cofem
1973

TECHNICAL CATALOGE

ALGORITHMIC SYSTEM
CONVENTIONAL SYSTEM

ADDRESSABLE SYSTEM

CONTROL PANELS

DETECTORS & MODULES

SOFTWARE

COFEM ALGORITHMIC ADDRESSABLE FIRE DETECTION SYSTEM

The Algorithmic addressable Fire Detection System represents the most modern technology in fire detection and constitutes a natural evolution from the Identifiable Detection System towards equipment that not only is able to identify the element that produces the alarm (sensor or call point), but that also allows for the total configuration of detection parameters (alarm levels, sensibility,...) as well as the adaptation to the environmental conditions and the degree of dust in the sensor.

In the Cofem Algorithmic addressable Detection System, the loop elements (sensors, manual call points, relay modules, masters, analogue sounders and technical signal module) have the property of being auto-identifiable, that is to say, all of them can be installed with no need for prior manual encoding, facilitating enormously the assembly and subsequent modifications to the installation.

The Algorithmic addressable Detection System is based on the measurement and transmission of the instant value of the monitored magnitude (smoke, temperature or monoxide concentration), for their subsequent processing in the control panel, which will consider the alert or standby status of the sensor. Each sensor incorporates a microprocessor responsible for the digitalization of the analogue value read in the sensor, for transmission of this value to the control panel and for identification of the sensor.

The main difference between the conventional and analogical detection systems lies in that for the first the Voltage delivered by the transducer is compared with a predetermined and fixed threshold (V_{alarm}), obtaining from that comparison the system in standby or system in alarm status.

In the Algorithmic addressable Detection System, on the contrary, the control panel gathers the readings from each sensor and determines the status thereof according to these readings, any previous readings (history), the pre-programmed parameters and on the decision algorithm, being possible to act on the detection parameters, as well as, for example, the alarm threshold.

Each sensor on the Cofem Algorithmic addressable Detection System transmits its value to the control panel with a regularity of less than 10 seconds.

The following table shows the values of equivalence of the elements connected to analogue control panels and operating limits.

Device Limits per Control Panel										
Referencia	**Descripción**	**Logic Relays**	***LYON & ZAFIR Control Panel***					***Central C-Lyon***		
			Loop limit	**Element equivalence**			**Cable section**	**Loop limit**	**Element equivalen**	
			Cable lenght->	*≤ 800 m*	*≤ 500 m*	*≤ 300 m*	**2x1,5 mm²**	**Cable lenght->**	*≤ 800 m*	**2x1,5 mm²**
			≤ 1350 m	*≤ 850 m*	*≤ 500 m*		**2x2,5mm²**	*≤ 1350 m*		**2x2,5mm²**
A30XHA	Addressable optical-thermal sensor	---	199	1	1	1		99	1	
A30XHAS	Addressable optical sensor	---	199	1	1	1		99	1	
A30XHTA	Addressable thermal sensor	---	199	1	1	1		99	1	
A30XHTCO	Optical-thermal-monoxide Multisensor	---	199	1	1	1		99	1	
PUCAY	Addressable manual call point	---	199	2	1	1		99	1	
MSTAY	Technical signal module	---	99	3	3	2		57	2	
KMAY	Conventional zone master module	---	99	5	3	2		72	2	
MYOA	Relay and technical signal module	1	32	5	3	2		31	2	
MDA1Y	Relay module	1	32	5	3	2		16	2	
MDA2Y	Relays module	2	16	5	3	2		8	2	
KABY	Loop isolator	---	199	1	1	1		99	0	
SIRAY	Addressable sounder	1	32	8/16[A]	6/12[A]	4/8[A]		32	4/8[A]	
SIRAYL	Addressable sounder with light	1	32	10/20[A]	8/14[A]	6/10[A]		25	6/10[A]	
SIRAY+BSLC	Addressable sounder with EN 54-23 light	1	19	25/35/40[B]	16/24/26[B]	12/20/22[B]		10	12/20/22[B]	
Límite de la central:										
LYON control panel a) 199 elements with 32 logic relays per loop, and b) 20 loops with 199 logic relays			***ZAFIR control panel*** a) 199 elements with 32 logic relays per loop					***C-Lyon control panel*** a) 99 elements with 32 logic relays per loop		
[A]) Values correspond with the standard / maximum sound intensity of the sounder.										
[B]) Value corresponds with the sound-light standard/sound **or** light at maximum/sound **and** light at maximum, sounder intensity										
Note: It is considered that wire has a resistance of 32.9 Ω/Km*mm² (cooper cable).										

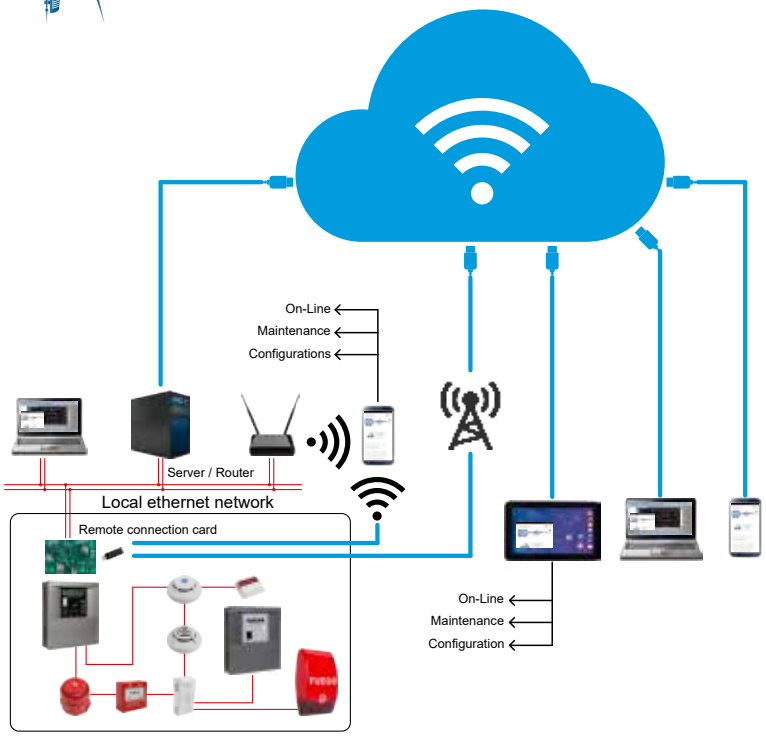
Table I. Limit elements per loop and per fire control panel (Lyon, Zafir and Compact Lyon)

COFEM REMOTE

Communication system

The Cofem remote system of the Lyon Remote, Compact Lyon and Zafir algorithmic-addressable control panels allows them to be connected from anywhere—making it possible to change the configuration, view maintenance data and manage online.

Thus, the user can interact with the control panel during starting up and subsequently manage maintenance planning or provide online real-time support to customers from their offices or anywhere else by means of a tablet, smartphone or PC with internet access.



NEW

NOTE: The functions offered in the product will depend on its version

Technical characteristics:

- View and act on the status of the control panel during the installation/starting up of the system.
- View and act on the status of the control panel in the customer's local network.
- View and act on the status of the control panel during maintenance.
- Management of events and alerts

LYON REMOTE

Addressable algorithmic control panel

The Lyon algorithmic addressable Control Panel is EN 54-2 and EN 54-4 standard certified according to the latest CE Directives/Regulation and can successfully overcome difficult environmental conditions, electrical interferences, electromagnetic radiate upsets, vibrations, etc.

The algorithmic addressable Detection System is able to identify the device which produces the alarm or fault (sensor or call point), and allows the total configuration of the detection parameters (alarm levels, sensibility...) as well as the adaptation to the environmental conditions and the degree of dust in the sensor.

In the Cofem algorithmic addressable System, the loop elements (sensors, manual call points, relay modules, masters, analogue sounders and technical signal modules) have the property of being auto-identifiable, that is to say, all of them can be installed with no need for prior manual encoding, facilitating enormously the assembly and subsequent modifications to the installation.

Features:

- Control panel configurable and expandable up to 8 loops (199 points per loop).
- Expandable up to 20 loops with an additional cabinet.
- All the points are supervised by the control panel, except the loop isolator KABY.
- Capacity for 199 configurable relays per control panel.
- Can hold up to 99 zones per panel.
- Registry with capacity of 4095 events with date and time.
- Delay of supervised sounder output programmable between 0 to 10 minutes, identified as S1.
- Alarm output as free voltage relay not supervised, identified as S2.
- Failure output, delayed and supervised, identified as S3.
- Allowed to connect addressable sounders in the loop.
- Evacuation push-button.
- Backlit LCD display with 4 lines and 40 characters.
- Incorporates multiple languages by default (Spanish, English, French, Portuguese, etc).
- Configurable with the I-Link software.
- It allows to connect an external keyboard (standard PC-PS2).
- Access to the control panel keyboard introducing a numeric code.
- Allows connection of up to 15 repeaters and/or 15 control panels in network.
- MODBUS (on specific request).
- Contact ID (on specific request).
- Cofem Remote.
- Size: 424 x 330 x 140 mm.
- Certified according to EN 54-2 and EN 54-4 and CE mark according to the European Regulation of Construction Products (UE) N°305/2011.

NEW

TECHNICAL FEATURES

Input voltage	110/230 Vac 50/60Hz	*Maximum current per loop*	500 mA / 26 a 32V/DC
Output voltage	21V Nominal	*Keyboard connector*	PS2 minidin 6
Maximum consumption	155 VA a 230 VAC	*Communications port*	USB 2.0/1.1 type B or
Batteries	2 x 12V 7Ah SLA		RS232 (depending version)
Power fuse	8 A	*Environmental conditions*	-10ºC+50ºC 20%-95% RH
Battery charger	500 mA 27V/DC 20ºC	*Size*	424 x 330 x 140 mm
Devices per loop	199	*Weight (without batteries)*	7,4 Kg
Power supply	5 A	*Standard*	EN 54 parts 2 and 4
Fuse S3	1 A	*Fuse S1*	2 A
IP protection	IP 30	*Fuse output 30V*	2 A

ZAFIR

Addressable algorithmic control panel

REMOTE OPTION

The Zafir Algorithmic addressable Control Panel is EN 54-2 and EN 54-4 according to the European Regulation of Construction Products.

The new development of Zafir control panel, allow integration of all the functionality of an addressable algorithmic system in a reduced-dimension cabinet with capacity up to 398 detectors in 2 loops.

The control panel is totally compatible with the Lyon system, highlighting that loop elements (sensors, manual call points, relay modules, masters, analogue sounders and technical signal modules) have the property of being auto-identifiable, that is to say, all of them can be installed with no need for prior manual encoding, facilitating enormously the assembly and subsequent modifications to the installation.

Features:

- Control panel configurable with 1 or 2 loops.
- Loop capability 199 points.
- All the points are supervised by the control panel, except the loop isolator KABY.
- Capacity for 64 configurable relays per control panel.
- Can hold up to 99 zones per panel.
- Registry with capacity of 4095 events with date and time.
- Delay of supervised sounder output programmable between 0 to 10 minutes, identified as S1.
- Alarm output as free voltage relay not supervised, identified as ALARM.
- Fault output, delayed and supervised, identified as FAULT.
- Allowed to connect addressable sounders in the loop.
- Evacuation push-button.
- Backlit LCD display with 4 lines and 40 characters.
- Incorporates multiple languages by default (Spanish, English, French, Portuguese, etc).
- Configurable with the I-Link software.
- It allows to connect an external keyboard (standard PC-PS2).
- Access to the control panel keyboard introducing a numeric code.
- Allows connection of up to 15 repeaters and/or 15 control panels in network.
- Contact ID (on specific request).
- Cofem Remote (on specific request).
- Size: 363 x 331 x 96 mm.
- Certified according to EN-54-2 and EN 54-4 and CE mark according to the European Regulation of Construction Products (UE) N°305/2011.

TECHNICAL FEATURES

Input Voltage	110/230 Vac 50/60Hz	*Maximum current per loop*	500 mA / 24 to 36V/DC
Output Voltage	24V Nominal	*Keyboard connector*	PS2 minidin 6
Maximum Consumption	70 VA to 230V/AC	*Communications port*	USB 2.0/1.1 type B & RS485
Batteries	2 x 12V 7Ah SLA	*Environmental conditions*	-10ºC+50ºC 20%-95% RH
Battery Charger	500 mA 27V/DC 20ºC	*Size*	363 x 331 x 96 mm
Devices per loop	199	*Weight (without batteries)*	4,5 Kg
Batteries Fuse	4 A	*Standard*	EN 54 parts 2 and 4
IP Protection	IP 30	*S1 Sounder fuse*	1,85 A autoreset
		30V Output fuse	0,75 A autoreset

COMPACT LYON

Addressable algorithmic control panel

REMOTE OPTION

The algorithmic addressable Control Panel Compact Lyon is EN 54-2 and EN 54-4 standard certified according to the latest CE Directives/Regulation.

The Compact Lyon panel does the same functions that Lyon Remote Control Panel, being fully compatible with it from the point of view of installation (cabling, analogue detectors, manual call points, modules and analogue sounders, etc.).

It is particularly interesting in medium-size installations, traditionally designed for conventional systems, allowing using an addressable system with all its functionality and advantage.

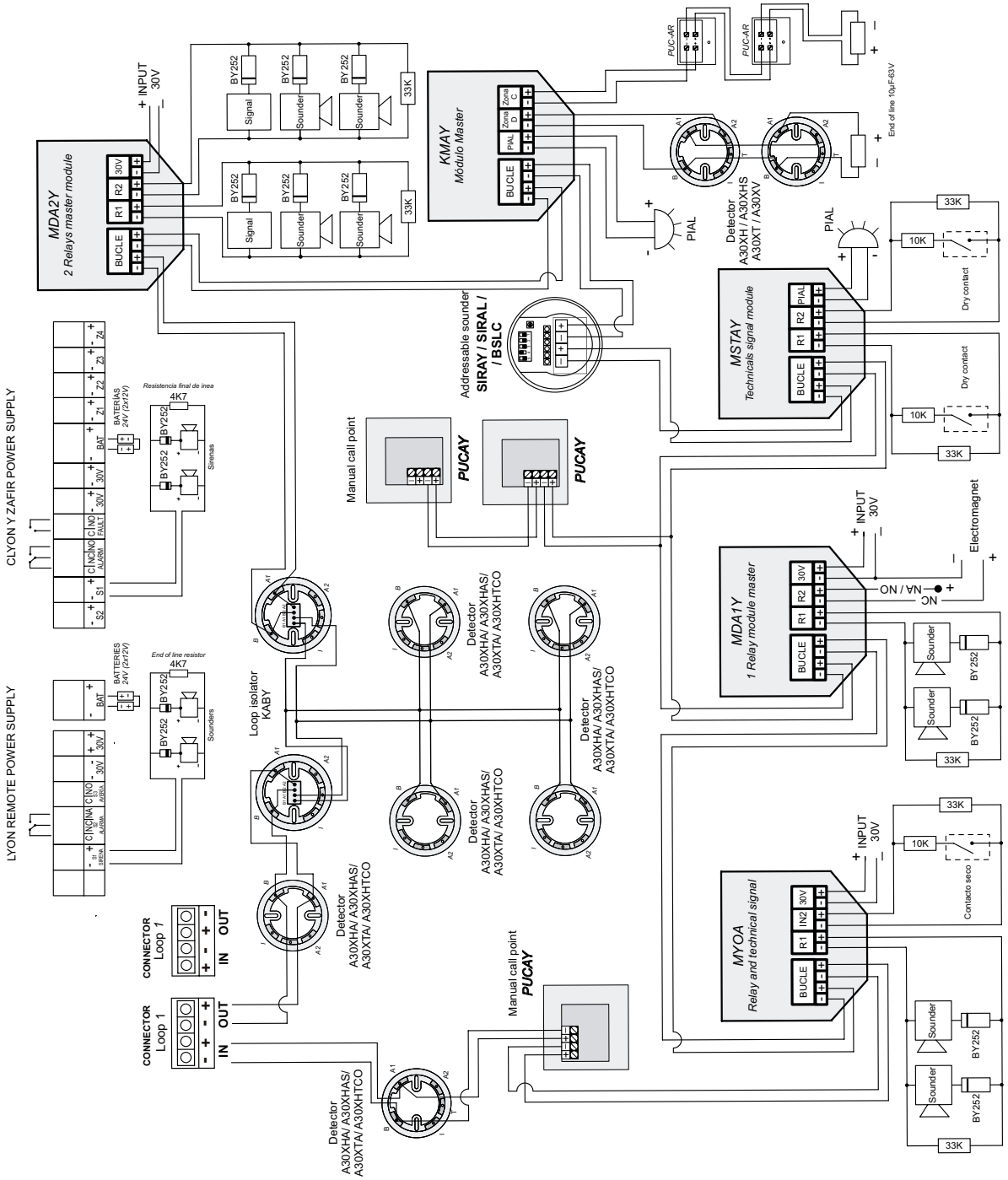
In case the installation should be extended, the Compact Lyon Control Panel has the control panels network function, whereby control panels can be connected together, also showing the information of the control panels connected to a repeater, besides allows an additional functionality of operation.

Features:

- Control panel configurable with 1 or 2 loops.
- Loop capability 99 points.
- All the points are supervised by the control panel, except the loop isolator KABY.
- Capacity up to 16 relays per loop, 32 totally.
- Can hold up to 99 zones per panel.
- Registry with capacity of 4095 events with date and time.
- Delay of supervised sounder output programmable between 0 to 10 minutes, identified as S1.
- Alarm output as free voltage relay not supervised, identified as ALARM.
- Fault output, delayed and supervised, identified as FAULT.
- Allowed to connect addressable sounders in the loop.
- Evacuation push-button.
- Backlit LCD display with 4 lines and 40 characters.
- Incorporates multiple languages by default (Spanish, English, French, Portuguese, etc).
- Configurable with the I-Link software.
- It allows to connect an external keyboard (standard PC-PS2).
- Access to the control panel keyboard introducing a numeric code.
- Allows connection of up to 15 repeaters and/or 15 control panels in network.
- Contact ID (on specific request).
- Cofem Remote (on specific request).
- Size: 363 x 331 x 96 mm.
- Certified according to EN 54-2 and EN 54-4 and EN 54-4 and CE mark according to the European Regulation of Construction Products (UE) N°305/2011.

TECHNICAL FEATURES

Input Voltage	110/230Vac 50/60Hz	*Maximum current per loop*	250 mA / 24 to 36V/DC
Output Voltage	24V Nominal	*Keyboard connector*	PS2 minidin 6
Maximum Consumption	70 VA to 230V/AC	*Communications port*	USB 2.0/1.1 type B & RS485
Batteries	2 x 12V 7Ah SLA	*Environmental conditions*	-10ºC+50ºC 20%-95% RH
Batteries charger	500 mA 27V/DC 20°	*Size*	363 x 331 x 96 mm
Devices per loop	99	*Weight (without batteries)*	4,5 Kg
Batteries Fuse	4 A	*Standard*	EN 54 parts 2 and 4
IP Protection	IP 30	*S1 Sounder Fuse*	1,85 A auto reset
		30V Fuse Output	0,75 A auto reset



General wiring diagram Lyon Remote, Zafir y C-Lyon

I-LINK

Management software

I-LINK is a configuration and monitoring software for the Cofem algorithmic-addressable control panels. The I-LINK software is designed to perform two functions:

Configuration of the control panel:
With the software (in its basic version), the system's operating parameters can be configured by following a set of simple steps: the general activation parameters of the control panel, the definition of the points, the activation of the relays and the definition of the area listings and activation listings.
All this with functions that assist the user in simplifying the data entry procedures, such as the use of the Cofem Installer app (for smartphones and tablets), the display of the configuration settings in tree format, the possibility of copying and moving loops, of modifying the information directly on the tables of points, relays, etc.
Moreover, I-LINK allows for configuring the installation's video cameras and subsequently associating them in the extended version (ONLINE) to the detection elements.

ONLINE:
With the extended version of the software, I-LINK allows for ONLINE (real time) connection to the fire detection and alarm control panel, allowing the real-time display of the events, and also allowing for action to be taken (monitoring, cancelling, starting up, activating evacuation, etc.).
For an improved display, the installations blueprints can be entered in several formats (including Autocad) and the different detection elements can be placed on these blueprints. When an event occurs, the appropriate blueprint is opened, focusing on the event, enabling the user to zoom in, switch blueprints, see the sequence of events, etc.
The installation's cameras can also be placed on the blueprints to relate them to the detection elements. Thus, when an event occurs, the related camera will be opened making it possible to view what is going on in that area of the installation. Also, at any time, you can click on any camera and view its images. On configuring the cameras, there is also the possibility of activating an image manager that will give us a warning in I-LINK ONLINE of the possible identification of fire.
By registering the installation in the Cofem Guard app (for smartphones, tablets or emails), I-LINK ONLINE will also send information of the events from the fire detection and alarm system to 5 users who will receive it in real time, depending on the connectivity/reception of these devices.

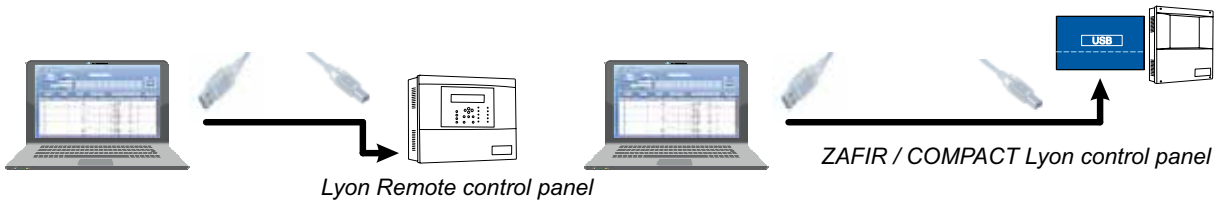
Features:

Basic Version (for programming the control panel):
- Allows for easy programming of the control panel from a PC.
- Allows for simple management of the configurations of all the Lyon Remote, Zafir and Compact Lyon installations.
- Loads the information on the installation's points from the Cofem Installer app.
- Configuration of the installation's video cameras.

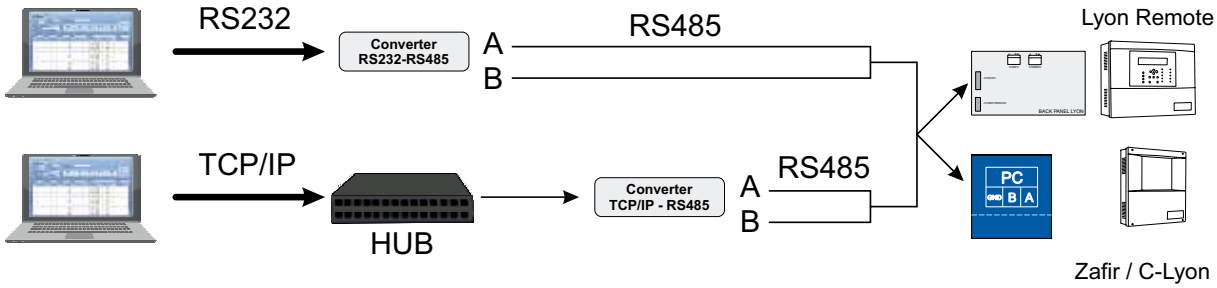
Extended Version (for ONLINE management):
- Allows for ONLINE management of the control panel, offering many control possibilities.
- Displaying events on the installation's blueprints.
- Displaying of the video cameras of the fire detection events associated to the installation.
- Under license, the sending of the installation's events to the Cofem Guard app (for smartphones, tablets or emails).
- Using RS232/485 converters, it allows for distances of up to 1200 m between the PC and the control panel.
- Allows for using wiring and the TCP/IP protocol in the installation.
- Possibility of managing up to 35 control panels simultaneously in a single installation.

