



cofem
1973



TECHNICAL CATALOGUE

CO & NO₂ DETECTION
HOME DETECTION
EXTINCTION

**CO & NO₂
DETECTION**



CONTROL PANELS



DETECTORS



SIGNALLING



MCO

Simplified CO control panel



Conventional Control panel with diffusion sensors of carbon monoxide (CO) and nitrogen dioxide (NO2) UNE 23300 certified.

This control panel provides the MiniCO110 (Ref. MCO110), MiniCO120 (Ref. MCO120) and MiniCO120DVB (Ref. MCO120DVB) references with 10 and 20 sensors respectively.

They are particularly suitable for parking or areas that need only 1 ventilation zone or installation of a few sensors in it.

The control panel displays the maximum concentration of CO in the detection zone, activating the ventilation and alarm when a specific concentration is reached after expiry of the set delay.

It has dry contact outputs for ventilation and a 24 Vdc alarm output.

The system works with CO sensor ("SCO" reference) and NO2 sensors ("SDN" reference) in the same area.

NO2 sensors transform measures of NO2 concentration in an equivalent measure of CO, and shown it in the display as a single concentration of CO, activating the ventilation and alarm when established CO levels are reached.

The control panel allows manual activation and deactivation of ventilation.

The equipment is designed for using diffusion sensors calibrated at factory for operation throughout the operational life of their sensors, and UNE 23300 certified.

Features:

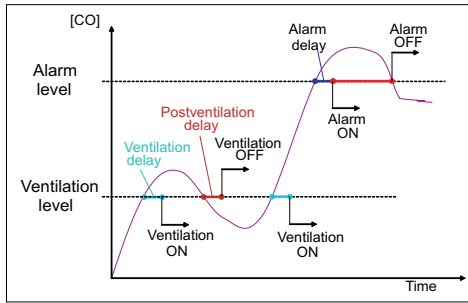
- Control panel of 1 ventilation zone with diffusion sensor brand COsensor model SCO (CO sensor) and SDN (NO2 sensor).
- Dry contact output (COM / NA) for ventilation 1 and ventilation 2 (DVB model only).
- Alarm output 24 Vdc 0.8 A.
- Space for 2x12 Vdc 2 Ah batteries (DVB model only)
- Display 3-digit, 7-segment.
- Dimensions: 280 x 225 x 105 mm.
- UNE 23300 certified.

TECHNICAL FEATURES

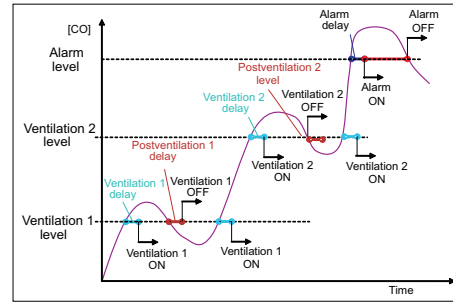
Power supply	230V 50-60Hz/AC	Intensity alarm output	24 Vdc 0,8 A
Maximum consumption	20 VA. 230 Vac	Alarm output fuse	Resettable
Batteries (only DVB model)	2 x 12 Vdc 2 Ah SLA	Zone output voltage	26 Vdc
Power supply fuse	4 A	Zone fuse	2 A
Battery charger	500 mA 27Vdc 20°C	Dry contact fault	230 Vac / 30 Vdc 1 A
Sensors by zone	10 CO / NO ₂ (MCO110)	Environmental conditions	-10°C +50°C
	20 CO / NO ₂ (MCO120)	Dimensions	280x225x105 mm
IP	30	Weight	3,45 kg
Dry contact ventilation	230 Vac / 30 Vdc 2A	Standard	UNE 23300



MiniCO110 / MiniCO120



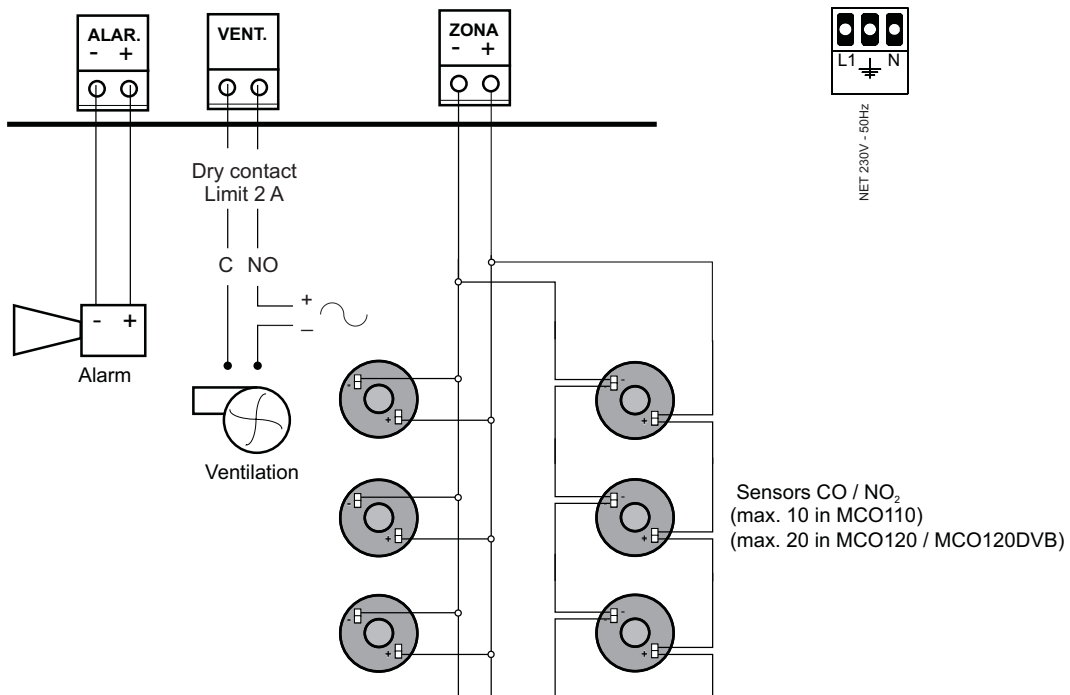
MiniCO120DVB



Parameter	Value	Margin
Ventilation level:	50 ppm	Programmable (20 ÷ 150 ppm, on a 10ppm increase rate)
Ventilation delay:	4 min	Programmable (1 ÷ 9 min, on a 1 min increase)
Postventilation delay:	4 min	Fixed
Alarm level:	200 ppm	Fixed
Alarm delay:	1 min	Fixed

Parameter	Value	Margin
Ventilation 1 level:	50 ppm	Fixed
Ventilation 1 delay:	4 min	Programmable (1 ÷ 9 min)
Postventilation 1 delay:	4 min	Fixed
Ventilation 2 level:	100 ppm	Fixed
Ventilation 2 delay:	0 min	Fixed
Postventilation 2 delay:	0 min	Fixed
Alarm level:	200 ppm	Fixed
Alarm delay:	0 min	Fixed

Scheme of operation for control panels with 1 output ventilation



Structure by zone



ZCO

2-4 zones CO control panel



Addressable COsensor control panel for carbon monoxide (CO) and dioxide nitrogen (NO₂) diffusion sensors designed with EN 50545-1 and UNE 23300 certified.

It has the following models ZafirCO2 (Ref. ZCO2), ZafirCO3 (Ref. ZCO3) and ZafirCO4 (Ref. ZCO4). They correspond with 2, 3 or 4 zones and up to 25 CO and/or 25 NO₂ sensors by zone. These models have DVB version (Double Ventilation and Batteries).

The COsensor ZafirCO control panel allows setting the activation concentration for ventilation level 1, 2 and alarm, as well as the delays for the activation and delays for the stop of these levels/alarm.

It has independent dry contact outputs per zone for each level of ventilation and alarm, as well as general fault output and auxiliary supply 30 Vdc.

The control panel has a maintenance mode for easy testing the operation of sensors by watching the flashing LEDs of the sensors when they face to the test gas.

The control panel can identify all sensors at the installation by their programming number. The auto configuration feature of the control panel will automatically detect all sensors and display a summary in the display. Confirming this information, control panel goes directly into "work" mode.

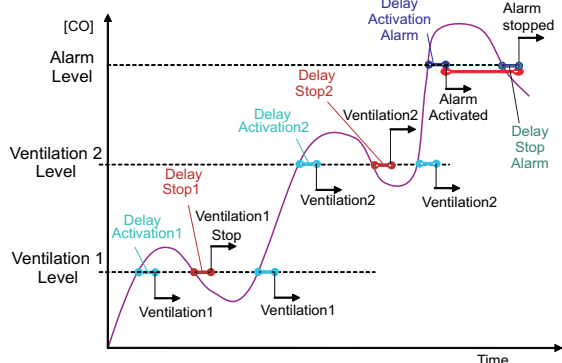
The philosophy and operation mode of the equipment is designed according to European standard EN 50545-1, using diffusion sensors and factory calibration for operation during the operational life of the sensors, and UNE 23300 certified.

Features:

- Control panel up to 4 ventilation zones with diffusion sensors brand COsensor model SCO (CO sensor) and SDN (NO₂ sensor).
- Dry contact output (COM/NO) Ventilation 1, Ventilation 2 (DVB models only) and alarm.
- Fault dry contact output (COM/NO/NC).
- Auxiliary 30 Vdc 1A power output.
- Concentration measures averaged according to EN 50545-1 up to 60 minutes.
- Ventilation level 1, ventilation level 2 (models DVB) and alarm selectable from 5 to 300 ppm of CO and from 0,1 to 30 ppm of NO₂.
- Delay time for activation and delay time to stop of ventilation 1 and ventilation 2 (models DVB), selectable between 0 and 10 minutes.
- Delay time for activation and delay time to stop of the alarm selectable between 0 and 5 minutes.
- Maintenance mode to check operation of sensors.
- System with auto configuration functionality.
- Space for batteries 2 x 12 Vdc 7 Ah (DVB models only).
- Backlit LCD Display 4 lines and 40 characters.
- Dimensions: 418 x 324 x 150 mm.
- Designed according to European standard EN 50545-1.
- UNE 23300 Certified.

