



# PROFESSIONAL FIRE

2019/2020

FIRE DETECTION  
SYSTEMS

 **Comelit®**  
Passion. Technology. Design.



## Deep roots, global vision.

Founded in 1956, Comelit Group SpA is an industrial company operating on a worldwide scale and specialising in the design and manufacture of video entry, video surveillance, anti-intrusion, home automation, access control and fire alarm systems. The company has a strong international vocation thanks to its close ties with the area in which it was created and in which its headquarters are still located today.

## An international group.

Comelit exports to over 70 countries worldwide and, in addition to its Italian headquarters, has **15 branches** located in strategic areas in which the company operates: from Europe to the Far East, the United States and the Middle East. This articulated sales structure integrates shared know-how with the awareness of specific requirements in each market.

## Constant innovation, friendly technology.

Comelit makes constantly looking to the future its mission. Innovation through continuous investment in manpower and technology finds an outlet in the design of new solutions dedicated to improving the quality of everyday life by maximising simplicity and functionality.

## Design: style, passion, art.

Besides placing technology at the service of mankind, Comelit is a byword for design. Its unique and original style combines the most hi-tech materials with simple lines, clean shapes and cutting-edge colours. Every Comelit product therefore conveys a new concept for living in a space, in harmony with modern architectural trends.

D E S I G N  
M I L A N O



 **Comelit®**  
Passion. Technology. Design.

## **FIRE DETECTION SOLUTIONS**

|                                       |           |
|---------------------------------------|-----------|
| APPLICATIONS AND SYSTEMS              | <b>4</b>  |
| OUR CALCULATION TOOLS                 | <b>6</b>  |
| ASPIRATING SMOKE DETECTION<br>SYSTEMS | <b>8</b>  |
| BEAM DETECTORS                        | <b>10</b> |
| ATEX SYSTEMS                          | <b>12</b> |
| GAS DETECTION SYSTEMS                 | <b>16</b> |
| APPLICATION DIAGRAMS                  | <b>18</b> |

|                          |           |
|--------------------------|-----------|
| <b>PRODUCT CATALOGUE</b> | <b>29</b> |
|--------------------------|-----------|

# FIRE DETECTION





## FIRE DETECTION SOLUTIONS

### GUIDE TO FIRE DETECTION

## THE APPLICATIONS



AIRPORTS



HOSPITALS



SCHOOLS



OFFICES



MUSEUMS



HOTELS



SHOPPING CENTRES



CAR PARKS



INDUSTRY

## THE SYSTEMS

### CONVENTIONAL SYSTEM

**Conventional systems** are particularly suited to fire detection in smaller facilities and buildings with simple layouts. These systems require the installation of detectors and manual call points, with a maximum of 32 devices per zone.

### ADDRESSABLE SYSTEM

**Addressable systems** can identify the precise location of a fire and are suitable for facilities of all types. Each loop of an addressable panel can include up to 250 devices.

### ASPIRATING SMOKE DETECTION SYSTEM

The **aspirating smoke detection system** should be used in conjunction with addressable or conventional systems and is the ideal replacement for point detectors in installations where access - and therefore maintenance - is difficult.

### ATEX SYSTEMS

**ATEX fire alarm systems** should be installed in places where there is a high risk of explosion, due to the atmospheric conditions and the elements in that environment.

### GAS DETECTION SYSTEMS

**Gas detection systems** are capable of selectively and reliably indicating the presence of toxic gases and flammable vapours. They are suitable for use in car parks, industrial areas and buildings.

## SYSTEM COMPARISON

|                                                                             | CONVENTIONAL<br>SYSTEM                             | ADDRESSABLE<br>SYSTEM       |
|-----------------------------------------------------------------------------|----------------------------------------------------|-----------------------------|
| Product codes                                                               | 43CPC002EN - 43CPC004EN<br>43CPC008EN - 43CPC016EN | 41CPE012 - 41CPE024EN       |
| Certification                                                               | <b>EN54-2, EN54-4</b>                              | <b>EN54-2, EN54-4, LPCB</b> |
| Possibility for expansion<br>with Comelit wireless system                   | Yes                                                | Yes                         |
| Possibility for interfacing<br>with Comelit aspirating system               | Yes                                                | Yes                         |
| Programming via PC software                                                 | No                                                 | Yes                         |
| Identification of the specific<br>device triggering the fire alarm or fault | No                                                 | Yes                         |
| Connection of multiple panels in a network                                  | No                                                 | 64                          |
| Supervision via software on a PC                                            | No                                                 | Yes                         |
| Maximum number of devices<br>per line/loop                                  | 32                                                 | 250                         |
| Timer programming<br>for day/night mode                                     | No                                                 | Yes                         |
| Access level protection                                                     | Via mechanical key                                 | Via numeric code            |
| Events log                                                                  | Optional for 43CPC016EN                            | Yes                         |
| <b>RECOMMENDED APPLICATIONS</b>                                             |                                                    |                             |
| Offices                                                                     | Yes                                                | Yes                         |
| Car parks                                                                   | Yes                                                | Yes                         |
| Museums                                                                     | Yes                                                | Yes                         |
| Airports                                                                    | No                                                 | Yes                         |
| Shopping centres                                                            | No                                                 | Yes                         |
| Hotels                                                                      | No                                                 | Yes                         |
| Schools                                                                     | No                                                 | Yes                         |



## FIRE DETECTION SOLUTIONS

### GUIDE TO FIRE DETECTION

## OUR CALCULATION TOOLS

Comelit provides tools that can correctly calculate the dimensions of addressable systems and precisely identify any possible problems before installation of the system. For example, you can calculate the cross-section and maximum length of the cable to use in accordance with the devices installed in the system, the maximum current consumption of the devices and thereby determine whether the panel will be able to control them. A second tool calculates the minimum capacity of the battery to be installed to ensure a certain level of autonomous operation in the event of a mains power outage. All this is possible simply by entering the number of devices that are to be installed. There are 3 calculation tools available:

- Tool for calculating cable cross-section and length and the current absorption for all Comelit addressable panels.
- Battery calculator for the Atena addressable panel
- Battery calculator for the Atena Easy addressable panel

Below is a simple example of how to use these calculation tools.

Example system with the devices listed in the following table.

| Product codes | DESCRIPTION                         | PRODUCT |
|---------------|-------------------------------------|---------|
| 41RCS000      | Addressable heat detector           | 5       |
| 41RFU000      | Addressable optical smoke detector  | 30      |
| 41RML000      | Addressable multi-criteria detector | 10      |
| 41PAM000      | Addressable manual button           | 5       |
| 41SAI000      | Addressable siren                   | 5       |
| 41SCI000      | Addressable siren and strobe        | 3       |
| 41SAB000/IS   | Base with addressable siren         | 2       |
| 41IOM022      | Addressable 2IN/2OUT module         | 3       |

Using the tool for calculation of cable characteristics and current consumption for Atena and Atena Easy, entering the data gives the following results:

- Current consumption = 213.4 mA
- Maximum cable length using cable with cross-section  $1.5 \text{ mm}^2 = 4174.6 \text{ m}$
- Minimum cable cross-section, given maximum length of loop is, for example,  $2500 \text{ m} = 1 \text{ mm}^2$

Using the battery calculation program, assuming a 40 hour standby time and 30 minutes

with 2 x 41RFU000, 2 x 41SAI000 and 1 x 41SCI000 in alarm condition, entering the above data gives the following results:

- Minimum battery capacity required = 20.3 Ah
- Maximum current absorption in standby = 0.15 A
- Maximum current absorption in alarm state = 0.3 A

# COMELIT CALCULATION SOFTWARE EXAMPLE

## ADDRESSABLE SYSTEM

**Start**

1. Please, enter the number of the loops 1 - 4:

2. Please, enter the number of devices for every loop:

| Standby Mode         |        |        |        |        | FIRE Mode   |        |        |        |  |
|----------------------|--------|--------|--------|--------|-------------|--------|--------|--------|--|
| Detectors            | Loop 1 | Loop 2 | Loop 3 | Loop 4 | Loop 1      | Loop 2 | Loop 3 | Loop 4 |  |
| 41RC000              | 10     | 10     | 0      | 0      | 2           | 2      | 0      | 0      |  |
| 41RF000              | 20     | 20     | 0      | 0      | 2           | 2      | 0      | 0      |  |
| 41RM000              | 2      | 2      | 0      | 0      | 1           | 1      | 0      | 0      |  |
| 41PAM00              | 2      | 2      | 0      | 0      | 1           | 1      | 0      | 0      |  |
| 41PA000              | 1      | 0      | 0      | 0      | 0           | 0      | 0      | 0      |  |
| Modules              |        |        |        |        | Modules     |        |        |        |  |
| Loop 1               | Loop 2 | Loop 3 | Loop 4 | Loop 1 | Loop 2      | Loop 3 | Loop 4 |        |  |
| 41OM002 (2 in 2 out) | 1      | 0      | 0      | 0      | 0           | 2      | 0      | 0      |  |
| 41OM004 (4 inputs)   | 0      | 0      | 0      | 0      | 0           | 0      | 0      | 0      |  |
| 41OM040 (4 inputs)   | 0      | 2      | 0      | 0      | 0           | 0      | 0      | 0      |  |
| 41SC000 (loop power) | 0      | 0      | 0      | 0      | 0           | 0      | 0      | 0      |  |
| 41SC000 (ext power)  | 1      | 0      | 0      | 0      | 1           | 1      | 0      | 0      |  |
| 41SC000 (1 output)   | 10     | 10     | 0      | 0      | 2           | 1      | 0      | 0      |  |
| 41SC000/240          | 0      | 0      | 0      | 0      | 0           | 0      | 0      | 0      |  |
| 41SC000 (ext input)  | 1      | 0      | 0      | 0      | 0           | 0      | 0      | 0      |  |
| Accessories          |        |        |        |        | Accessories |        |        |        |  |
| Loop 1               | Loop 2 | Loop 3 | Loop 4 | Loop 1 | Loop 2      | Loop 3 | Loop 4 |        |  |
| 4BPT000              | 2      | 2      | 0      | 0      | 2           | 2      | 0      | 0      |  |
| 41SL000 (sirens)     | 0      | 0      | 0      | 0      | 0           | 0      | 0      | 0      |  |

Tone Type:  27 is the main tone type

| Standby Mode |           |        |        |        | FIRE Mode |        |        |        |        |
|--------------|-----------|--------|--------|--------|-----------|--------|--------|--------|--------|
| Sounders     | Tone type | Loop 1 | Loop 2 | Loop 3 | Loop 4    | Loop 1 | Loop 2 | Loop 3 | Loop 4 |
| 41SA000      | HIGH      | 2      | 2      | 0      | 0         | 2      | 2      | 0      | 0      |
|              | LOW       | 0      | 0      | 0      | 0         | 1      | 1      | 0      | 0      |
| 41SC000      | HIGH      | 2      | 2      | 0      | 0         | 1      | 1      | 0      | 0      |
|              | LOW       | 0      | 0      | 0      | 0         | 1      | 1      | 0      | 0      |
| 41SA000      | HIGH      | 0      | 0      | 0      | 0         | 0      | 0      | 0      | 0      |
|              | LOW       | 0      | 0      | 0      | 0         | 0      | 0      | 0      | 0      |
| 41SA000G15   | HIGH      | 0      | 0      | 0      | 0         | 0      | 0      | 0      | 0      |
|              | LOW       | 0      | 0      | 0      | 0         | 0      | 0      | 0      | 0      |
| 41SC000      | HIGH      | 2      | 2      | 0      | 0         | 2      | 2      | 0      | 0      |
|              | LOW       | 0      | 0      | 0      | 0         | 1      | 1      | 0      | 0      |

3. Please, enter the panel parameters:

| Outputs            | Standby | FIRE Mode |
|--------------------|---------|-----------|
| FIRE R (0-0.3 A)   | 0       | 0         |
| FIRE P (0-0.3 A)   | 0       | 0         |
| SND 1/2 (0-0.3 A)  | 0       | 0         |
| AUX +24V (0-0.3 A) | 0       | 0         |
| Relays (0-4)       | 0       | 0         |

4. Please, enter values for:

Zones in FIRE Mode (1-96):

The required time for operation in Standby mode without mains power supply (hours):

The required time for operation in Fire mode without mains power supply (hours):

5. External Power Supply Unit:

41ALM072

Notes:

- The accessories 41SL000 and 4BPT000 have to be addressed in the system.
- The automatic detectors mounted to bases 41SM000, 41SM000G and 41SC000 are assigned of separate addresses in the control panel. The start with their number in the table number of the detector from the same type in the respective loop number.