NOTE: The functions offered in the product will depend on its version.

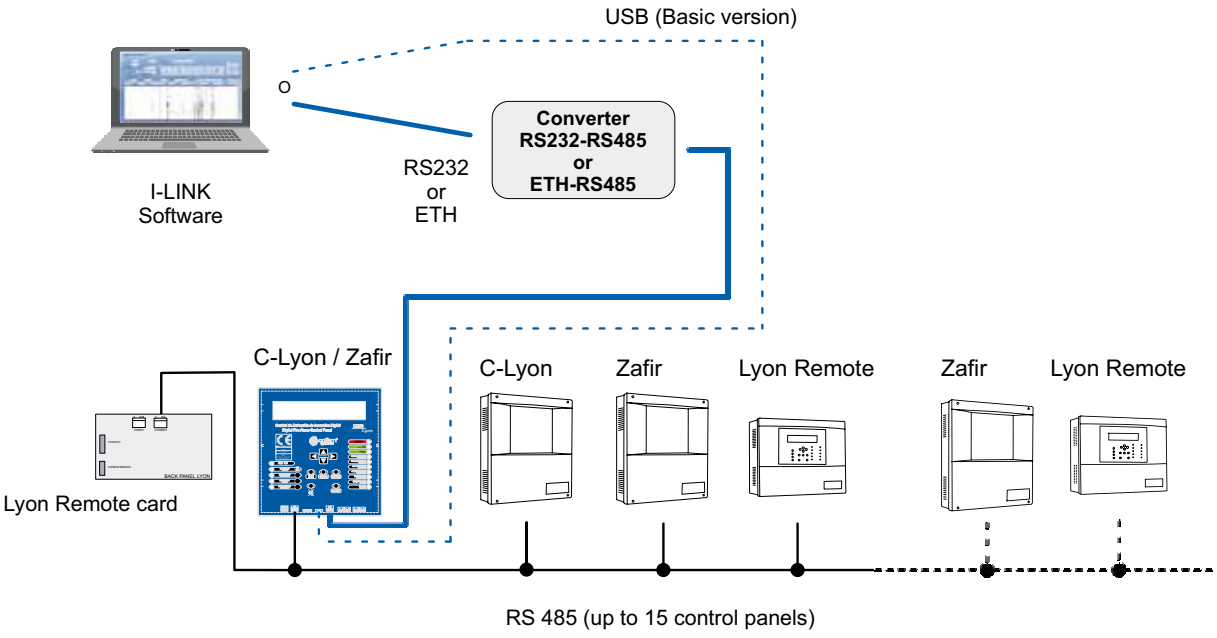
Lyon Remote connection diagram

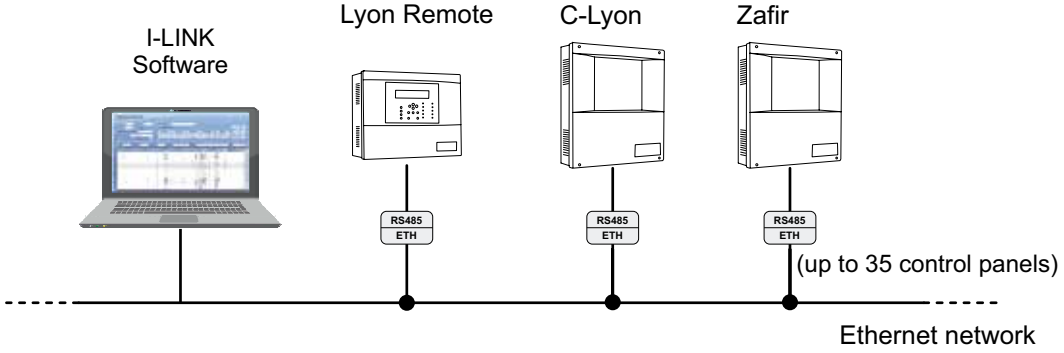


Connection 1 for control panel by RS485 or TCP/IP protocol (extended version)



Example of connection network and with I-link





APP'S

Android apps

COFEM INSTALLER

Effortless installation, thus preventing errors and saving time

Following Cofem's philosophy based on the simplicity and reliability of its systems, the "COFEM Installers" app has been created, with the purpose of gathering the installation data required for the quick and easy configuration of the algorithmic addressable fire detection and alarm control panels, in three steps:

1- Open the application.

2- Create a new installation.

3- Scan the QR codes of the components (detectors, call points, etc.)

With this application you can carry all the information around with you without needing to make notes on pieces of paper, also avoiding any possible reading and writing errors. The information on the installations can also be sent or received by any means available on the phone/tablet to configure the installation's settings with the EasyCoNET / I-Link programme.

COFEM GUARD

Receive real-time alerts from the Cofem fire detection system

With this application it will be very easy to stay informed of fire warnings. On our mobile device from anywhere with an internet access, we can be the first to receive information about alarms, warnings and faults from our algorithmic-addressable fire detection and alarms control panels.

For this you must:

1- Contract this warning service from Cofem material distributor.

2- Have the "EasyCoNet / I-link extended version" software with internet access.

3- Connect it to the detection control panel and fire alarm.

Once these steps have been carried out, you can register in this application and have real-time information on the fire events (event type, time, control panel No., loop No., point No., label, etc.).

ZYR

Algorithmic repeater control panel

The LYON REMOTE / ZAFIR / COMPACT Lyon control panel allows to connect up to 15 repeaters, using a 4 wires of 1,5 mm^2 connection (two for supply and two for communication for RS485 line). The two wires of the RS485 line will be connected from the control panel to the corresponding repeaters. The repeater wiring is realized like the figure attached.

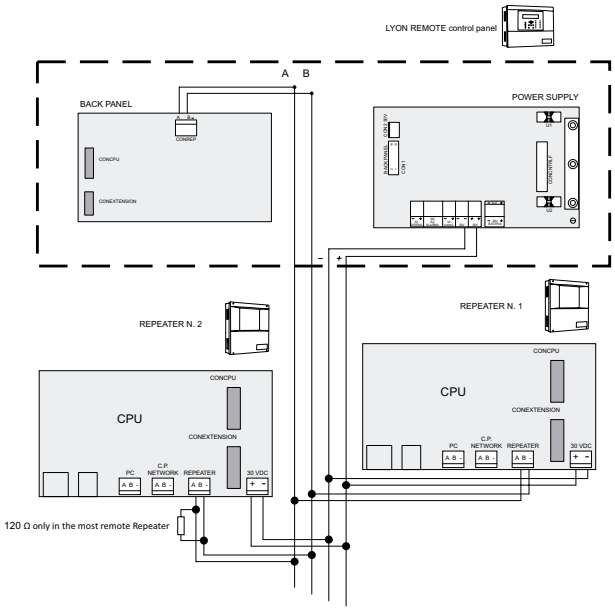
From 30 V output of the control panel power supply is allowed up to 3 repeaters. For C-Lyon and Zafir control panels is allowed supply 1 repeater. The rest of repeaters should be connected from the 30 V output of an external power supply.

The wiring of repeaters, communication and power wires, will be realized with twisted and shielded halogen-free of 2x1,5 mm^2 wire, maximum length up to 1200 m.

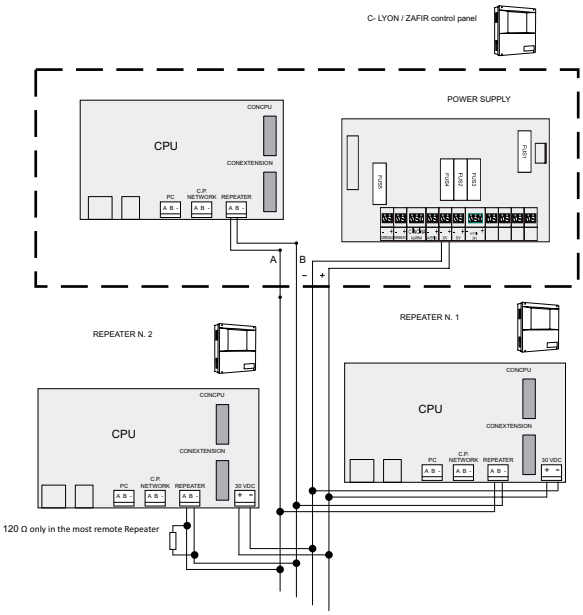
In the end of the line should be connected a 120 Ω resistance, in the back panel of the last repeater.

TECHNICAL FEATURES

Supply	30 V
Standby consumption	150 mA
Humidity	20 - 95% RH
Temperature	-10ºC +50ºC
Dimensions	283 x 240 x 35 mm
Weight (without batteries)	2,4 kg
IP protection	IP 30



Lyon Remote control panel connection diagram



Zafir and Compact Lyon control panel connection diagram

A30XTA

Algorithmic addressable heat sensor

Algorithmic addressable heat sensor for fire detection.

The A30XTA sensor is based on the physical properties of a NTC. The variation of the electrical features of the NTC thermistor due to variation of room temperature makes it suitable for a heat sensor.

The A30XTA is capable of registering absolute temperatures (heat sensor) but also temperature rises (rise of heat rate sensor).

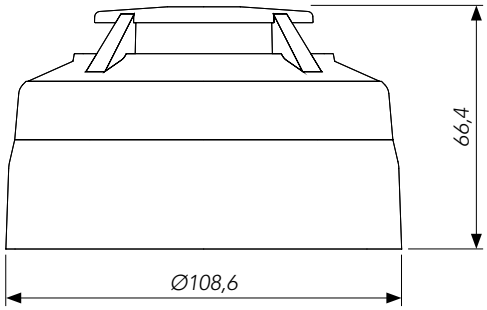
The heat rate function allows detect a fire in the first phases of its growth. If it is very slow, the sensor is activated when temperature reaches 55°C.

Features:

- Low section, total height less than 45 mm (including the base).
- Available with high base for electrical conduit of 20 mm.
- Alarm with two red LED, which makes easier the identification from any direction (360°).
- Possibility to connect a remote action indicator.
- Easy connection, without polarity.
- A single flash of LED indicators shows communication with the control panel, and alarm status with LED on.
- Detector and base with easy installation, interchangeable with the entire of range A30X, and manufactured in white heat-resistant ABS.
- According to EN 54 part 5 class A2R (sensors with heat rise function), and CE mark according to the European Regulation of Construction Products (UE) N°305/2011.

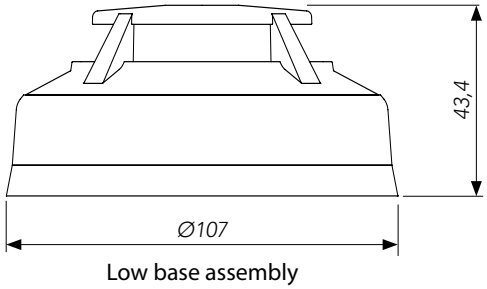
TECHNICAL FEATURES

Power Supply	24 - 35V non-polarized
Standby Current	1 mA
Alarm Current	5 mA
Activation Signal	Two Red LED (360º visibility)
Remote Indicator Output	Yes
Humidity	20 - 95% RH
Temperature	-10ºC +50ºC
Sensitivity	According to EN 54-5 Class A2R
IP Protection	IP 20



High base assembly

Other colors on request



Low base assembly

A30XHA
A30XHAS

Algorithmic addressable smoke optical sensor

Algorithmic addressable optical smoke sensor for fire detection.

The optical smoke sensor A30XHA / A30XHAS is based on the Tyndall effect (light refraction in a dark chamber) created in an optical chamber.

The variation of the electrical features of the chamber in the presence of combustion aerosols makes it suitable for smoke sensing.

The sensor A30XHA (optical-heat sensor) also has a static heat element that sets it into alarm status when temperature reaches 55°C.

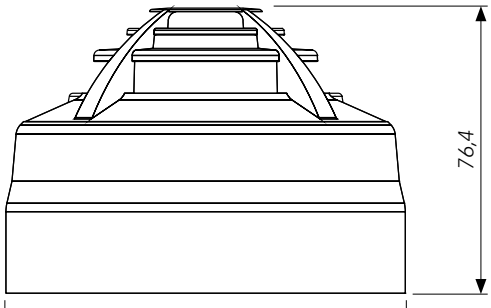
Features:

- Low section, total height less than 53,4 mm (including the base).
- Available with high base for electrical conduit of 20 mm.
- Alarm with two red LED, which makes easier the identification from any direction (360°).
- Possibility to connect a remote action indicator.
- Easy connection, without polarity.
- A single flash of LED indicators shows communication with the control panel, and alarm status with LED on.
- Indication of contamination status of the sensor in the control panel display (the sensor discriminates between fast alarm signal and slow and sustained small increases due to the accumulation of dust and dirt).
- Detector and base with easy installation, interchangeable with the entire of range A30X, and manufactured in white heat-resistant ABS.
- According to EN 54-7 Standard, and CE mark according to the European Regulation of Construction Products (UE) N°305/2011.

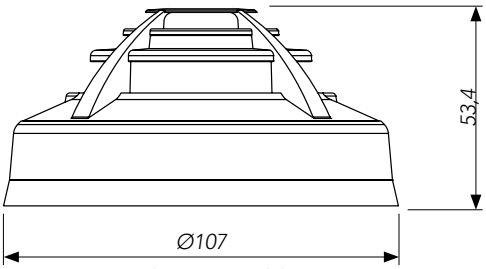
TECHNICAL FEATURES

Power Supply	24 - 35V non-polarized
Standby Current	1 mA
Alarm Current	5 mA
Activation Signal	Two Red LED (360º visibility)
Remote Indicator Output	Yes
Humidity	20 - 95% RH
Temperature	-10ºC +50ºC
Sensitivity	According to EN 54-7
IP Protection A30XHA	IP 20
IP Protection A30XHAS	IP 40

Other colors on request



High base assembly



Low base assembly

A30XHTCO

Algorithmic addressable multisensor

Algorithmic addressable multisensor for fire detection.

The A30XHTCO has three different types of sensors: one optical smoke sensor, one heat sensor and one carbon monoxide sensor (CO).

The use of the CO sensor is very valuable for the early detection for some types of fire.

As well, the integration with the optical smoke detector inside its algorithm of dynamic processing, give us, as main results, a compact detector very robust facing the false alarms

For complete its benefits, the sensor also has a heat element sets it alarm status when temperature reaches 55°C.

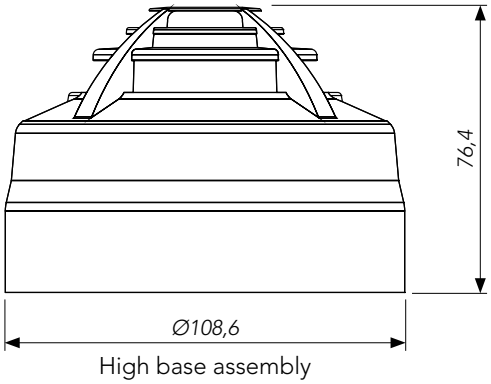
Features:

- Low section, total height less than 53,4 mm (including the base).
- Available with high base for electrical conduit of 20 mm.
- Alarm with two red LED, which makes easier the identification from any direction (360°).
- Possibility to connect a remote action indicator.
- Easy connection, without polarity.
- A single flash of LED indicators shows communication with the control panel, and alarm status with LED on.
- Indication of contamination status of the sensor in the control panel display (the sensor discriminates between fast alarm signal and slow and sustained small increases due to the accumulation of dust and dirt).
- Dynamic processing algorithm that reduces drastically incidences due to false alarms.
- Detector and base with easy installation, interchangeable with the entire of range A30X, and manufactured in white heat-resistant ABS.
- According to EN 54-7 Standard, and CE mark according to the European Regulation of Construction Products (UE) N°305/2011.

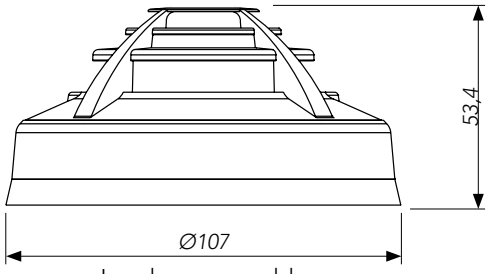
TECHNICAL FEATURES

Power Supply	24 - 35V non-polarized
Standby Current	1 mA
Alarm Current	5 mA
Activation Signal	Two Red LED (360º visibility)
Remote Indicator Output	Yes
Humidity	20 - 95% RH
Temperature	-10ºC +50ºC
Sensitivity	According to EN 54-7
IP Protection	IP 40
Lifespan	5 years

Other colors on request



High base assembly



Low base assembly

PUCAY

Resettable manual call point

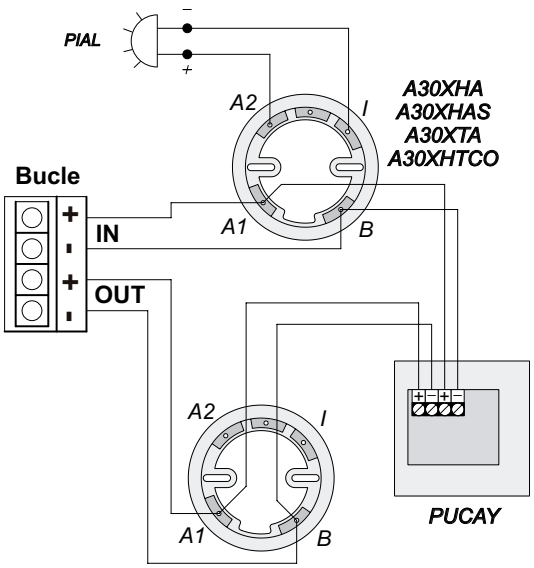
Resettable Manual Call Point (with short-circuit isolator) for algorithmic addressable detection systems.

It has a LED that lights up when the call point is manually triggered (alarm), as well as showing a yellow tab on the lower side of the activation face. A single flash shows communication with the control panel.

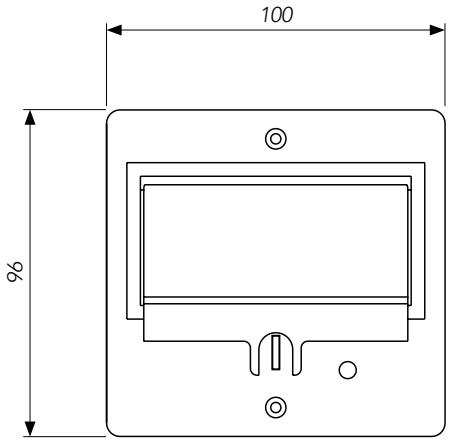
It is easy to reset through activation of the yellow button sited in the front face by means of a screwdriver.

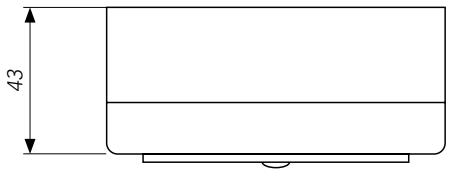
Features:

- Easily resettable call point by pushing yellow button on the front side.
- Transparent protector cover to avoid accidental false alarms.
- Self-identified element in the fire detection algorithmic and addressable.
- Communication with the control panel is indicated by a single flash of the LED.
- Immediate visual recognition of alarm status by the permanent activation of the LED, and the trigger of the yellow tab on the lower side of the activation face.
- According to EN 54-11 Standard, and CE mark according to the European Regulation of Construction Products (UE) N°305/2011.



A30XHA / A30XHAS / A30XTA / A30XHTCO





TECHNICAL FEATURES

Power Supply	24 - 35V with polarity
Standby Current	1 mA
Alarm Current	5 mA
Activation Signal	Red Light
Remote Indicator Output	No
Humidity	20 - 95% RH
Temperature	-10ºC +50ºC
Standard	EN 54-11
IP Protection	IP 50

KMAY

Module to connect conventional devices

Microprocessed algorithmic addressable device (with short-circuit isolator) installed as another element inside the loop.

This is a device that allows connecting conventional detectors and/or manual call point inside an algorithmic addressable fire detection system, performing the interface function between the algorithmic addressable detection system and the conventional one.

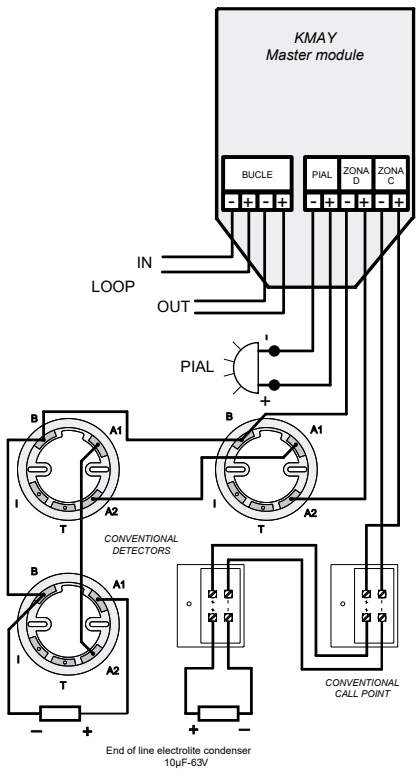
In the "Zona C" terminal, a maximum of 10 conventional call points can be installed. In the "Zona D" terminal, it is allowed 20 temperature detectors (A30XT, A30XV) or 15 elements between conventional smoke detectors (A30XH, A30XHS) and manual call points. Both terminals are monitored by an end of line capacitor, 10µF/63V. In this way, it is indicated an open line, crossed line, alarm detector or alarm manual call point status.

The flashing of the transparent red LED indicates communication with the control panel, and if it remains on it indicates the alarm status of a detector or manual call point connected to this module.

This module has an output for activation of a remote indicator which will be activated when alarm status is reached. The Master Detection Module takes the power supply from the loop.

The Master Detection Module is placed in a rectangular, heat-resistant ABS box.

The module is certified according to EN 54-18 Standard, and CE mark according to the European Regulation of Construction Products (UE) N°305/2011.



TECHNICAL FEATURES

Power Supply	24 - 35V with polarity
Standby Current	1 mA
Short-Circuit Isolator	Yes
Zone voltage	20V with polarity
Activation Signal	Red Light
Remote Indicator Output	Yes
Humidity	20 - 95% RH
Temperature	-10ºC +50ºC
Size	140,5 x 73 x 48mm
Standard	EN 54-18
IP Protection	IP 30

MSTAY

Technical signals module

Microprocessed algorithmic addressable device (with short-circuit isolator) installed as another element inside the loop.