TECHNICAL FEATURES

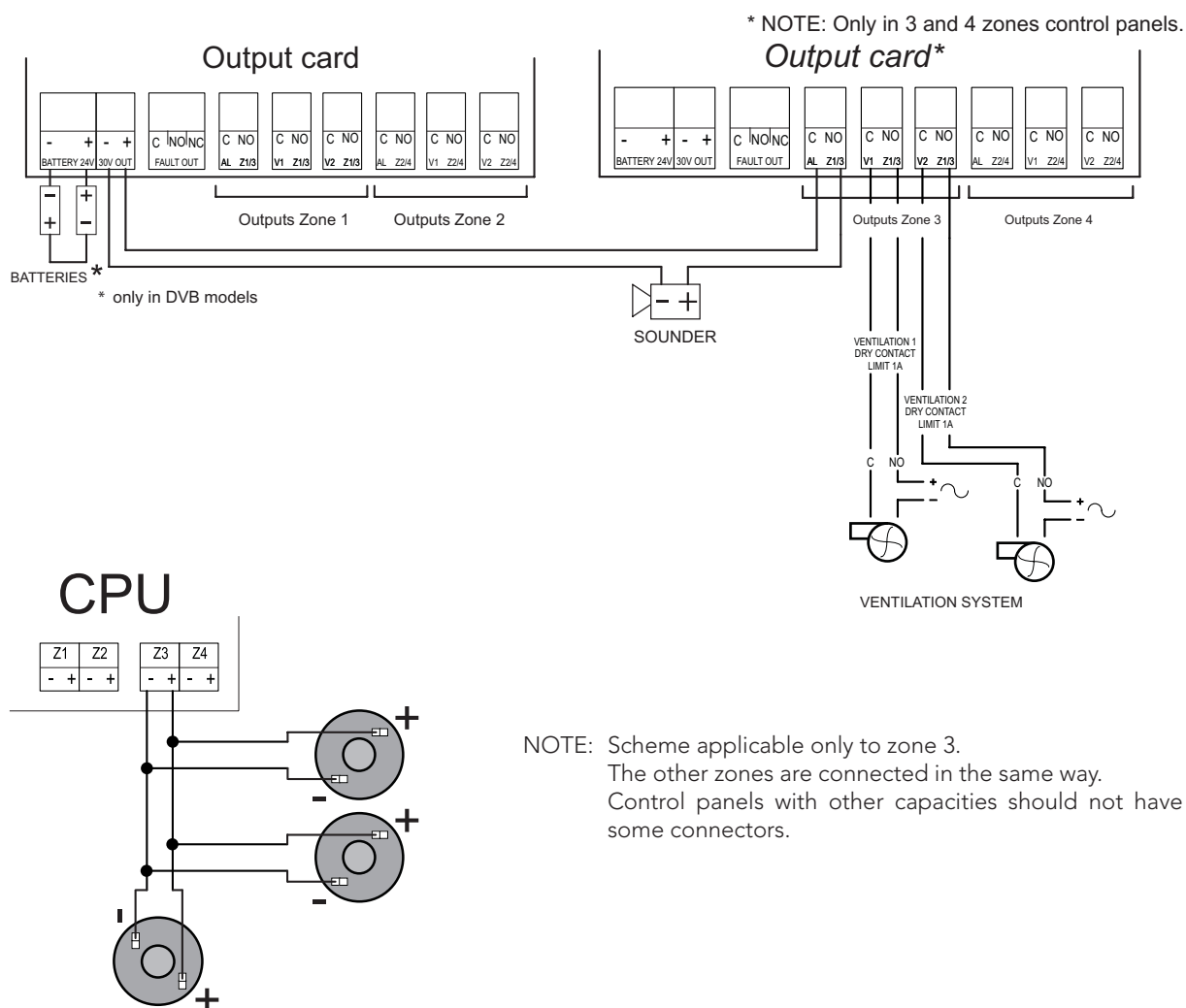
Tensión de alimentación	230 V 50 Hz/AC	Máxima corriente por zona	150 mA/ 26 a 32 Vdc
Consumo máximo	70 VA a 230 V/AC	Contacto seco ventilación	230 Vac/30 Vdc 1 A
Fuente Alimentación Central	2,5 A	Contacto seco alarma	230 Vac/30 Vdc 1 A
Baterías (solo modelo DVB)	2 x 12 V 7 Ah SLA	Contacto seco avería	230 Vac/30 Vdc 1 A
Fusible Alimentación	4 A	Condiciones ambientales	-10°C +50°C
Cargador de baterías	500 mA 27 V/DC 20°C	Dimensiones	425 x 330 x 135 mm
Sensores por zona	25 CO y/o 25 NO ₂	Peso (sin baterías)	7 Kg
IP	30	Normativa	EN 50545-1 y UNE 23300
		Máxima corriente salida 30 v	1 A



Parameter	Value	Margin
Ventilation 1 level	50 ppm (CO) 1 ppm (NO ₂)	5-300 ppm (CO) 0,1-30 ppm (NO ₂)
Vent. 1 activation delay	4 min	0-10 min
Vent. 1 stop delay	4 min	0-10 min
Vent. 2 level	100 ppm (CO) 3 ppm (NO ₂)	Vent1-300 ppm (CO) Vent1-30 ppm
Vent. 2 activation delay	4 min	0-10 min
Vent. 2 stop delay	4 min	0-10 min
Alarm level	200 ppm (CO) 5 ppm (NO ₂)	Vent1/vent2-300 ppm (CO) Vent1/vent2-30 ppm
Alarm activation delay	1 min	0-5 min
Alarm stop delay	1 min	0-5 min
Concentration average	0 min (instantaneous)	0-60 min

NOTE: Don't have in consideration ventilation 2 in models of only 1 ventilation

Operation scheme of DVB control panels



Connection scheme for 4 zones DVB control panel



SCO

Carbon monoxide sensor



Carbon monoxide (CO) diffusion sensor for COsensor system designed according to the European standard EN 50545-1 and UNE 23300 certified.

The sensor is designed to work with all models of COsensor control panels, both conventional (CCO and MiniCO models) and addressable (ZafirCO). In this way, when control panel start up , the sensor recognizes control panel and adapts its communication.

The sensor is based on electrochemical technology that allows adequately answer to CO concentration in the environment, and send this information to the control panel. Then, control panel active properly activate ventilation and alarms.

The sensor has a red LED red that flashes every 10 seconds in normal operation. Connected with conventional control panel, it makes double flash to indicate that it has reached a concentration of 50 ppm of CO, and fix light when the concentration reaches 200 ppm of CO. Connected with addressable control panel, it makes double flash when the concentration read by the sensor is equal or higher than the ventilation level programmed at control panel, and fixed light when concentration read by the sensor is equal or higher than the alarm level programmed at control panel.

CO sensors must be distributed at the installation in accordance with standards and/or regulation. A recommendable coverage for these devices are between 200 and 300 m², and place in a height between 1,5 and 2 m from the floor.

In addressable control panels with maintenance mode active, it can be easily checked the operation of sensors by observing flashing of sensor led when faces to test gas.

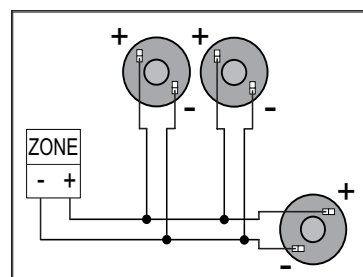
The philosophy and operation mode of the equipment is designed according to European standard EN 50545-1, using diffusion sensors and factory calibration for operation during the operational life of the sensors, and UNE 23300 certified.

Features:

- Compatible with conventional control panel CCO and MiniCO models and addressable control panel ZafirCO.
- The sensor base support installations with 16 mm diameter pipe.
- It has red LED which identifies the sensor communication and concentrations of ventilations and alarm.
- Connected with addressable control panels, it supports maintenance mode to check the status of the sensor when face to test gas.
- It contains programming number to allow identification of sensor at addressable control panel.
- Designed according to European standard EN 50545-1.
- UNE 23300 certified.

TECHNICAL FEATURES

Supply	24 - 34V with polarity
Current in standby	2 mA
Current in alarm	4 mA
Activation indicator	Red led
Dimensions	Ø 115 mm / 60 mm
Humidity	20 - 95 % RH
Temperature	-10°C +50°C
Standards	UNE 23300 / EN 50545-1
IP	30
Life time	Up to 10 years





SDN

Nitrogen dioxide detector



Dioxide Nitrogen (NO₂) diffusion sensor for COsensor system designed according to the European standard EN 50545-1 and UNE 23300 certified.

The sensor is designed to work with all models of COsensor control panels, both conventional (CCO and MiniCO models) and addressable (ZafirCO). In this way, when control panel start up , the sensor recognizes control panel and adapts its communication.

The sensor is based on electrochemical technology that allows adequately answer to CO concentration in the environment, and send this information to the control panel. Then, control panel active properly activate ventilation and alarms.

The sensor has a red LED red that flashes every 10 seconds in normal operation. Connected with conventional control panel, the measures of NO₂ are transformed in a equivalent ppm CO concentration. In this way, it is allowed installation of CO and NO₂ sensors in the same detection zone line. Relation between NO₂ and CO is lineal indicating 100 ppm of CO with 2,5 ppm of NO₂. SDN sensor makes double led flash when reaches measures of equivalent 50 ppm CO concentration, and fix light led when reaches measures of equivalent 200 ppm CO concentration. Connected with addressable control panel, it makes double flash when the concentration read by the sensor is equal or higher than the ventilation level programmed at control panel, and fixed light when concentration read by the sensor is equal or higher than the alarm level programmed at control panel.

NO₂sensors must be distributed at the installation in accordance with standards and/or regulation. A recommendable coverage for these devices are between 200 and 300 m², and place in a height between 1,5 and 2 m from the floor.

In addressable control panels with maintenance mode active, it can be easily checked the operation of sensors by observing flashing of sensor leds when faces to test gas.

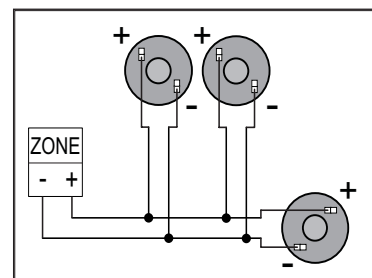
The philosophy and operation mode of the equipment is designed according to European standard EN 50545-1, using diffusion sensors and factory calibration for operation during the operational life of the sensors, and UNE 23300 certified.

Features:

- Compatible with conventional control panel CCO and MiniCO models and addressable control panel ZafirCO.
- The sensor base support installations with 16 mm diameter pipe.
- It has red LED which identifies the sensor communication and concentrations of ventilations and alarm.
- Connected with addressable control panels, it supports maintenance mode to check the status of the sensor when face to test gas.
- It contains programming number to allow identification of sensor at addressable control panel.
- Designed according to European standard EN 50545-1.
- UNE 23300 certified.

TECHNICAL FEATURES

Supply	24 - 34V with polarity
Current in standby	2 mA
Current in alarm	4 mA
Activation indicator	Red led
Dimensions	Ø 115 mm / 60 mm
Humidity	20 - 95 % RH
Temperature	-10°C +50°C
Standards	UNE 23300 / EN 50545-1
IP	30
Life time	Until 4 years





LLHCO
 SIR24BL/BZA
 SIR24F
 SIR24P
 SIR-24B



Sounders for CO / NO₂ system

Sign to be directly connected to the output of the control panels or relay modules. With indication adhesive.

LLHCO LIGHT SIGN

Operating voltage	12-30 Vdc
Consumption	80 mA at 30 Vdc
Power	80 dB at 1 m
IP protection	IP40
Standard	EN 60598, EN 605598-2-1, EN 61547, EN 55015
Temperature	0 to 40°C
Humidity	95% RH
Size	262x100x51 mm
Weight	340 gr
Jumper	Fixed / flashing active / no active buzzer

SIR24B, SIR24BL and SIR24BZA SOUNDERS

- Output and indoor sounder made of red ABS plastic.
- High volume sound. Low consumption.
- 32 tones. Volume control.
- Automatic synchronization.
- SIR24B: Sounder.
- SIR24BL: Sounder with light.
- SIR24BZA: Sounder with high base.