WARNINGS SOUNDERS

ERROR MESSAGES

Calculate

Minimal accumulator capacity, (Ah):

Maximum current in Standby mode, [A]:

| Loop 1  | Loop 2  | Loop 3 | Loop 4 | Total consumption, [A]: |
|---------|---------|--------|--------|-------------------------|
| 0.02125 | 0.03175 | 0      | 0      | 0.3303                  |

Maximum current in FIRE mode, [A]:

| Loop 1  | Loop 2  | Loop 3 | Loop 4 | Total consumption, [A]: |
|---------|---------|--------|--------|-------------------------|
| 0.18667 | 0.18383 | 0      | 0      | 1.882                   |

Total number of addressed devices:

| Loop 1: | Loop 2: | Loop 3: | Loop 4: |
|---------|---------|---------|---------|
| 81      | 83      | 0       | 0       |

**Start**

ATTENTION: The calculations are applicable for copper cables only. The calculated length and cross section of the cable concern one loop of the system.

1. Please, enter the number of used devices in the system according their type:

| Detectors | Modules              | Accessories | Sounders   | Sound Level | Tone Type |
|-----------|----------------------|-------------|------------|-------------|-----------|
| 41RC000   | 41OM002 (2 in 2 out) | 41SL000     | 41SA000    | HIGH        | 27        |
| 41RF000   | 41OM002 (4 inputs)   | 4BPT000     | 41SC000    | LOW         | 27        |
| 41RM000   | 41OM004 (4 inputs)   |             | 41SA000    | HIGH        | 27        |
| 41PAM00   | 41OM040 (4 inputs)   |             | 41SA000G15 | LOW         | 27        |
| 41PA000   | 41SC000 (loop power) |             | 41SC000    | HIGH        | 27        |
| 41PA000   | 41SC000 (ext. power) |             |            | LOW         | 27        |
|           | 41SC000 (1 output)   |             |            |             |           |
|           | 41SC000/240          |             |            |             |           |
|           | 41SC000 (ext. input) |             |            |             |           |

2. Calculating the loop length according the cable cross section.

Please, enter the cross section of the used cable to calculate the maximal loop length:  mm<sup>2</sup>

Case 1: The loop is broken at the beginning and is powered only by one side.  m

Case 2: The loop is not interrupted.  m

Calculate

3. Calculating the cable cross section according the loop length.

Please, enter the maximal loop length to calculate the cross section of the used cable:  m

Case 1: The loop is broken at the beginning and is powered only by one side.  mm<sup>2</sup>

Case 2: The loop is not interrupted.  mm<sup>2</sup>

Calculate

How to work with the Loop Length Calculator Tool

- Press the "Start" button - in the input data fields are set automatically values by default.
- Enter the total number of detectors for one loop sorted by type. Include also the detectors mounted on sounders 41SA000, 41SA000G15 and 41SC000.
- Enter the number of the sounders sorted according the set sound level in the panel menu:
  - In the column "HIGH" enter the number of the sounders with set HIGH sound level in the panel.
  - In the column "LOW" enter the number of the sounders with set LOW sound level in the panel.
  - Tone type is set automatically to 27 - this is the main tone type for the system. You can change it with other tone type from 1 to 32. (Note: The tone types are described in details in the installation manuals of the sounders 41SA000, 41SC000, 41SA000G15 and 41SC000).
  - \* Note: The sound level is set individually for every sounder in the panel menu.
- Enter the total number of modules for one loop sorted by type.
- Enter the total number of accessories for one loop sorted by type.
- Press the "Calculate" button to calculate the total consumption in the loop.
- Calculate the maximum loop length according the cross section of the used cable:
  - Enter the cable cross section in sqmm.
  - Press the "Calculate" button in the field.
  - Use the "X" button to clear the calculated values in the fields before starting a new calculation.
- Calculate the optimum cable cross section according the maximal loop length:
  - Enter the loop length in meters.
  - Press the "Calculate" button in the field.
  - Use the "X" button to clear the calculated values in the fields before starting a new calculation.

Addressed Devices:  Consumption, mA:  Calculate

Messages for troubles:

THE ATENA PANEL BATTERY CHARGER SUPPLIES 2A CONSTANTLY AND IS CAPABLE OF CHARGING 100 Ah batteries, IN ACCORDANCE WITH REGULATION METHODS AND TIMESCALES



## FIRE DETECTION SOLUTIONS

### GUIDE TO FIRE DETECTION

## ASPIRATING SMOKE DETECTION SYSTEMS

### WHAT ARE THEY?

Aspirating smoke detectors draw in air for analysis from the protected area through pipes with holes or capillary pipes. The pipes convey the aspirated air to a sensor, which can be positioned at a distance from the protected area, thereby allowing easier and more economic maintenance. For suspended ceiling protection, for example, inspection hatches are not required as the network of pipes running through the suspended ceiling does not require maintenance; maintenance is only required for the machine, which can even be positioned outside the protected area and therefore in a more accessible location. Simply use a compressor to blow air through the coupling between the pipe and the machine. With an aspirating system, no wiring is required in the protected area; all that is required is the installation of a simple plastic pipe. It is possible to create a completely invisible detection system, hiding the sampling pipe in the space above the suspended ceiling and using capillary pipes (small diameter pipes) with small holes to draw air from the protected area and convey it to the detection unit.

### WHERE SHOULD THEY BE INSTALLED?

This type of fire detection system is ideally suited to the following situations:

- Areas where detection would otherwise be difficult, such as, for example, in clean rooms, telephone exchanges, suspended ceilings, technical rooms, air ducts, etc..
- Aesthetically sensitive environments, such as museums, historic buildings, facilities with complex architecture etc..
- Environments where access to the system for maintenance purposes is difficult, such as cattle sheds, prisons, underground stations, etc..

### WHAT REGULATIONS APPLY?

All aspirating systems must be approved to EN54-20.

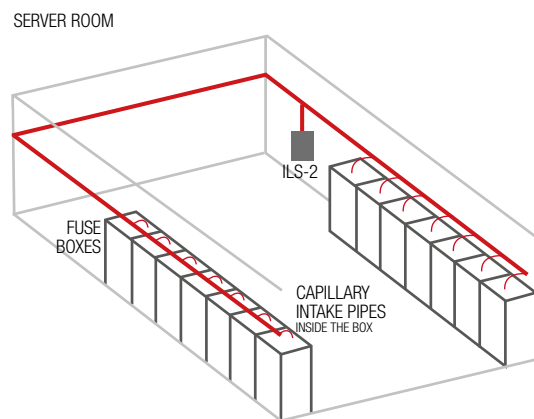
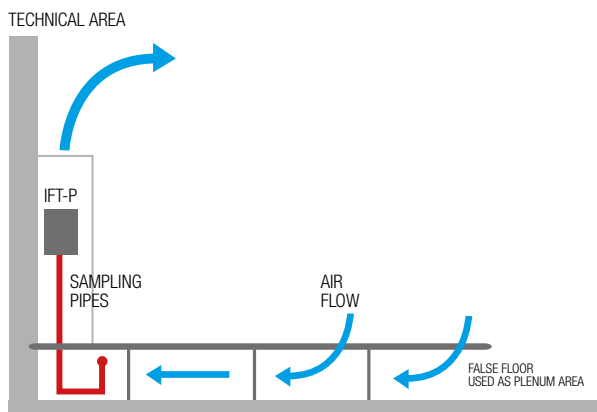
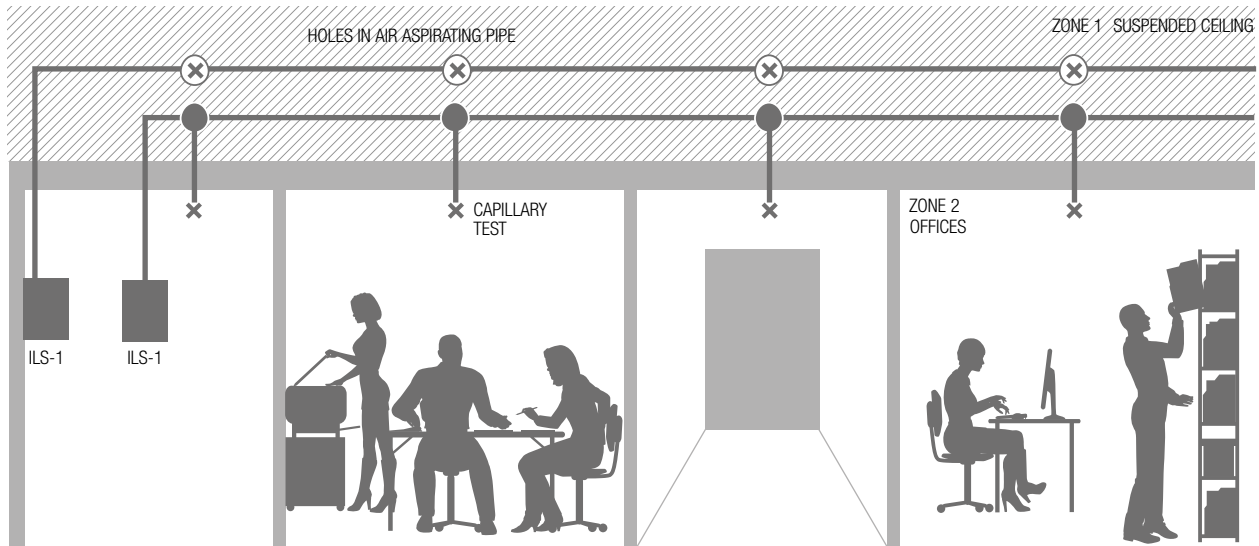
EN54-20 divides aspirating smoke detection systems into 3 classes according to their sensitivity:

- Class C - Normal sensitivity (equivalent to the sensitivity of a point detector system). Can be used in rooms up to 8 m high.
- Class B - Enhanced sensitivity (greater sensitivity than a point detector system). Can be used in rooms up to 12 m high.
- Class A - Very high sensitivity (environments with high air recirculation rate or environments requiring very early warning). Can be used in all types of premises.

One aspirating hole is equal to a smoke optical detector with standard sensitivity. Please refer to local regulations for sizing.

| Product codes                              | ILS-1                                    | ILS-2                                     | IFT-P                                       |
|--------------------------------------------|------------------------------------------|-------------------------------------------|---------------------------------------------|
| Description                                | Aspirating detector<br>1 zone 1 detector | Aspirating detector<br>2 zone 2 detectors | Aspirating smoke detector<br>1 zone 2 pipes |
| Certification                              | <b>EN54-20</b>                           | <b>EN54-20</b>                            | <b>EN54-20</b>                              |
| Maximum number of holes per pipe - class A | 3                                        | 3                                         | 12                                          |
| Maximum number of holes per pipe - class B | 6                                        | 6                                         | 36                                          |
| Maximum number of holes per pipe - class C | 18                                       | 18                                        | 36                                          |
| Sensitivity                                | 0.06% to 6.0% obs/m                      | 0.06% to 6.0% obs/m                       | 0.001% to 20% obs/m                         |

## APPLICATION EXAMPLE





## FIRE DETECTION SOLUTIONS

### GUIDE TO FIRE DETECTION

## BEAM DETECTORS

### WHAT ARE THEY?

A beam detector is a fire detection device that uses the attenuation and/or modulation of one or more optical beams to detect smoke. Usually they consist of a powered active unit, that comprises the functions of emitter and receiver, and an unpowered passive unit, that reflects the beam of light back to the active unit. When the active unit detects a difference between the light emitted and the light received, it triggers an alarm signal. The beam detector is able to determine whether an obscuration of the beam is due to the presence of smoke (partial blocking of the beam) or a physical object (total blocking of the beam). In the latter case, the unit relays a fault signal.

### WHERE SHOULD THEY BE INSTALLED?

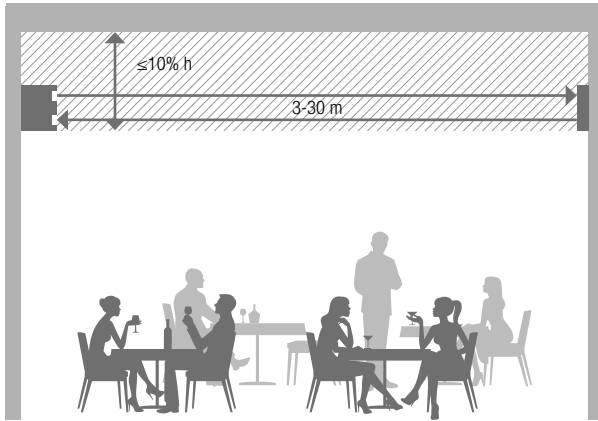
The possibility to protect large spaces with just one beam detector not only obviates the need to install several point smoke detectors, along with the associated wiring and preparation work, but also enhances the aesthetics of the protected area while facilitating maintenance. Usually beam detectors are installed in:

- Large buildings with big open spaces, such as car parks, warehouses, dining rooms in restaurants and hotels, schools, long corridors, tennis courts and other sports facilities, hangars etc..
- Historic buildings and aesthetically sensitive environments, such as churches, museums, palaces, arenas, art galleries, luxury shops, etc..

