



Conventional fire detection system



CLVR 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.

Input voltage	110/230VAC 50/60Hz	End of line capacitor	4 K7
Output voltage	21 V Nominal	Sounder output voltage	30 V/DC 2 A
Maximum consumption	70 VA to 230 V/AC	Fault output	Yes, dry contact
Batteries	2 x 12 V 7 Ah SLA	Environmental conditions	-10°C +50°C
Max. voltage 30V output	0,75A / 1,50A ⁽¹⁾ AUTORESET	Size	363 x 331 x 96 mm
Battery charger	500 mA 27 V/DC 20°C	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
(4)			

TECHNICAL FEATURES

⁽¹⁾CLVR08Z and CLVR12Z control panels







* 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 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.

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	-10°C +50°C
Supply fuse	4 A	Size	418 x 324 x 150 mm
Battery charger	500 mA 27V/DC 20°C	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

TECHNICAL FEATURES

Wiring diagram





Example of a relay card wiring diagram



Example of a zones card connection diagram



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EASY LONDON Software

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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.







The London control panel allows to connecting up to 10 repeaters, using a 4 wires of 1,5 mm² 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 halogenfree of 2 x 1,5 mm² wire, maximum length up to 1200 m.



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





A30XT 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.

TECHNICAL FEATURES

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



High base assembly



Low base assembly



Other colors on request

A30XV 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.

TECHNICAL FEATURES

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



High base assembly



Low base assembly



Other colors on request



A30XH/A30XHS Detector



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.

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 (360° visibility)
Remote indicator output	Yes
Humidity	20 - 95% RH
Temperature	-10°C +50°C
Sensibility	According EN 54-7
IP protection	IP 40



Other colors on request



High base assembly



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	-10°C +50°C
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	-10°C +50°C
IP protection	IP 50



Wiring diagram

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



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	-10°C +50°C	-10°C +50°C
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)

A30XZSD

A30XZSL WIRING DIAGRAM





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 24 Vdc 16 mA (SIR24B)/20 mA (SIR24BL)
	49mA (SIR24C tone 7)
Consumption (tone 3/0,5Hz/high po	ower) at 24 Vdc 32 mA (SIR24B+BSLC)
Output volume	at 24 Vdc 102 dB (A) (tone 3)
	SIR24C 107dB (tone 23)
Operating temperature	-25°C to +70°C
Size	Ø95 x 91 mm (SIR24B)
	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
	IP21C-SIR24C (low base)
	IP65-SIR24C (high base)



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.

CAEPLH



By supply activation
by supply activation
24 Vcc
85 dB /112 dB
2 / 3 / 5 / 10 cycles
60 sec ON / 30 sec OFF
2 LEDs of voidable option
320 x 218 x 77 mm (CAEPLH)
220 x 315 x 70 mm (CAEPL)
450 mA
IP65 (sealed with silicone)

CAEPL



Wiring diagram

SIR24B, SIR24BL AND SIR24BZA SOUNDERS



SIR24B + BSLC SOUNDERS



CAEPLAND CAEPLH SOUNDERS





Indoor sounders

CONVENTIONAL SYSTEM



6" ALARM BELL CA6

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



SOUNDERS SIR24P and SIR24F

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



SIR24P



Wiring diagram

6" ALARM BELL CA6 DIAGRAM



SIR24P and SIR24F SOUNDERS DIAGRAM





External power supply ZAFIRPWS



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:



(b) 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 outropt	ZAFIRPWS2: 1,5A				
Output current	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				

CONVENTIONAL SYSTEM

Wiring diagram



ZAFIRPWS WIRING DIAGRAM ALGORITHMIC ADDRESSABLE SYSTEM



ZAFIRPWS WIRING DIAGRAM FAULT OUTPUT





FAE 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.

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	-10°C +50°C				
Size	418 x 324 x 150 mm				
IP Protection	IP 30				





CONVENTIONAL SYSTEM

MDL1R Relay 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









Accessories of the conventional system



Optical beam smoke detectors

CONVENTIONAL SYSTEM



Optical beam detectors for fire detection, consisting of a system of broadcast reception of an optical beam of infrared of a length between 10 and 100 m.

The operation is based on the principle of blackout, based on the interruption of the infrared beam by the smoke, which reduces the strength of the signal received by the receiver. If the beam signal exceeds the set limit, activates the alarm indicating the presence of fire in the area.

The installation of these detectors is ideal for large rooms or places with high ceilings.



The equipment are composed of a single module that incorporates a transmitter and a receiver.

The detectors are available in two versions for each model:

DLR50Z / **DLR100Z:** Reach up to 50 and 100 m respectively. This model feeds directly from the zone.

DLR50M / DLR100M: Reach up to 50 and 100 m respectively. This model is motorized, with auto-setting and external power supply.