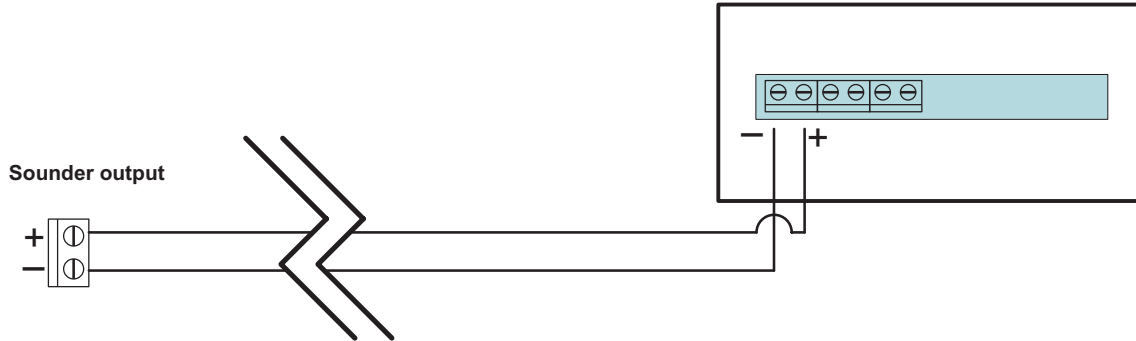
Voltage range	9-28 Vdc
Consumption (using tone 3)	at 24 Vdc 16mA (SIR24B) / 20 mA (SIR24BL)
Consumption (tone 3 / 0,5 Hz / high power)	at 24 Vdc 32mA (SIR24B + BSCL)
Output volume (tone 3)	24 Vdc 102 dB (A)
Operating temperature	-25 °C to + 70 °C
Size	Ø95 x 107 mm (SIR24BL / SIR24BZA)
IP protection	IP54 - SIR24B IP65 - SIR24BL IP65 - SIR24BZA

SIR24P and SIR24F SOUNDERS

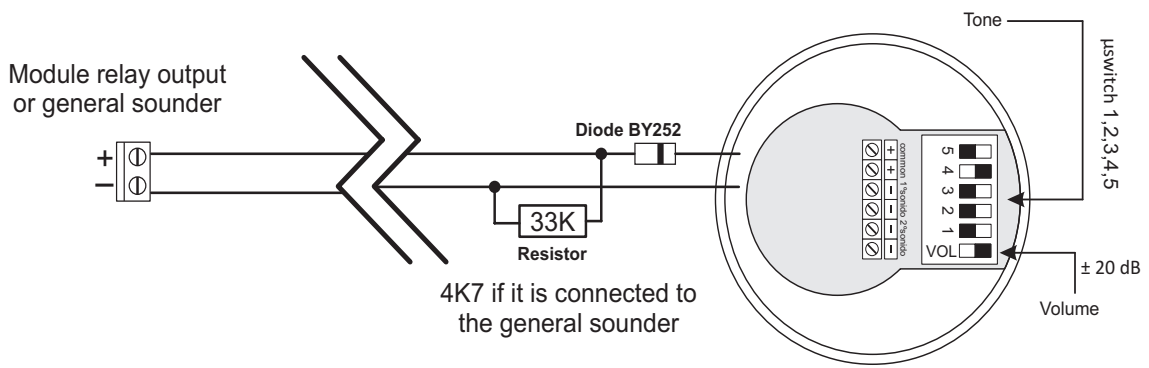
Material	red P.V.C.
Operating voltage	30 Vdc
Consumption at 30 Vdc	70 mA
Power	85 dB
Operating temperature	5°C to 40°C
Size	80 x 80 x 30 mm
With intermittent flash	Only SIR24F model



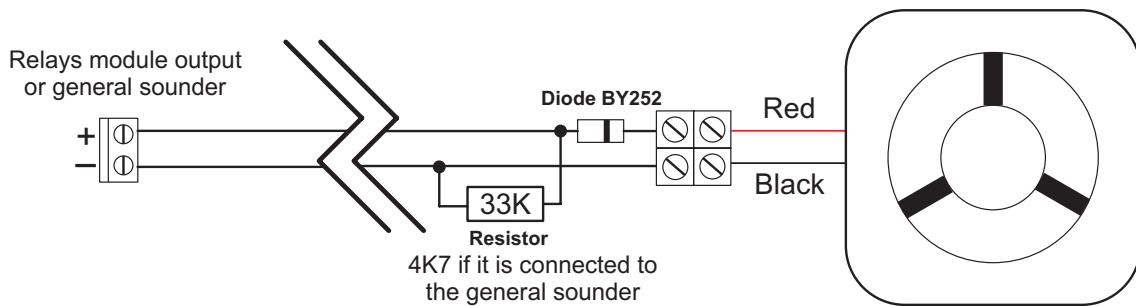
LLHCO LIGHT SIGN



SIR24B, SIR24BL AND SIR24BZA SOUNDERS



SIR24P AND SIR24F SOUNDERS



**HOME
DETECTORS**



GAS DETECTORS



CO DETECTORS





MDET

Home smoke mini detector



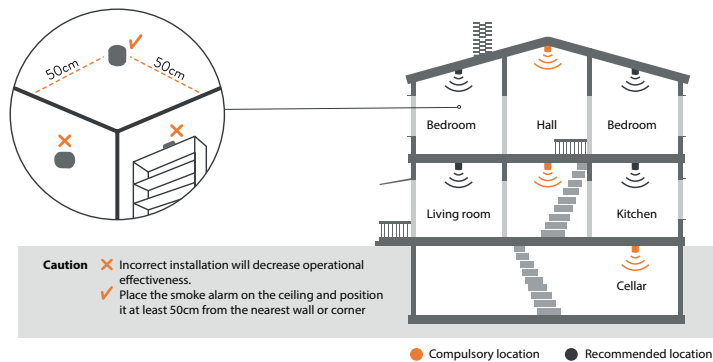
Home smoke mini detector, with 3V lithium battery, and 10 year lifetime.

The detector utilizes photoelectric detection technology to sense smoke from different fires. Unit have a sensing chamber which uses a beam of light and a light sensor. The alarm sounds when the smoke density reaches a preset level. The smoke alarm is equipped a self-diagnostics and checking feature to ensure correct operation through its service life.

Is not necessary change the battery; after 10 years operating, an acoustic signal indicates that to proceed to the replacement of this

Features:

- Photoelectric sensor for ultimate protection.
- Test/silence button at front cover.
- 10 year lithium battery-no battery changes for ever.
- Install simply and quickly using screws (included) or almost instantly with unique 3M VHB adhesive tape.
- Test button for testing smoke alarm's correct functioning.
- Silence function to silence false alarms and temporally desensitizing smoke alarm, just press and release at once.
- Low battery warning.
- End of life indicator: after 10 years of powered operation, an audible warning will occur indicating that the detector should be replaced.
- Local alarm memory
- Wide range of appearances to suit different ceilings.
- Compliant with EN 14604:2005.



Installation diagram

TECHNICAL FEATURES

Supply	3V lithium battery
Power	85 dB at 3 m
Consumption in standby	< 3µA @2,9V
Temperature	0°C - +45°C
Humidity	93% RH
Temperature adhesive bond	-35°C - +93°C
Dimensions	Ø50,8 x 42x5 mm high
Weight	54 g
Warranty	5 years



EYEHOME

Stand alone smoke and CO detectors

Range of stand-alone detectors for the detection of fire and carbon monoxide (CO). Depending on the model, it is possible to interconnect them, as well as to install a Wi-Fi module, which, when connected to an internet access, allows you to set the different operating parameters of the detectors and also receive the alarm and malfunction signals on your smartphone app, wherever you are.



EYEHOME+



EYEHOME



EYEHOME+CO



MDAHWF WIFI



NEW

TECHNICAL FEATURES EYEHOME+CO

Power supply	3 V (2 AA batteries)
Wi-Fi distance	50 mts
Standby current	< 50 μ A
Alarm current	< 20 μ A
Power	\geq 85 dB at 1 m
Lifetime	10 years
Temperature	-10 +40 $^{\circ}$ C
Humidity	RH 30-95 %
Standard	EN 50291-1:2010+A1:2012

TECHNICAL FEATURES EYEHOME / EYEHOME+

Power supply	DC 2x1,5 V (2 AA batteries)
Power	> 85 dB (A)
Alarm consumption	4 mA
Max. number of detectors	Up to 30 detectors
Low battery indicator	Yes
Silent mode	Yes
Wi-Fi	Sólo EYEHOME+ model
Standard	EN 14604



KEEPER

Stand-alone CO & Gas keeper detectors



Range of gas detectors for domestic, autonomous, use with possibility of connection to the supply (220-230V) or 12VDC, with operating indicator, that emits an optical and acoustic in case of alarm.

-Keeper CO: made of black ABS plastic to detect carbon monoxide.

CO (carbon monoxide) is a highly toxic gas produced basically by any type of poor combustion, in addition to by internal combustion engines.

Keeper CO is especially suitable for the detection of CO in places such as garages, boilers rooms, kitchens, living quarters with heaters or gas stoves, etc.

-Keeper GAS: made of grey ABS plastic to detect natural gas, methane, propane and butane.

The escaping gas or shut-off flame in boilers, kitchens, living areas with gas stoves or heaters, etc, can cause a high concentration of combustible gases indoors, with the danger of explosion that it entails.

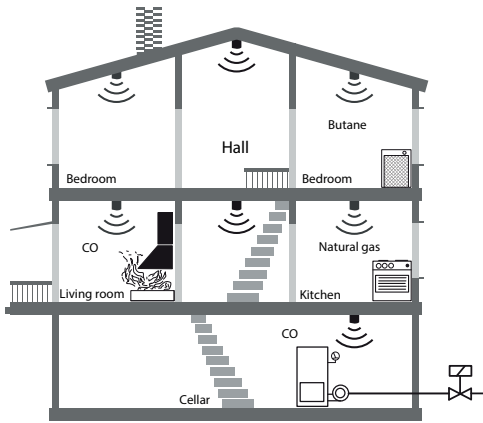
Keeper GAS is particularly suitable for the detection of combustible gases common in places such as those mentioned above.

Features:

- Domestic detectors fed by supply (220-230V) or 12V DC.
- Operating indicator (green led), optical signal (red led) and acoustic of alarm.
- It incorporates a heat sensor that is activated at a temperature of 84°C.
- Detector with relay option allows the connection with a repeater unit (alarm distance), with a shut off of gas supply control system, or a control panel alarm.
- Particularly suitable for garages (only Keeper CO),boilers rooms, kitchens,areas with gas stoves or heaters, etc.
- Design according European normative EN 50194.
- Size: 140,5 x 73 x 48 mm.

TECHNICAL FEATURES

Maximum consumption	3W
Maximum strength in output of 9VDC	100 mA
Standard	EN 50194 type A
Size	140,5 x 73 x 48
Humidity	20 - 95% RH
Operating temperature	-10°C to 50°C
Aproximate cover	25 m ²
Sensor life	5 years
Lower explosivity limit (LEL) - Keeper GAS	10 %
Detection sensibility - Keeper CO	300 ppm



MODELS

DAG and DACO:

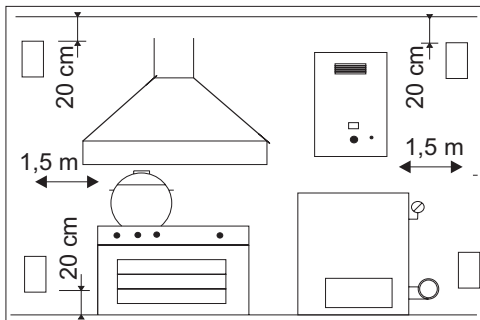
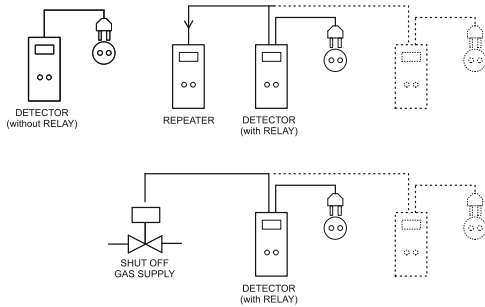
With supply at 230VAC and 9Vdc output.

DAGR and DACOR:

With supply at 230VAC and 9Vdc output and relay with dry contact NO/NC for manoeuvres.

DAGR12 and DACOR12:

With supply at 12Vdc and relay with dry contact NO/NC for manoeuvres.



INSTALLATION NOTES

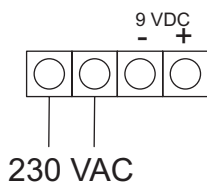
Always more than 1,5 m from sources of heat, smoke and vapors.

Keeper CO: 20cm from the roof.

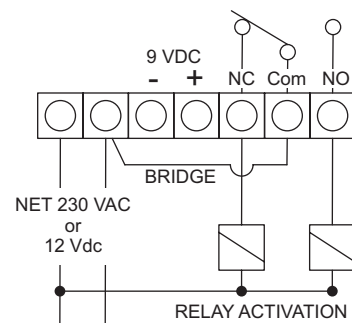
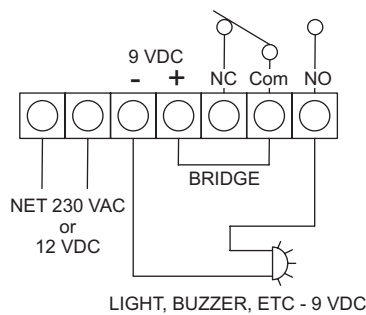
Keeper GAS:

- Light gases (city gas, natural gas, etc.) at 20 cm from the roof.
- Hard gases (propane, butane) at 20 cm from the roof.