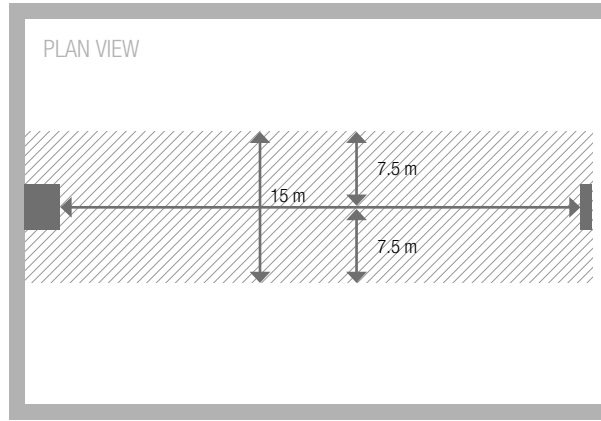
| Code     | Distance from ceiling<br>(minimum) | Coverage |
|----------|------------------------------------|----------|
| 48BFC000 | 30 cm                              | 3-30 m   |
| 48BFC002 | 30 cm                              | 5-50 m   |
| 48BFC003 | 30 cm                              | 50-100 m |

## APPLICATION EXAMPLE

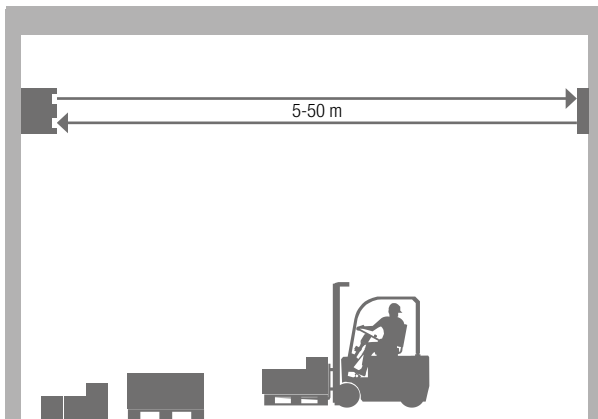
BEAM DETECTOR 48BFC000



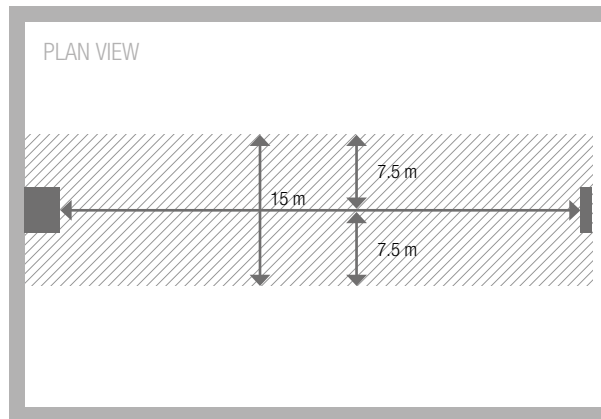
DINING ROOM - RESTAURANT



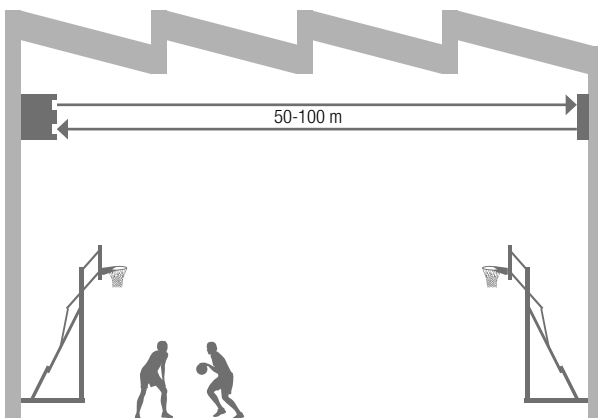
BEAM DETECTOR 48BFC002



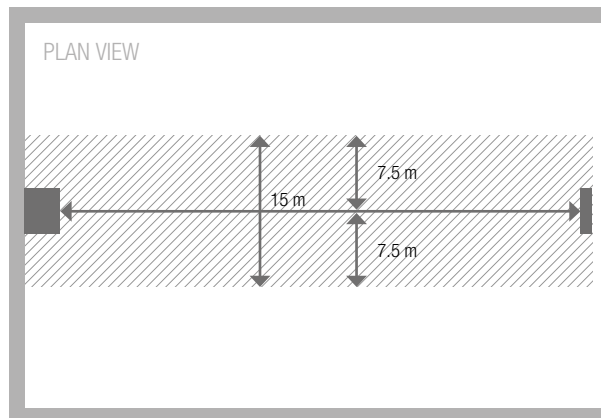
WAREHOUSE



BEAM DETECTOR 48BFC003



GYMNASIUM WITH PITCHED OR SHED-STYLE CEILING



\*The percentage may vary depending on the maximum height of the gables



## FIRE DETECTION SOLUTIONS

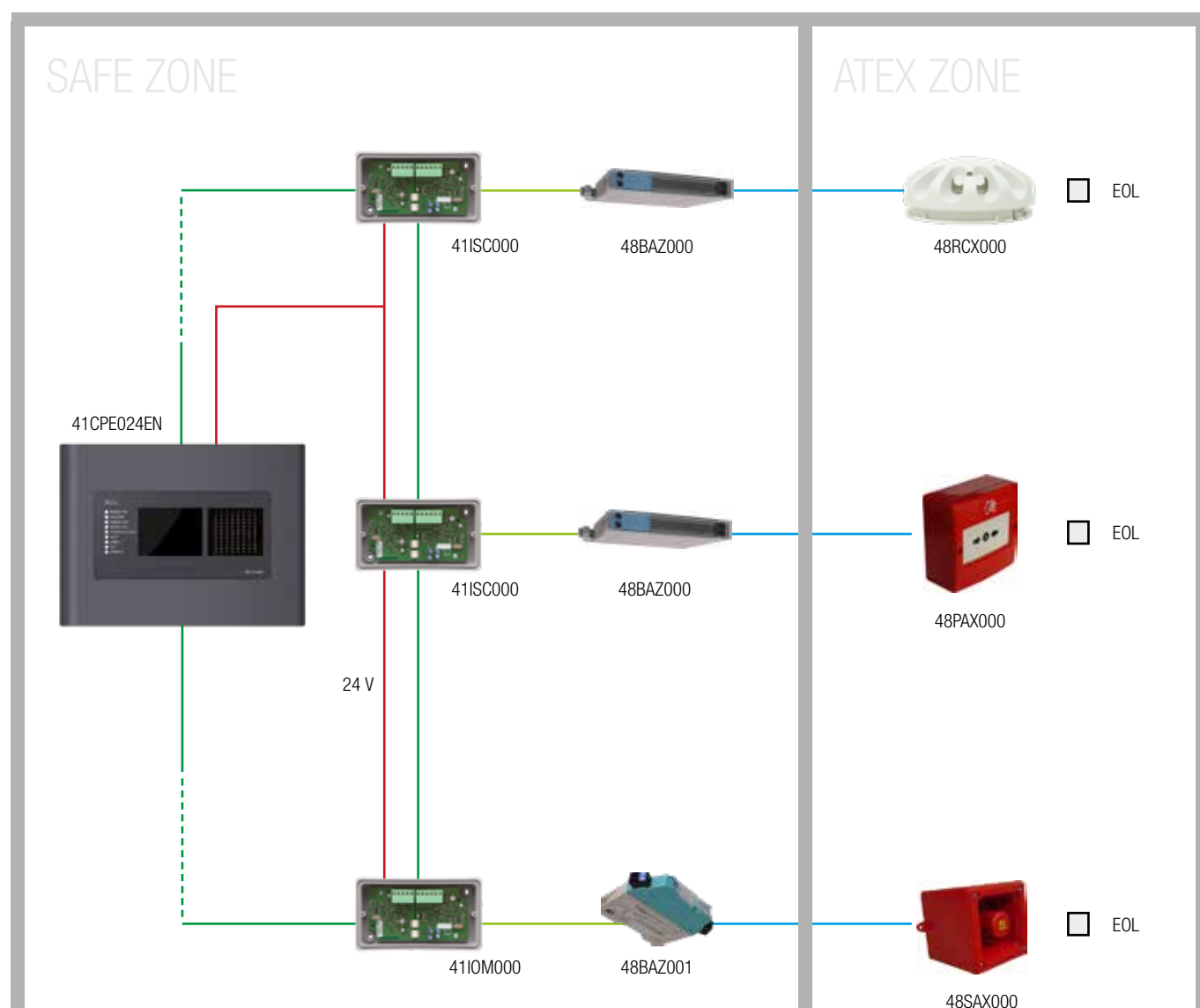
### GUIDE TO FIRE DETECTION

## ATEX SYSTEMS

### WHAT ARE THEY?

The word ATEX comes from "**AT**mosphères and **EX**plosibles", i.e. places in which there is a high risk of explosion due to the atmospheric conditions and the elements placed in the environment in question. Fire alarm systems in ATEX zones must employ devices with very low operating voltages to avoid the creation of sparks that could start a fire or cause an explosion.

In these areas the rapid response of fire detectors is essential, as is the need to initiate evacuation promptly. Comelit fire alarm equipment for ATEX zones ensures safety and reliability, interfacing with the panel via a Zener barrier and module 41ISC000 on the loop. A typical layout is shown below for an installation in a chemical factory.



## EXTINGUISHING PANEL

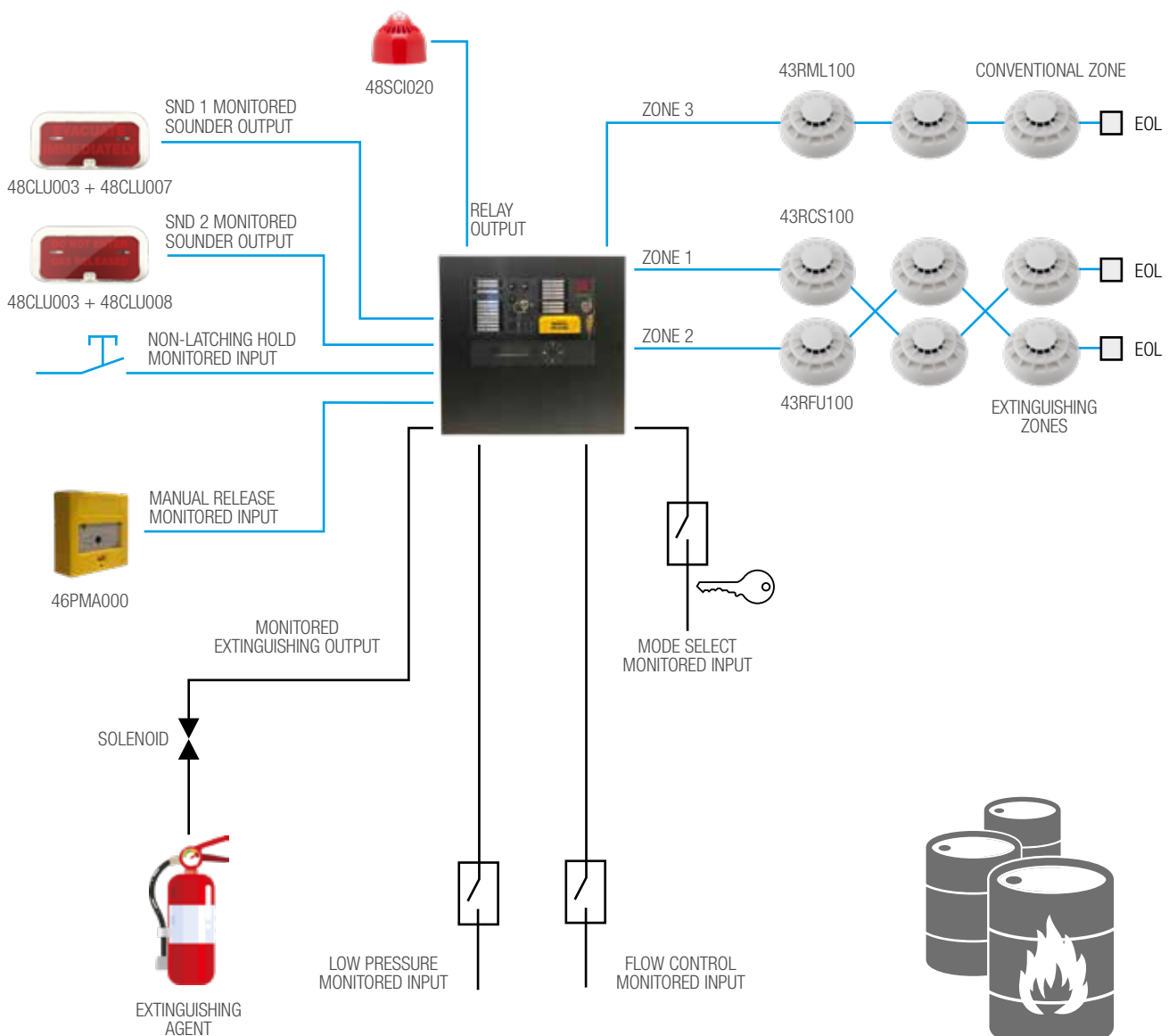
### WHAT IS IT?