It has two inputs to distinguish between the open or close state of a dry contact connected in series with a 10 kΩ resistor. In quiescent condition, the contact has to be open, and in anomaly condition, the contact has to be closed. In the first input (marked with IN1), the closed contact is detected as an ALARM condition. In the second input (marked with IN2), the closed contact is detected as FAULT warning condition. It is possible to associate both inputs having an alarm and fault conditions information.

In the quiescent condition, the device supervises the electrical connection through a 33 kΩ resistor, which allows indication of open or closed electrical connection status.

It is typically used to signal the status of other detection systems that may exist, as for example, connection of flow sensors in the case of sprinkler installations, end of travel in the case of fire-resistant doors, elevators, level of deposits, etc.

The flashing of the transparent red LED indicates communication with the control panel, and if it remains lit, it indicates an alarm status. The illumination of the green LED indicates activation of one or both inputs.

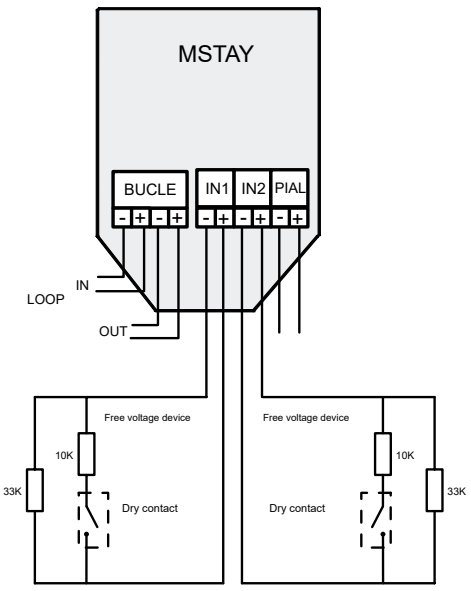
This device has an output for connection to a remote action indicator, which is activated when in alarm status. This element is electrical fed through the loop connection.

The device is placed in a rectangular, heat-resistant ABS box.

The module is certified according to EN 54-18 Standard, and CE mark according to the European Regulation of Construction Products (UE) N°305/2011.

TECHNICAL FEATURES

Power Supply	24 - 35V with polarity
Standby Current	1 mA
Short-Circuit Isolator	Yes
Supervision voltage	7V with reverse polarity
Remote Indicator Output	Yes
Activation signal	Green Light
Communication/Alarm Indicator	Red Light
Humidity	20 - 95% RH
Temperature	-10ºC +50ºC
Size	140,5 x 73 x 48 mm
Standard	EN 54-18
IP Protection	IP 30



MDA1Y

1 relay output module

Microprocessed algorithmic addressable device (with short-circuit isolator) installed as another element inside the loop.

The module takes the power supply from the loop, but it requires an auxiliary 30V supply to give the necessary energy to the devices controlled by the relays. It monitors the presence of voltage in the auxiliary supply line of 30V and in the output of the monitored relays.

The module is protected by 0,9 A resettable fuse and each monitored output by 0,5 A.

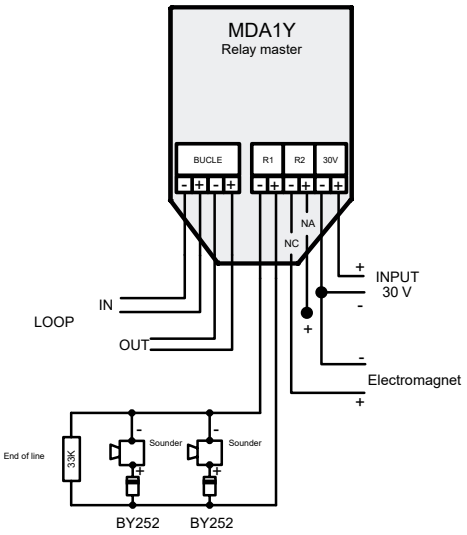
The flashing of the transparent red LED indicates communication with the control panel. Illumination of the green LED indicates the actuation of a relay.

It is a module with two relay outputs of simultaneous activation (with a single function), not only in its type of application (sounder, switches or pre-alarm), but also in their timing and in the combination of sensors that activate them.

The R1 output relay is monitored with a line termination resistance of 33 kΩ, indicating the state of opened line or crossed line. The R2 output relay acts as a dry contact NO and NC, not monitored, which typical application in the energizing of the electromagnets of fire-resistant doors. Considering the consumption produced across the system, it is recommended installation of an external power supply when connecting more than 10 electromagnets altogether per detection system.

The device is placed in a rectangular heat-resistant ABS box.

The module is certified according to EN 54-18 Standard, and CE labelled according to the European Regulation of Construction Products (UE) N°305/2011.



TECHNICAL FEATURES

Power Supply	24 - 35V with polarity
Standby Current	1 mA
Short-Circuit Isolator	Si
Relay supervision voltage	7V with reverse polarity
Relay output voltage	30V
Activation signal	Green Light
Communication Indicator	Red Light
Humidity	20 - 95% RH
Temperature	-10ºC +50ºC
Size	140,5 x 73 x 48 mm
Standard	EN 54-18
IP Protection	IP 30

MDA2Y

2 relays supervised output module

Microprocessed algorithmic addressable device (with short-circuit isolator) installed as another element inside the loop.

The module is loop powered but it requires an auxiliary 30V supply power to provide the necessary energy to the devices controlled by the relays. It supervise the voltage presence in the auxiliary supply line of 30V and in the output of the supervised relays

The module is protected by 0,9 A resettable fuse and each output is supervised by 0,5 A.

the red Led blinking indicates communication with the control panel, the lit green LED indicates the activation of one or both relays.

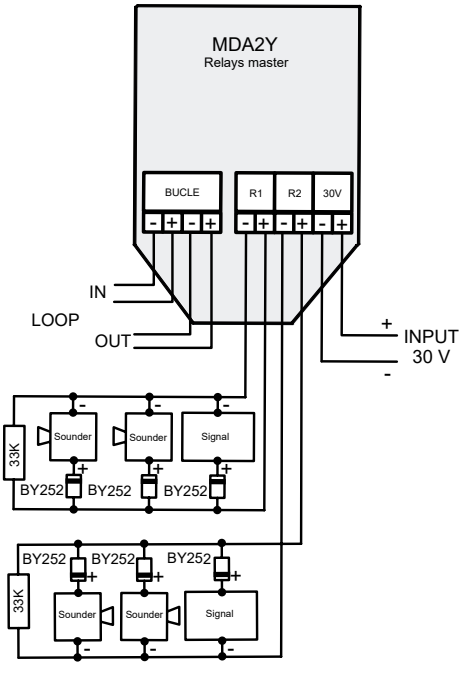
It is a module with two relay outputs of independent activation (two functions), not only in their type of application (sounder, switches or short circuit), but also in their timing and in the combination of sensors that activate them.
In the standby state, the MDA2Y supervise both external line by means of a 33 kΩ resistance, indicating the state of open line or short circuit.

The MDA2Y is supplied rectangular heat-resistant ABS box.

The module is certified according to EN 54-18 Standard, and CE labelled according to the European Regulation of Construction Products (UE) N°305/2011.

TECHNICAL FEATURES

Power Supply	24 - 35V with polarity
Standby Current	1 mA
Short-Circuit Isolator	Si
Relay supervision voltage	7V with reverse polarity
Relay output voltage	30V
Activation Signal	Green Light
Communication Indicator	Red Light
Humidity	20 - 95% RH
Temperature	-10ºC +50ºC
Size	140,5 x 73 x 48 mm
Standard	EN 54-18
IP Protection	IP 30



MYOA
MYOAF

NEW

Output input module

Microprocessed algorithmic addressable loop device (with short-circuit isolator)

This module has one output relay powered by external supply 30V and one input technical signal to distinguish the open or closed state of a dry contact. The Module is protected by 0,9 A resettable fuse and the relay by 0,5 A.

The module is loop powered but it requires an auxiliary 30V supply power to provide the necessary energy to the devices controlled by the output relays "R1". The relay is configured with only one function (sounder, switched activation by double Input), but also in its timing and in the combination of sensors that activate it. The module monitors the presence of voltage in the auxiliary supply line of 30V and in the output of the monitored rely. The voltage output of the relay is 30V.

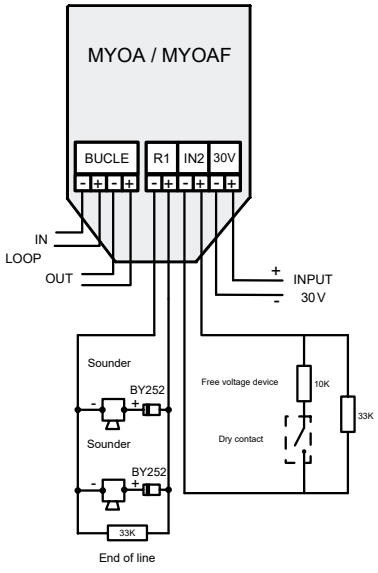
The technical signal input has a 10 kΩ resistor connected in series with the dry contact. In quiescent condition, the contact has to be open, and in anomaly condition, the contact has to be closed. In the input (marked with IN2), the closed contact is detected as ALARM condition.

There is also the MYOAF version, which is identical to the MYOA, except that the closed contact is detected as a fault.
The MYOA supervises each external line (relay output and technical signal input) through a 33kΩ each one, which allows indication of open or closed electrical connection status.

The flashing of the transparent red LED indicates communication with the control panel, the fix light of red led indicates the alarm status of the input, and the illuminated green LED indicates the activation of the relay.

The Relay and Technical Signal Module is placed in a rectangular, head-resistant ABS box.

The module is certified according to EN 54-18 Standard, and labelled according to the European Regulation of Construction Products (UE) N°305/2011.



TECHNICAL FEATURES

Power Supply	24 - 35V with polarity
Standby Current	1 mA
Short-Circuit Isolator	Yes
Supervision voltage	7V with reverse polarity
Remote Indicator Output	No
Activation signal	Green Light
Communication/Alarm Indicator	Red Light
Humidity	20 - 95% RH
Temperature	-10ºC +50ºC
Size	140,5 x 73 x 48 mm
Standard	EN 54-18
IP Protection	IP 30

MDA2YLT

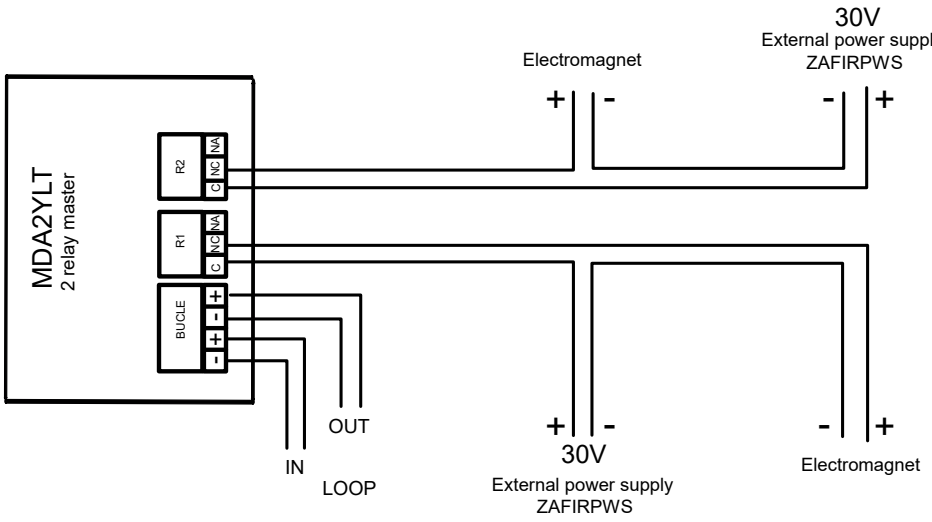
2-relay output module

Microprocessed and algorithmic-addressable module (with short-circuit insulator) which is installed as one more element in the loop.

The modules are powered by the loop connection, requiring no outside power. The blinking red transparent LED shows there is communication with the control panel. The fixed lit red transparent LED indicates that one or both relays have been triggered.

To order, rectangular boxes made of heat-resistant ABS are available.

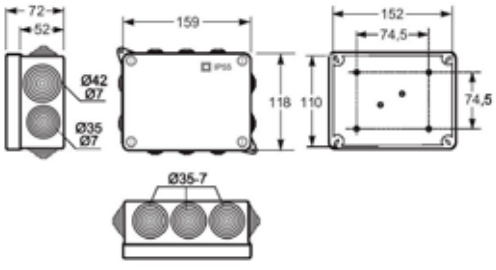
This is a module with two relay outputs that are separately activated (two functions), independent timing, as well as a combination of sensors that activate them. The R1 and R2 outputs are voltage free C/ NC/ NA. Using this module, we can control fire doors and gates.



NEW

TECHNICAL FEATURES

Power supply	24 - 35V with polarity
Standby Current	1 mA
Activated consumption	4 mA
Loop isolator	Yes
Maximum resistive load	5A / 250 VAC
Activation indicator	red led (fixed)
Communication indicator	red led (blinking)
Humidity	20 - 95% RH
Temperature	-10ºC +50ºC
Dimensions	159 x 118 x 72 mm
IP protection	IP 55



Assembly box dimensions

KMAY32

Module to connect 32 detectors / 10 detectors

Microprocessed and algorithmic-addressable module (with short-circuit insulator) which is installed as one more element in the loop.

This module allows the connection of conventional detectors and/or alarm call points in an algorithmic-addressable fire detection system, performing the interface function between an algorithmic-addressable control panel and a conventional system. Up to a maximum of 10 conventional alarm call points can be installed on the strip of "Area C". The "D Area" strip allows a maximum of 32 temperature detectors (A30XT, A30XV) or 32 components between smoke detectors (A30XH, A30XHS) and conventional alarm call points. Both strips supervise the line using a 4K7 end-of-line resistor. It thus indicates the status of the open line, crossed line, detector alarm or alarm call point alarm.

It has a microswitch for setting the area thresholds;

- Open line threshold (pin microswitch 1-2).
- Detector alarm triggered threshold (pin microswitch 3-4).
- Alarm call point triggered threshold (pin microswitch 5).

The blinking of the red transparent LED indicates communication with the control panel, and if it stays on in indicates the status of the alarm of a detector or of a alarm call point connected to that module.

This module has an output for the activation of a remote pilot, which is activated when it is in alarm state.

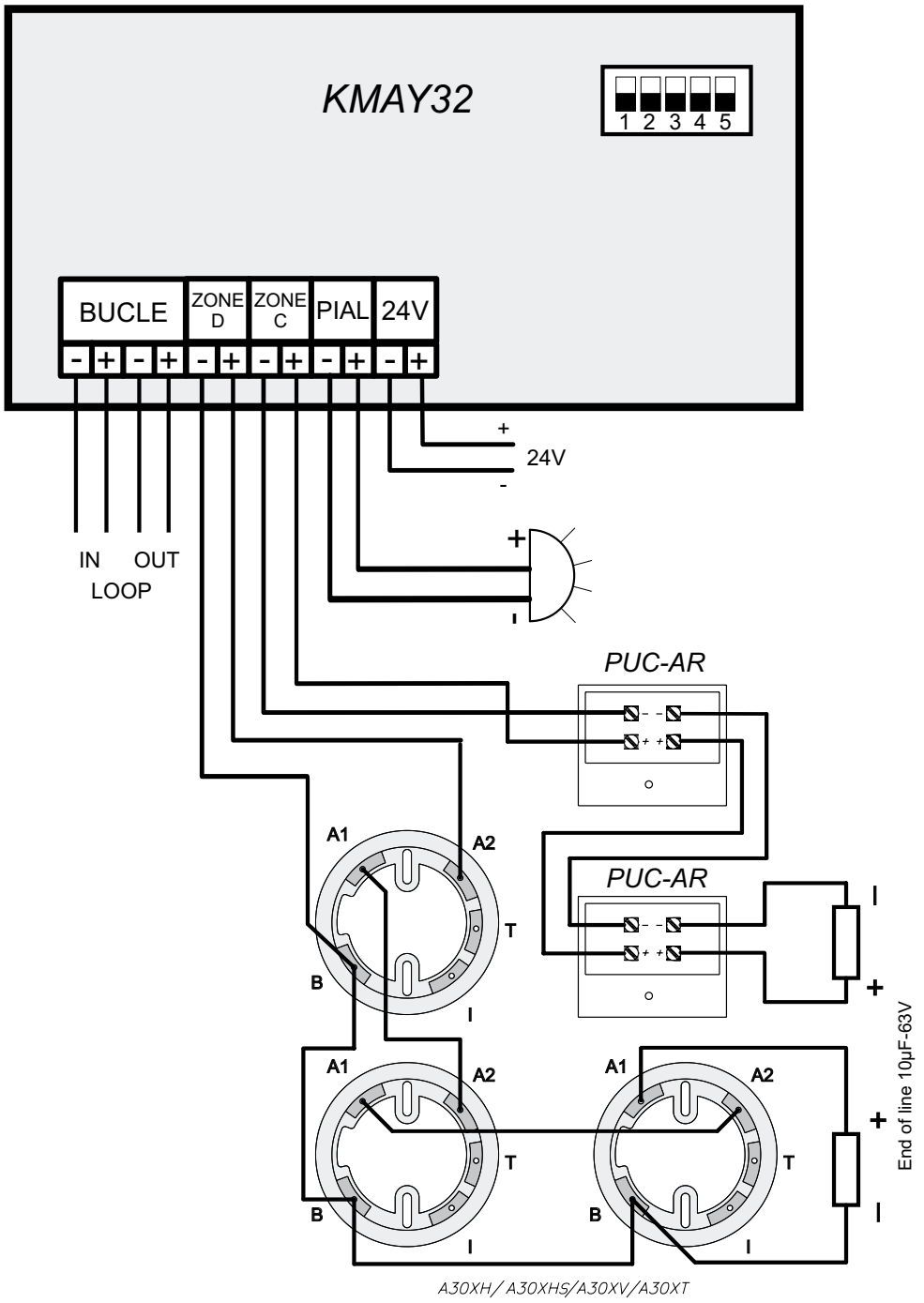
This module is powered by the loop connection and requires a 24V auxiliary power supply to power the areas, said voltage is supervised by the microcontroller.

Rectangular boxes made of heat-resistant ABS are available on order.

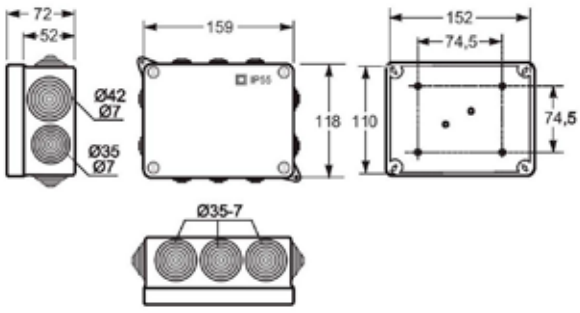
NEW

TECHNICAL FEATURES

Loop power supply	24 - 35V with polarity
Auxiliary 24V power supply	20 - 30V
Standby consumption	1,5 mA
Shor-circuit isolator	Yes
Area voltage	22V with polarity
Remote indicator output	Yes
Activation indicator	red led (fixed)
Communication indicator	red led (blinking)
Humidity	20 - 95% RH
Temperature	-10ºC +50ºC
Dimensions	159 x 118 x 72 mm
IP protection	IP 55



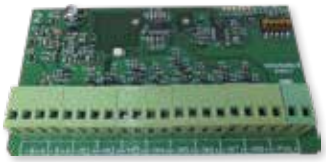
A30XH / A30XHS/A30XV/A30XT



Assembly box dimensions

MSTAY8

Module with 8 inputs



Microprocessed and algorithmic-addressable module (with short-circuit insulator) which is installed as one more element in the loop.

It has eight inputs to monitor equipment external to the system.

It is typically applicable for signalling the status of other detection systems in which there could be a connection to flow sensors in the case of sprinkler installations, travel path end-stops in the case of fire doors, lifts, tank levels, pressure units, etc.

These inputs are configurable by microswitch in the following manner:

- Supervised (pin 1 microswitch set to ON); the outside line in supervised standby state by means of a 33KΩ resistor, indicating the status of the line or crossed line. Connecting a parallel 10kΩ resistor will activate the related input.
- Active by closed contact (pin 1 microswitch set to OFF and pin 3 microswitch set to OFF); the input in standby must be with the contacts open, in case of event the input contacts must be crossed. This will be the factory setting.
- Active by open contact (pin 1 microswitch set to OFF and pin 3 microswitch set to ON); the input in standby must be with the contacts crossed, in case of event the contacts must be opened.

Using pin 2 of the configuration microswitch we will select the type of event that the module will send to the control panel: ON Fault and OFF Alarm.

The configuration of the inputs is common to all of them.

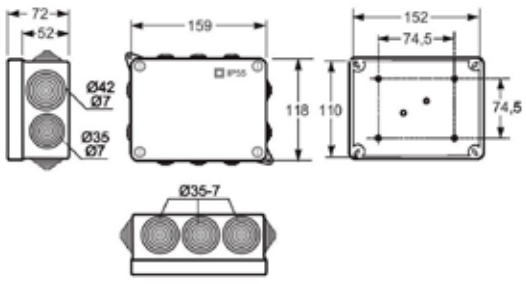
The blinking of the transparent red LED indicates communication with the Lyon control panel and also if it stays lit it indicates the activation of one or several inputs. This module has an output for the activation of a remote pilot, which is activated when it is in alarm state. The Technical Signals module is powered by the connection to the loop.

NEW

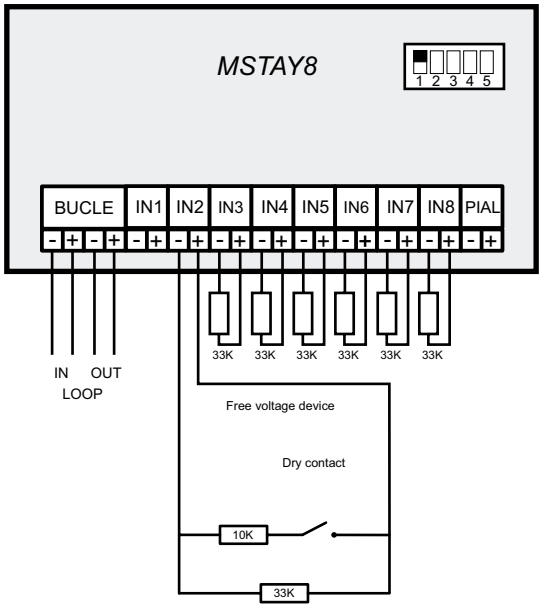
Rectangular boxes made of heat-resistant ABS are available on order.