Wiring diagram for 230VAC supply



Wiring diagram with relays for 230VAC or 23Vdc supply (according to model)





DAH9V DAGB CAVG



Home detectors

DAH9V

Autonomous smoke detector for fire detection, with acoustic alarm.

Smoke sensibility	0,08~0,15 dB / m
Temperature sensibility	57°C (model with temperatures sensor)
Current in standby	8 μ A
Current in alarm	15 mA
Temperature	0°C to 50°C
Humidity	0 to 95 % RH
Acoustic alarm level	85 dB / 3 m
Dimensions	Ø105 x 30 mm

Installation requirements:

- Centre of roof (do not install less than 10 cm from the walls).

Minimum installation recommended:

- At least 2 detectors by house.
- At least 1 detector by floor.
- Separator hallway outside the open bedrooms.
- Bedrooms normally closed.
- On the roof before a stair.
- Living room, dinner room, attic, etc.

DAGB HOME GAS DETECTOR

Autonomous gas detector with acoustic alarm, capable of activate a gas shut off to avoid danger.

Supply	220V AC with battery of 9V
Sensibility	10% LEL
Consumption in alarm	\leq 1,7 W
Consumption in standby	\leq 0,5 W
Temperature	-10°C ~50°C
Humidity	< 95 % RH
Acoustic level	85 dB / 3 m

Gas type detected:

1. LPG (Butane, Propane) used in standard and little bottles.
2. City gas and natural gas.

Installation: See installation notes of the keeper diagram.

CAVG GAS SHUT OFF ACTUATOR

Electromechanical valve for automatic shut off of the gas supply.

Dimensions	100 x 90 x 70 mm
Nominal voltage	12 Vdc
Operating voltage	8 Vdc - 16 Vdc
Operating power	0,24 W - 4,5 W - 10 W
Consumption	20 mA - 350 mA - 1000 mA
Torque	10 - 30 - 40 Kg / cm
Temperature	-20°C ~ +50°C
Humidity	< 95 % RH

**EXTINCTION
SYSTEMS**



**FIRE HOSE
CABINETS**



**GAS EXTINCTION
SYSTEM**

SPRINKLERS





CLVR02EXT

Extinguishing control panel



Automatic conventional fire detection and fire alarm control panel with extinguishing functionality.

CLVR 02EXT: 2 zones extinguishing control panel.

The control panel incorporates a third configurable zone as conventional separate zone from extinction in order to protect against fire small areas close to the flood/extinction zone, or allow the supervision of an external fire protection system giving a fault indication, such as a pressure switch contact.

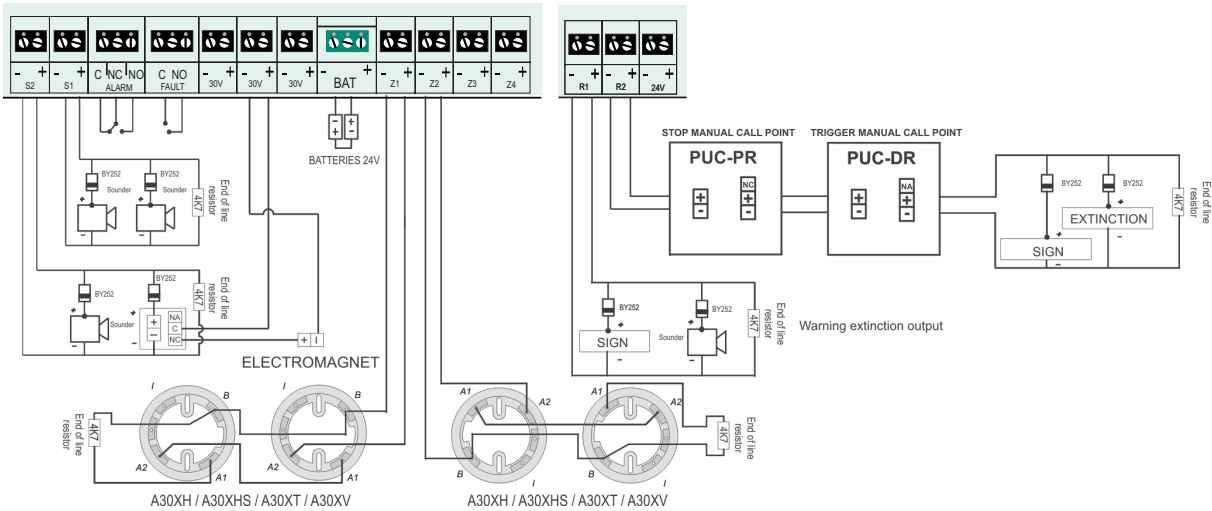
CLVR control panel characteristics are common among all its models.

Features:

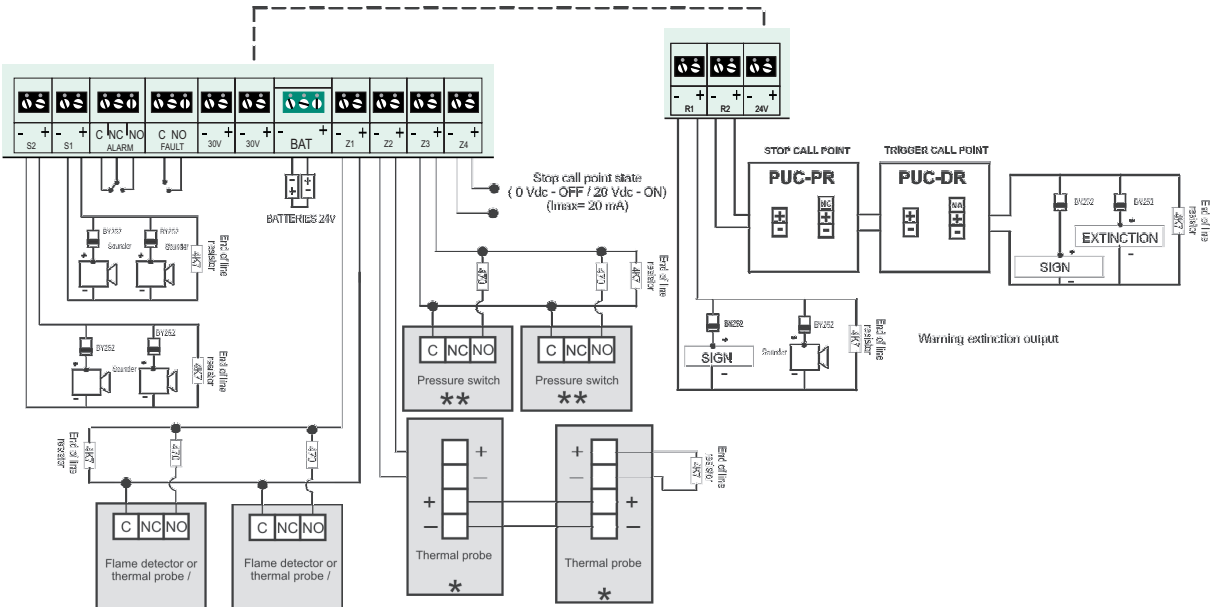
- 2 zones control panel with extinguishing functionality for conventional detectors and call points use.
- Third additional zone configurable as an alarm and detection zone for conventional detectors and call points or as a monitoring input of an external fire protection system.
- Same technical features as conventional CLVR control panels (2 general sounder outputs, 1 alarm output, 1 fault output, 230Vdc outputs, test mode, threshold setup, metallic cabinet, etc).
- 3 modes of operating extinction:
 - Standard mode: Output R1 of pre-warning is activated with Zone 1 or Zone 2 in alarm status.
 - Consecutive mode: Output R1 is activated intermittently (1 second with Zone 1 or Zone 2 in alarm status, 0,5 seconds with Zones 1 and 2 in alarm status, and continuing once the output R2 delay is finished).
 - Simultaneous mode: Output R1 is activated with Zones 1 and 2 in alarm status.
- Stop and activation extinguishing button directly in the control panel.
- Possibility to install manual stop and activation buttons near the flood zone.
- 1 extinction output ("R2") supervised, temporized supervised, temporized between 0 and 60 seconds, protected by a resettable fuse.
- Delay for R2 extinguishing output reset after extinguishing activation temporized between 0 and 30 minutes.
- Certified according EN 54-2, EN 54-4 and EN 12094-1 with CE mark.

TECHNICAL FEATURES

Supply voltage	110/230VAC 50/60Hz	End of line capacitor	4 K7
Output voltage	21 V Nominal	Sounder output voltage	30 V/DC
Max. consumption	70 VA at 230 V/AC	Environmentals conditions	-10°C +50°C
Batteries	2 x 12 V 7 Ah SLA	Size	363 x 331 x 96 mm
Extinction fuse R1/R2	0,5A/0,75A autoreset	Weight (without batteries)	4,3 Kg
Batteries charger	500 mA 27 V/DC 20°C	Standard	EN 54-2, EN 54-4 & EN 12094-1
Devices par zone	32	30v max. current output	1,5 A autoreset
Control panel power supply	2,2 A	Extinction module fuse	1,85 A autoreset
Max. current per zone	2 mA (in standby)	S1 output sounder fuse	1,85 A autoreset
		S2 output sounder fuse	0,75 A autoreset



Example of connection with extinction



*Note 1: The wiring diagram of the thermal probe depends of the model.
 **Note 2: Zone 3 used for monitoring the pressure switch.

Example of wiring diagram with flame detectors, thermal probes and pressure switches



PUC-DR PUC-PR



Simplified extinguisher call points

Simplified manual call points for the shut-down and triggering of extinguisher systems using gaseous agents.

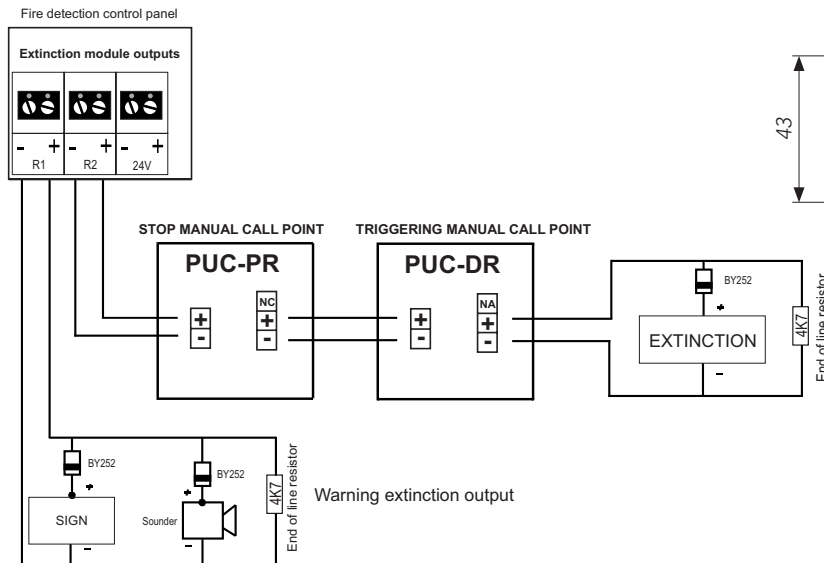
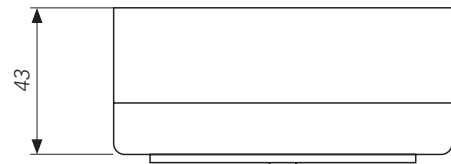
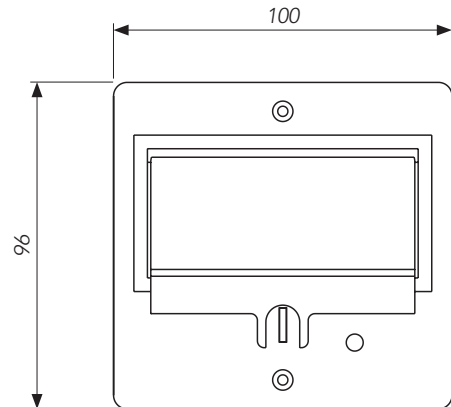
Every call point includes an action indicator (LED) that lights up if manually activated, in addition to a yellow tab that is triggered on the lower part of the drive face. The call point is easily resettable by flipping the yellow switch on the front face.