Conventional panel 46EST003 for the detection and extinguishing of fires was designed for the use and monitoring of powder, gas, condensed aerosol, water or other types of extinguishers.

This panel is divided into 2 operational sections, extinguishing and fire detection, and was designed to extinguish in one zone. It can work with solenoid valves, pressure switches and other types of actuator.

After processing the signals coming from automatic fire detectors/manual activation buttons, the panel transmits commands to the extinguishing execution devices, visual and audible signalling units, ventilation devices, etc...

Below is an installation example for our extinguishing panel:





## FIRE DETECTION SOLUTIONS

### GUIDE TO FIRE DETECTION

## ATENA MANAGER SUPERVISION SOFTWARE

### WHAT IS IT?

Atena manager is supervision software for installations equipped with the Atena addressable control panel (art. 41CPE024EN). This programme enables you to view a graphic image of the protected building and the status of the entire system, and to execute system commands when necessary. The control panel is connected to the supervision software via a LAN cable.

### HOW DOES IT WORK?

The software is simple to use and effective. Once the software is installed, you can load building schematics (JPG, BMP, PNG, TIF, GIF) and then enter graphically all the devices in the system.

Atena Manager can control up to 64 Atena control panels connected in a network, with 1000 devices per control panel. It signals all alarm and fault conditions and enables the user to silence buzzers, sirens, to launch an evacuation procedure and to reset the control panel. In the event of an alarm on a floor of the building, the software will automatically display the image of the area in question in the foreground and indicate the device which generated the alarm.







## GAS DETECTION SOLUTIONS

### GUIDE TO FIRE DETECTION

## GAS DETECTION SYSTEMS

### WHAT ARE THEY?

GAS detection systems are capable of selectively and reliably indicating the presence of toxic gases and flammable vapours. They are suitable for use in car parks, industrial areas and buildings. The gas sensor is a device which detects the presence of one or more types of gas inside an environment, in general as part of a security system. The types of Comelit gas sensors can be divided into the following categories on the basis of the transduction principle:

#### ELECTROCHEMICAL

The operating principle of electrochemical sensors ensures that the concentration of the gas you want to measure is directly proportional to the electrical current output of the sensor. Through a small opening, the gas being tested fills the sensor, passing through a membrane typically made of low-porosity thin Teflon film which prevents water vapour from passing through. This type of sensor therefore allows gas concentration to be converted into an electrical current outflow.

#### CATALYTIC

This sensor category is mainly used to detect combustible gases; their operating principle is based on a process of catalytic combustion, which allows a variation in gas concentration to be converted to a variation in resistance, effectively meaning that it is the resistance at the sensor output that is measured.

### TYPES OF GAS DETECTED:

**METHANE (CH<sub>4</sub>) – KM series.** Combustible gas, lighter than air. Its density in relation to air is 0.55 and its LEL is 4.4%v/v (expressed in %Volume).

*The methane gas sensor must be secured at a height of 20/30 cm from the ceiling.*

**LPG – KG series.** A gas that is heavier than air, formed by a mix of 20-30% Propane (C<sub>3</sub>H<sub>8</sub>) and 80-70% Butane (C<sub>4</sub>H<sub>10</sub>). The density in relation to air is 1.56 for Propane and 2.05 for Butane; the LEL is 1.7%v/v for Propane and 1.4%v/v for Butane. LPG settings for should be applied as for Butane, since this is the major constituent of LPG.

*The LPG sensor must be secured at a height of 20/30 cm from the floor.*

**HYDROGEN (H<sub>2</sub>) – KI series.** A colourless, odourless, highly flammable gas that is much lighter than air. Its density in relation to air is 0.07 and its LEL is 4%v/v (expressed in %Volume).

*The hydrogen sensor must be secured at a height of 20/30 cm from the ceiling.*

**GASOLINE – KB series.** Gasoline vapours are heavier than air and extremely flammable. Its density in relation to air is 2.8 on average and its LEL is approximately 1.2%v/v (expressed in %Volume).

*The gasoline vapours sensor must be secured at a height of 30/40 cm from the floor.*

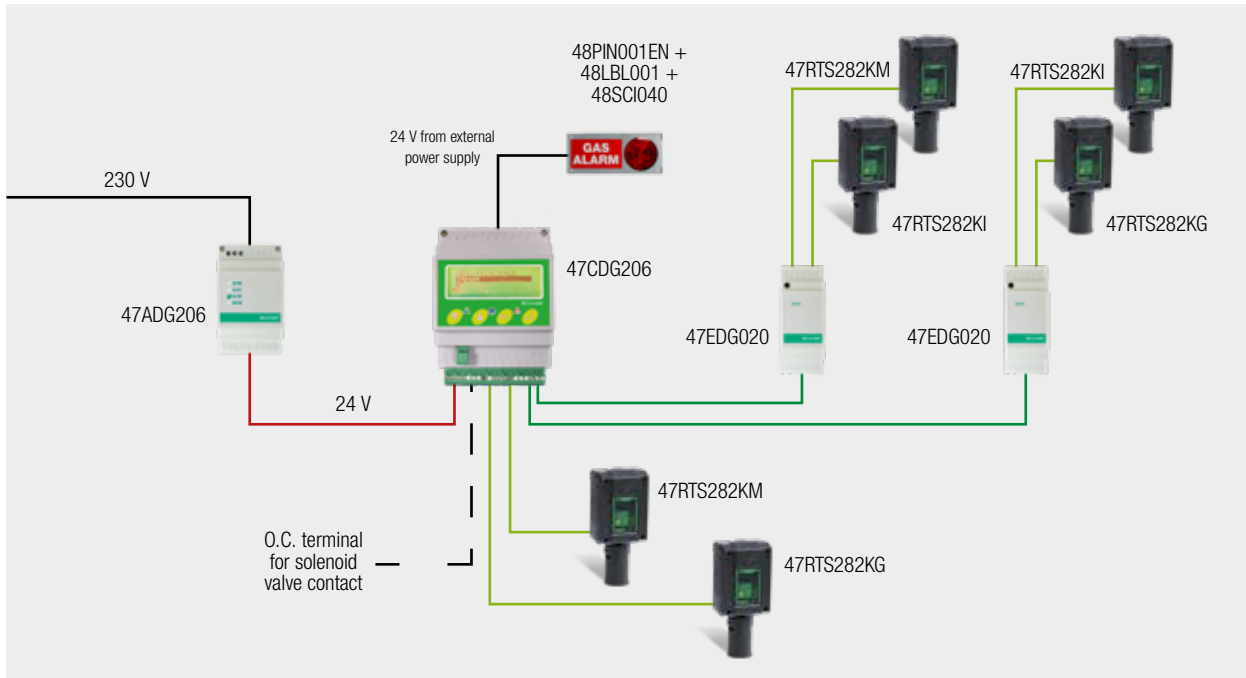
**CARBON MONOXIDE (CO) – EC-S series.** Carbon monoxide is a toxic, odourless, colourless gas, as light as air (its density in relation to air is 0.97); it is explosive at extremely high concentrations, in fact its LEL (Lower Explosive Limit) is 10.9%vol. CO is produced by the incomplete combustion of carbon-based fuels. If they do not burn properly, these fuels - gases, oils, wood and coal - form excess CO which, as it spreads through the environment, poses a serious risk to human health.

*The carbon monoxide sensor must be secured at a height of 1.60 m from the floor.*

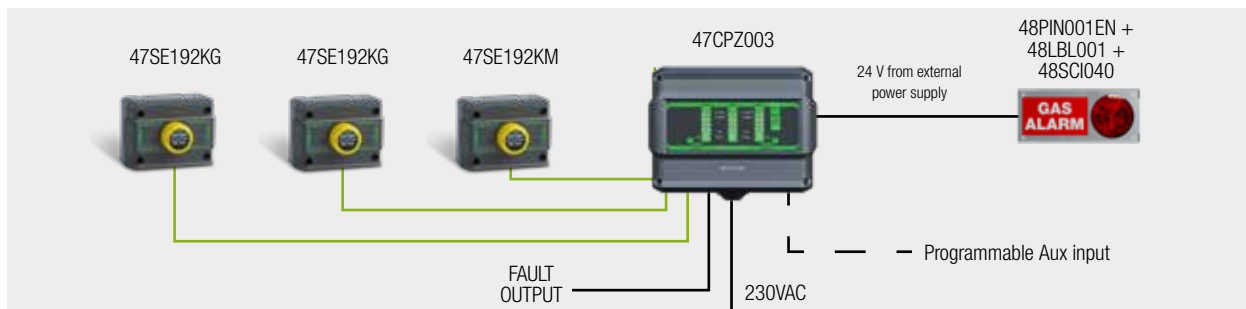
**OXYGEN (O<sub>2</sub>) – EO series.** Oxygen is an odourless, colourless gas, slightly heavier than air (its density in relation to air is 1.1). It is not a flammable gas but, as it is a powerful oxidant, it reacts with combustible materials and reducing agents which results in the risk of fire and explosion because it acts as a catalyst for combustion. The air we breathe contains 20.95% Oxygen. If the concentration of O<sub>2</sub> in the air falls below 19.5% it is considered dangerous for human health; if the concentration then drops below 16% it causes respiratory problems until asphyxia occurs, and below 6% will result in instant death. Bear in mind that a lack of oxygen can be caused by combustion phenomena, by the increase of other gases (toxic and/or flammable) in the air and also by leaks of inert gases (Nitrogen, Helium, Argon, etc.). At high concentrations, over 24%, O<sub>2</sub> becomes irritating to the respiratory tract and can impact the central nervous system, eyes and lungs.

*The oxygen sensor must be secured at a height of 1.60 m from the floor.*

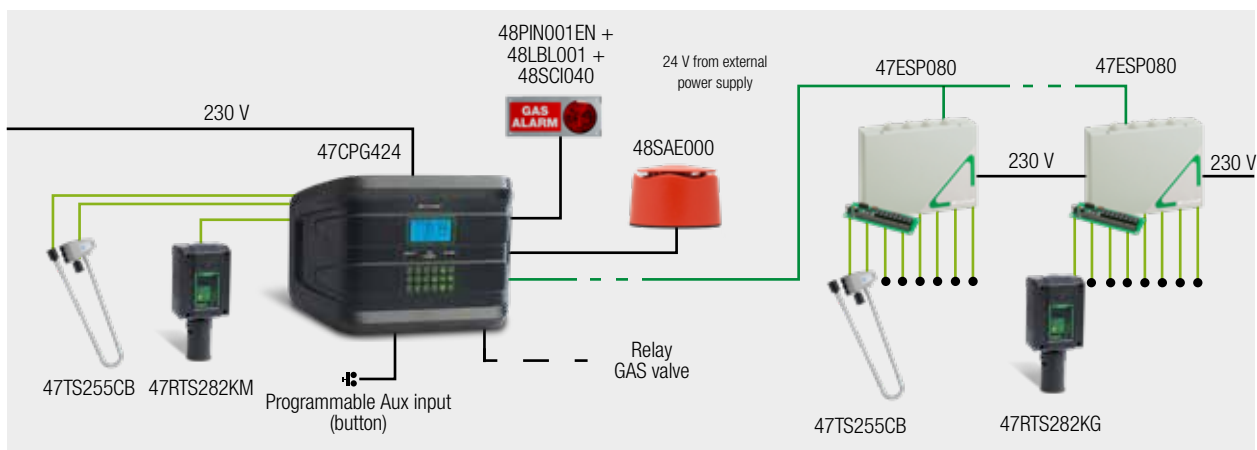
## EXAMPLE OF INSTALLATION WITH DIN RAIL MOUNTING GAS PANEL FOR RESIDENTIAL/COMMERCIAL



## EXAMPLE OF INSTALLATION WITH 47CPZ003 GAS PANEL FOR COMMERCIAL APPLICATIONS



## EXAMPLE OF INSTALLATION WITH 47CPG424 GAS PANEL FOR INDUSTRIAL APPLICATION



NB: Sensor 47TS255CB occupies 2 inputs. connection via 4 wires shielded cables.