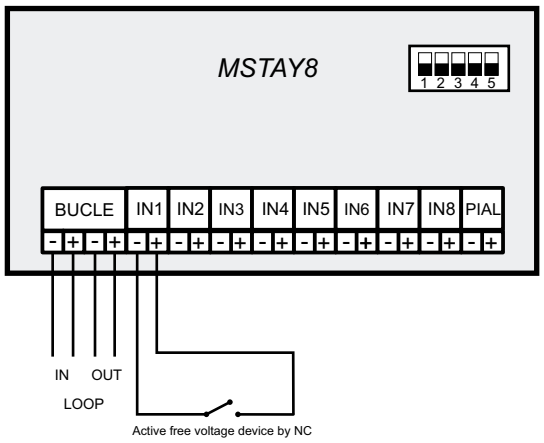
TECHNICAL FEATURES

Power supply	24 - 35V with polarity
Supervision-free mode standby consumption	
Active by closed contact	2 mA
Active by open contact	5 mA
Supervised mode standby consumption	2,5 mA
Non supervision-free mode alarm consumption	
Active by closed contact	14 mA
Active by open contact	11 mA
Supervised mode alarm consumption	14 mA
Short-circuit isolator	Si
Supervision voltage	5 V with inverted polarity
Remote indicator output	Si
Activation indicator	red led (fixed)
Communication indicator	red led (blinking)
Humidity	20 - 95 % RH
Temperature	-10ºC +50ºC
Dimensions	153 x 110 x 63
IP protection	IP 55

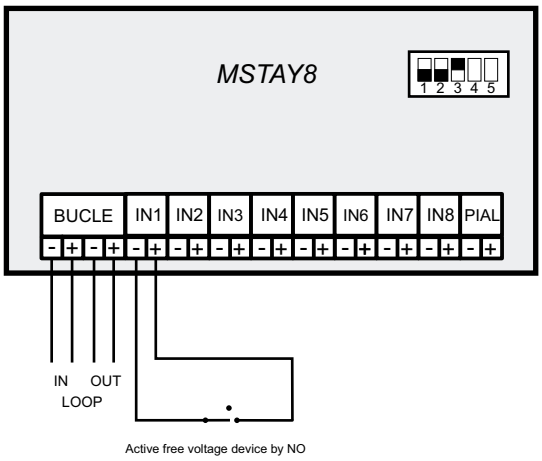


Assembly box dimensions





Factory settings



KABY

Loop isolator module

Microprocessed algorithmic element installed as another element inside the loop (It is not addressable – There is not need to configure this element).

This is a protection element that is connected into the detection loop, with the aim of isolating stretches with crossed line failures, and allowing therefore the rest of the loop to operate normally.

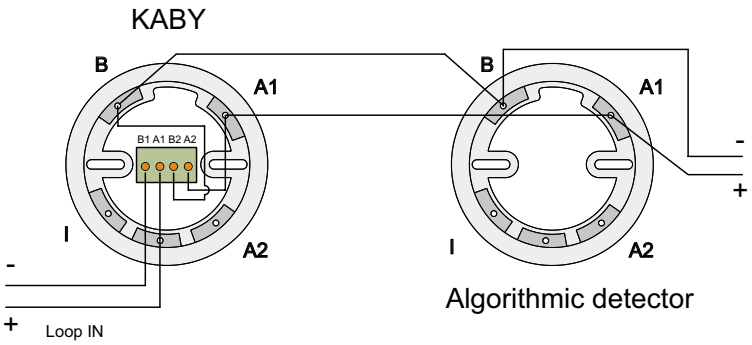
It is supplied installed inside of a high base. This assembly allows having it in the same place as the detector, making easy the connection of the loop wiring.

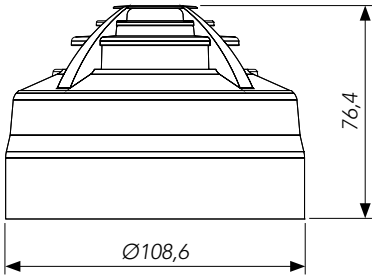
We recommend installing a module or element with isolator, minimum every 32 elements of the loop.

The base has two stickers in the outer side with the word "KABY" to allow easy recognition.

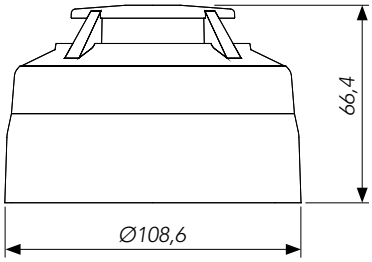
The element is feed from the loop connection.

The module is certified according to EN 54-17 Standard, and CE labelled according to the European Regulation of Construction Products (UE) N°305/2011.





Assembly for A30XHA



Montaje para A30XTA / A30XHAS

TECHNICAL FEATURES

Power Supply	24 - 35V with polarity
Standby Current	110 µA
Short-Circuit Isolator	Yes
Remote Indicator Output	No
Humidity	20 - 95% RH
Temperature	-10ºC + 50ºC
Standard	EN 54-17
IP Protection	IP 30

PIAL

Remote indicator

Remote action indicator of fire detection system.

The PIAL allows showing alarm status of sensors and modules of algorithmic systems, as well as of sensors of conventional systems.

Typical cases of use:

- Places where elements of the detection system are not visible, for example, inside false ceiling, in which the PIAL can be visibly situated on the lower part of the ceiling or near the wall.

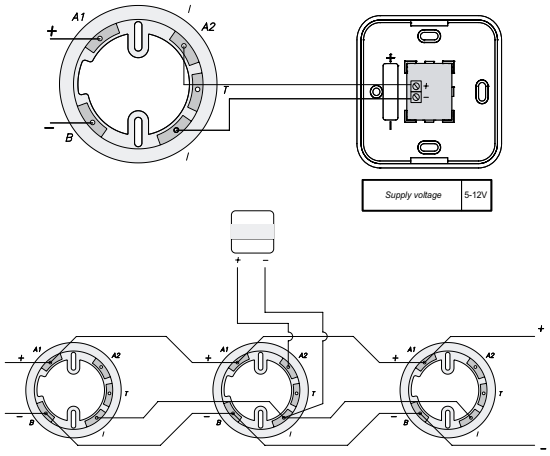
- Reduced accessibility rooms or that is needed do a big inspection range for the identification of the element in alarm, for example in hotel rooms, where the PIAL can be situated above the door frame of each room, making very easy its identification.

Permanent activation of the red LED indicates alarm status.

It is an element easy to install, both for its electrical wiring and its fixation. Furthermore, can be adapted to the conduit boxes and switchgear.

Features:

- Alarm status can be identified in any perpendicular direction at its installation.
- Easy connection, with polarity.
- Can be adapted to the conduit boxes and switchgear.
- The red light is produced by two LEDs, increasing reliability against failure of any of them.
- Manufactured in heat-resistant ABS. Base and lid are white, red viewer.



TECHNICAL FEATURES

Supply	5 - 12 V/DC with polarity
Standby consumption	0 mA
Alarm consumption	5 mA
Activation signal	Red led
Humidity	20 - 95% RH
Temperature	-10ºC +50ºC
IP protection	IP 50

A30XZSL
A30XSD

Alarm devices

Base with EN 54-23 visual alarm certified, EN 54-3 sound certified and base detector.

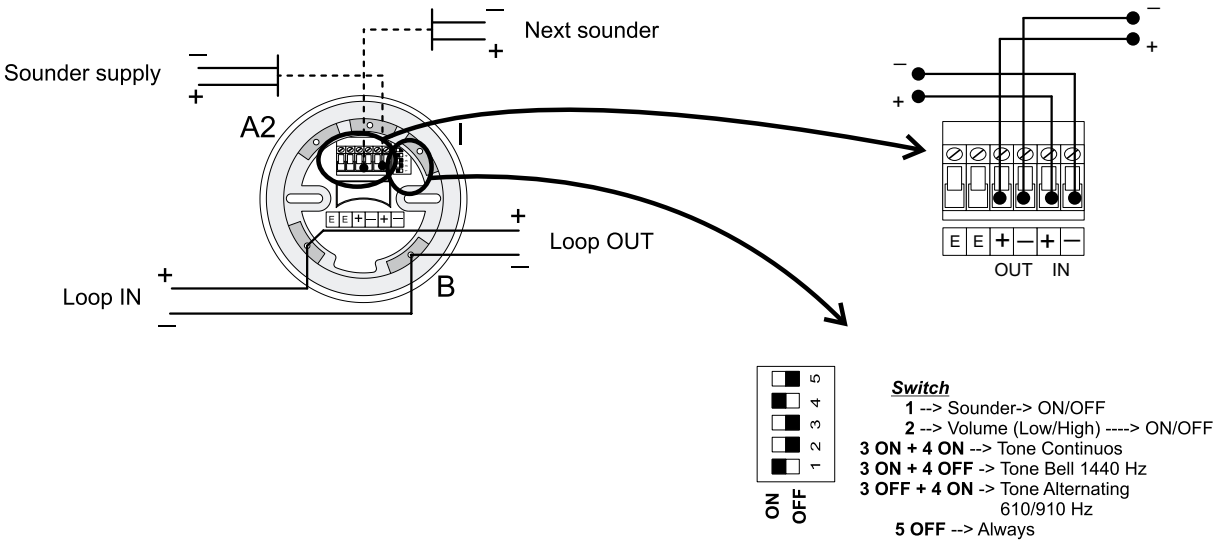
Typical uses of A30XZSD and A30XZSL are spaces or rooms that need a fire detector integrated with sounder and visual alarm such as hotel rooms.
The coverage of the set should not be more than the coverage of detector with which it is installed, except purposes or uses justified.

From functionally point of view, the detector is wired according to the criteria of the fire control panel. Regarding the sounder and visual alarm base, it is a conventional sounder wired according to the criteria of the equipment which feed it (Sounder output at fire control panel, MDA1Y, MDA2Y, MYOA, etc).

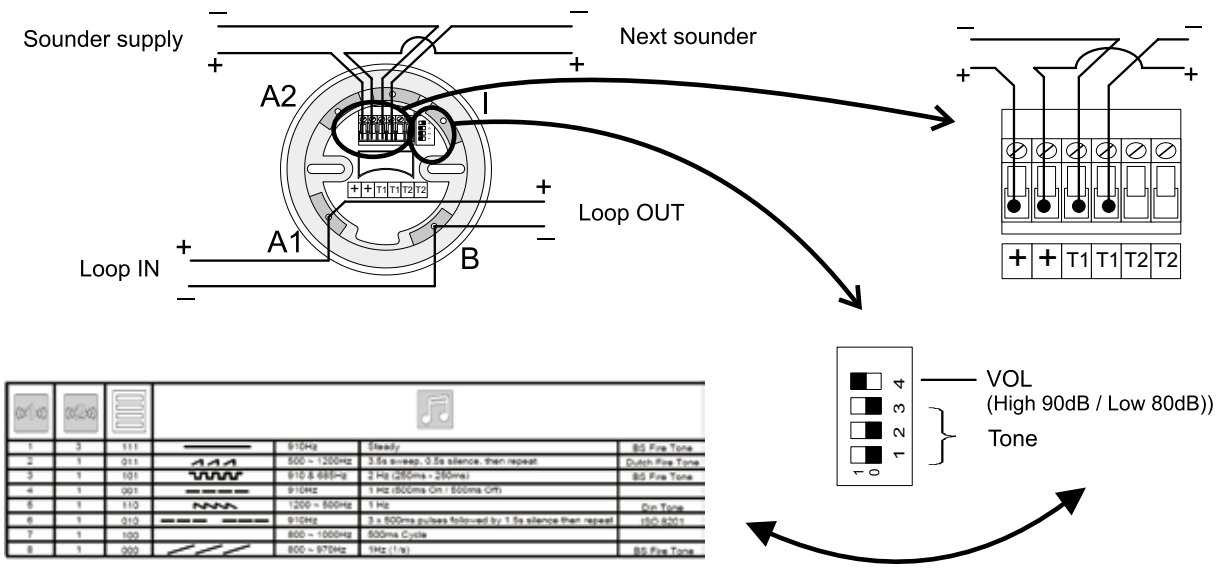
TECHNICAL FEATURES

	A30XZSD	*A30XZSL*
Supply	18-30 V with polarity	18-30 V with polarity
Standby consumption	0 mA	0 mA
Alarm consumption	5 mA / 7 mA (Low/High dB)	9 mA / 11 mA (Low/High dB)
Operating temperature	-10ºC +50ºC	-10ºC +50ºC
Dimensions	Ø114mm x high 45 mm (without detector)	Ø114mm x high 45 mm (without detector)
IP protection	IP 30	IP 30
Sound intensity	Low 80 / High 90 dB-1m	Low 80 / High 90 dB-1m
Tones	8 types	3 types
Standard	EN 54-3	EN 54-23 & EN 54-3
Flash	-	0,5 Hz (60 ms)

A30XZSL ADDRESSABLE DIAGRAM



A30XZSD ADDRESSABLE DIAGRAM



SIRAY
SIRAYL
SIRAY+BSLC

Addressable alarm sounders

Microprocessed digital and addressable device (with short-circuit isolator) installed as another element inside the loop. The sounder is made of in ABS heat-resistant plastic red color.

Is a module with a single programming function in terms of the timing and combination of sensors that trigger it. This sounder is configured as a relay acting as sounder.

The variant SIRAYL and SIRAY+BSLC additionally emit light signals, where in addition, the SIRAY+BSLC makes it according to EN 54-23 (visual alarm device). The fact that specifically these sounders emitting light does not affect the programming of the control panel. For this reason, these devices are programmed in the control panel as if they were the reference SIRAY.

The standard configuration of the sound of the sounder is shown in the bottom figure according to EN 54-3 (acoustic device). The same figure shows the standard configuration of the light signal at the base of the sounder SIRAY+BSLC according to EN 54-23 (visual alarm device).

It is possible to change the tone and light signal selection, but this operation affects the power consumption of the sounder, and therefore, the consumption of the device points. The bottom figure shows a table of equivalence for tone selections (standard 95 dB - 1m and maximum sound intensity 105 dB - 1m) and visual signal (W-2, 4-2, 37, 5). It is possible to calculate the precise calculation with the software of loop elements capacity.

Internal wiring and other microswitch positions must be unmodified selected by the manufacturer.

TECHNICAL FEATURES

Power supply	24 - 35V with polarity
Standby current	1 mA
Alarm current	5 - 50 mA
Short-circuit isolator	Yes
Operating temperature	-10ºC + 55ºC
Size	Ø95 x 91 mm / Ø95 x 107 mm (SIRAYL) Ø95 x 95 (high) x 135 mm (SIRAY+BSLC)
Standard	EN 54-3 / EN 54-23 (BSLC)
IP protection	IP 65 (SIRAY+BSLC) and SIRAYL IP 54 SIRAY
Sound intensity	95 / 105 dB - 1m (SIRAY / SIRAYL)
Light intensity	w 2,4 - 2,3 / 7,5 m (BSLC)

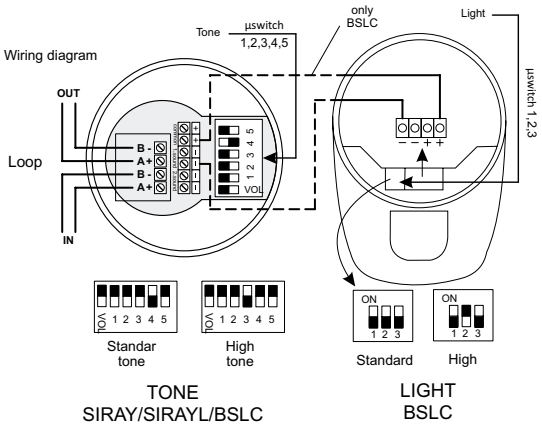


Figure 1

Devices limits per control panel									
Reference	Description	Lyon Remote & Zafir control panel					C-Lyon control panel		
		Loop limit	Element equivalence			Cable section	Loop limit	Element equivalence	Cable section
		Cable lenght ->	≤ 800 m	≤ 500 m	≤ 300 m	2x1,5 mm²	Cable lenght ->	≤ 800 m	2x1,5 mm²
			≤ 1350 m	≤ 850 m	≤ 500 m	2x2,5mm²		≤ 1350 m	2x2,5mm²
SIRAY	Addressable sounder	32	8/16[A]	6/12[A]	4/8[A]		16	4/8[A]	
SIRAYL	Addressable sounder with light	32	10/20[A]	8/14[A]	6/10[A]		25	6/10[A]	
SIRAY+BSLC	Addressable sounder with EN 54-23	19	25/35/40[B]	16/24/26[B]	12/20/22[B]		10	12/20/22[B]	

[A]) Values corresponds with the standard / maximum sound intensity of the sounder.

[B]) Value corresponds with the sound-light standard / sound or light at maximum / sound and light at maximum, sonder intensity

Note: The cable is considered with resistance of 32,9 Ω/Km*mm² (cupper cable)

Figure 2

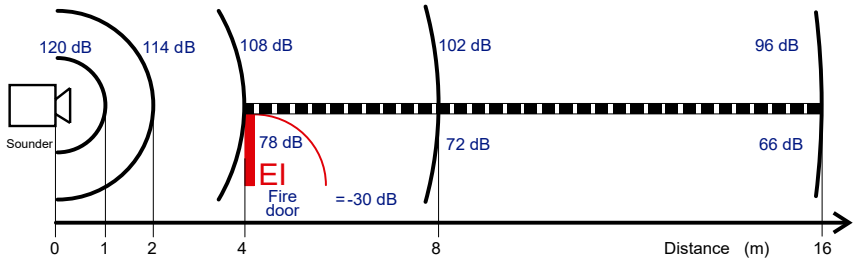
CA6
SIR24F
SIR24P

Indoor sounders

Sound level (dB-(A))	*Distance (m)*
120	1
114	2
108	4
102	8
96	16
90	32
84	64

ACOUSTIC GENERAL RULES

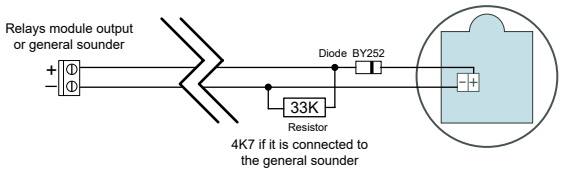
- Every time you double the distance, 6 dBs are lost.
- 30 dBs are lost for every fire door.
- 20 dBs are lost for every normal door.



Indoor sounders to be directly connected to the output of control panels or relay modules.

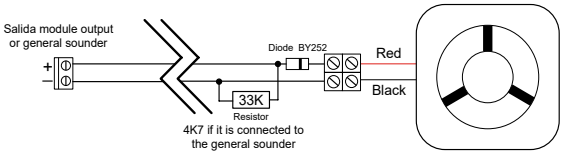
ALARM BELL 6" CA6

Output voltage	24 Vcc
Consumption	25 mA
Output volume	95 dBA at 1 meter 92 dBA at 3 meters
Operative temperature	-20°C to 60°C
Humidity	Max. 90% RH
Size	6" (150 mm x 56 mm)
Weight	764g
IP protection	IP33



SIR24P & SIR24F SOUNDERS

Material	red P.V.C.
Operating voltage	30 Vdc
Consumption at 30 Vdc	70 mA
Sound level	85 dB
Operating temperature	5°C to 40°C
Size	80 x 80 x 30 mm
With intermittent flash	Only SIR24F model



SIR24B
SIR24BL
SIR24B+BSLC
SIR24C

Indoor and outdoor sounders

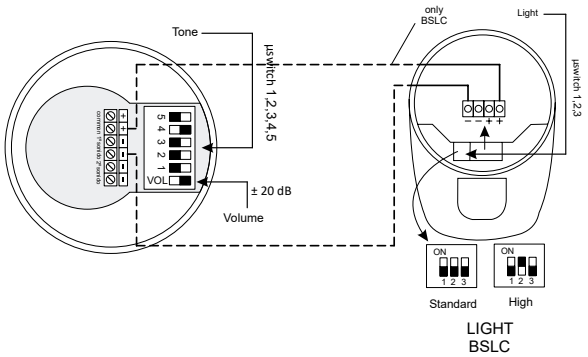
List of indoor and outdoor sounders to connect directly to the sounder output of the control panels or relay modules.

SOUNDER SIR24B, SIR24BL, SIR24BZA and BSLC

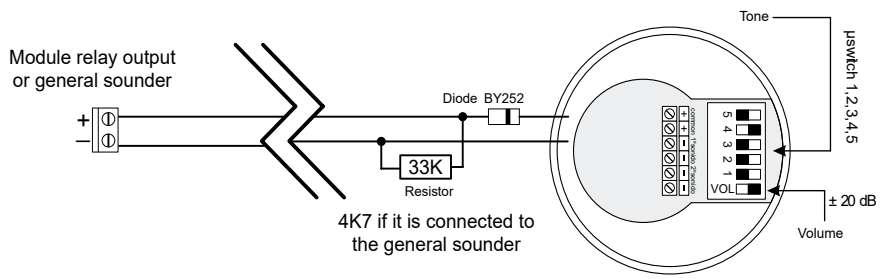
- Indoor and outdoor sounder made of red ABS.
- Great sound level. Low consumption.
- 32 selectable tones. Volume control.
- Automatic synchronization.
- SIR24B: Sounder.
- SIR24C: Sounder with light, certified EN54-23.
- SIR24BL: Sounder with light.
- SIR24BZA: Sounder with high base.
- BSLC: Base with light, certified EN54-23.

Voltage range	9-28 Vdc
Consumption:	
(Using tone 3)	at 24Vdc 16mA (SIR24B)
	20mA (SIR24BL)
(Using tone7)	49mA (SIR24C)
Consumption:	
(Tone 3/0,5Hz/high power)	at 24Vdc 32mA
	(SIR24B+BSLC)
Output volume	at 24 Vdc 102 dB (A) (tone 3)
	SIR24C 107dB (tone 23)
Operating temperature	-25°C at +70°C
Size	Ø95 x 91 mm
	Ø95 x 107 mm (SIR24BL/SIR24BZA)
	Ø95 x 95 x 135 mm (SIR24B+BSLC)
	Ø100 x 98 mm (SIR24C)
IP protection	IP54-SIR24B
	IP65-SIR24BL
	IP65-SIR24BZA
	IP65-SIR24B+BSLC
	IP21C-SIR24C (low base)
	IP65-SIR24C (high base)

SIR24B + BSLC SOUNDER



SIR24B, SIR24BL & SIR24BZA SOUNDERS



CAEPLH
CAEPL

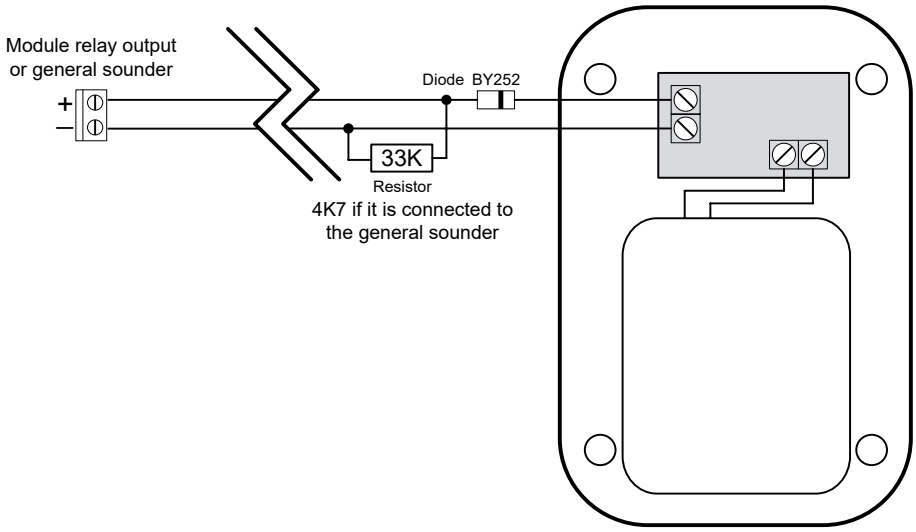
Outdoor sounders

SOUNDER CAEPL and CAEPLH

- Outdoor red sounder made of ABS plastic.
- Back cover to protect the PCB's.
- They work like power sounders at 24V.
- Piezobuzzer sounder.