PUC-PR model: Simplified manual call point for the SHUT-DOWN of EXTINGUISHER (blue) for use in conventional CLVR02EXT control panels.

PUC-DR model: Simplified manual call point for the TRIGGERING of EXTINGUISHER (yellow) for use in conventional CLVR02EXT control panels.

Power supply
Standby consumption
Alarm consumption
Activation indicator
Remote indicator output
Humidity
Temperature
IP protection
Standard

20-24 V with polarity
0 mA
35 mA
red led
No
20 - 95% RH
-10 a +50 °C
IP50
EN 54-11





PUC-DRE PUC-PRE

Extinguisher call points

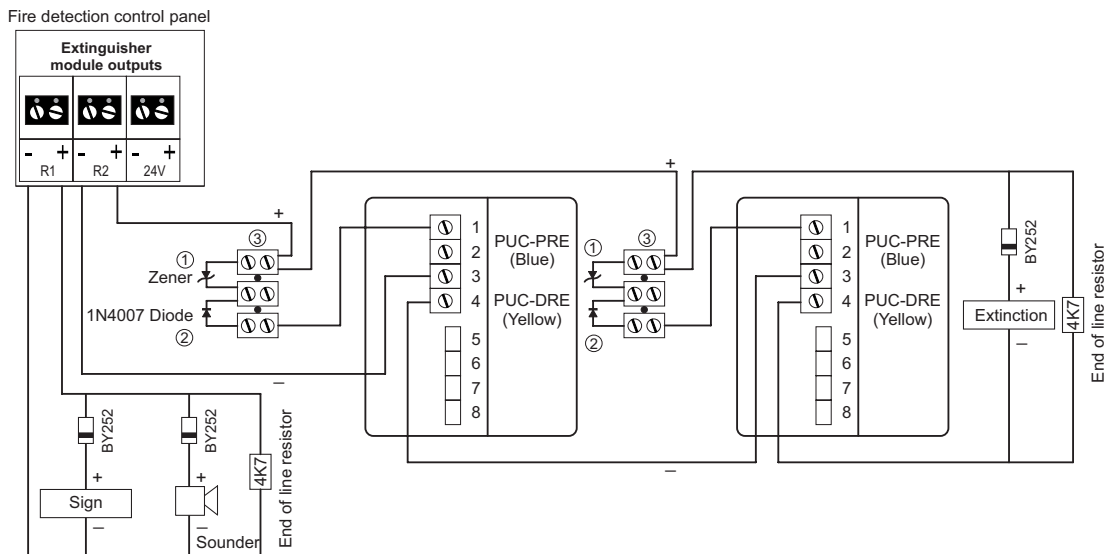
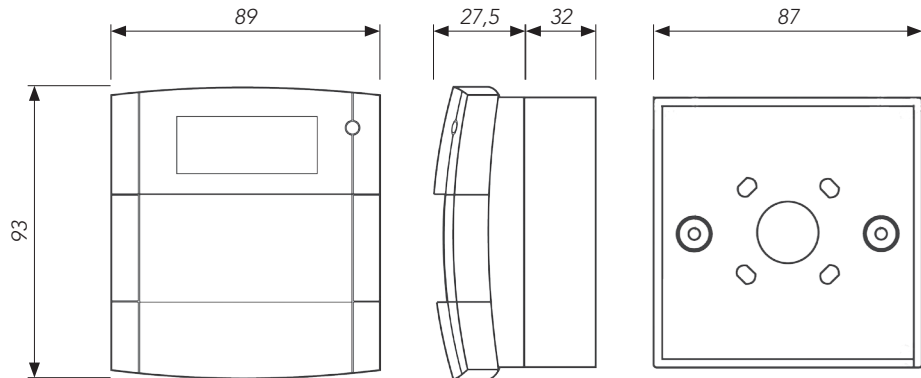


Manual call points for the shut-down and triggering of extinguisher systems using gaseous agents. The call points are actuated by breaking a fragile component (glass).

Fitted with a protective cover to prevent accidental activations.

The PUC-DRE model is the yellow extinguisher triggering call point, based on standard EN 12094-3. The PUC-PRE model is the blue extinguisher shut-down call point, based on standard EN 12094-3.

Maximum voltage	30Vdc
Alarm consumption	35 mA
Humidity	93% RH
Temperature	-10 a +55 °C
IP protection	IP24D
Standard	EN 12094-3



Note 1: Zener 5V1 for PUC-DRE call point. Zener 9V1 for PUC-PRE call point

Note 2: 1N4007 diode

Note 3: Strip

Components (1), (2) and (3) come with the call point



LLH LLHST LLH23



Luminous alarm signs

The extinguisher system allows the possibility of including extinguisher signs.

As the triggering of an extinguishing system may entail certain risks and dangers, the function of the extinguisher sign is to warn the staff of the areas sensitive to the imminent triggering of the system or when the system has been triggered.

Three types of extinguisher signs are available:

- 1) LLHST: Device with acoustic and luminous warning function.
- 2) LLH: Device with acoustic, luminous and informative sticker warning function.
- 3) LLH23: Device with EN 54-3 acoustic and EN 54-23 luminous functions and adhesive sticker warning.

The third device must always be used in such installations that do not have other EN 54-3 and EN 54-23 fire warning devices.

LLH and LLHST LUMINOUS SIGNS

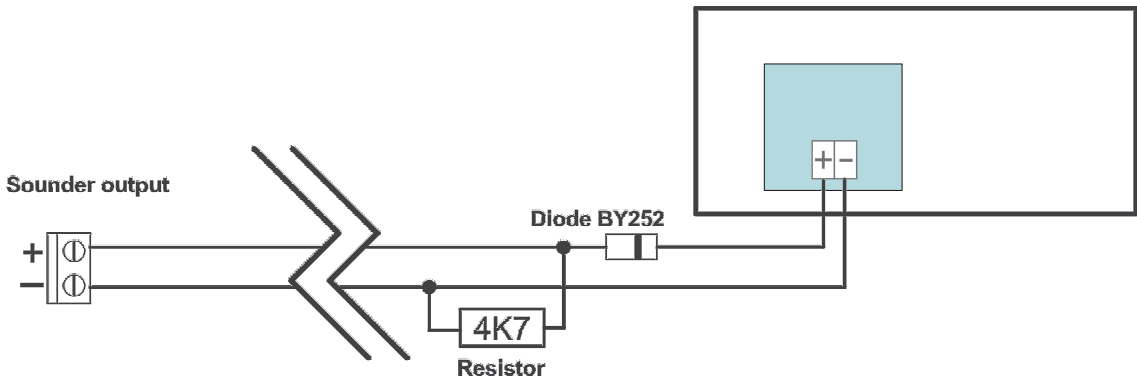
Signs to be connected directly to the outputs of the control panels or to the relay modules.
With indicator sticker.

Operating voltage	12-30 Vdc
Maximum consumption	80 mA at 30 Vdc
Power	80 dB at 1 m
IP protection	IP40
Standard	EN 60598, EN 60598-2-1, EN 61547, EN55015
Temperature	0 to 40°C
Humidity	95% RH
Dimensions	262 x 100 x 51 mm
Weight	340 gr
Jumper	fixed / intermittent illumination Active / non-active buzzer

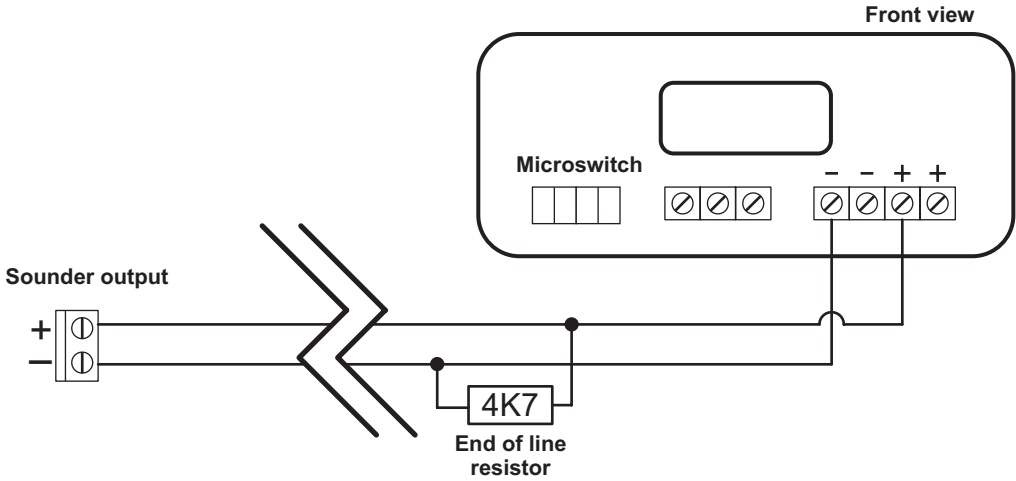
LLH23 LUMINOUS SIGN

Optic acoustic alarm sign certified as per EN 54-3 and EN 54-23. Available with several selectable audio tones.

Nominal voltage	24 Vcc
Consumption	82 mA at 30Vdc
Category	W-3,6-9
Power	71 - 91 dB
IP protection	IP21C
Standard	EN 54-3 / EN 54-23
Temperature	-10°C to +55°C



LLH / LLHST diagram



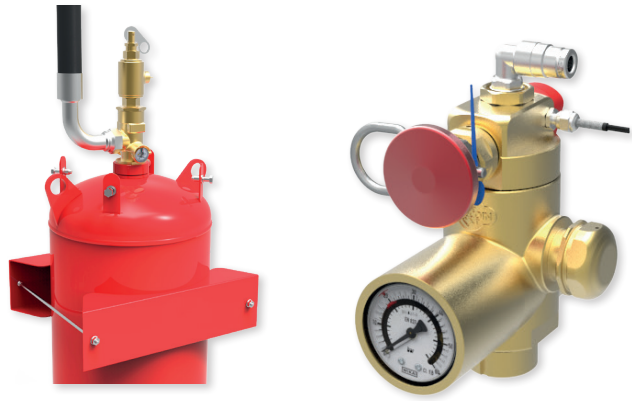
LLH23 diagram

Note: The LLH23 sign has the diode incorporated



EXACOC

Automatic extinguishing in kitchens



Automatic extinguishing system for kitchens comprised of:

- An automatic detection system based on a fire detection control panel and alarm with EN 12094 certified extinguishing function.
- Thermal probes inside the fumes vent.
- Extinguisher shut-down and triggering call points.
- Extinguisher signs.
- Sounders.
- Extinguishers with capacities of 9 l, 12 l and 25 l, which feed a network of Ø15 mm stainless steel pipes connected to a maximum of 6 diffusers per extinguisher aimed at the possible sources of the fire (burners, griddle, deep fryer, etc.) and at least one above the filters and another on the fumes outlet 30 cm towards the inside of the pipe).

EXACOC: Automatic extinguishing for kitchens comprised of:

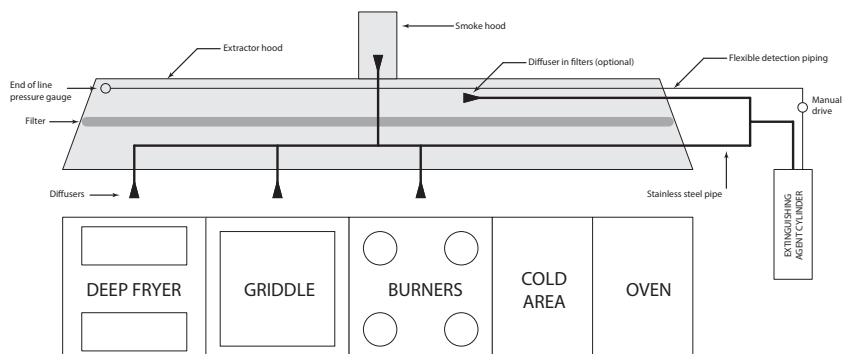
- 1 9 l EAC-FIWAGUARD F-40 extinguisher
- 1 nozzle
- 1 clamp
- 1 FIWAGUARD F-40 manual call point
- 6 diffusers + FIWAGUARD hood
- 1 end-of-line coupling with pressure gauge
- 1 stainless steel cabinet
- 10 metres of FIWAGUARD piping

EXACOC12L: Automatic extinguishing for kitchens comprised of:

- 1 12 l water solution cylinder
- 1 nozzle + Fitting and end-of-line coupling with pressure gauge
- 12 metres of Fireline piping
- 6 diffusers
- 1 manual triggering call point
- 1 pressure switch
- 1 stainless steel cabinet

EXACOC25L: Automatic extinguishing for kitchens comprised of:

- 1 25 l water solution cylinder
- 1 nozzle + Fitting and end-of-line coupling with pressure gauge
- 24 metres of Fireline piping
- 15 diffusers
- 1 manual triggering call point
- 1 pressure switch
- 1 stainless steel cabinet



SOYUZ

Automatic extinction system



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.