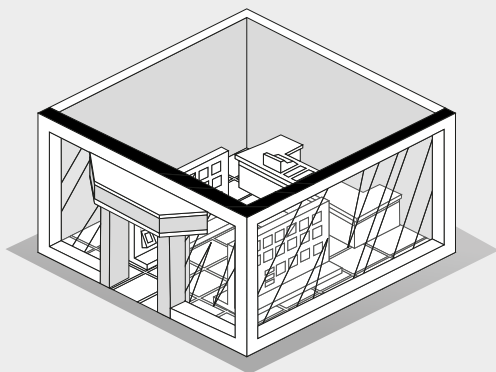
## APPLICATION

### GUIDE TO FIRE DETECTION

## APPLICATION SMALL COMMERCIAL FACILITY OFFICES

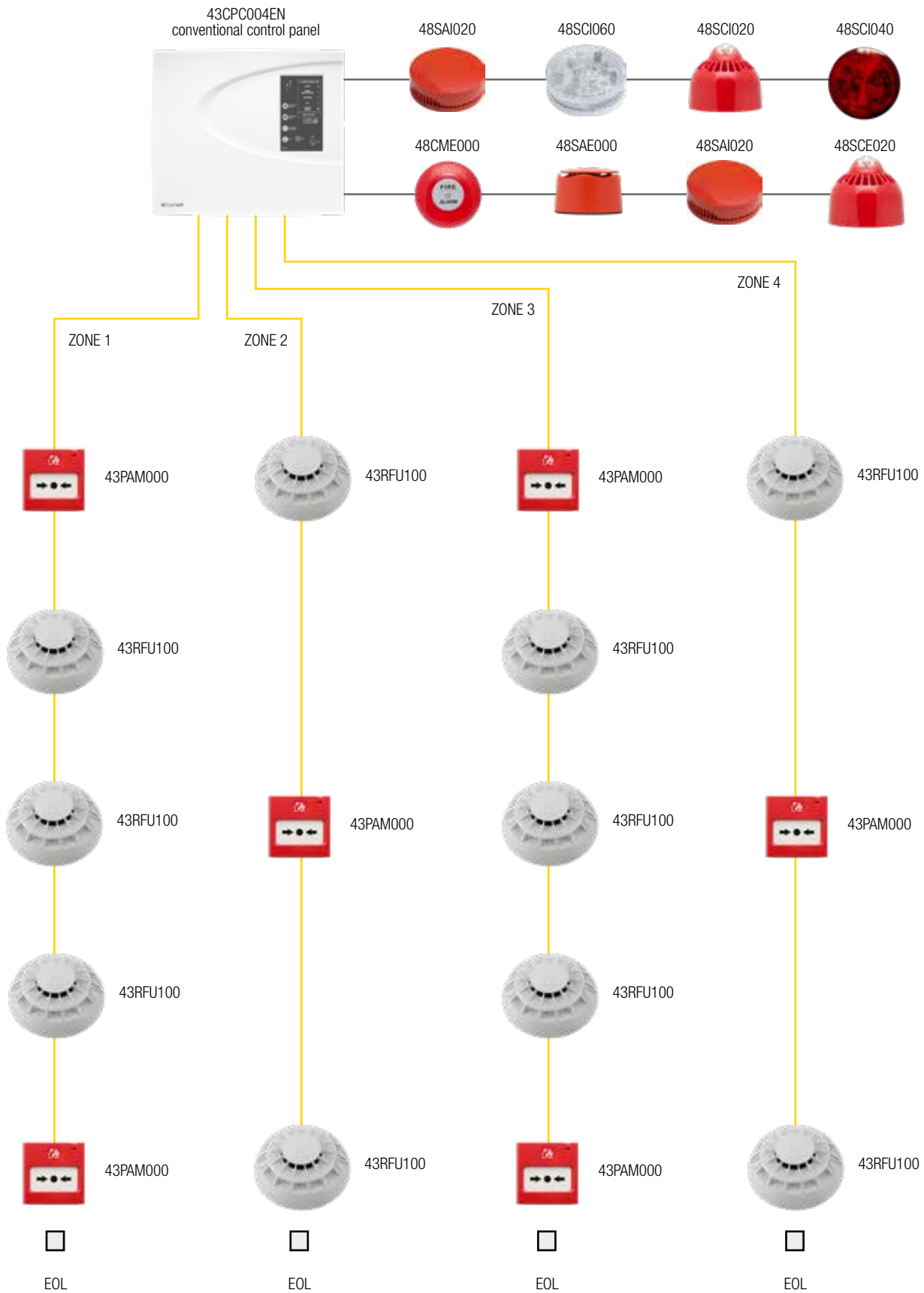
### FIRE DETECTION SYSTEM

Comprised of Eracle conventional control panel for 4 zones, manual call points and smoke detectors.



| Code              | Description                                     | Qty. |
|-------------------|-------------------------------------------------|------|
| <b>43CPC004EN</b> | Eracle conventional 4-zone fire detection panel | 1    |
| <b>43RFU100</b>   | Conventional optical smoke detector             | 10   |
| <b>43PAM000</b>   | Conventional manual call point                  | 6    |
| <b>48SAI020</b>   | Indoor 32 tone siren                            | 2    |
| <b>48SCI060</b>   | Sounder with white strobe                       | 1    |
| <b>48SCI020</b>   | Wall-mounted siren + white strobe - IP21        | 1    |
| <b>48SCI040</b>   | Sounder with red strobe                         | 1    |
| <b>48CME000</b>   | 6" outdoor bell                                 | 1    |
| <b>48SAE000</b>   | Electronic siren                                | 1    |
| <b>48SCE020</b>   | Wall-mounted siren and white strobe             | 1    |

CONVENTIONAL ZONE ———  
SOUNDER CIRCUIT ———





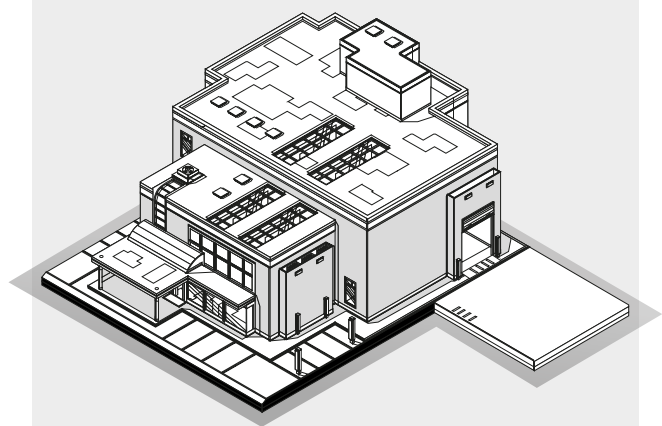
## APPLICATION

### GUIDE TO FIRE DETECTION

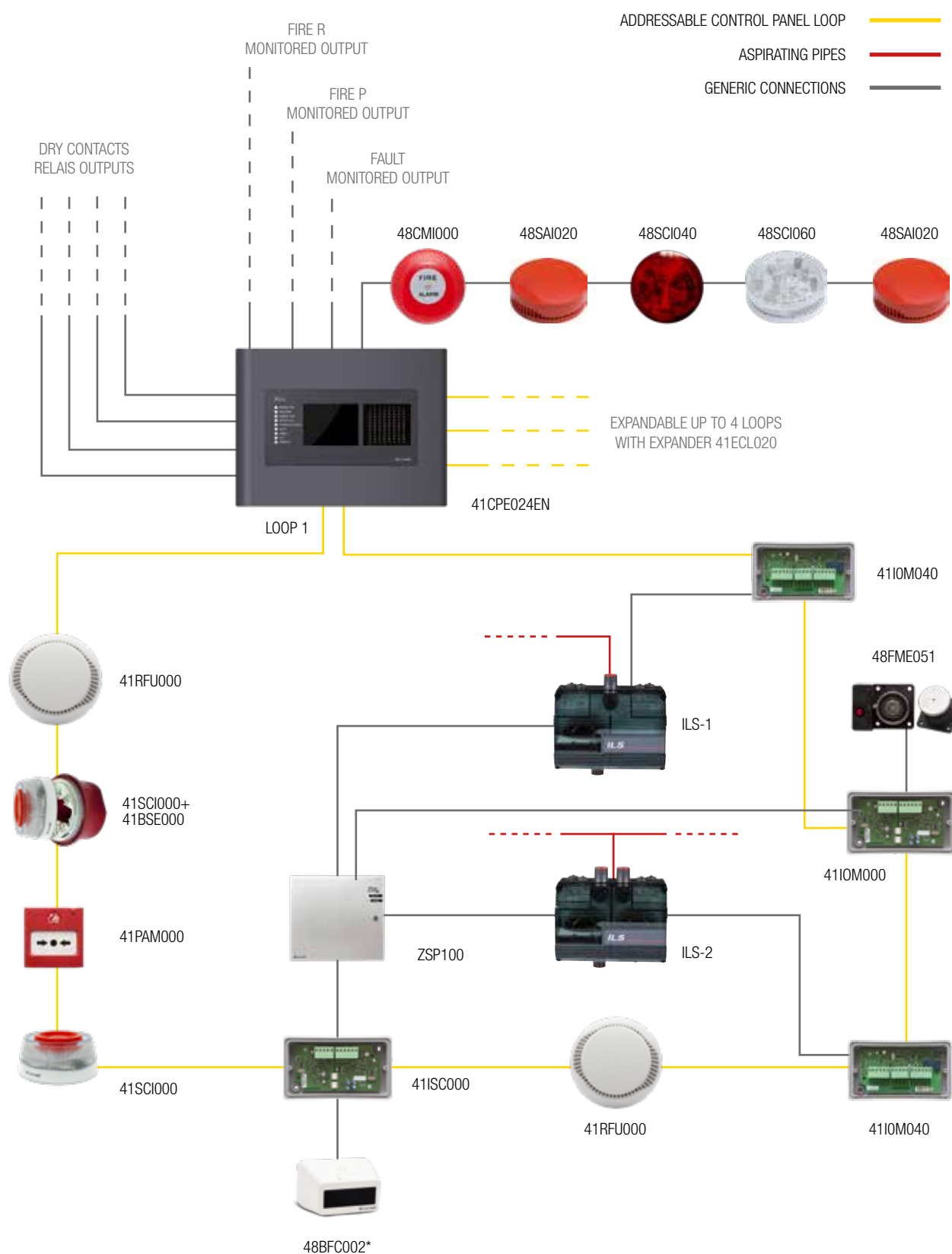
## APPLICATION INDUSTRIAL

### FIRE DETECTION SYSTEM

Comprised of an Atena addressable control panel, manual alarm buttons, smoke detectors and indoor sirens; combined with aspirating system.



| Code                      | Description                                                 | Qty. |
|---------------------------|-------------------------------------------------------------|------|
| <b>41CPE024EN</b>         | Atena expandable addressable fire detection control panel   | 1    |
| <b>41ISC000</b>           | Addressable module for conventional zone                    | 1    |
| <b>ILS-1</b>              | Aspirating detector, 1 zone 1 detect.                       | 1    |
| <b>ILS-2</b>              | Aspirating detector, 2 zone 2 detect.                       | 1    |
| <b>41IOM000</b>           | Addressable module with 1 monitored output                  | 1    |
| <b>41IOM040</b>           | Addressable module with four monitored inputs               | 2    |
| <b>41RFU000</b>           | Addressable optical smoke detector                          | 2    |
| <b>41SCI000</b>           | Addressable indoor siren with strobe for connection in loop | 2    |
| <b>41PAM000</b>           | Addressable manual call point                               | 1    |
| <b>41BSE000</b>           | Base for addressable sirens IP65                            | 1    |
| <b>48BFC002</b>           | Beam detector with reflector 5-50M                          | 1    |
| <b>ZSP100 - 5,5A - 18</b> | 5,5A Additional power supply unit                           | 1    |
| <b>48CMI000</b>           | 6" Indoor bell - IP33C                                      | 1    |
| <b>48SAI020</b>           | Indoor 3-tone piezo siren 24vdc                             | 2    |
| <b>48SCI040</b>           | Sounder with red strobe                                     | 1    |
| <b>48SCI060</b>           | Sounder with white strobe                                   | 1    |
| <b>48FME051</b>           | Magnetic door holder 50 Kg                                  | 1    |