Activation	by supply activation
Supply	24 Vcc
Power	85 dB /112 dB
Cycles	2 / 3 / 5 / 10 cycles
Timing by cycle	60 sec. ON / 30 sec. OFF
LEDs	2 LEDs of voidable option
Size	320 x 218 x 77 mm (CAEPLH) 220 x 315 x 70 mm (CAEPL)
Current / consumption	450 mA
IP protection	IP65 (sealed with silicone)

CAEPL & CAEPLH SOUNDERS



SIRCEI
SIRWAL
SIR-PIT

Light warning devices

Luminous warning devices:

Devices that when are activated emit flashes of light in order to alert people with hearing disabilities:

A. SIRWAL and SIRCEI:

- Certified EN54-23.
- Supply: 9 ÷ 60 Vdc.
- Operating temperature: -25°C to 70°C.
- High base.
- Protection IP65.
- Red color.
- Dimensions: Ø93 mm x 65 mm.
- Flash: White 1Hz (0,5 Hz selectable).
- Consumption: 10-25 mA according selection.

A1. SIRWAL:

- Wall device.
- W 2,4 - 7,5.

A2. SIRCEI:

- Ceiling device.
- C 3 - 7,5.

B. SIR-PIT:

- Supply: 9 - 60 Vdc.
- Consumption: 3 ÷ 15 mA according selection.
- Flash: 1 flash 1Hz.
  2 flashes 1Hz.
  Continuous 1Hz.
- Temperature: -20°C to 55°C.
- Protection: IP21C.
- Color: red.
- Red flash.

DIAGRAM FOR SIRWAL AND SIRCEI

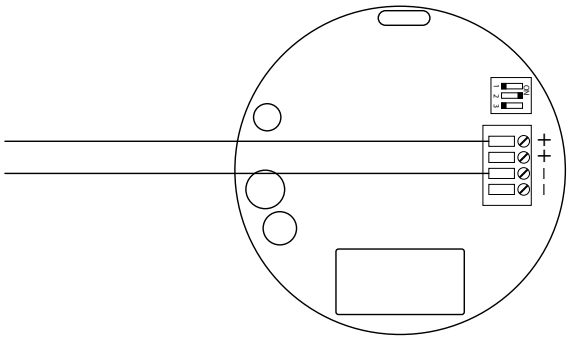
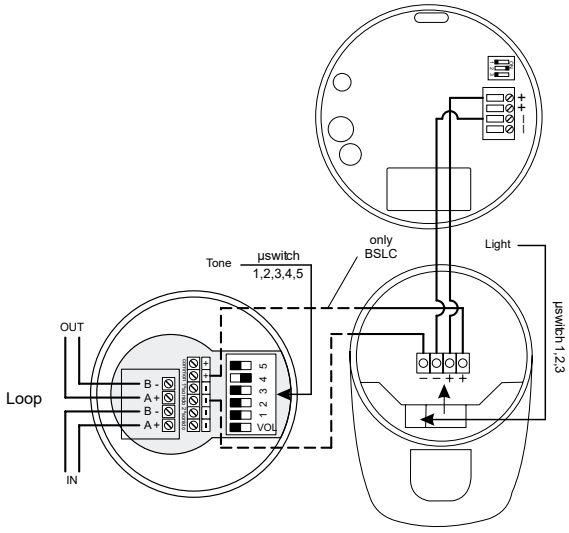


DIAGRAM FOR SIRWAL AND SIRCEI WITH BSLC AND SIRAY



NOTE: They can be connected with the SIRAYBSLC by selecting low sound and light on this device and BSLC. The calculation of consumption points of the SIRAY+BSLC and this additional device shall be computed as a SIRAY+BSLC with selection of sound and maximum light.

SIR24SC
SIR24SC+BSLC

Voice alarm devices

Device that activates a voice message with sound of fire alarm.
The message is selectable from its internal list.

A. SIR24SC and SIR24SC+BSLC:

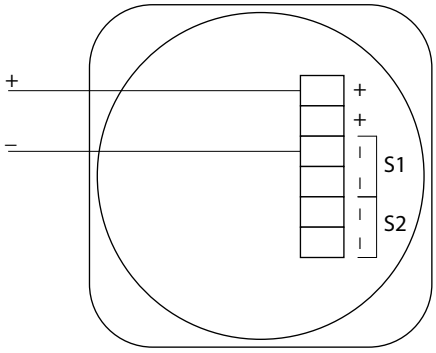
- Voltage: 18 ÷ 28 Vdc.
- Consumption: 4 ÷ 8 mA.
- Sound: 90/100 dB selectable.
- Several selectable alarm tones.
- Temperature: -10°C a 55°C.
- Protection: IP21C.
- Color: red.
- Dimensions: 106 x 106 x 91mm.

B. SIR24SC + BSLC:

Set alarm voice with bright warning based device.

- Certified EN54-23.
- W 2,4 - 7,5.
- Consumption: 18 ÷ 28 mA.
- 1 Hz (0,5 Hz selectable).

DIAGRAM FOR SIR24SC



ZAFIRPWS

External power supply

External Power Supply (with batteries charge incorporated) for fire detection and fire alarm systems. Certified according EN 54-4.

This equipment is specially recommended for properly feeding any fire detection device which requires external power supply.

It has two outputs:

- Two 30V output monitored and protected by a fuse, for easy connection.
- Dry contact fault output, for integration with other systems.

The system has three indication leds to show system status:

RED (green): system operating through 110/230 V/AC power supply.

BATTERY (green): system operating under batteries.

FAULT (amber): system fault, general power supply fault or fault in the auxiliary battery supply.

There are 2 models available depending on the needs of the system:

- ZAFIRPWS2 (65W): supply capacity 1,5A (65w).
- ZAFIRPWS5 (150W): supply capacity 4A (150w).

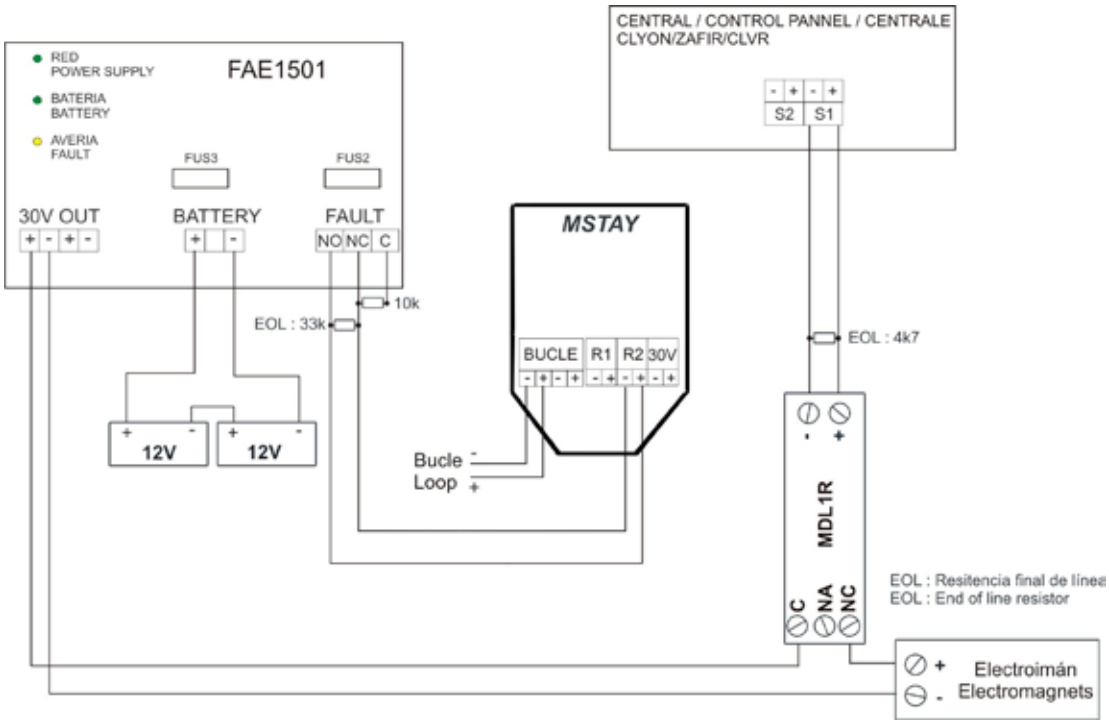
General power supply connection is different between the two models. ZAFIRPWS2 is connected to electrical network by a connector located on the right side of the box. ZAFIRPWS5 is connected to electrical network directly to the switching power supply.

External Power Supply is placed inside a metallic box of 363 x 331 x 96 mm, which allow additional space for installing batteries (2x12 Vdc7Ah).

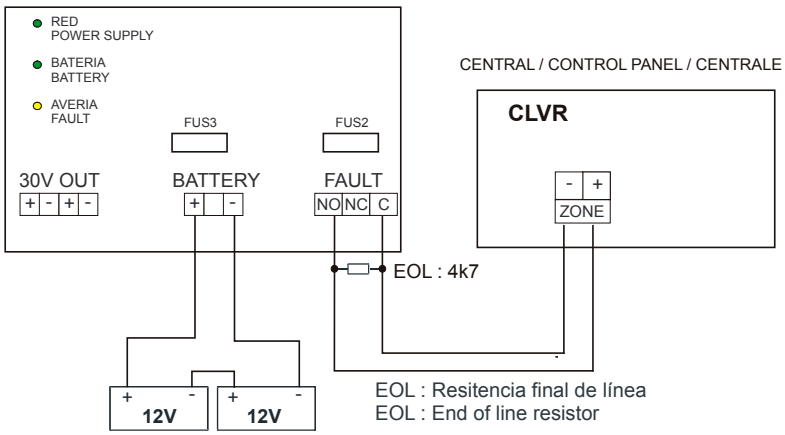
TECHNICAL FEATURES

Power supply	110/230V 50-60Hz/AC
Consumption in standby	50 mA
Output voltage	29 ~ 29,5 V/AC
Output current	ZAFIRPWS2: 1,5A
	ZAFIRPWS5: 4A
Batteries charger	Yes
Humidity	20 - 95% HR
Temperature	-10°C to +50°C
Dimensions	363 x 331 x 96 mm
IP protection	IP 30
Standard	EN 54-4

ZAFIRPWS WIRING DIAGRAM ALGORITHMIC ADDRESSABLE SYSTEM



ZAFIRPWS WIRING DIAGRAM FAULT OUTPUT



CONVENTIONAL SYSTEM

CONTROL PANELS

MODULES & DETECTORS DEVICES

CLVR02-12Z

Conventional automatic control panel

Automatic conventional fire detection and fire alarm control panel.

This control panel provides different versions to fit more accurately to the needs of each facility:

· CLVR 02Z: CLVR Control panel up to 2 zones.
· CLVR 04Z: CLVR Control panel up to 4 zones.
· CLVR 08Z: CLVR Control panel up to 8 zones.
· CLVR 12Z: CLVR Control panel up to 12 zones.

CLVR control panels features are common in all its models.

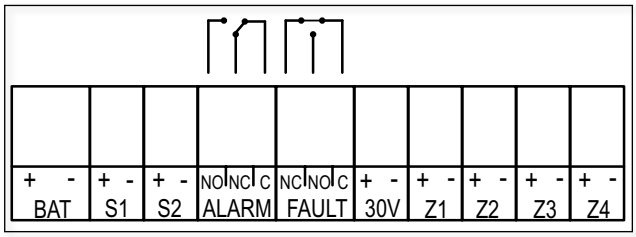
Features:

- Control panels up to 12 zones for conventional detectors and call points use.
- 2 supervised sounder outputs, delayed from 0 to 10 minutes, and protected by a fuse.
- 1 alarm output through a dry contact NO/NC (normally open / normally closed).
- 1 fault output through a dry contact NO/NC (normally open / normally closed).
- 2 auxiliary outputs 30V/DC supervised and protected by a fuse to feed external (magnetic fire doors, sounders, etc).
- Available testing mode to facilitate the quick and easy verification of the sensors and call points.
- It allows to configure the open line, alarm detector and alarm call point threshold, to adjust to the operation with other detectors.
- It allows to configure the last detection zone as a supervision input of a external protection fire system with a fault indication.
- Metallic chest with frontal bolted door, 4 predrilled of 28 mm and one rectangular else of 140 x 20 mm for electric wiring and space for 2 batteries of 7Ah.
- RS485 MODBUS protocol on-demand.
- Possibility of software ON-LINE on PC using MODBUS functionality.
- CONTACTID on-demand.
- Certified according to EN 54-2 & EN 54-4 standards and CE mark .

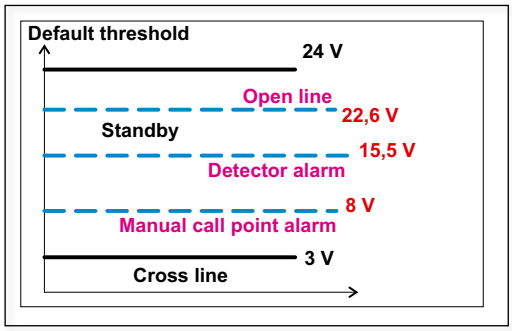
TECHNICAL FEATURES

Input voltage	110/230VAC 50/60Hz	*End of line capacitor*	4 K7
Output voltage	21 V Nominal	*Sounder output voltage*	30 V/DC
Maximum consumption	70 VA to 230 V/AC	*Fault output*	Yes, dry contact
Batteries	2 x 12 V 7 Ah SLA	*Environmental conditions*	-10ºC +50ºC
Max. voltage 30V output	0,75A / 1,50A[1] AUTORESET	*Size*	363 x 331 x 96 mm
Battery charger	500 mA 27 V/DC 20ºC	*Weight (without batteries)*	4,3 Kg
Devices per zone	32	*Standar*	EN 54-2, EN 54-4 & EN 12094-1
Control panel power supply	2,2 A	*Sounder output fuse S1*	1A / 1,85A[1] Autoreset
Maximum current per zone	2 mA (standby)	*Sounder output fuse S2*	1A / 0,75A[1] Autoreset

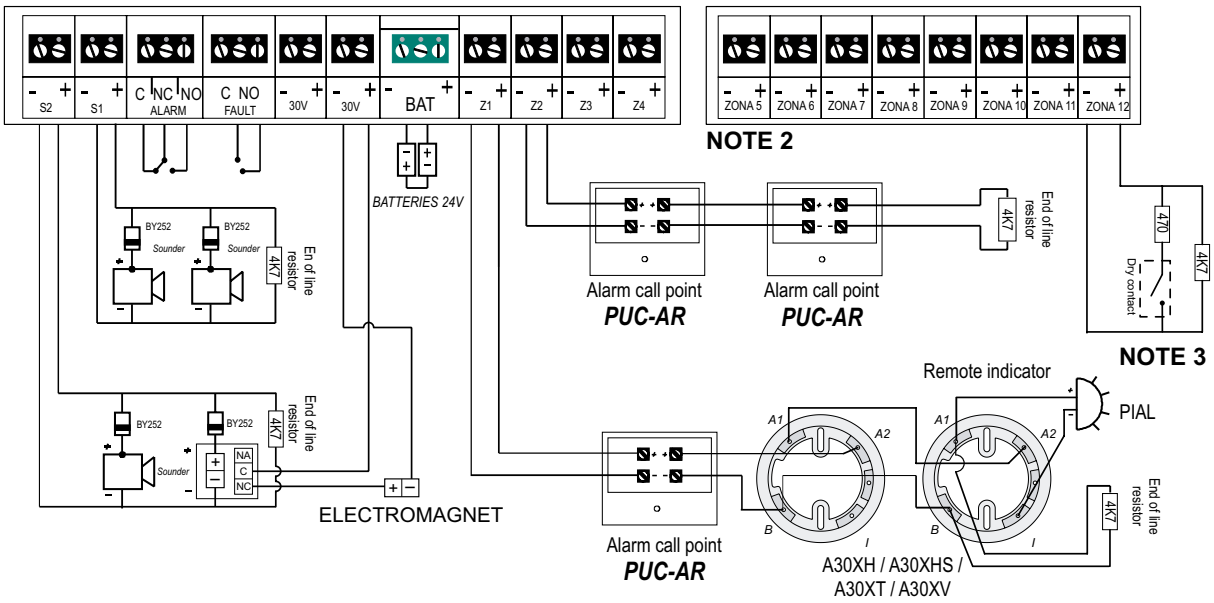
[1] CLVR08Z and CLVR12Z control panels



NOTE1

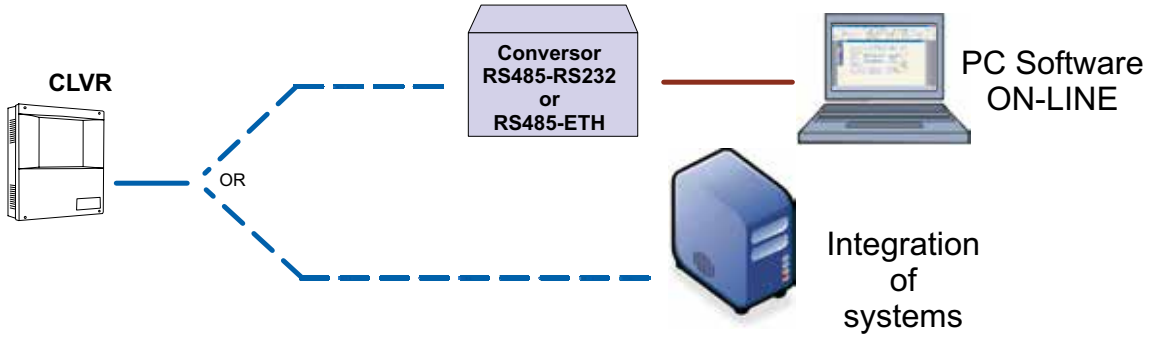


* Only CLVR02Z / CLVR04Z



NOTE 1: Zones 3 and 4 are not functional in CLVR02Z control panel.
NOTE 2: This card contains 4 or 8 zones depending on the model (CLVR08Z/CLVR12Z).
NOTE 3: Last zone configured for external system monitoring.

Example of general wiring diagram



Example of connection for MODBUS functionality

LONDON

Automatic conventional control panel

The London control Panel has been designed according EN54 part 2 and 4 in accordance with the last directives, successfully overcoming the most severe tests of environmental conditions, conducted electrical noise, magnetic disturbances, vibration, etc.

Based in a micro processed technology of 16 bits, used this for managing the detection system and performed manoeuvres. It allows conventional detectors, with the following voltage levels:

- Open line	22,5 V	24 V
- Surveillance mode	19 V	22,5 V
- Detector alarm	7 V	16 V
- Call point alarm	3,5 V	7 V
- Crossed line	0 V	3,5 V

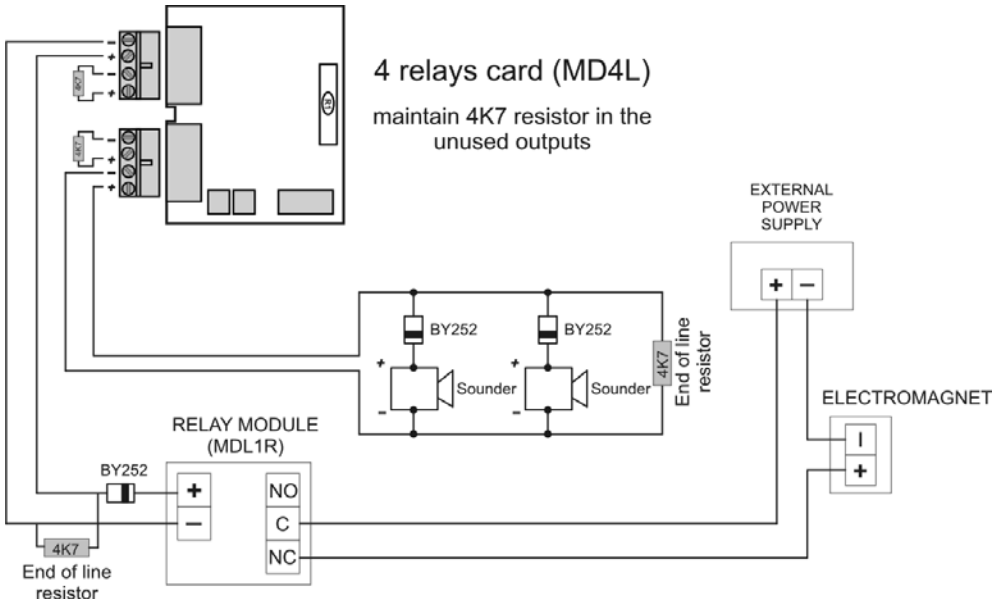
Measuring the line voltage and knowing the voltage merges aforementioned, a correspondence can be established with the control panel indication.

