121
Configuration SW
- This software enables to acquire the system characteristics by reading the control unit data; to unload and to programme the configuration and parameters of each individual point

MAPPE/FAP500 cod. SW3600121
Supervision software with graphic maps
- This software enables full network management of one or more control units. It is possible to manage and assist the system in local or remotely.

LAN/TCP/IP500 cod. IT1510121
LAN/TCP/IP interface
- It enables to connect several control units on a LAN network.

ITS500 cod. IT1610121
Printer interface.

MGSM500 cod. CT6010121
Modem interface for GSM.

MPSTN500 cod. CT5910121
Modem interface for PSTN.

FAP500 SYSTEM: BUTTONS

Buttons

FM500 cod. SD6000121
Break glass manual pushbutton, complete with self-learning circuit
- Fire alarm pushbuttons are used for signalling an alarm manually. To use the break glass pushbutton model just press the glass in the middle in order to break it and to operate the internal switch. These pushbuttons are provided with a special tool to be used to perform the TEST, to open the cover and to replace the glass. The alarm state is shown by the switching on of a red LED. Compliant with Standards: EN54 part 11

FM500

FMR500 cod. SB6100121
Manual recommissioning pushbutton, complete with self-learning circuit and short-circuit isolator.
- To use the recommissioning pushbutton model just press the glass in the middle in order to push it inwards, thereby operating the switch. These pushbuttons are provided with a special tool to be used to perform the TEST and to replace the glass. The alarm state is shown by the switching on of a red LED. Compliant with Standards: EN54 part 11

FMR500

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FAP500 DIGITAL SYSTEM

FAP500 SYSTEM: DETECTORS

Photo-optical smoke detector

FDO500 cod. SD4800121

Low profile photo-optical smoke detector, complete with self-learning circuit and short-circuit isolator.

- Smoke detectors work according to the light scattering principle caused by smoke particles present in the air. The smoke detector has the automatic gain control function; a microcontroller calculates reading compensation to keep constant sensitivity and corrects any level increase due to dust depositing into the analysis cell. Smoke detectors shall be installed in places protected against draughts which may divert the flow of combustion particles and in places where the common activities performed do not cause gas material fires.
- Power supply: 20Vdc (modulated voltage between -15% and + 10%)
- Average absorption at rest: 250 mA@20Vdc
- Absorption at alarm: 2mA@20Vdc
- Two-colour led: red alarm - green regular operation
- Relative humidity max: 93%
- Working temperature: 0 ÷ 50°C
- Weight: 70 g
- Dimensions: ø 90 x 31 (H) mm
- Certificato EN54 parte 7, certification number: 1293-CPD-0082

FDO500

Heat detector

FDT500 cod. SD5700121

Low profile heat detector, complete with self-learning circuit and short-circuit isolator.

- Heat detectors monitor the temperature values in the area where they are installed.
- A microcontroller analyses and compares the signal received from a NTC type temperature detector and activates the alarm if the read temperature exceeds 58°C.
- Power supply: 20Vdc (modulated voltage between -15% and + 10%)
- Average absorption at rest: 250 mA@20Vdc
- Absorption at alarm: 2mA@20Vdc
- Static alarm threshold: 58°
- Two-colour led: red alarm - green regular operation
- Relative humidity max: 93%
- Working temperature: 0 ÷ 50°C
- Weight: 70 g
- Dimensions: ø 90 x 40 (H) mm
- Compliant with EN54 Standards, part 5 class A1S, certification number: 1293-CPD-0084.

FDT500

FAP500 DIGITAL SYSTEM

FAP500 SYSTEM: DETECTORS

Thermo-speedometric detector

FDTD500 cod. SD9000121

Low profile thermo-speedometric detector, complete with self-learning circuit and short-circuit isolator.

- Thermo-speedometric detectors monitor temperature rise in the area where they are installed. A microcontroller analyses and compares the signal received from a NTC type temperature detector and activates the alarm if the read temperature rise exceeds 5°C per minute.
- Power supply: 20Vdc (modulated voltage between -15% and + 10%)
- Average absorption at rest: 250 mA@20Vdc
- Absorption at alarm: 2mA@20Vdc
- Static alarm threshold: 58°
- Two-colour led: red alarm - green regular operation
- Relative humidity max: 93%
- Working temperature: 0 ÷ 50°C
- Weight: 70 g
- Compliant with EN54 Standards, part 5 class A1R, certification number: 1293-CPD-0085.

FDTD500

Optical- heat detector

FDOT500 cod. SD9K00121

Low profile optical- heat detector, complete with self-learning circuit and short-circuit isolator.

- Double technology detectors (smoke-heat) base their operating principle on the light scattering principle caused by smoke particles present in the air (TYNDALL effect) and on temperature monitoring within the area where they are installed. A microcontroller analyses and compares the signal received from a NTC type temperature detector and activates the alarm if the read temperature exceeds 58°C. The smoke detector has the automatic gain control function; a microcontroller calculates reading compensation to keep sensitivity constant in time.
- Power supply: 20Vdc (modulated voltage between -15% and + 10%)
- Average absorption at rest: 250 mA@20Vdc
- Absorption at alarm: 2mA@20Vdc
- Static alarm threshold: 58°
- Two-colour led: red alarm - green regular operation
- Relative humidity max: 93%
- Working temperature: 0 ÷ 50°C
- Weight: 70 g
- Dimensions: ø 90 x 40 (H) mm
- Compliant with EN54 standards part 7 and part 5 class A1, certification number: 1293-CPD-0083

FDOT500

FAP500 DIGITAL SYSTEM

FAP500 SYSTEM: BASES FOR DETECTORS

Standard base

SD500 cod. SD4K00121
Digital detector standard base.
- The base is standard for all digital detectors of the FAP500 series.
- Material: ABS
- Colour: white
- Dimensions: 90 mm

SD500M cod. SD4S00121
Digital detector standard base, FAP500 series - package with 10 pcs.

SD500R cod. SD5K00121
Digital detector standard base with alarm repetition.
- The base is standard for all digital detectors of the FAP500 series, its output enables to directly pilot (through the loop supply) the outdoor gem LR500SI
- Material: ABS
- Colour: white
- Dimensions: 90 mm
- Alarm repetition output: 12 mA@24Vdc

SD500-RM cod. SD6S00121
Digital detector standard base with alarm repetition, FAP500 series - package with 10 pcs

SD515 cod. SD2V00121
Base support for series 500 bases