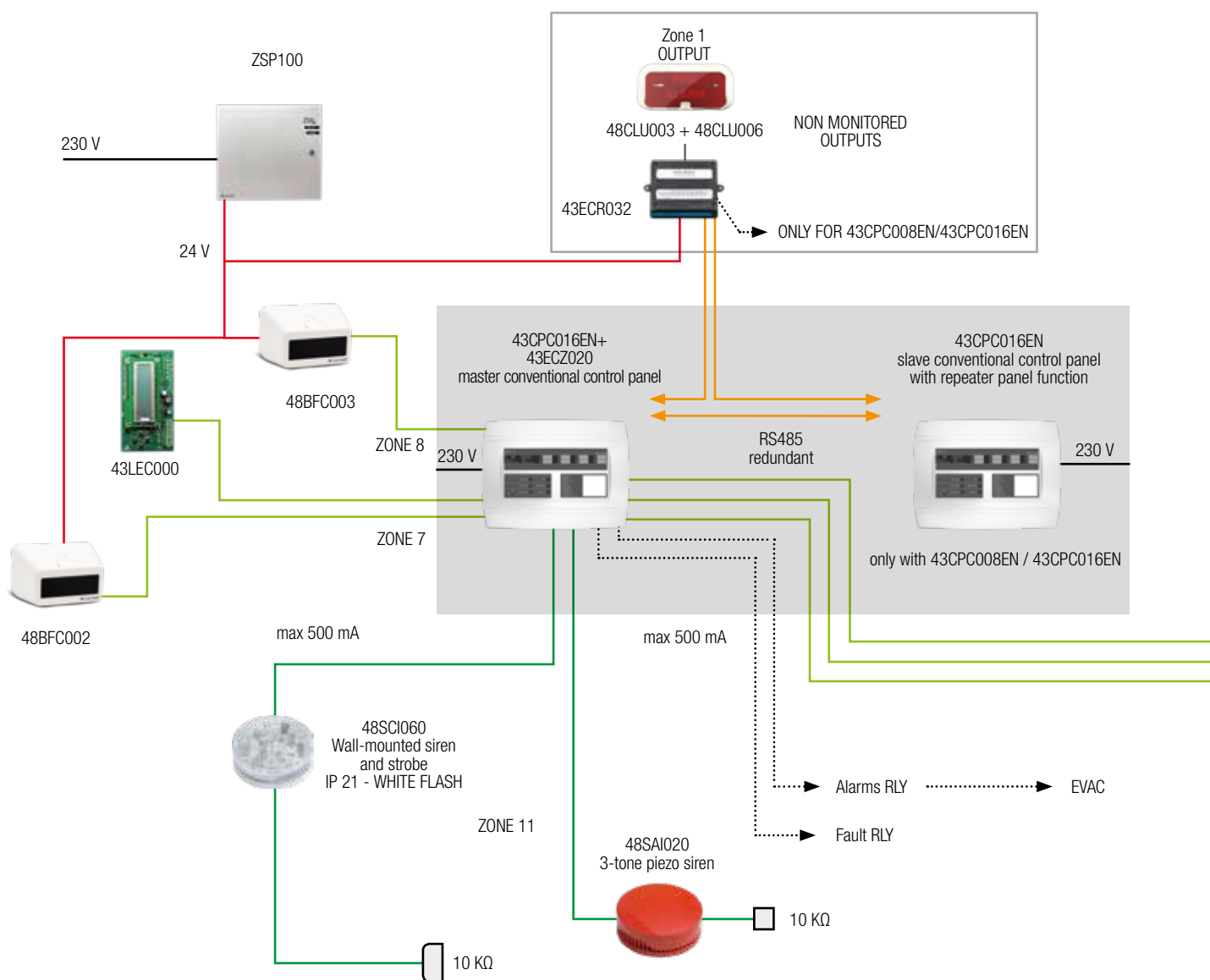
\*Check the absorption of beam detectors with the current available



## APPLICATION DIAGRAMS

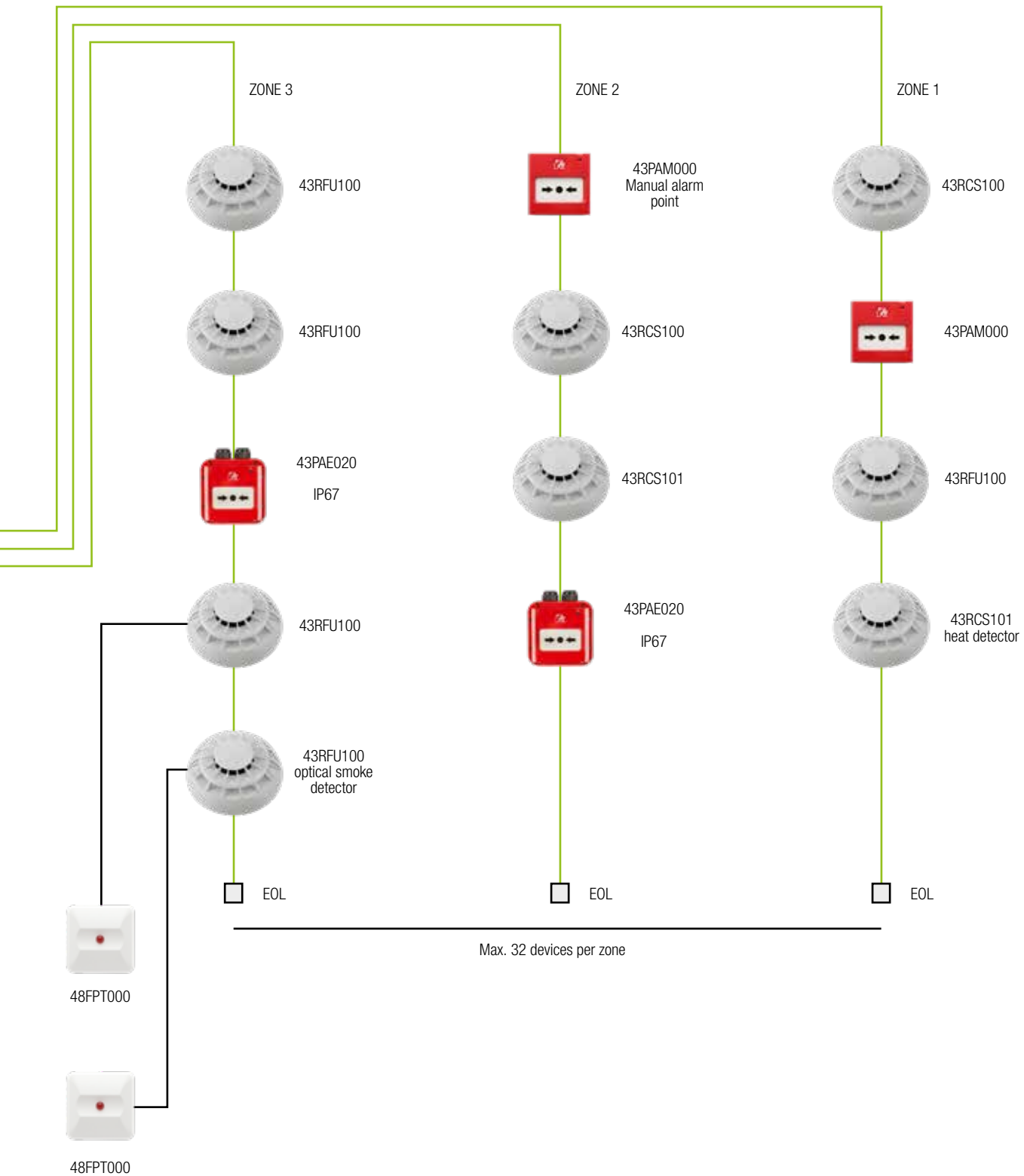
### GUIDE TO FIRE DETECTION

## CONVENTIONAL SYSTEM (GENERAL LAYOUT)



# FIRE DETECTION

- ZONE —
- SOUNDER CIRCUITS —
- RS485 —
- 24 V POWER SUPPLY —
- 230 V —

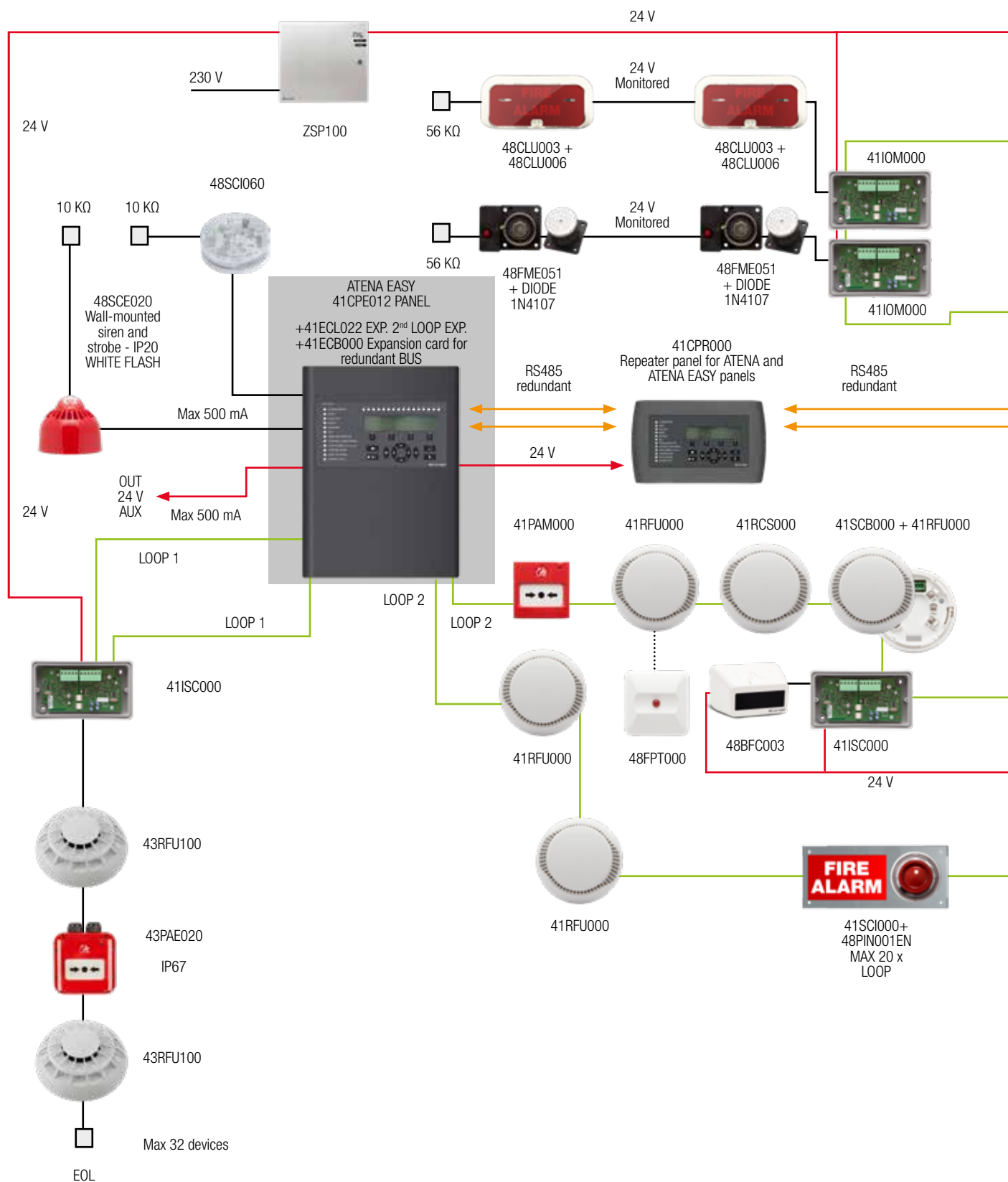
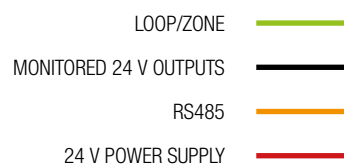