Features:

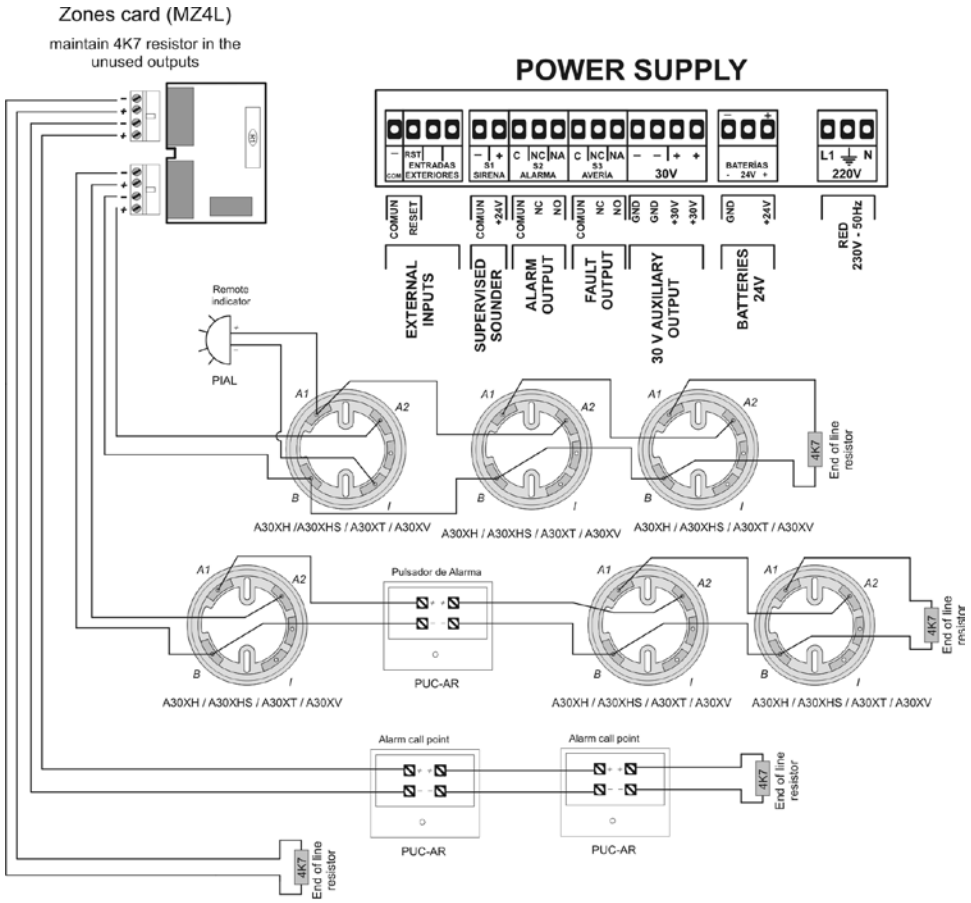
- Control panel configurable up to 12 modules, with 4 zones or 4 relays (control panel limit of 48 outputs, relays and zones).
- Expandable up to 32 modules with an additional cabinet (limit 128 outputs, zones and relays).
- Supports up to 32 devices (detectors and call points) per zone.
- Configurable with PC-EasyLONDON software (RS232).
- It allows to connect an external keyboard (standard PC-PS2).
- It allows the connection of 10 repeaters.
- 30Vdc auxiliary output.
- Equipped with 1 delayed sounder output (0 to 10 minutes) and supervised.
- Equipped with 1 alarm output and 1 fault output as free voltage relays.
- It allows the connection of a printer (RS232).
- Certified according EN 54-2 and EN 54-4, and CE mark.
- Access to the panel keyboard by means of a numeric code.
- Size: 418 x 324 x 150 mm.

TECHNICAL FEATURES

Input voltage	230 V 50 Hz/AC	*Maximum current per zone*	2 mA (standby)
Output voltage	21 V Nominal	*End of line capacitor*	4 K7
Standby consumption	70 mA	*Sounder output voltage*	24V/DC 2 A
Alarm consumption	140 mA	*Fault output*	No
Batteries	2 x 12 V 7 Ah SLA	*Environmental conditions*	-10ºC +50ºC
Supply fuse	4 A	*Size*	418 x 324 x 150 mm
Battery charger	500 mA 27V/DC 20ºC	*Weight (without batteries)*	5.9 Kg
Devices per zone	32	*Standard*	EN 54 parts 2 & 4
Control panel power supply	3 A	*Max. voltage 30V output*	1 A



Example of a relay card wiring diagram



Example of a zones card connection diagram

EASY LONDON

Setup software for control panels

EASY LONDON is a support software for programming the London control panel of Cofem.

Since this control panel allows you to control a large number of elements (it could manage 128 outputs between zones and relays), it needs an effective system of labelling and programming for an easy, quickly and intuitive configuration.

You can download EasyLONDON software to any PC.

It allows you to prepare information related to the installation (labels of zones, relays and their activation, modes of operation, etc) on this computer and then dump it on the control panel with an RS232.

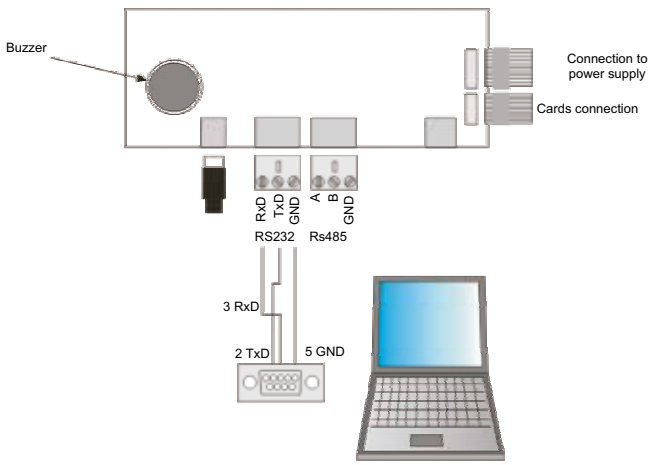
This form will be easier to work on the configuration of the control panel in any place where are all the necessary information is available, and only move to the installation for its dump on the control panel and start-up.

In addition, avoids having to enter the information through the front of the control panel, especially useful for complex installations configuration feature.

Similarly, the EasyLONDON facilitates the management and control of the configuration of all the installations with London control panel.

Features:

- Software for the LONDON control panel programming.
- Installable software on any PC (the PC must have minimum characteristics described in the manual of the software EasyLONDON)
- Allows you to easily program the control panel from PC (usually a laptop) in a Windows environment, and connecting with the control panel, then dump this information.
- Connection between PC and control panel with an RS232 connection.
- It allows to easily manage the configurations of all installations with London control panel.
- It avoids having to configure the control panel from the front of it.
- It allows to prepare the configuration from anywhere.
- It allows to prepare the configuration from anywhere.



CENTRAL REPETIDORA

London repeater control panel

The London control panel allows to connecting up to 10 repeaters, using a 4 wires of 1,5 mm^2 connection (two for supply and two for communication for RS485 line). The two wires of the RS485 line will be connected from the control panel to the corresponding repeaters.

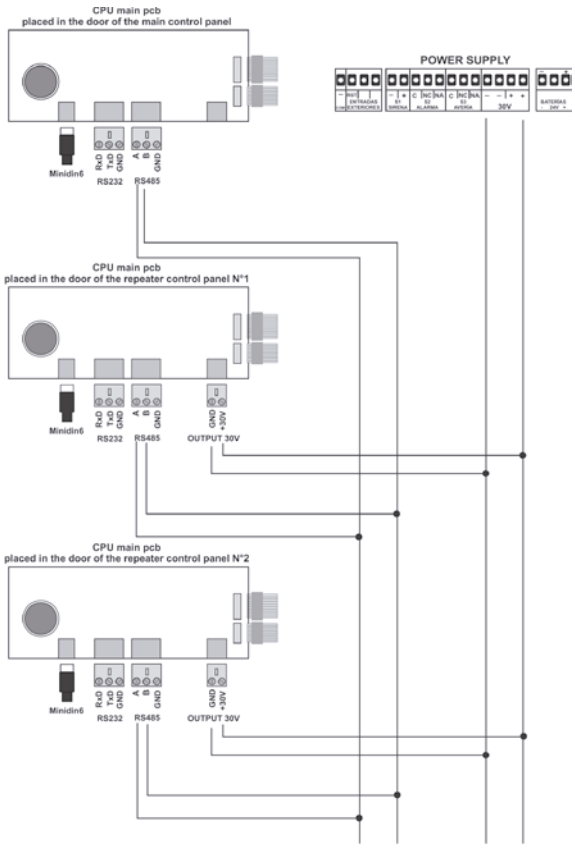
The two wires will connect from the 30V output of the power supply in the control panel to the back panel of their repeaters.

The repeater wiring is realized like the figure attached.

The supply up to 3 repeaters is doing from the 30V output of the power supply of the London control panel.

To feed 4 to 10 repeaters must be done from the 30V output of an external power supply (FAE).

The wiring of repeaters, communication and power wires, will be realized with twisted and shielded halogen-free of 2 x 1,5 mm^2 wire, maximum length up to 1200 m.



TECHNICAL FEATURES

Supply	30 V
Consumption in surveillance	150 mA
Humidity	20 - 95% RH
Temperature	-10ºC +50ºC
Dimensions	418 x 324 x 150mm
Weight (without batteries)	4,9 kg
IP protection	IP 30

A30XT

Conventional heat detector

Conventional heat detector for fire detection.

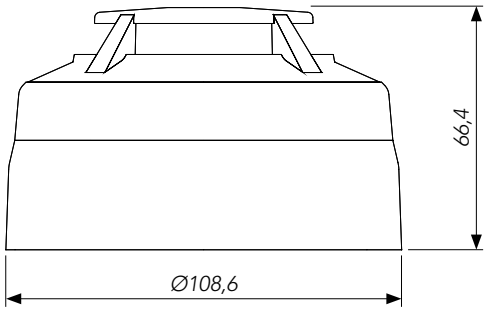
The detector consists of a sensitive element to temperature variations produced by any process of combustion.

The value measured by this element is compared with a preset reference value which causes the detector to alarm status when the temperature reaches 55°C.

Features:

- Low section, total height less than 45 mm (including the base).
- Available with high base for electrical conduit of 20 mm.
- Alarm with two red LED, which makes easier the identification from any direction (360°).
- Possibility to connect a remote action indicator.
- Easy connection, without polarity.
- Detector and base with easy installation, interchangeable with the entire of range A30X, and manufactured in white heat-resistant ABS.
- According to EN 54-5 class A2, and CE mark, according to the European Regulation of Construction Products (UE) N°305/2011.

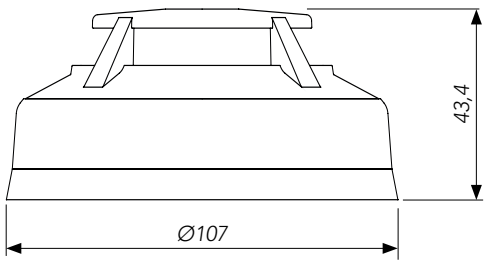
Other colors on request



High base assembly

TECHNICAL FEATURES

Supply	12 - 30V without polarity
Standby consumption	40 µA (at 18V)
Alarm consumption	40 mA (at 18V)
Activation signal	Two red led (360º visibility)
Remote indicator output	Yes
Humidity	20 - 95% RH
Temperature	-10ºC +50ºC
Sensitivity	According to EN 54-5 Class A2
IP protection	IP 20



Low base assembly

A30XV

Combined heat conventional detector

Combined heat detector for fire detection.

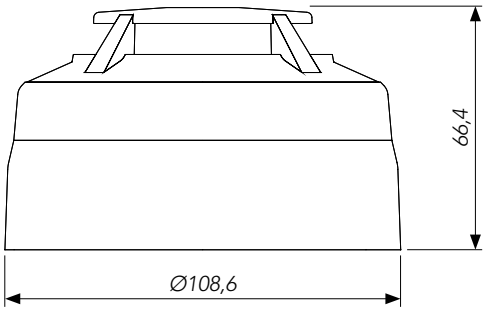
The detector A30XV has a double heat detection system that measures the speed of increase in temperature (rate of rise heat function), both as their absolute value (heat function), and compares it with a measure of internal reference.

The rate of rise heat function allows to detect a fire in the early stages of their development, or, if this is very slow, is activated when the temperature reaches 55°C.

Features:

- Low section, total height less than 45 mm (including the base).
- Available with high base for electrical conduit of 20 mm.
- Alarm with two red LED, which makes easier the identification from any direction (360°).
- Possibility to connect a remote action indicator.
- Easy connection, without polarity.
- Detector and base with easy installation, interchangeable with the entire of range A30X, and manufactured in white heat-resistant ABS.
- According to EN 54-5 Class A2R (detectors with rate of rise heat function), and CE mark, according to the European Regulation of Construction Products (UE) N°305/2011.

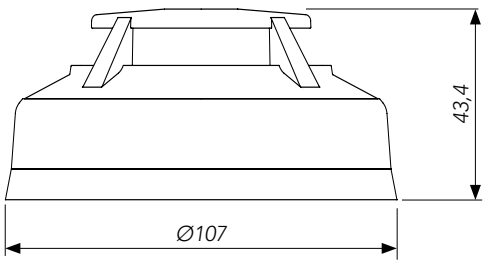
Other colors on request



High base assembly

TECHNICAL FEATURES

Supply	12-30V without polarity
Standby consumption	40 µA (at 18V)
Alarm consumption	40 mA (at 18V)
Activation signal	Two red led (360º visibility)
Remote indicator output	Yes
Humidity	20 - 95% RH
Temperature	-10ºC +50ºC
Sensibility	According EN 54-5 Class A2R
IP protection	IP 20



Low base assembly

A30XH
A30XHS

Detector óptico de humos convencional

Conventional smoke detector for fire detection.

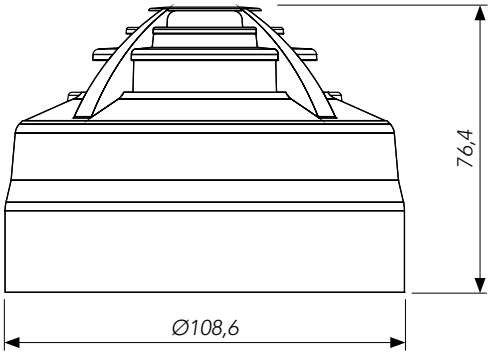
The A30XH detector is based on the Tyndall effect (light refraction in a dark chamber) for detection of fires which generates smoke (plastic, wood, paper, etc).

The A30XH detector (smoke-heat detector) also has a static heat element that sets the detector into an alarm mode when temperature reaches 55°C

Features:

- Low section, total height less than 45 mm (including the base).
- Available with high base for electrical conduit of 20 mm.
- Alarm with two red LED, which makes easier the identification from any direction (360°).
- Possibility to connect a remote action indicator.
- Easy connection, without polarity.
- Double flash LED indicates a dirty status of the detector (fast signal indicates alarm and slow indicates maintenance required).
- Detector and base with easy installation, interchangeable with the entire of range A30X, and manufactured in white heat-resistant ABS.
- According to EN 54-7 and CE mark according to European Regulation of Construction Products (UE) N°305/2011.

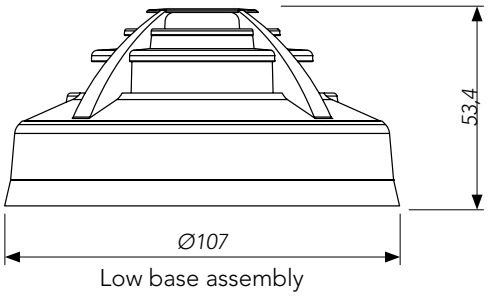
Other colors on request



High base assembly

TECHNICAL FEATURES

Supply	12 - 30V without polarity
Standby consumption	60 µA (at 18V)
Alarm consumption	40 mA (at 18V)
Activation and dirt signal	Two red led (360º visibility)
Remote indicator output	Yes
Humidity	20 - 95% RH
Temperature	-10ºC +50ºC
Sensibility	According EN 54-7
IP protection	IP 40



Low base assembly

PUCAR

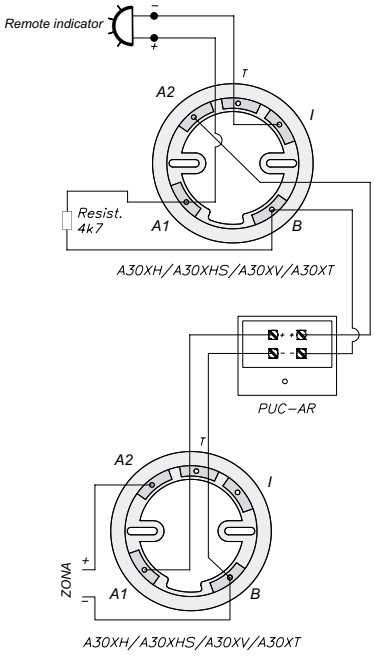
Manual call point

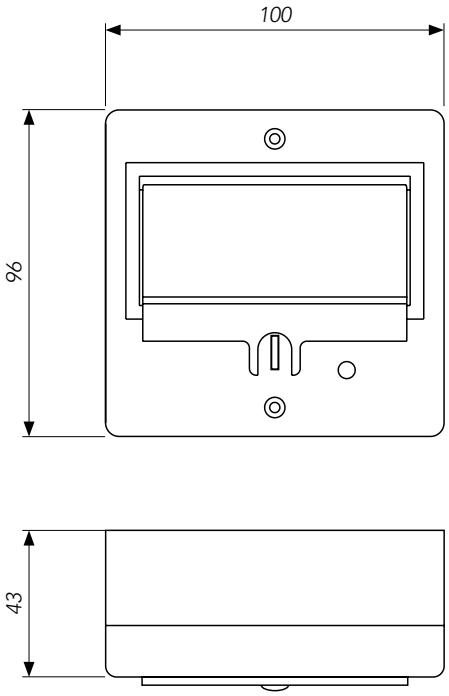
Manual call point for the conventional fire detection system.

It has an indicator of action (red led) that illuminates in case of be manually operated (alarm).

Features:

- Resettable call point by pushing yellow button on the front side.
- Transparent protector cover to avoid accidental false alarms.
- Immediate visual recognition of alarm status by the permanent activation of the LED, and the trigger of
- The yellow tab on the lower side of the activation face.
- According to EN 54-11 and CE mark according the European Regulation of Construction Products (UE) N°305/2011.





TECHNICAL FEATURES

Supply	24 - 35V without polarity
Standby consumption	0 mA
Alarm consumption	35 mA
Activation signal	Red led
Remote indicator output	No
Humidity	20 - 95% RH
Temperature	-10ºC +50ºC
Standard	EN 54-11
IP protection	IP 50

PIAL

Remote indicator

Remote action indicator of fore detection system.

The PIAL allows showing alarm status of sensors and modules of analogue systems, as well as of sensors of conventional systems.

Typical cases of use:

- Places where elements of the detection system are not visible, for example, inside false ceiling, in which the PIAL can be visibly situated on the lower part of the ceiling or near the wall.
- Reduced accessibility rooms or that is needed do a big inspection range for the identification of the element in alarm, for example in hotel rooms, where the PIAL can be situated above the door frame of each room, making very easy its identification.

Permanent activation of the red LED indicates alarm status.

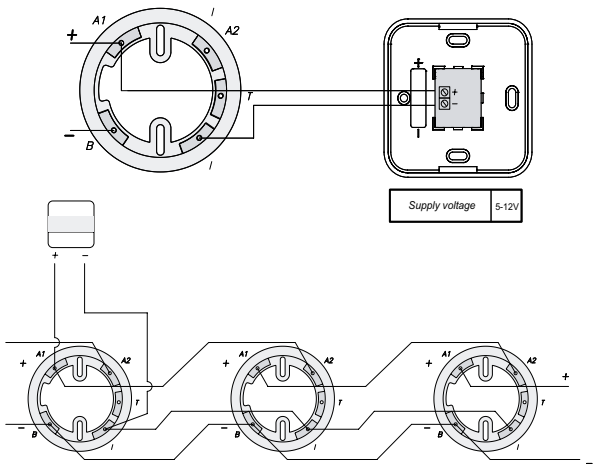
It is an element easy to install, both for its electrical wiring and its fixation, furthermore, can be adapted to the conduit boxes and switchgear.

Features:

- Alarm status can be identified in any perpendicular direction at its installation.
- Easy connection, with polarity.
- Can be adapted to the conduit boxes and switchgear.
- The red light is produced by two LEDs, increasing reliability against failure of any of them.
- Manufactured in heat-resistant ABS. Base and lid are white, red viewer.

TECHNICAL FEATURES

Supply	5 - 12 V/DC with polarity
Standby consumption	0 mA
Alarm consumption	5 mA
Activation signal	Red led
Humidity	20 - 95% RH
Temperature	-10ºC +50ºC
IP protection	IP 50



MDL1R
MDL2R
MDL-8

Relays module

Relay module for fire detection system.

This module consists of a relay that controls the output of a dry contact normally open (NO) normally closed (NC), unsupervised.

That provision allows you to control as typical application door electromagnets in conventional fire detection systems, either through the control panel supply or sources of external power supply (FAE).

The equipment is very simple and easy to install.

The board of the relay module is mounted on a plastic base, which carries some tapes that allow secure comfortably in the place that best suits, taking advantage of the available space in stations, power supplies (FAE), etc, according to the normal distribution of the wiring of the installation.

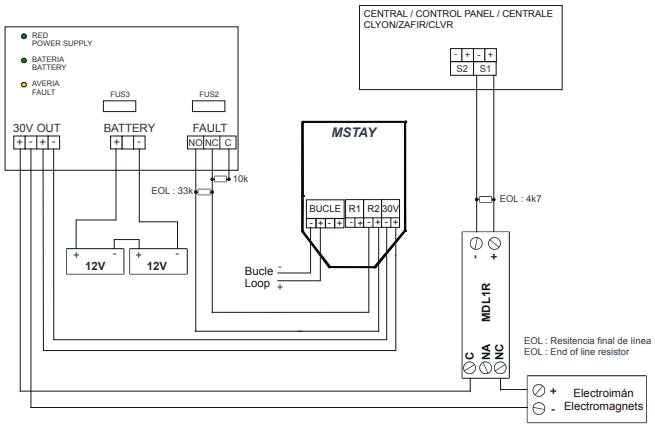
In addition, the relay module contains a safety fuse on the side of the dry contact.

There are three versions of modules based on the number of relays contained on the base:

- MDL1R: 1 relay module.
- MDL2R: 2 relays module.
- MDL-8: 8 relays module.

Features:

- Relay with dry contact output NO-NC, not supervised.
- Simple installation by means of adhesive tapes, taking advantage of the space and following the normal distribution wiring.
- It contains safety fuse.



TECHNICAL FEATURES

Supply	24 - 35V
Standby consumption	0 mA
Fuse	2 A
Consumption active	20 mA

A30XZSL
A30XSD

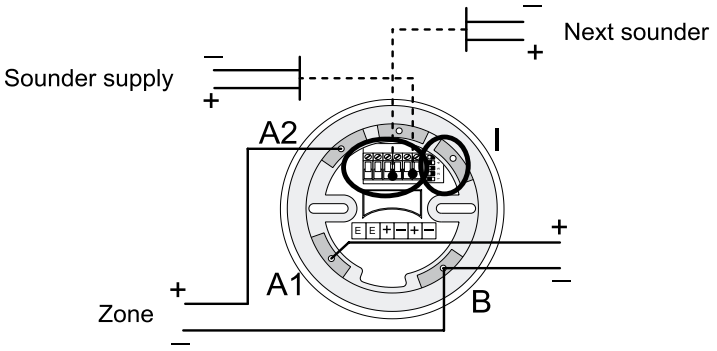
Alarm devices

Base with EN 54-23 visual alarm certified, EN 54-3 sound certified and base detector.