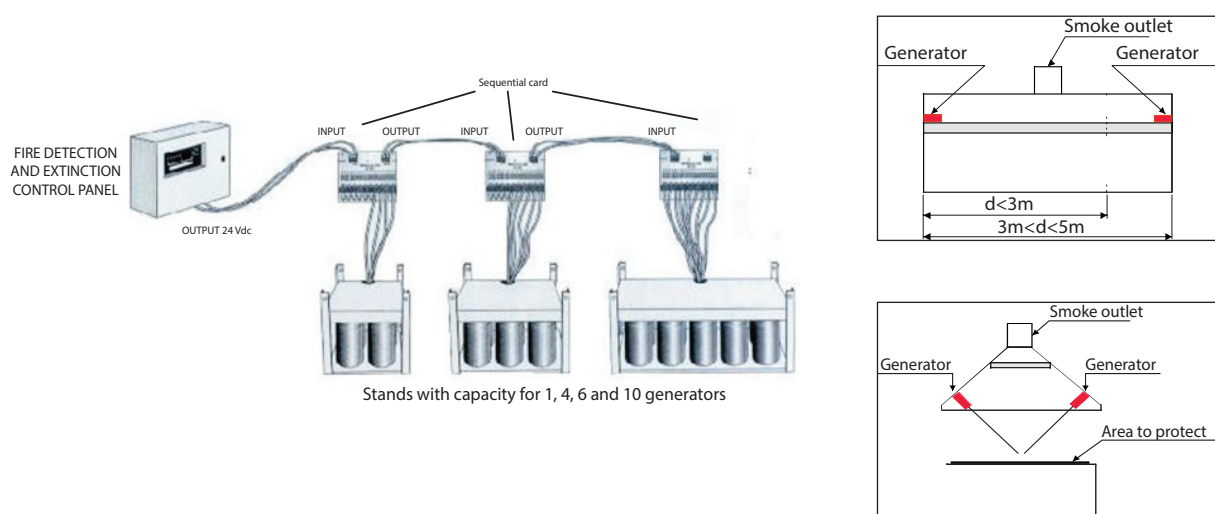
This system also has the advantage that it does not move the oxygen of the place, so the people do not suffer suffocation hazard.

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.

Features:

- Stock/operating temperature of generators: -40 to $85^{\circ}C$.
- Trigger intensity of the generators: $\geq 0,8$ A during $t \geq 0,1$ s.
- Resistance of generators: $0,7\Omega$.
- 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.





CR3

Ø25 fire hose cabinet



Fire hose cabinet Ø25 mm according to UNE/EN 671-1 and 20 m semi-rigid hose made according UNE 694. It is composed by:

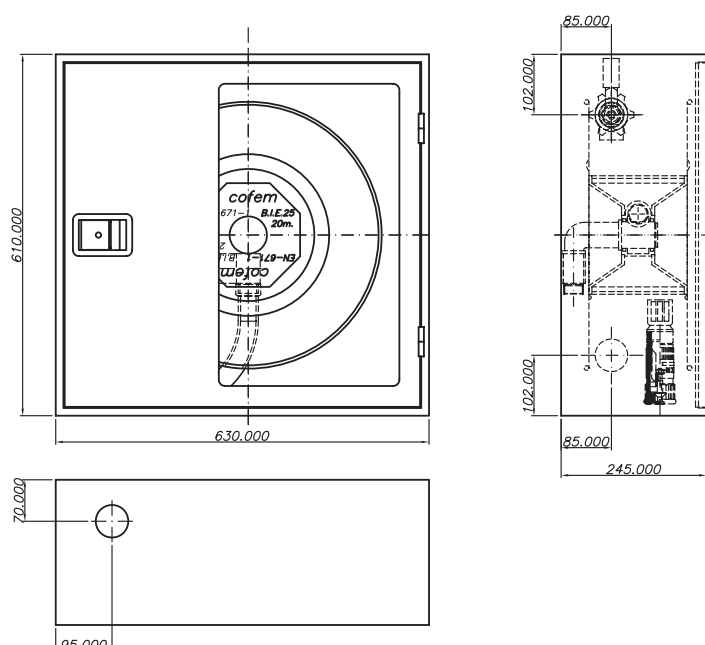
Horizontal cabinet made of 1 mm thickness steel, painted in red color RAL3000, size 630 x 610 x 245 mm, with semi-blind door for polystyrene, and easy-open lock, provided with support arm fixing and pre-holes for water supply, including reel, hose, nozzle, swing arm, seat valve, manometer and supply hose.

It can be made in another color, with the RAL provided by the customer, or in stainless steel, and it can be mounted in a floor bow.

Likewise, under command, the door design has some options: standard, red blind, white blind, white semi-blind, totally stainless, etc.

Features:

- Reel of Ø450 mm disks, painted in red, with axial supply.
- Semi-rigid hose Ø25 mm and 20 m length, manufactured according to EN 694 standard and CE mark.
- Hose nozzle of three positions: close, spray and jet, connected to the end of the hose by threaded prop.
- Arm red painted with double articulation and fixing strip to the cabinet bracket.
- Seat valve at 90° of 1", with ¼" manometer outlet.
- Manometer graduated from 0 to 16 bars.
- Supply trigger between valve and reeling frame, with a Ø25 mm semi-rigid hose.



B330

Ø25 fire hose cabinet



Fire hose cabinet Ø25mm according to UNE/EN 671-1 and 30 m semi-rigid hose made according UNE 694. It is composed by:

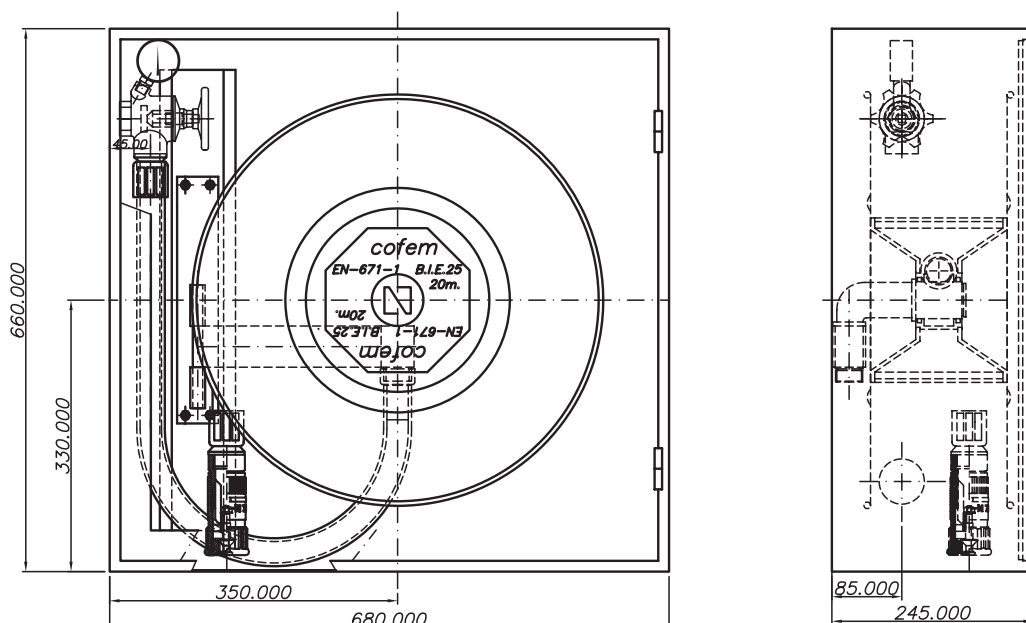
Horizontal cabinet made of 1 mm thickness steel, painted in red color RAL3000, size 680 x 660 x 245 mm, with semi-blind door with polystyrene, and easy-open lock, provided with support arm fixing and pre-holes for water supply, including reel, hose, nozzle, swing arm, seat valve, manometer and supply hose.

It can be made in another color, with the RAL provided by the customer, or in stainless steel, and it can be mounted in a floor bow.

Likewise, under command, the door design has some options: standard, red blind, white blind, white semi-blind, totally stainless, etc.

Features:

- Reel of Ø500 mm disks, painted in red, with axial supply.
- Semi-rigid hose Ø25 mm and 30 m length, manufactured according to EN 694 standard and CE mark.
- Hose nozzle of three positions: close, spray and jet, connected to the end of the hose by threaded prop.
- Arm red painted with double articulation and fixing strip to the cabinet bracket.
- Seat valve at 90° of 1", with ¼" manometer outlet.
- Manometer graduated from 0 to 16 bars.
- Supply trigger between valve and reeling frame, with a Ø25 mm semi-rigid hose.





C4

Ø25 fire hose cabinet



Fire hose cabinet Ø25 mm according to UNE/EN 671-1 and 20 m semi-rigid hose made according UNE 694. It is composed by:

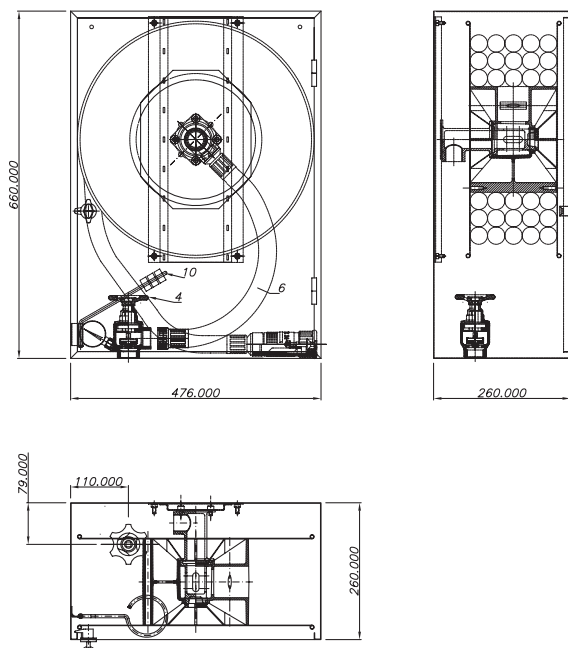
Vertical cabinet made of 1 mm thickness steel, painted in red color RAL3000, size 476 x 660 x 260 mm, with semi-blind door with polystyrene, and easy-open lock, provided with support arm fixing and pre-holes for water supply, including reel, hose, nozzle, swing arm, seat valve, manometer and supply hose.

It can be made in another color, with the RAL provided by the customer, or in stainless steel, and it can be mounted in a floor bow.

Likewise, under command, the door design has some options: standard, red blind, white blind, white semi-blind, totally stainless, etc.