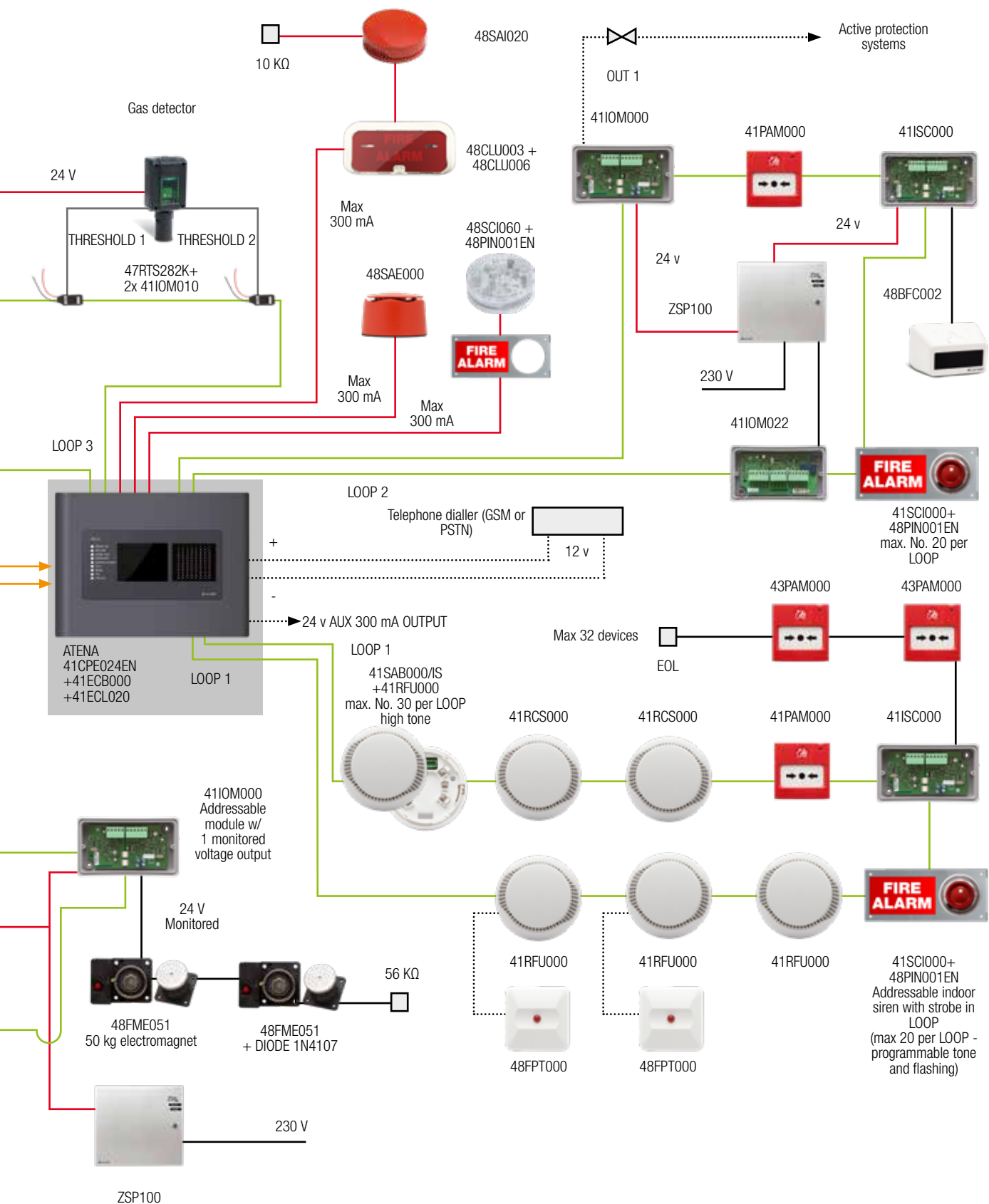


## APPLICATION DIAGRAMS

### GUIDE TO FIRE DETECTION

## ADDRESSABLE SYSTEM (GENERAL LAYOUT)





N.B.

Up to 250 addressable devices can be connected to each LOOP.  
All the devices indicated can be connected in both Comelit addressable  
analogue panels.



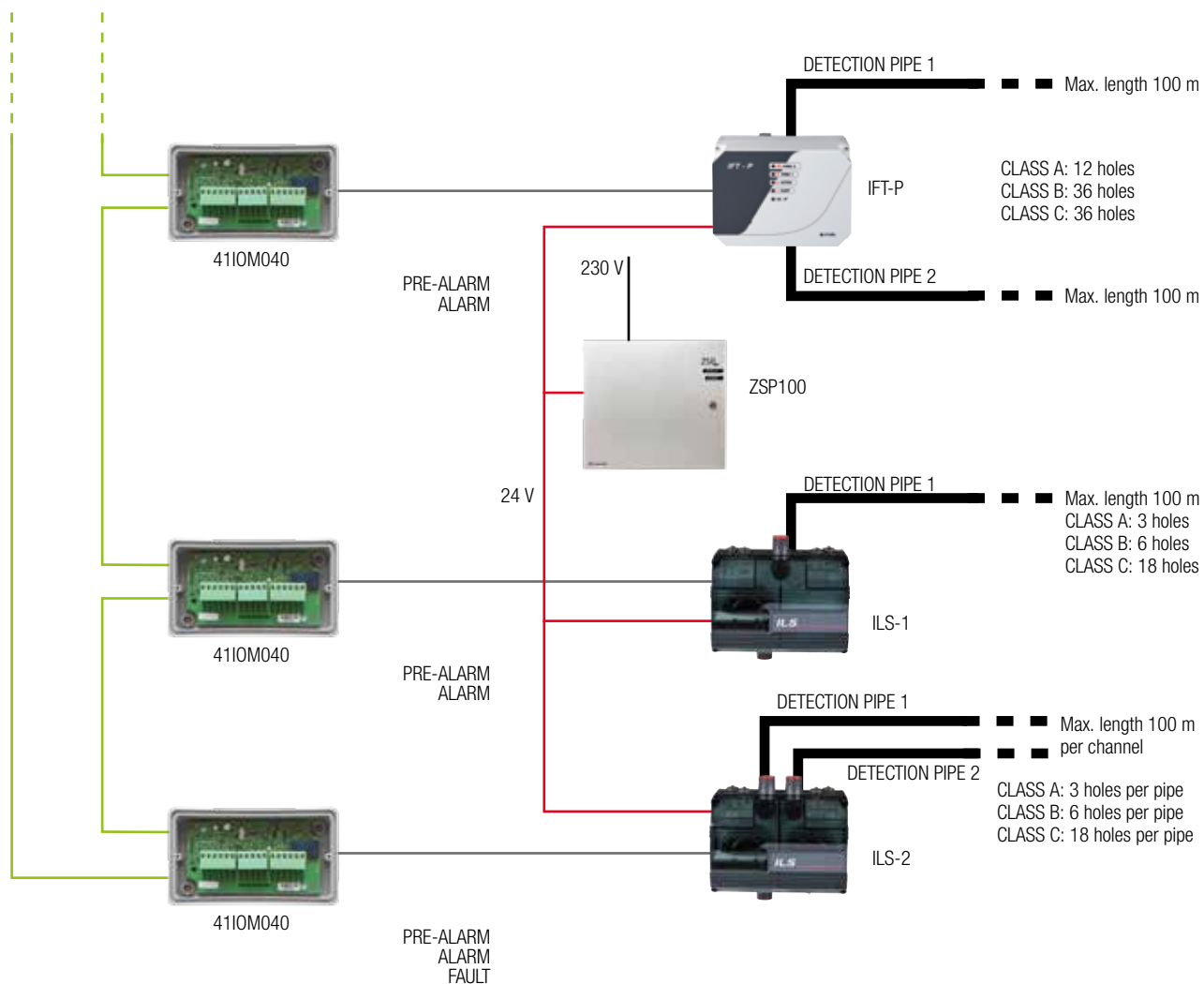
## APPLICATION DIAGRAMS

### GUIDE TO FIRE DETECTION

## ASPIRATING SYSTEM (GENERAL LAYOUT)

LOOP ———  
24 V ———  
GENERIC CONNECTIONS ———

Fire alarm panel loop  
41CPE012/41CPE024EN





## CONVENTIONAL SYSTEM

|                   |    |
|-------------------|----|
| PANELS            | 30 |
| OPTIONAL CARDS    | 31 |
| DETECTORS AND MCP | 32 |

## ADDRESSABLE SYSTEM

|                                 |    |
|---------------------------------|----|
| PANELS                          | 34 |
| DEVICE PROGRAMMERS AND SOFTWARE | 35 |
| DETECTORS AND MCP               | 36 |
| VISUAL AND AUDIBLE DEVICES      | 37 |
| MODULES                         | 38 |

## COMMON ACCESSORIES

|                                    |    |
|------------------------------------|----|
| BEAM DETECTORS                     | 39 |
| VISUAL AND AUDIBLE WARNING DEVICES | 40 |
| DOOR HOLDERS                       | 42 |
| ACCESSORIES                        | 43 |

## ASPIRATING SYSTEM

|                        |    |
|------------------------|----|
| ASPIRATING UNITS       | 44 |
| ASPIRATING ACCESSORIES | 45 |

## ATEX DETECTION

48

## EXTINGUISHING

49

## GAS DETECTION

|                                |    |
|--------------------------------|----|
| EASY DIN RAIL GAS PANELS       | 50 |
| EASY DIN PANEL ACCESSORIES     | 50 |
| PROFESSIONAL GAS PANELS        | 51 |
| EASY DIN AND PRO GAS DETECTORS | 52 |
| REPLACEABLE CARTRIDGES         | 52 |
| COMPACT GAS PANELS             | 54 |
| DETECTORS FOR DOMESTIC USE     | 54 |