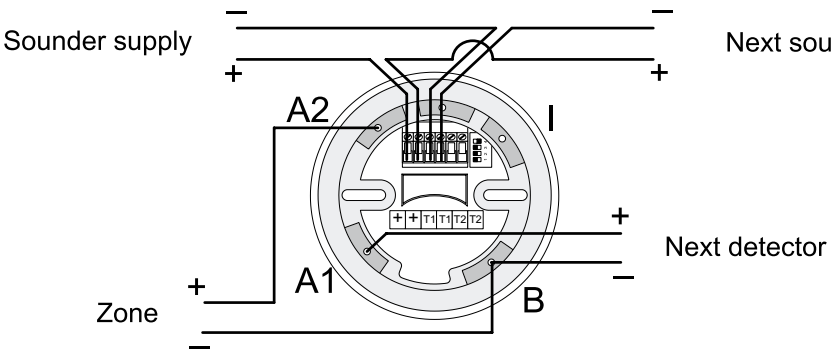
Typical uses of A30XZSD and A30XZSL are spaces or rooms that need a fire detector integrated with sounder and visual alarm such as hotel rooms.

The coverage of the set should not be more than the coverage of detector with which it is installed, except purposes or uses justified.

From functionally point of view, the detector is wired according to the criteria of the fire control panel. Regarding the sounder and visual alarm base, it is a conventional sounder wired according to the criteria of the equipment which feed it (Sounder output at fire control panel, MDA1Y, MDA2Y, MYOA, etc).



A30XZSL WIRING DIAGRAM



A30XZSD WIRING DIAGRAM

TECHNICAL FEATURES

	A30XZSD	*A30XZSL*
Supply	18-30 V with polarity	18-30 V with polarity
Standby consumption	0 mA	0 mA
Alarm consumption	5 mA / 7 mA (Low/High dB)	9 mA / 11 mA (Low/High dB)
Operating temperature	-10ºC +50ºC	-10ºC +50ºC
Dimensions	Ø114mm x high 45 mm (without det.)	Ø114mm x alto 45 mm (without det.)
IP protection	IP 30	IP 30
Sound intensity	Low 80 / High 90 dB-1m	Low 80 / High 90 dB-1m
Tones	8 types	3 types
Standard	EN 54-3	EN 54-23 & EN 54-3
Flash	-	0,5 Hz (60 ms)

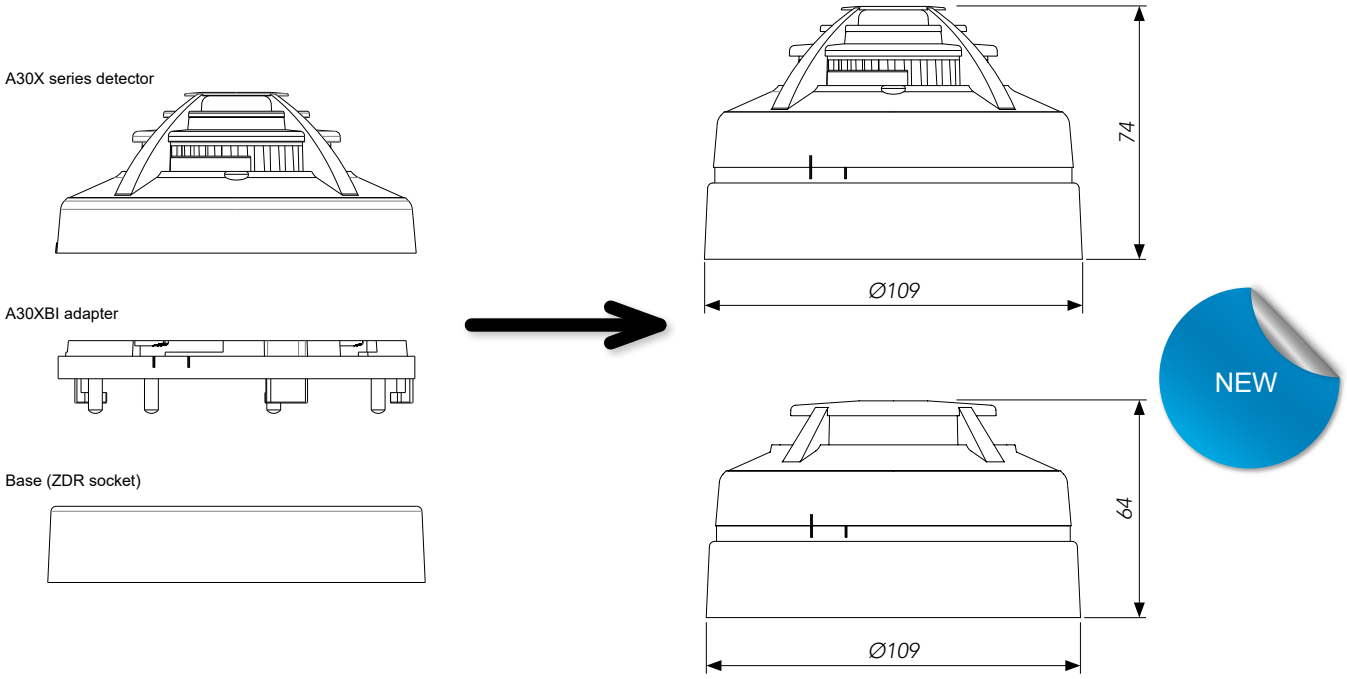
A30XBI

Socket adapter

To facilitate the task of updating the TC25/A system to the Lyon system (and in general the conventional system), Cofem has an "interconnection base" that allows for placing the detectors of the algorithmic-addressable and conventional system directly on the sockets of higher systems without the need to change or rewire the sockets.

Thus, if the wiring and the sockets of the installation are in good condition, a quick, simple and very cheap update to the system can be carried out, based on replacing the fire detection and alarm control panel and its detectors.

The A30XBI adaptor can be used with conventional and algorithmic-addressable detectors and these are supplied configured according to the detectors to be replaced.



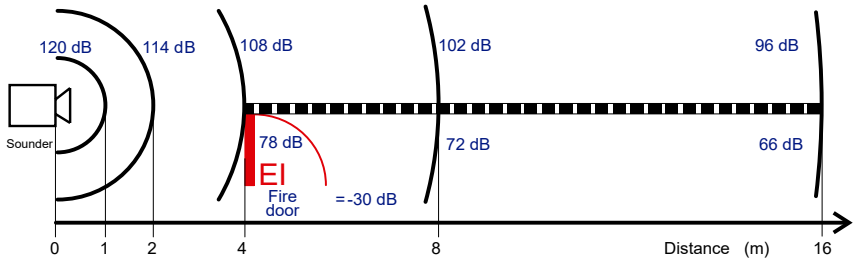
CA6
SIR24F
SIR24P

Indoor sounders

Sound level (dB-(A))	*Distance (m)*
120	1
114	2
108	4
102	8
96	16
90	32
84	64

ACOUSTIC GENERAL RULES

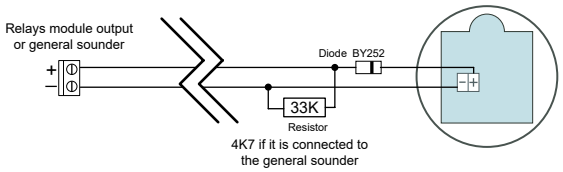
- Every time you double the distance, 6 dBs are lost.
- 30 dBs are lost for every fire door.
- 20 dBs are lost for every normal door.



Indoor sounders to be directly connected to the output of control panels or relay modules.

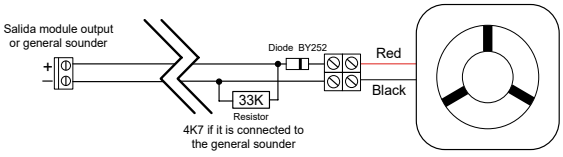
ALARM BELL 6" CA6

Output voltage	24 Vcc
Consumption	25 mA
Output volume	95 dBA at 1 meter 92 dBA at 3 meters
Operative temperature	-20°C to 60°C
Humidity	Max. 90% RH
Size	6" (150 mm x 56 mm)
Weight	764g
IP protection	IP33



SIR24P & SIR24F SOUNDERS

Material	red P.V.C.
Operating voltage	30 Vdc
Consumption at 30 Vdc	70 mA
Sound level	85 dB
Operating temperature	5°C to 40°C
Size	80 x 80 x 30 mm
With intermittent flash	Only SIR24F model



SIR24B
SIR24BL
SIR24B+BSLC
SIR24C

Indoor and outdoor sounders

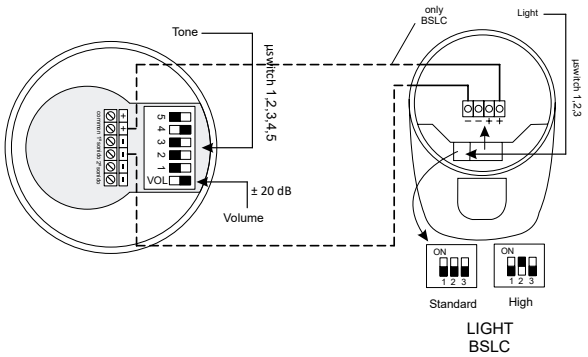
List of indoor and outdoor sounders to connect directly to the sounder output of the control panels or relay modules.

SOUNDER SIR24B, SIR24BL, SIR24BZA and BSLC

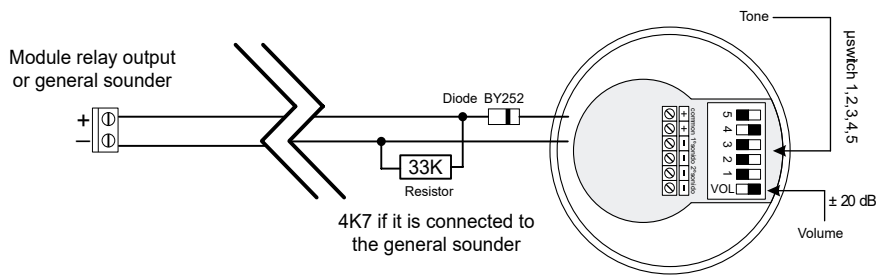
- Indoor and outdoor sounder made of red ABS.
- Great sound level. Low consumption.
- 32 selectable tones. Volume control.
- Automatic synchronization.
- SIR24B: Sounder.
- SIR24C: Sounder with light, certified EN54-23.
- SIR24BL: Sounder with light.
- SIR24BZA: Sounder with high base.
- BSLC: Base with light, certified EN54-23.

Voltage range	9-28 Vdc
Consumption:	
(Using tone 3)	at 24Vdc 16mA (SIR24B)
	20mA (SIR24BL)
(Using tone7)	49mA (SIR24C)
Consumption:	
(Tone 3/0,5Hz/high power)	at 24Vdc 32mA
	(SIR24B+BSLC)
Output volume	at 24 Vdc 102 dB (A) (tone 3)
	SIR24C 107dB (tone 23)
Operating temperature	-25°C at +70°C
Size	Ø95 x 91 mm
	Ø95 x 107 mm (SIR24BL/SIR24BZA)
	Ø95 x 95 x 135 mm (SIR24B+BSLC)
	Ø100 x 98 mm (SIR24C)
IP protection	IP54-SIR24B
	IP65-SIR24BL
	IP65-SIR24BZA
	IP65-SIR24B+BSLC
	IP21C-SIR24C (low base)
	IP65-SIR24C (high base)

SIR24B + BSLC SOUNDER



SIR24B, SIR24BL & SIR24BZA SOUNDERS



CAEPLH
CAEPL

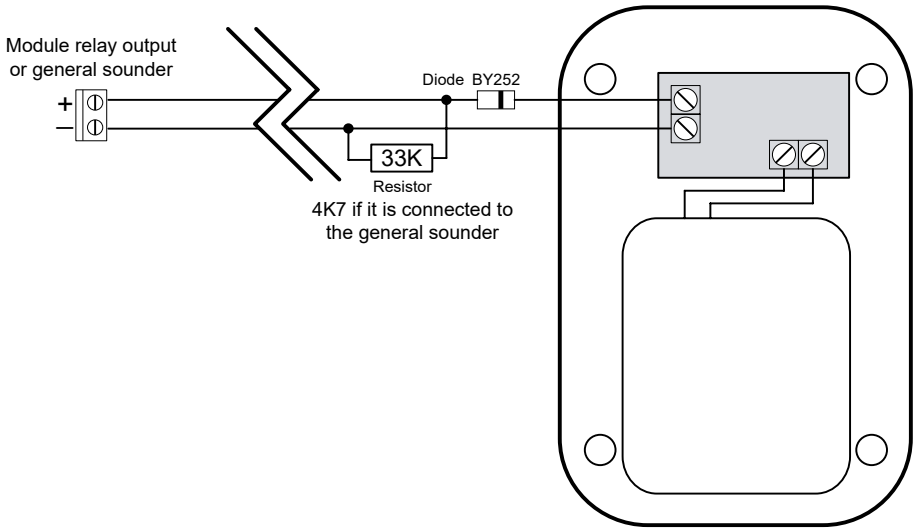
Sirenas de exterior

SOUNDER CAEPL and CAEPLH

- Outdoor red sounder made of ABS plastic.
- Back cover to protect the PCB's.
- They work like power sounders at 24V.
- Piezobuzzer sounder.

Activation	by supply activation
Supply	24 Vcc
Power	85 dB /112 dB
Cycles	2 / 3 / 5 / 10 cycles
Timing by cycle	60 sec. ON / 30 sec. OFF
LEDs	2 LEDs of voidable option
Size	320 x 218 x 77 mm (CAEPLH) 220 x 315 x 70 mm (CAEPL)
Current / consumption	450 mA
IP protection	IP65 (sealed with silicone)

CAEPL & CAEPLH SOUNDERS



SIRCEI
SIRWAL
SIR-PIT

Light warning devices

Luminous warning devices:

Devices that when are activated emit flashes of light in order to alert people with hearing disabilities:

A. SIRWAL and SIRCEI:

- Certified EN54-23.
- Supply: 9 ÷ 60 Vdc.
- Operating temperature: -25°C to 70°C.
- High base.
- Protection IP65.
- Red color.
- Dimensions: Ø93 mm x 65 mm.
- Flash: White 1Hz (0,5 Hz selectable).
- Consumption: 10-25 mA according selection.

A1. SIRWAL:

- Wall device.
- W 2,4 - 7,5.

A2. SIRCEI:

- Ceiling device.
- C 3 - 7,5.

B. SIR-PIT:

- Supply: 9 - 60 Vdc.
- Consumption: 3 ÷ 15 mA according selection.
- Flash: 1 flash 1Hz.
  2 flashes 1Hz.
  Continuous 1Hz.
- Temperature: -20°C to 55°C.
- Protection: IP21C.
- Color: red.
- Red flash.

DIAGRAM FOR SIRWAL AND SIRCEI

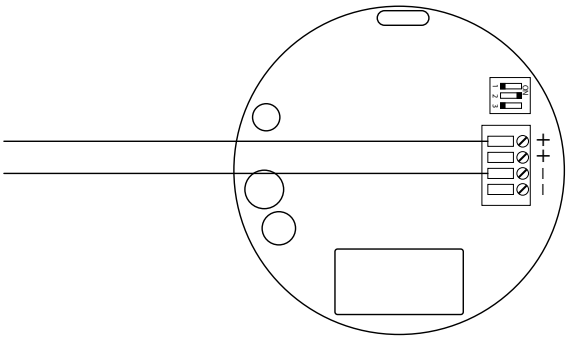
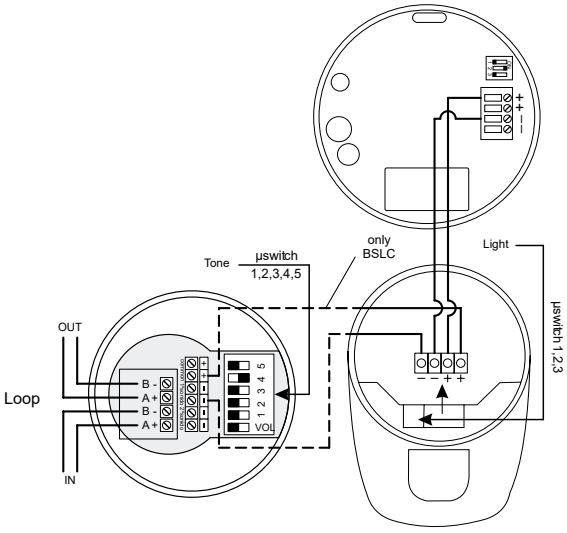


DIAGRAM FOR SIRWAL AND SIRCEI WITH BSLC AND SIRAY



NOTE: They can be connected with the SIRAYBSLC by selecting low sound and light on this device and BSLC. The calculation of consumption points of the SIRAY+BSLC and this additional device shall be computed as a SIRAY+BSLC with selection of sound and maximum light.

SIR24SC
SIR24SC+BSLC

Voice alarm devices

Device that activates a voice message with sound of fire alarm.
The message is selectable from its internal list.

A. SIR24SC and SIR24SC+BSLC:

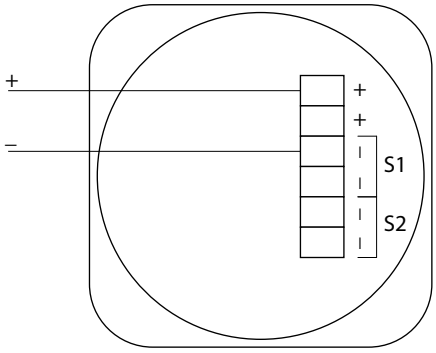
- Voltage: 18 ÷ 28 Vdc.
- Consumption: 4 ÷ 8 mA.
- Sound: 90/100 dB selectable.
- Several selectable alarm tones.
- Temperature: -10°C a 55°C.
- Protection: IP21C.
- Color: red.
- Dimensions: 106 x 106 x 91mm.

B. SIR24SC + BSLC:

Set alarm voice with bright warning based device.

- Certified EN54-23.
- W 2,4 - 7,5.
- Consumption: 18 ÷ 28 mA.
- 1 Hz (0,5 Hz selectable).

DIAGRAM FOR SIR24SC



FAE03Y/05Y

External power supply

External power supply for fire detection system.

It has two outputs depending on the system supply need:

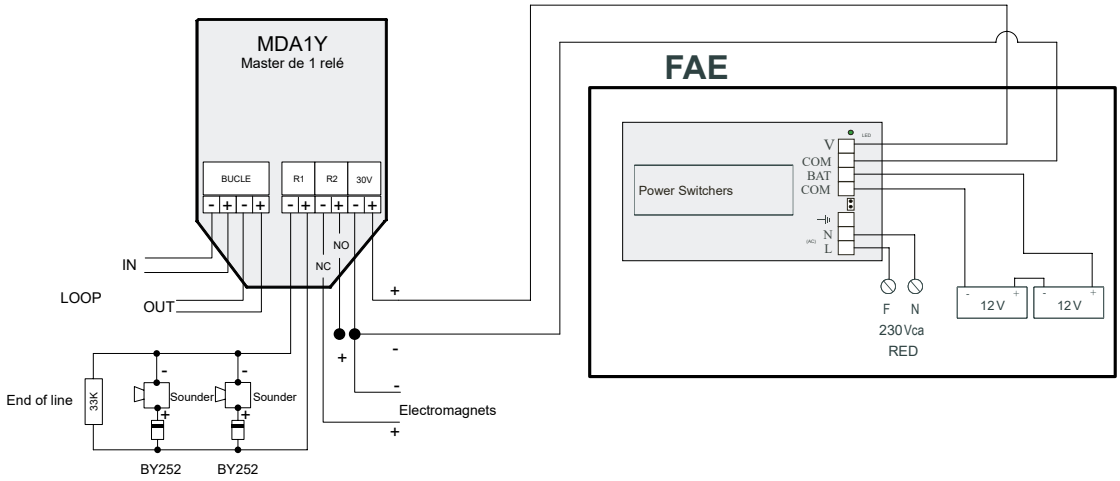
- FAE 03: Supply capacity 3A (100W).
- FAE 05: Supply capacity 5A (155W).

FAE is installed inside a chest of 418 x 324 x 150 mm, allowing you to have additional space to place the necessary batteries inside.

Features:

- Supply capacity 3A (model FAE03) or 5A (model FAE05).
- FAE installed inside a chest, allowing you to have additional space to place the necessary batteries inside.
- Dimensions: 418x324x150 mm.
- Metallic chest.
- Built-in battery charger.
- Existing variant with chest in grey.

Wiring diagram
FAE03/05 with relays module



TECHNICAL FEATURES

Power Supply	230 V/AC 50 Hz
Output Voltage	30 V/DC
Standby Current	100 mA
Output Current	FAE 03: 3A / FAE 05: 5A
Batteries Charger	Yes
Humidity	20 - 95% RH
Temperature	-10ºC +50ºC
Size	418 x 324 x 150 mm
IP Protection	IP 30

ZAFIRPWS

External power supply

External Power Supply (with batteries charge incorporated) for fire detection and fire alarm systems. Certified according EN 54-4.

This equipment is specially recommended for properly feeding any fire detection device which requires external power supply.

It has two outputs:

- Two 30V output monitored and protected by a fuse, for easy connection.
- Dry contact fault output, for integration with other systems.

The system has three indication leds to show system status:

RED (green): system operating through 110/230 V/AC power supply.

BATTERY (green): system operating under batteries.

FAULT (amber): system fault, general power supply fault or fault in the auxiliary battery supply.

There are 2 models available depending on the needs of the system:

- ZAFIRPWS2 (65W): supply capacity 1,5A (65w).
- ZAFIRPWS5 (150W): supply capacity 4A (150w).

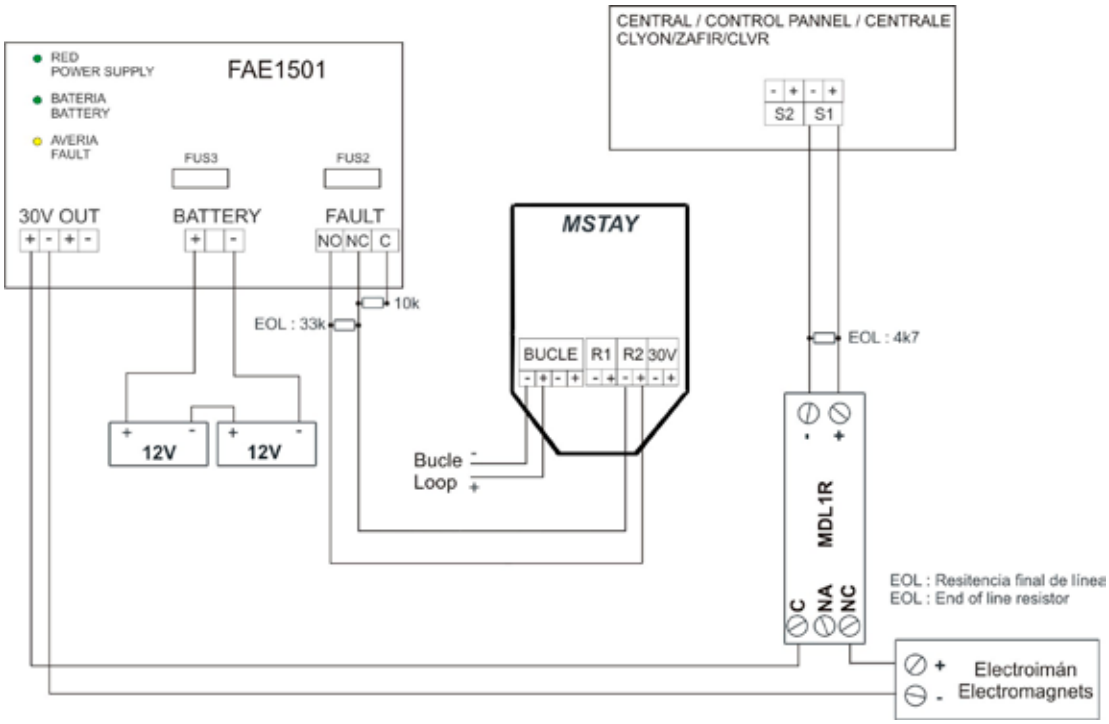
General power supply connection is different between the two models. ZAFIRPWS2 is connected to electrical network by a connector located on the right side of the box. ZAFIRPWS5 is connected to electrical network directly to the switching power supply.