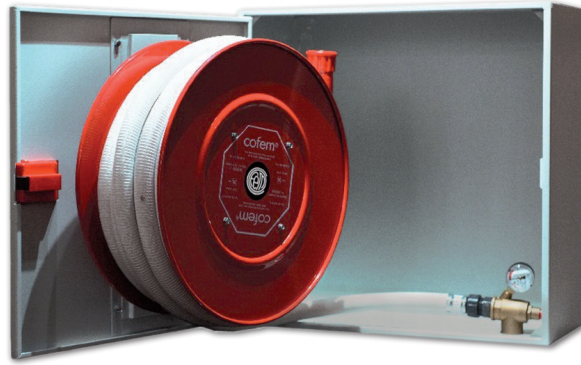
Features:

- Rectangular dimensions for easy installation in columns.
- Reel of Ø450 mm disks, painted in red, with axial supply.
- Semi-rigid hose Ø25 mm and 20 m length, manufactured according to EN 694 standard and CE mark.
- Rail for hose allows the exit of the hose in any direction from the frontal 180°.
- Hose nozzle of three positions: close, spray and jet, connected to the end of the hose by threaded prop.
- Seat valve at 90° of 1", with ¼" manometer outlet.
- Manometer graduated from 0 to 16 bars.
- Supply trigger between valve and reeling frame, with a Ø25 mm semi-rigid hose.



C5

Ø25 fire hose cabinet



Fire hose cabinet Ø25 mm according to EN 671-1 standard with 20 m of semi-rigid hose manufactured according to EN 694.

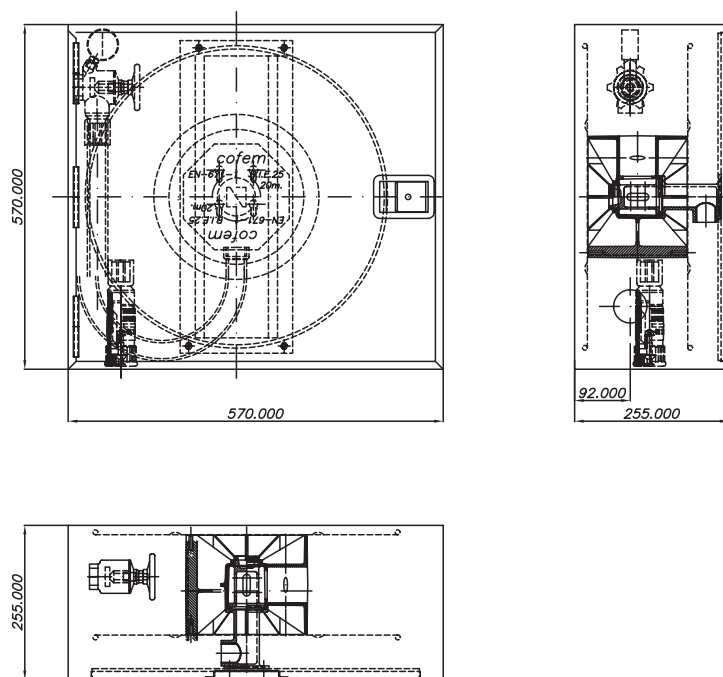
It is composed of:

Horizontal cabinet built of 1 mm steel plate thickness, painted in gray color RAL 7035, measures 570 x 570 x 255 mm, with blind door of the same material and color, and quick opening lock, provided with support arm fixing and pre-holes for water supply, including reel, hose, nozzle, swing arm, seat valve, manometer and supply hose.

It can be made in another color, with the RAL provided by the customer, or in stainless steel, and it can be mounted in a floor bow.

Features:

- Reel mounted on the door of the cabinet to facilitate its handling
- Reel of Ø450 mm disks, painted in red, with axial supply.
- Semi-rigid hose Ø25 mm and 20 m length, manufactured according to EN 694 standard and CE mark.
- Rail for hose allows the exit of the hose in any direction from the frontal 180°.
- Hose nozzle of three positions: close, spray and jet, connected to the end of the hose by threaded prop.
- Seat valve at 90° of 1", with ¼" manometer outlet.
- Manometer graduated from 0 to 16 bars.
- Supply trigger between valve and reeling frame, with a Ø25 mm semi-rigid hose.





P6415/20

Ø45 fire hose cabinet of 15 and 20m



Fire hose cabinet Ø45 mm according to EN 671-2 standard with 15 m (P6415) or 20 m (P6420) of plane hose manufactured according to UNE 23.091/2A. It is composed of:

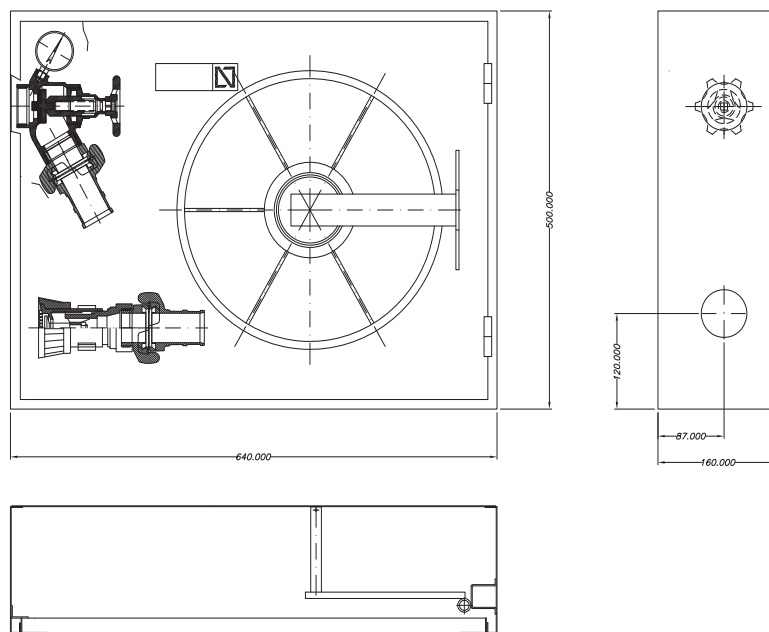
Horizontal cabinet built of 1 mm steel plate thickness, painted in red RAL 3000, measures 640 x 500 x 160 mm, with semi-blind door for polystyrene, and easy-open lock, provided with support arm fixing and pre-holes for water supply, including reel, hose, nozzle, swing arm, seat valve, manometer and supply hose.

It can be made in another color, with the RAL provided by the customer, or in stainless steel, and it can be mounted in a floor bow.

Likewise, under command, the door design has some options: standard, red blind, white blind, white semi-blind, totally stainless, etc.

Features:

- Reeling frame with Ø350 mm .
- Plane hose of Ø45 mm and 15 or 20 m length, manufactured according UNE 23.091/2A and CE mark, with adaptors manufactured according UNE 23.400 of Ø45, slight use.
- Seat valve at 120° output, made of brass, with threads of 1 ½" and adaptor according to UNE 23.400, slight use.
- Manometer graduated from 0 to 16 bars.
- Hose nozzle of three positions: close, spray and jet, connected to the end of the hose by slight use adaptors.



SPB25

Reel and extinguisher support

Fire hose cabinet Ø25 mm according to UNE/EN 671-1 and 20 m semi-rigid hose made according UNE 694.
It is composed by:

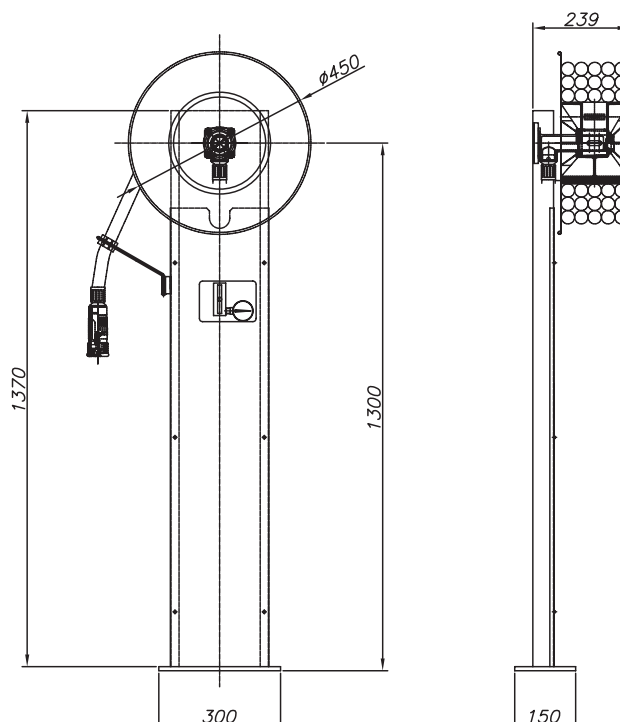
Support foot built in 1 mm thick steel sheet, painted in RAL 3000 red color, measures 476 x 1525 x 240 mm.

Provided with fixing of BIE and extinguisher mounting bracket, input supply, hose, nozzle, seat valve, manometer and supply hose.

It can be made in another color, with the RAL provided by the customer.

Features:

- Reel of Ø450 mm disks, painted in red, with axial supply.
- Semi-rigid hose Ø25 mm and 20 m length, manufactured according to EN 694 standard and CE mark.
- Rail for hose allows the exit of the hose in any direction from the frontal 180°.
- Hose nozzle of three positions: close, spray and jet, connected to the end of the hose by threaded prop.
- Seat valve at 90° of 1", with ¼" manometer outlet.
- Manometer graduated from 0 to 16 bars.
- Supply trigger between valve and reeling frame, with a Ø25 mm semi-rigid hose.





PULEXH

Horizontal sets



CR3PULEXHPSR

Specific description:

- HORIZONTAL set.
- Fire hose cabinet Ø25 mm depending on the model, with CE mark according to EN 671-1 standard.
- Module with alarm call point resettable with bitonal sounder.
- Module for 1 or 2 fire extinguishers of 6 or 9 kg of versatile dust.
- Mixed module for fire extinguisher and call point / sounder.
- Made of steel plate painted red RAL 3000 with doors made of stainless steel AISI 304.

The measures of some sets are:

HORIZONTAL set CR3 (3 modules): 1090 x 610 x 245 mm.

HORIZONTAL set CR3 (2 modules): 930 x 610 x 245 mm.

HORIZONTAL set C4: 936 x 660 x 260 mm.

On-demand can be adapted to the provision which it deems appropriate, as well as the disposition of the module of the call point and sounder, which can be adapted to the configuration that is desired, provided drawings of the holes which should be attached.

Also, the doors has several options: standard, red blind, white blind, red semi blind, white semi blind, completely stainless steel, etc.



CR3AEXPULHPSI



CR3AEXPULHPCR



CR3PULEXHPSI

PULEXV

Vertical sets

Specific description:

- VERTICAL set.
- Fire hose cabinet Ø25 mm depending on the model, with CE mark according to EN 671-1 standard.
- Module with alarm call point resettable with bitonal sounder.
- Module for 1 or 2 fire extinguishers of 6 or 9 kg of versatile dust.
- Mixed module for fire extinguisher can call point / sounder.
- Made of steel plate painted red RAL 3000 with doors made of stainless steel AISI 304.

The measures of some sets are:

VERTICAL set CR3 (3 modules): 630 x 1380 x 245 mm

VERTICAL set CR3 (2 modules): 630 x 910 x 245 mm

On-demand can be adapted to the provision which it deems appropriate, as well as the disposition of the module of the call point and sounder, which can be adapted to the configuration that is desired, provided drawings of the holes which should be attached.

Also, the doors has several options: standard, red blind, white blind, red semi blind, white semi blind, completely stainless steel, etc.



CR3PULEXVPCB



CR3AEXPULVPSI



CR3PULEXV2TINPSI



CR3PULEXV2PCI



CBP2

Ø25 fire hose cabinet



Fire hose cabinet Ø25 mm according to EN 671-1 and 20 m hose length manufactured according to EN 694:2001.

It is composed by:

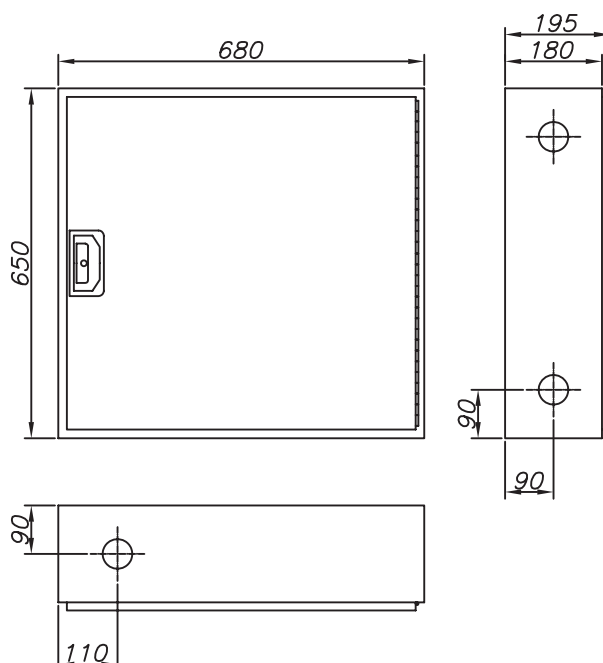
Horizontal cabinet made of 1 mm thickness steel, painted red RAL 3000, measures 680 x 650 x 180 mm, and easy-open lock, provided with support arm fixing and pre-holes for water supply, including reel, hose, nozzle, swing arm, seat valve, manometer and supply hose.