TECHNICAL FEATURES

	DLR50Z / DLR100Z	DLR50M / DLR100M
Supply	10,2 and 30 Vcc	14 to 28 Vcc
Standby consumption	< 4mA	10, 12, 14, 16 mA (for 1, 2, 3, 4 det.)
Alarm consumption	Zone consumption (470 W)	48 - 52 mA
Wave lenght	880nm	850nm
Max. misalignment of the detector	± 0.8°	± 0.3°
Max. misalignment of the reflector	± 5°	± 5°
Relay output	2 A 30 Vcc	30 Vcc
Temperature	-30°C to +55°C	-10°C to +55°C
IP protection	IP 50	IP 54
Standard	EN 54-12	EN 54-12

Wiring diagrams



ALGORITHMIC ADDRESSABLE SYSTEM





Position of the microswitch in the device to indicate the fault state in the zone.

CONVENTIONAL SYSTEM



Wiring diagram DLR50Z/DLR100Z for algorithmic addressable and conventional

ALGORITHMIC ADDRESSABLE SYSTEM



CONVENTIONAL SYSTEM



Wiring diagram DLR50Z/DLR100Z for algorithmic addressable and conventional

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.

Product type	Alarm T⁰C	Max. environ. T°C		
<u>EPC</u> Various utilities/ Industrial and commercial applications	68 ℃ 88 ℃ 105 ℃ 138 ℃ 180 ℃	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 ℃ 88 ℃ 138 ℃ 180 ℃	38 °C 66 °C 93 °C 121 °C		
XCR Industrial applications excellent resistance to the chemical abrasion	68 ℃ 88 ℃ 105 ℃ 138 ℃ 180 ℃	38 °C 66 °C 79 °C 93 °C 121 °C		
<u>XLT</u> Excellent for low T℃	57 °C	38 °C		

Type of product and temperature



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



Wiring diagram with direct connection to the conventional control panel

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



Wiring diagram with interface module



Wiring diagram with direct connection to addressable module KMAY

CONVENTIONAL SYSTEM





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





Flame detector

CONVENTIONAL SYSTEM



flame detector



ATEX 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.

- IR²: 2 IR sensors
- IR³: 3 IR sensors
- UV/IR³: 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

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	90° cone
Spectral response	185 a 260 nm UV / IR3 1,0 - 2,7 um
Operating temperature / Humidity	-10°C to +55°C (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)



Wiring diagram

CONVENTIONAL SYSTEM

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 m ²	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 m ²	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 m ²	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 m ²	4 - pre-alarm alarm individual levels 1 - avería	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 tubo=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).







The system is based on placement of SOYUZ generators in the zone to protect. When it is activated electrically, it burns a mix pyrotechnic that generates an spray finally disseminated by the environment composed of potassium carbonate (K_2CO_3), which is not a TOXIC substance that involved eliminating the formation of radicals that are associated with fire and by absorbing the energy of combustion, so that fire is extinguished.

This system also has the advantage that it does not move the oxygen of the place, so the people do not suffer suffocation hazard.

Generators are triggered by an alarm and fire detection control panel with functionality of extinguishing EN 12094 certified, with thermal probes inside the exhaust hood, trigger and lock call points, signs of extinguishing , and sounders, etc, as required by installation.

The system can be used for the protection of hoods, data processing points, special equipment, etc.

System design:

1- Calculate number of generators of SOYUZ.

- a) By inundation:
 - Calculate the real inundation volume and plus a 20% of security.
 - Every generator of 300 g protects 6 m³.

b) By application on surfaces:

- The generator generates a cone of diameter place 0.9m to 1.5m away. Therefore, each 300 g generator protects 0.63 m².

- In exhaust hoods:

- 1) Protection of the hood filter (fig. 1).
- 2) Protection of the hot points (fig. 2).
 - Place, at least, 1 generator in every hot point (Fryer, griddle, stove, etc.).
 - Place, at least, 1 generator every m² of hot point.

Features:

- Stock/operating temperature of generators: -40 to 85°C.
- Trigger intensity of the generators: ≥ 0.8 A during t $\ge 0.1s$.
- Resistance of generators: 0,7Ω.
- Toxicity and corrosivity: NONE; CAS N° 584-08-07; Oral LD50 (rat): 1850 mg/Kgm.
- There are stands with capacity for 1, 4, 6 and 10 generators.
- Connection of generators through sequential card. Each card supports a maximum of 10 generators. For more generators or other distribution, it is allowed to place the sequential cards in series.





CONVENTIONAL SYSTEM

Automatic extinction system for kitchens





Automatic extinction system for kitchens composed by:

- An automatic detection system based on a fire detection and alarm control panel with extinction function certified according to EN 12094.
- Temperature probes inside the exhaust hood.
- Lock and trigger manual call point.
- Extinction signs.
- Sounders.

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Fire extinguishers of 9l capacity, which supply a pipe net made of stainless steel of Ø15 mm, where are connected until 6 diffuser maximum, pointing to the possible fire origins (stove, plate, fryer, etc) and at least one over the filters, and another in the smoke output, 30 cm inside the pipe).