External Power Supply is placed inside a metallic box of 363 x 331 x 96 mm, which allow additional space for installing batteries (2x12 Vdc7Ah).

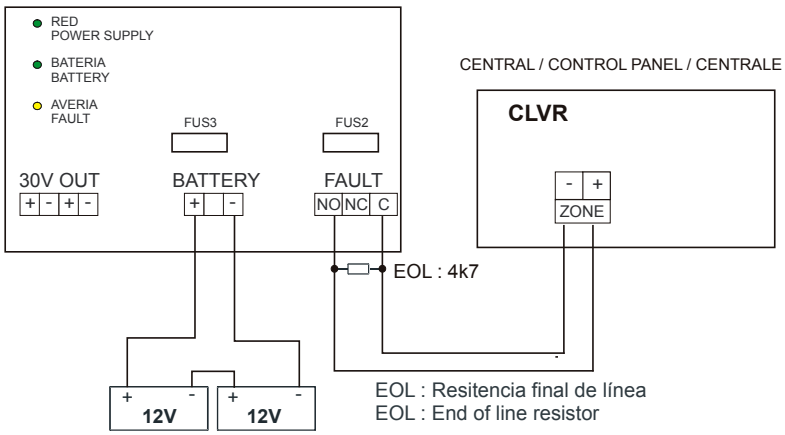
TECHNICAL FEATURES

Power supply	110/230V 50-60Hz/AC
Consumption in standby	50 mA
Output voltage	29 ~ 29,5 V/AC
Output current	ZAFIRPWS2: 1,5A
	ZAFIRPWS5: 4A
Batteries charger	Yes
Humidity	20 - 95% HR
Temperature	-10°C to +50°C
Dimensions	363 x 331 x 96 mm
IP protection	IP 30
Standard	EN 54-4

ZAFIRPWS WIRING DIAGRAM ALGORITHMIC ADDRESSABLE SYSTEM



ZAFIRPWS WIRING DIAGRAM FAULT OUTPUT



DLR

Optical smoke beam detectors

Optical smoke beam detectors for fire detection system consisting in a system of emitting/receiving an optical beam of infra-red light.

The installation of these detectors is ideal for large premises or for premises with very high ceilings.

There are several models:

-DLR50Z and DLR100Z: Conventional beam detector with separation between 50 and 100 m, which connects directly to the output of the detection area.
-DLR50CON and DLR100CON: Conventional linear barrier with separation between 50 and 100 m. It has an additional CADL circuit to reset the beam detector from the control panel.
-DLR50M and DLR100M: Motorised beam detector with separation between 50 and 100 m.
-DLRONE50 and DLRONE120: Beam detector with self-alignment, cancellation of ambient light, monitoring of the building's movements and models with separation between 50 and 120 m.

DLRONE50
DLRONE120

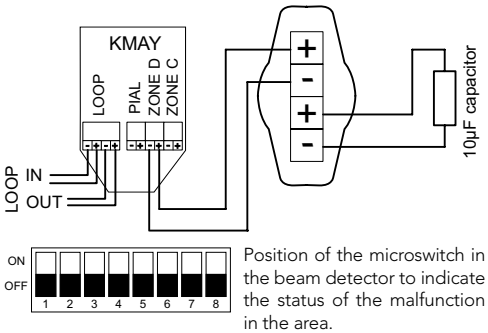
DLR50Z
DLR100Z

DLR50M
DLR100M

DLR50CON
DLR100CON

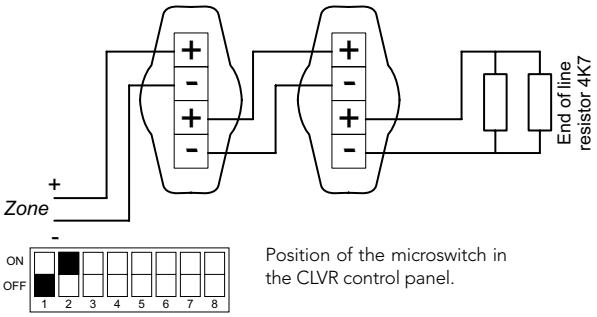
	DLR50Z DLR100Z	*DLR50M DLR100M*	*DLRONE50 DLRONE120*	*DLR50CON DLR100CON*
Power supply	10,2 y 30 Vcc	14 a 28 Vcc	14-36 Vdc	11-30 Vdc
Standby consumption	< 4 mA	10, 12, 14, 16 mA (for 1, 2, 3, 4 det.)	5 mA	20 mA
Alarm consumption	depending on area consumption (470 W)	48 - 52 mA	33 mA	50 mA
Wavelenght	880 nm	850 nm	850 nm	850 nm
Max. angle detector	± 0.8º	± 0.3º	± 0.5º	± 0.5º
Max. angle reflector	± 5º	± 5º	± 5º	± 0.5º
Relay output	2 A 30 Vcc	30 Vcc	2 A a 30 Vdc	1 A a 24 Vdc
Temperature	-30ºC to +55ºC	-10ºC to +55ºC	-20ºC to +55ºC	-10ºC to +55ºC
Protection	IP 50	IP 54	IP 55	IP 65
Standard	EN 54-12	EN 54-12	EN 54-12	EN 54-12

ALGORITHMIC ADDRESSABLE SYSTEM



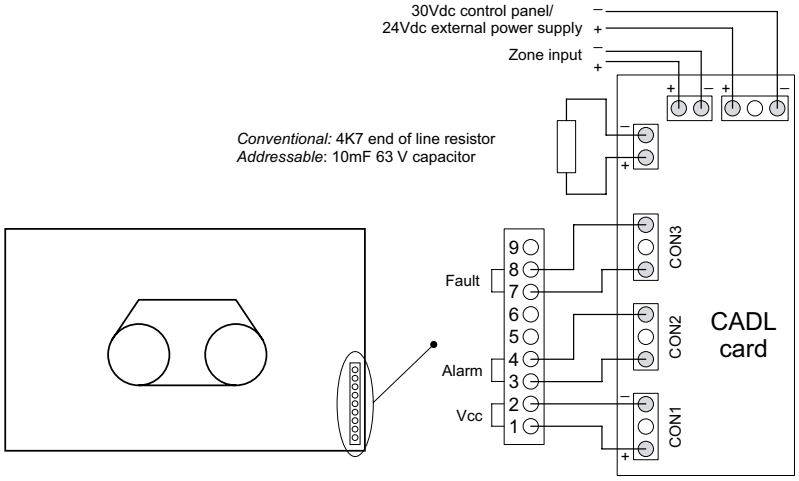
Position of the microswitch in the beam detector to indicate the status of the malfunction in the area.

CONVENTIONAL SYSTEM



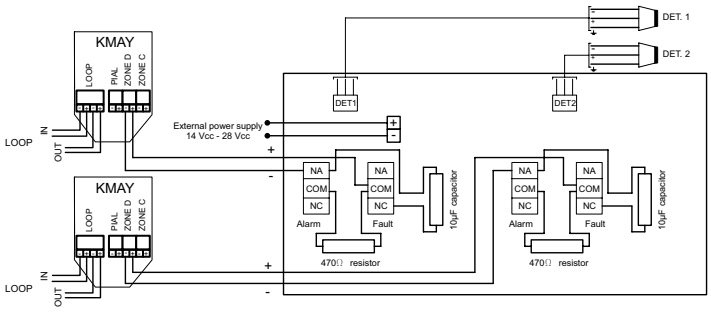
Position of the microswitch in the CLVR control panel.

DLR50Z / DLR100Z connection diagram for algorithmic-addressable and conventional systems

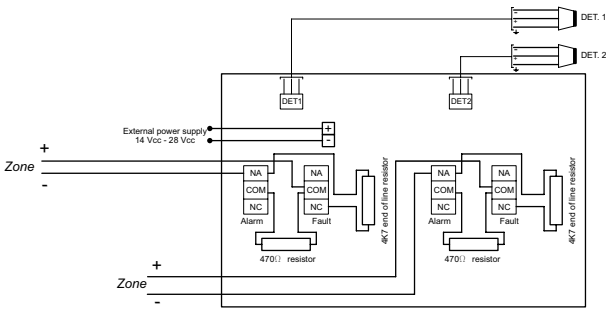


DLR50CON / DLR100CON connection diagram

ALGORITHMIC ADDRESSABLE SYSTEM

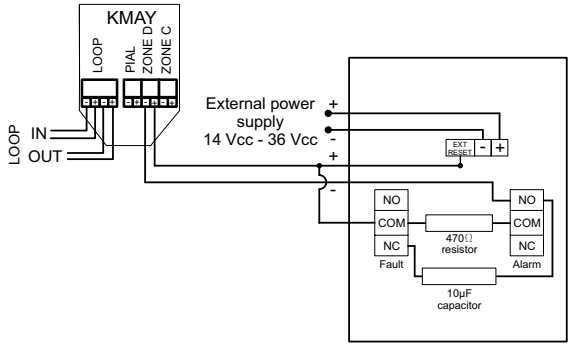


CONVENTIONAL SYSTEM

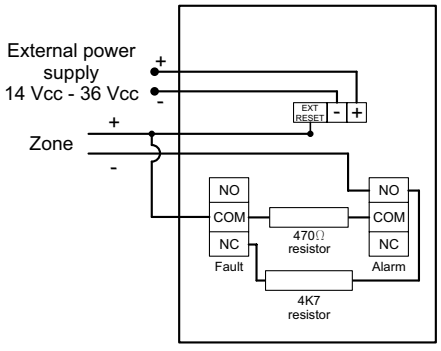


DLR50M / DLR100M connection diagram

ALGORITHMIC ADDRESSABLE SYSTEM



CONVENTIONAL SYSTEM



DLRONE50 / DLRONE120 connection diagram

CTE / CTX

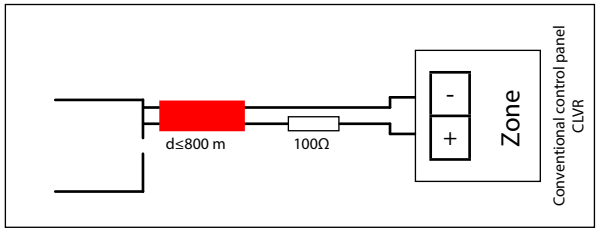
Lineal heat detector

Linear heat Detector is a proprietary cable that detects the heat at any point of its length.

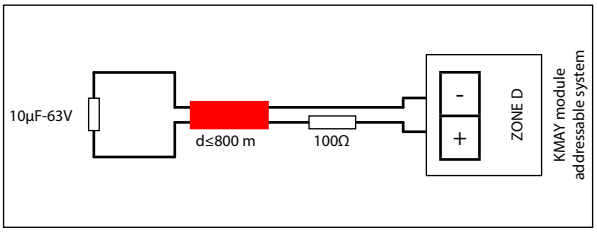
The sensor cable consists of two steel conductors individually insulated with a polymer sensitive to temperature. The insulated conductors are twisted together to create a spring pressure, then is wrapped with an outer cover appropriate to the environment in which must be installed in the detector.

In the calibrated temperature, heat sensitive insulating polymer yields against the pressure generated by the radiation of heat, allowing interior conductors get in touch between them and activate an alarm signal. This action occurs at any point heated within the detector cable length. It is not required to heat a specific length to activate the alarm, or you need to calibrate the system to compensate for changes in environmental temperature where it is installed.

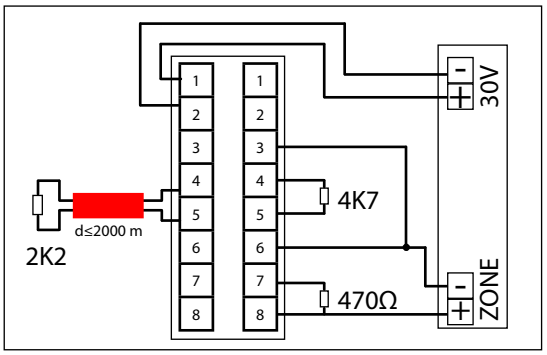
The linear heat Detector provides the advantages of coverage of lines with sensitivity of specific points.



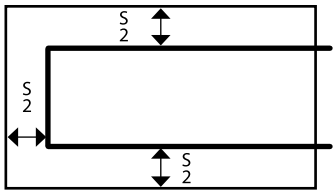
Wiring diagram with direct connection to the conventional control panel



Wiring diagram with direct connection to addressable module KMAY



Wiring diagram with interface module



Ceiling of the protected area
S= Generally will be 6,4 m, according to UNE 23007-14

TECHNICAL FEATURES

Max. nominal voltage	30 VAC, 42 VDC
2W wire resistance	0,2 ohmios / pie. (0,656 ohm / m)
Min. radius of curvature	6,4 cm
Diameter	Nominal 4 mm
Weight	Nominal 3,6 kg / 152 m

Type of product and temperature

Product type	Alarm T°C	Max. environ. T°C
EPC Various utilities/ Industrial and commercial applications	68 °C 88 °C 105 °C 138 °C 180 °C	38 °C 66 °C 79 °C 93 °C 105 °C
EPR Property against erosion by climate / Performance of the cover for high T°C	68 °C 88 °C 138 °C 180 °C	38 °C 66 °C 93 °C 121 °C
XCR Industrial applications excellent resistance to the chemical abrasion	68 °C 88 °C 105 °C 138 °C 180 °C	38 °C 66 °C 79 °C 93 °C 121 °C
XLT Excellent for low T°C	57 °C	38 °C

STF / STPR

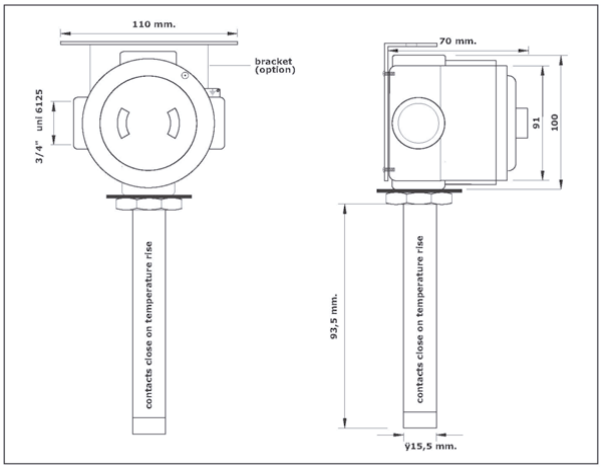
Probe temperature

Punctual heat detector based on a probe that allows its installation in special environments.

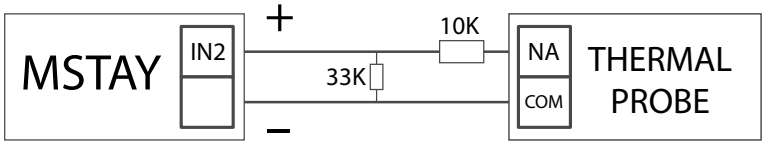
Depending on the protection needs, the detector can be used in:

- Aggressive environments: Model IP65.
- ATEX environments: II2GD Exd IIC T6.

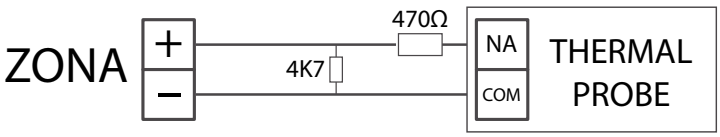
Protection	IP65									
Relative humidity	98%									
Weight	400g									
Bimetal component	Nilvia (Nilvar)									
Sensor material	Steel									
Fixed calibration on request (°C)	60	71	88	107	135	163	182	232	315	385



ALGORITHMIC ADDRESSABLE SYSTEM



CONVENTIONAL SYSTEM



FDINA40
FDAAT60

Flame detector

Flame detector to protect zones with open fires.

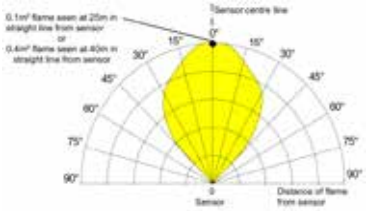
The detector is designed to respond to the flicker frequency and wavelengths characteristic of flames

There are three types of detectors depending on the used sensors to centre in the typical specific wavelengths of the flames and generate algorithms to discriminate these flames from others lightning supplies.

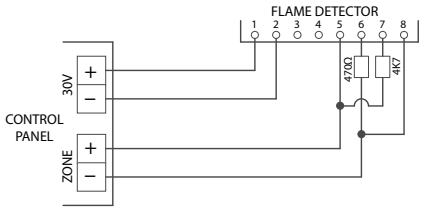
- IR^2: 2 IR sensors
- IR^3: 3 IR sensors
- UV/IR^3: 1UV sensor and 2 IR sensors.

Equally, there are an ATEX and conventional version of the previous models.

Detection field for the conventional detector



Detection field for the ATEX detector



Wiring diagram

Supply voltage	14-30 VCC
Alarm current, options	28 mA, RL1 and RL2 energized 20 mA, current loop, RL1 and 2 off 9 mA, RL1 energized
Alarm indicator	Red, light-emitting diode (LED)
Alarm reset time	1 second
View range	0,1m^2 n-heplane at 25m
Sensibility	Class 1 (EN54-10)
View field	90º cone
Spectral response	185 a 260 nm UV / IR3 1,0 - 2,7 um
Operating temperature / Humidity	-10ºC to +55ºC (without ice or condensation) / 95% RH without condensation
IP protection	IP 65 (conventional) / IP 66 (ATEX)
Cover material	Die-cast Zinc Alloy, blue (conventional) Copper-free aluminium, red (ATEX)
Dimensions	142 x 108 x 82 mm (conventional) / 150 x 146 x 137 mm (ATEX)
Weight	2 KG (conventional) / 2,5 KG (ATEX)

DAS100C
DALM1Z

Aspire smoke detector

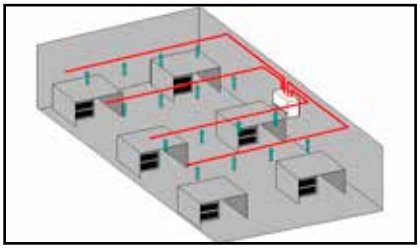
Range of aspire smoke detectors with selectable levels of sensibility (Normal, Better and High)

They detect the smoke analyzing the aspirated air through the holes in a tubes distributed by the enclosure to monitoring and taken to the detector

Aspire smoke detector uses laser light to discriminate the particles from the air and get an alarm early and reliable.

Typical applications of this range of detectors are: data storage, air conditioning units, machines, computers, equipment racks, prison cells, air ducts, rooms machines, etc.

There are several models depending on the needs of detection (refer to attached table)



	Features	Max. cover	Alarm levels	Aspiration tubes length (m)	Detection class	System sensibility	Test points QT.	
Senator Nano	190x230x110 mm 1,2 kg IP50	250 m²	Pre-alarm 1 alarm 1 fault	1 tube 25-50 m	Class C Class B Class A	Normal 5% Better 2% High 0,8%	10 4 2	24V / 350 mA Øint tube=15-25mm Øext tube=26-26,5mm
Senator 25	140x200x85 1,85 kg IP50	500 m²	Pre-alarm 1 alarm 1 fault	1 tube 50 m	Class C Class B Class A	Normal 5% Better 2% High 0,8%	10 Sw design Pipecad	24V / 250 mA
Senator 100	297x200x85 3,75 kg IP50	1000 m²	Pre-alarm 1 alarm 1 fault	2 tube 50-100 m (50m x 2) (100m x 1)	Class C Class B Class A	Normal 5% Better 2% High 0,8%	20 Sw design Pipecad	24V / 400 mA
Senator 200	427x372x95 5,2 kg IP50	2000 m²	4 - pre-alarm alarm individual levels 1 - fault	4 tubes 200-250 m (50m x 4) (100 m x2)	Class C Class B Class A	Normal 5% Better 2% High 0,8%	100 400 20	Øext tube=25/26-26,5mm 24Vdc / 300-470-750 mA (according aspirating speed)

There is also a model that includes only the air aspirating system for incorporating an external fire detector inside.

- Consumption: 24Vdc / 300 mA.
- Size: 259 x 184 x 166 mm.
- Temperature: -10°C to +60°C.
- External/internal tube diameter: Ø25/Ø21 mm.
- Tube max length: 100 m.
- Protection: IP65.
- 1 or 2 detectors in the same aspiration (IAS-1) or independents (IAS-2).

ELPCF

Electromagnets for fire doors


ELPCF50K


ELPCF140K


ELPCF50KS


ELPCF300K

ELPCF50K-ELPCF50KR-ELPCF50KAL-ELPCF50KALR ELECTROMAGNETS:

Electromagnetic wall retainers for fire containment doors.

- Power supply: 24V DC
- Consumption: 60 mA.
- Retention force: > 55 Kg | adjustable force.
- Unblocking push button.
- Noise suppressor.
- Anti-magnetic spring.
- UNE 1155 certificate.
- Head dimensions: 75x90x35 mm.

ELPCF140K ELECTROMAGNET:

Electromagnetic wall retainers for fire containment doors:

- Power supply: 24 V DC
- Consumption: 70 mA.
- Retention force: > 140 Kg.
- Unblocking push button.
- Noise suppressor.
- Anti-magnetic spring.
- EN 1155 certificate.
- Head dimensions: 90x100x43 mm.

ELPCF300K ELECTROMAGNET:

High power electromagnetic retainer for emergency and general passage doors.

- Power supply: 12 - 24V DC.
- Consumption at 12V DC: 500 mA.
- Consumption at 24V DC: 250 mA.
- Retention force: 300 Kg.
- With damping.
- Operating temperature: -10°C to +50°C.
- Protection: IP40.
- Dimensions: 250x48x25 mm.

ELPCF600K ELECTROMAGNET:

High power electromagnetic retainer for emergency and general passage doors.

- Power supply: 12 - 24V DC.
- Consumption at 12 V DC: 500 mA.
- Consumption at 24 V DC: 250 mA.
- Retention force: 600 Kg.
- Dimensions: 265x66x41 mm.

ELPCF50KS ELECTROMAGNET:

Electromagnetic retainer for mounting on the floor.

- Power supply: 24V DC
- Consumption: 45 mA.
- Retention force: 50 Kg.
- Protection: IP40.

Fire protection manufacturer
Ctra. de Molins de Rei a Rubí, km. 8,4
08191 Rubí, SPAIN
www.cofem.com