It can be made in another color, with the RAL provided by the customer, or in stainless steel, and it can be mounted in a floor bow.

Features:

- Reel of Ø525 disks, painted in red RAL 3000.
- Semi-rigid hose Ø25 mm and 20 m length, manufactured according to EN 694:2001 standard.
- Nozzle Variomatic Ø25 of three positions; close, spray and jet, made of red plastic.
- Seat valve at 110° of 1", with ¼" manometer outlet.
- Non-return valve for manometer of ¼".
- Manometer graduated from 0 to 16 bars.
- Supply trigger between valve and reeling frame, with a Ø25 mm semi-rigid hose.

The fire hose cabinet can be made with blind door (CBP2PC), stainless steel blind door (CBP2PCI) and semi-blind door (CBP2PS).



CBP3

Ø25 fire hose cabinet



Fire hose cabinet Ø25 mm according to EN 671-1 and 20 m hose length manufactured according to EN 694:2001.

It is composed by:

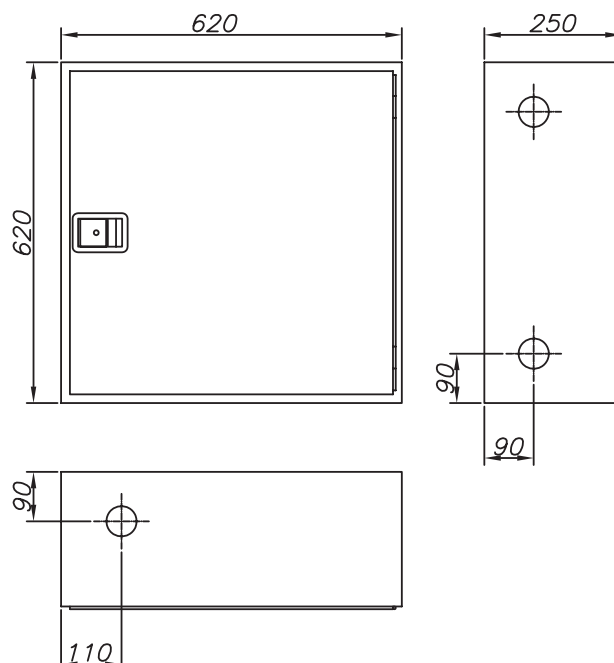
Horizontal cabinet made of 1 mm thickness steel, painted red RAL 3000, measures 620 x 620 x 245 mm, and easy-open lock, provided with support arm fixing and pre-holes for water supply, including reel, hose, nozzle, swing arm, seat valve, manometer and supply hose.

It can be made in another color, with the RAL provided by the customer, or in stainless steel, and it can be mounted in a floor bow.

Features:

- Reel of Ø450 disks, painted in red RAL 3000.
- Semi-rigid hose Ø25 mm and 20 m length, manufactured according to EN 694:2001 standard.
- Nozzle Variomatic Ø25 of three positions; close, spray and jet, made of red plastic.
- Seat valve at 110° of 1", with ¼" manometer outlet.
- Non-return valve for manometer of ¼".
- Manometer graduated from 0 to 16 bars.
- Supply trigger between valve and reeling frame, with a Ø25 mm semi-rigid hose.

The fire hose cabinet can be made with blind door (CBP3PC), stainless steel blind door (CBP3PCI) and semi-blind door (CBP3PS).





CBF4

Ø25 fire hose cabinet



Fire hose cabinet Ø25 mm according to EN 671-1 and 20 m hose length manufactured according to EN 694:2001.

It is composed by:

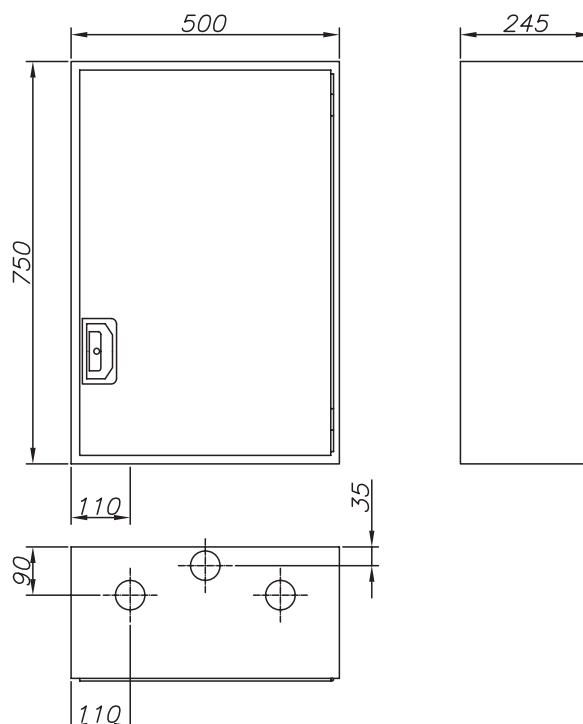
Vertical cabinet made of 1 mm thickness steel, painted red RAL 3000, measures 750 x 500 x 245 mm, and easy-open lock, provided with pre-holes for water supply, including reel, hose, nozzle, swing arm, seat valve, manometer and supply hose.

It can be made in another color, with the RAL provided by the customer, or in stainless steel, and it can be mounted in a floor bow.

Features:

- Reel of Ø450 disks, painted in red RAL 3000.
- Semi-rigid hose Ø25 mm and 20 m length, manufactured according to EN 694:2001 standard.
- Nozzle Variomatic Ø25 of three positions; close, spray and jet, made of red plastic.
- Seat valve at 110° of 1", with 1/4" manometer outlet.
- Non-return valve for manometer of 1/4".
- Manometer graduated from 0 to 16 bars.
- Supply trigger between valve and reeling frame, with a Ø25 mm semi-rigid hose.

The fire hose cabinet can be made with blind door (CBF4PC), stainless steel blind door (CBF4PCI) and semi-blind door (CBF4PS).





COLUMNA SECA

Exclusive firefighter extinguishing system

The dry pipe is a fire installation of exclusive firefighter use, consisting of a vertical 3" pipe with water connections in the different floors of the building fire.

This pipe delivers water from an initial entry on the floor at street level, to the different connections on the floors of the building.

- IPF 41: Connection on the building front in cabinet or manhole with inscription "Use exclusive fire department", consisting of a twin connection of 2 inputs $\varnothing 70$ mm.
- IPF 39: Output in floor building installed in cabinet or manhole, consisting of a twin connection of 2 outputs of $\varnothing 45$ mm
- IPF 40: Output in floor building with the same features of IPF39, with cut valve in the main pipe.

Installation according to R/D 513/2017.



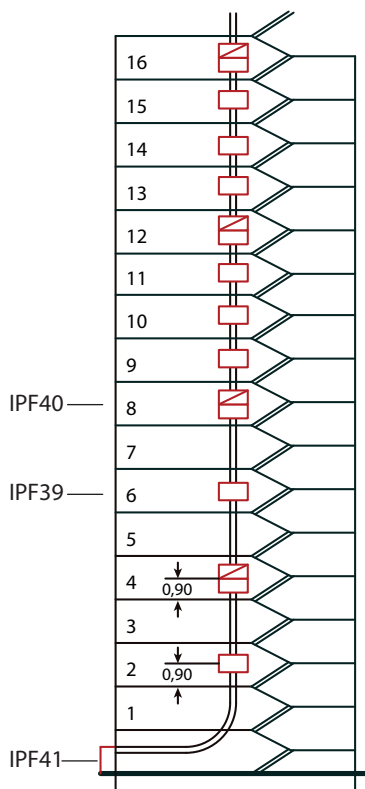
IPF41



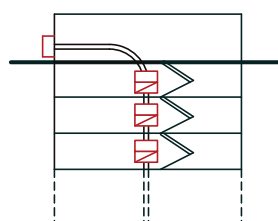
IPF39



IPF40



Ascending dry pipe

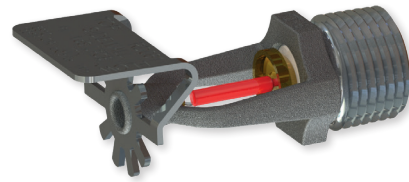


Descending dry pipe



SPRINKLERS

Automatic sprinklers

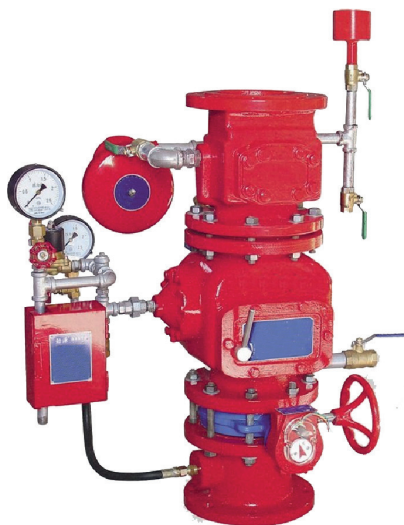


ROCIADORES AUTOMÁTICOS

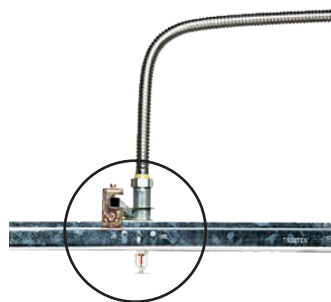
The sprinklers are an automatic system of fire control, which are activated because of an increase in temperature produced by a fire. They are controlled by an alarm check valves, which is also responsible for activating the fire alarm.

Temperature and color range (of the bulb):

Red:	68°C
Yellow:	79°C
Green:	93°C
Blue:	141°C
Black:	260°C



Alarm and control equipment



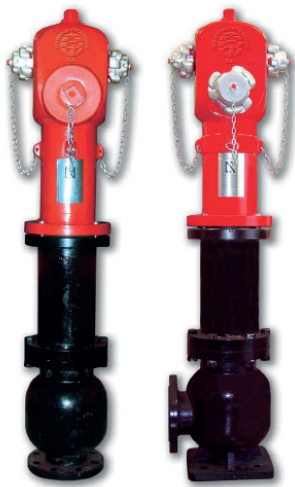
Flexible connection system



FIRE HYDRANTS

Output fire hydrants

It is an output of water equipment, located in the environs of buildings to protect and which fire brigade can couple their hoses. They can be surface or buried (manhole).



DRY PIPE HYDRANT



MANHOLE HYDRANT



WET PIPE HYDRANT



CAI2L / CAI2LL:

Cabinet to store auxiliary equipment for a fire hydrant (according to supplied CEPREVEN).

Equipment:

- 1 Ø70 hose with 15 m length with adaptor
- 2 Ø45 hose with 15 m length with adaptor
- 1 Ø70 nozzle with 3 positions with adaptor
- 2 Ø45 nozzle with 3 positions with adaptor
- 1 bifurcation 1x70 to 2x45
- 1 reduction de 70 to 45



EXTINGUISHERS

ABC dust and CO₂ extinguishers



First responders equipment for little fires. There are 3 types:

- ABC versatile powder extinguishers.
- Carbon dioxide extinguishers (CO₂).
- Water extinguishers.

Extinguisher cabinets made of sheet steel with different finishes



Extinguisher designer brackets

Fire blanket bracket

First aid kit bracket



Fire protection manufacturer
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08191 Rubí, SPAIN
www.cofem.com