# PRODUCT CATALOGUE

## FIRE DETECTION





## CONVENTIONAL SYSTEM

### GUIDE TO FIRE DETECTION

#### CONVENTIONAL PANELS

|                           |                                                                          |  |                                          |                                          |  |
|---------------------------|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------|------------------------------------------|-------------------------------------------------------------------------------------|
|                           |                                                                          | ERACLE 2<br>43CPC002EN                                                            | ERACLE 4<br>43CPC004EN                   | ERACLE 8<br>43CPC008EN                   | ERACLE 16<br>43CPC016EN                                                             |
|                           | ARTICLE CODE                                                             | ERACLE CONV. FIRE ALARM PANEL<br>2 ZONES                                          | ERACLE CONV. FIRE ALARM PANEL<br>4 ZONES | ERACLE CONV. FIRE ALARM PANEL<br>8 ZONES | CONVENTIONAL PANEL WITH 8 TO<br>16 ZONES                                            |
| FUNCTIONS                 | REMOTE PANEL CONTROL                                                     |                                                                                   |                                          | Yes                                      | Yes                                                                                 |
|                           | NO. OF RELAYS WITH EXPANSION                                             |                                                                                   |                                          | 8 (with art. 43ECR032)                   | 16 (with art. 43ECR032)                                                             |
|                           | SIREN ACTIVATION DELAY                                                   |                                                                                   |                                          | 1 - 10 minutes                           | 1 - 10 minutes                                                                      |
|                           | DETECTION WITH CONFIRMATION (DUAL ACTION)                                |                                                                                   |                                          | Yes                                      | Yes                                                                                 |
|                           | INSTANT ZONE                                                             |                                                                                   |                                          | Programmable                             | Programmable                                                                        |
|                           | NUMBER OF 4-ZONE EXPANSION UNITS                                         |                                                                                   |                                          |                                          | 2 (2 x art. 43ECZ020 max.)                                                          |
|                           | NUMBER OF 4-SIREN EXPANSION UNITS                                        |                                                                                   |                                          |                                          | 1 (with art. 43ECS020)                                                              |
| HARDWARE CHARACTERISTICS  | NUMBER OF DETECTION ZONES AVAILABLE                                      | 2                                                                                 | 4                                        | 8                                        | 8, expandable up to 16                                                              |
|                           | COMELIT SENSORS AND ALARM BUTTONS PER ZONE (MAX)                         | 32                                                                                | 32                                       | 32                                       | 32                                                                                  |
|                           | MONITORED OUTPUTS                                                        | 2 (0.3 A max. each)                                                               | 2 (0.3 A max. each)                      | 2 (0.3 A max. each)                      | 2 (0.3 A max. each)                                                                 |
|                           | NO. OF FIRE RELAYS                                                       | 1 (3 A@120 VAC, 3 A@60 VDC)                                                       | 1 (3 A@120 VAC, 3 A@60 VDC)              | 1 (3 A@24 VDC)                           | 1 (3 A@24 VDC)                                                                      |
|                           | NO. OF FAULT RELAYS                                                      | 1 (3 A@120 VAC, 3 A@60 VDC)                                                       | 1 (3 A@120 VAC, 3 A@60 VDC)              | 1 (3 A@24 VDC)                           | 1 (3 A@24 VDC)                                                                      |
| GENERAL DATA              | IP PROTECTION RATING                                                     | IP30                                                                              | IP30                                     | IP30                                     | IP30                                                                                |
|                           | DIMENSIONS (W X H X D - mm)                                              | 340x290x100                                                                       | 340x290x100                              | 340x290x100                              | 441x331x80 mm                                                                       |
|                           | OPERATING TEMPERATURE (°C)                                               | -5 to 40                                                                          | -5 to 40                                 | -5 to 40                                 | -5 to 40                                                                            |
|                           | MAX. OPERATING HUMIDITY RH (%)                                           | (93 ± 3)% @ 40°C                                                                  | (93 ± 3)% @ 40°C                         | (93 ± 3)% @ 40°C                         | (93 ± 3)% @ 40°C                                                                    |
|                           | STORAGE TEMPERATURE (°C)                                                 | -20 to 60                                                                         | -20 to 60                                | -20 to 60                                | -20 to 60                                                                           |
|                           | CERTIFICATION STANDARD                                                   | EN54-2, EN54-4                                                                    | EN54-2, EN54-4                           | EN54-2, EN54-4                           | EN54-2, EN54-4                                                                      |
|                           | ENCLOSURE                                                                | Plastic                                                                           | Plastic                                  | Plastic                                  | Plastic                                                                             |
|                           | PLASTIC COVER DIMENSIONS (WXHxD - mm)                                    |                                                                                   |                                          |                                          | 444x461x45 mm                                                                       |
|                           | WEIGHT WITHOUT BATTERY (G)                                               | 2100                                                                              | 2100                                     | 2400                                     | 4000                                                                                |
|                           | LEVEL 2 PROTECTION                                                       | Mechanical key                                                                    | Mechanical key                           | Mechanical key                           | Mechanical key                                                                      |
|                           | ALERTS                                                                   | LED                                                                               | LED                                      | LED                                      | LED                                                                                 |
|                           | MAX. CONNECTION CABLE CROSS-SECTION (mm²)                                | 1 to 2.5                                                                          | 1 to 2.5                                 | 1 to 2.5                                 | 1 to 2.5                                                                            |
| ELECTRICAL SPECIFICATIONS | MAIN POWER SUPPLY                                                        | 230 VAC ±10% (0.3 A fuse)                                                         | 230 VAC ±10% (0.3 A fuse)                | 230 VAC ±10% (0.3 A fuse)                | 230 VAC ±10% (2 A fuse)                                                             |
|                           | BACKUP POWER SUPPLY (BATTERIES NOT SUPPLIED)                             | 1x 12 VDC, 7 Ah, 2 A fuse                                                         | 1x 12 VDC, 7 Ah, 2 A fuse                | 1x 12 VDC, 7 Ah, 2 A fuse                | 1x 12 VDC, 18 Ah, 4.5 A fuse                                                        |
|                           | POWER SUPPLY FOR EXTERNAL DEVICES (VDC)                                  | 24 (0.3 A max)                                                                    | 24 (0.3 A max)                           | 24 (0.3 A max)                           | 24 (0.3 A max)                                                                      |
|                           | ZONE ALARM THRESHOLDS (mA)                                               | 10 to 110                                                                         | 10 to 110                                | 10 to 110                                | 10 to 110                                                                           |
|                           | NETWORK POWER ABSORPTION (mA)                                            | 50                                                                                | 50                                       | 50                                       | 50                                                                                  |
|                           | MAX. POWER ABSORPTION OF CONNECTED DEVICES WITH CHARGED BATTERY (A)      | 0.7                                                                               | 0.7                                      | 0.7                                      | 0.7                                                                                 |
|                           | CIRCUIT OUTPUTS FOR SIRENS                                               | 24 VDC/0.3 A, 0.3 A fuse                                                          | 24 VDC/0.3 A, 0.3 A fuse                 | 0.5 A@24 VDC, 0.5 A fuse (PTC)           | 24 VDC/0.3 A, 0.3 A fuse                                                            |
|                           | OUTPUTS CIRCUIT FOR SIRENS 2                                             | 24 VDC/0.3 A, 0.3 A fuse                                                          | 24 VDC/0.3 A, 0.3 A fuse                 | 0.5 A@24 VDC, 0.5 A fuse (PTC)           | 24 VDC/0.3 A, 0.3 A fuse                                                            |
|                           | ZONE POWER SUPPLY AND SHORT CIRCUIT THRESHOLDS (mA)                      | > 110                                                                             | > 110                                    | > 110                                    | > 110                                                                               |
|                           | ZONE FAULT OR OPEN CIRCUIT THRESHOLDS (mA)                               | 2                                                                                 | 2                                        | 2                                        | 2                                                                                   |
|                           | ZONE POWER SUPPLY VOLTAGE AND NORMAL MODE THRESHOLDS (mA)                | 2 to 10                                                                           | 2 to 10                                  | 2 to 10                                  | 2 to 10                                                                             |
|                           | FAULT RELAY AND ALARM RELAY OUTPUTS SWITCHING WITH VOLTAGE-FREE CONTACTS | 3 A@120 VAC, 3 A@60 VDC                                                           | 3 A@120 VAC, 3 A@60 VDC                  | 3 A@120 VAC, 3 A@60 VDC                  | 3 A@120 VAC, 3 A@60 VDC                                                             |

## CARDS AND ACCESSORIES FOR CONVENTIONAL PANELS

**43ECR032****8 RELAY EXPANSION MODULE FOR ERACLE 8 AND ERACLE 16**

The 8 relay expansion module can be connected to the ERACLE 8 and ERACLE 16 panel via serial port. Each relay is associated with a zone and will be activated in the event of a fire alarm being generated in that zone. Power supply voltage: 24 VDC. Current consumption on standby: 8 mA. Additional consumption for each active relay: 10 mA. Maximum current absorption: 2 A. Contacts capacity: 1 A@12 V or 0.5 A @24 VDC. Cable cross section: 1.5 - 2.5 mm<sup>2</sup>. Operating temperature -5°C - +40°C. Operating relative humidity: 93% (± 3%)@40°C. Dimensions:(HxWxD): 130x111x41 mm. Weight: 0.4 kg

**43CRE000****SET OF 5 PAIRS OF KEYS FOR ERACLE PANEL**

Set of 5 pairs of keys for Eracle panel.

**43EOL000****SET OF 5 END-OF-LINE RES. FOR CONVENTIONAL ZONE**

Set of 5 end-of-line resistors for conventional zone.

**43ECZ020****4 ZONE EXPANSION MODULE FOR ERACLE 16**

4 zone expansion module for ERACLE 16 Up to 32 devices can be connected to each zone. Absorption in standby mode 130 mA. Absorption in alarm mode 330 mA. Dimensions 57x81 mm. Weight 200 g.

**43ECS020****4 SIREN EXPANSION MODULE FOR ERACLE 16**

Expansion module with 4 siren lines for ERACLE 16 Absorption in alarm mode 150 mA. Operating temperature 0°C to +40°C. Weight 200 g. Dimensions 57x81 mm.

**43LEC000****EVENT LOG FOR ERACLE 16**

Event log for Eracle 16. Number of events in the memory 510. Rated voltage 24 Vd/c. Absorption in standby mode 25 mA. Absorption with backlighting activated: 55 mA ± 2 mA. Maximum absorption with backlighting and relay output activated: 76 mA ± 2 mA. Dimensions: 125x66 mm



## CONVENTIONAL SYSTEM

### GUIDE TO FIRE DETECTION

#### CONVENTIONAL DETECTORS



| CONVENTIONAL DETECTORS    |                                                                     |                                                                 |                                               |                                               |                                                            |
|---------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------|-----------------------------------------------|------------------------------------------------------------|
|                           | ARTICLE CODE                                                        | <b>43RCS100</b>                                                 | <b>43RCS101</b>                               | <b>43RFU100</b>                               | <b>43RML100</b>                                            |
|                           |                                                                     | CONVENTIONAL HEAT AND RATE OF RISE DETECTOR                     | CONVENTIONAL HEAT DETECTOR                    | CONVENTIONAL OPTICAL SMOKE DETECTOR           | CONVENTIONAL MULTI-CRITERIA SMOKE/HEAT DETECTOR            |
| FUNCTIONS                 | SELF DIAGNOSIS                                                      | Yes                                                             | Yes                                           | Yes                                           | Yes                                                        |
|                           | LED INDICATORS                                                      | 2, 360° visibility                                              | 2, 360° visibility                            | 2, 360° visibility                            | 2, 360° visibility                                         |
|                           | DRIFT COMPENSATION                                                  |                                                                 |                                               | Yes                                           |                                                            |
| HARDWARE CHARACTERISTICS  | IP PROTECTION RATING (IP CODE)                                      | IP30                                                            | IP30                                          | IP30                                          | IP30                                                       |
| GENERAL DATA              | DETECTOR CLASS (IN ACCORDANCE WITH A EN54-5)                        | A1/R                                                            | A2/S                                          | N/A                                           | A1/R                                                       |
|                           | COLOUR                                                              | White                                                           | White                                         | White                                         | White                                                      |
|                           | DIMENSIONS (ØXH - mm - BASE INCLUDED)                               | 102x42                                                          | 102x42                                        | 102x42                                        | 102x48                                                     |
|                           | WEIGHT (G)                                                          | 160                                                             | 160                                           | 160                                           | 170                                                        |
|                           | CABLE CROSS-SECTION (mm <sup>2</sup> )                              | 0.4 to 2.5                                                      | 0.4 to 2.5                                    | 0.4 to 2.5                                    | 0.4 to 2.5                                                 |
|                           | CERTIFICATION STANDARD                                              | EN54-5                                                          | EN54-5                                        | EN54-7                                        | EN54-5, EN54-7                                             |
| TECHNICAL CHARACTERISTICS | TYPE OF DETECTION POINT                                             | Heat detector with fixed threshold 58°C + rate of rise detector | Heat detector with fixed threshold 60°C       | Optical smoke detector                        | Multi-criteria smoke/heat detector + rate of rise detector |
|                           | OPERATING TEMPERATURE (°C)                                          | -10 to 60                                                       | -10 to 60                                     | -10 to 60                                     | -10 to 60                                                  |
|                           | SETTLING TIME ON POWER-UP (S)                                       | 30                                                              | 30                                            | 30                                            | 30                                                         |
|                           | MAX. OPERATING HUMIDITY RH (%)                                      | (93 ± 3)% @ 40°C                                                | (93 ± 3)% @ 40°C                              | (93 ± 3)% @ 40°C                              | (93 ± 3)% @ 40°C                                           |
|                           | CURRENT ABSORPTION IN ALARM STATUS WITH BASES 43RBX000 AND 43RBX001 | 20 mA, 12-30 VDC                                                | 20 mA, 12-30 VDC                              | 20 mA, 12-30 VDC                              | 20 mA, 12-30 VDC                                           |
|                           | CURRENT ABSORPTION IN ALARM STATE WITH BASE TYPE 43RBX003           | 18 mA @ 9 VDC, 29 mA @ 12 VDC, 32 mA @ 15 VDC                   | 18 mA @ 9 VDC, 29 mA @ 12 VDC, 32 mA @ 15 VDC | 18 mA @ 9 VDC, 29 mA @ 12 VDC, 32 mA @ 15 VDC | 18 mA @ 9 VDC, 29 mA @ 12 VDC, 32 mA @ 15 VDC              |
|                           | AVERAGE CURRENT CONSUMPTION IN INACTIVE STATE                       | <50 µA                                                          | <50 µA                                        | <50 µA                                        | <50 µA                                                     |
|                           | OPERATING VOLTAGE (VDC)                                             | 9-30 (12-24 VDC rated)                                          | 9-30 (12-24 VDC rated)                        | 9-30 (12-24 VDC rated)                        | 9-30 (12-24 VDC rated)                                     |
|                           | OUTPUT IN ALARM STATE FOR REMOTE INDICATION                         | 20 mA/3.3 VDC                                                   | 20 mA/3.3 VDC                                 | 20 mA/3.3 VDC                                 | 20 mA/3.3 VDC                                              |

**43RBX000****BASE FOR CONVENTIONAL DETECTORS**

The standard base for conventional detectors has a low-profile design and an extremely reliable sensor connection system that provides a secure fixing for the detector. Dimensions: ø 102 mm, h 11 mm.

**43RBX001****BASE WITH DIODE FOR CONVENTIONAL DETECTORS**

The standard base with diode for conventional detectors has a low-profile design and an extremely reliable sensor connection system that provides a secure fixing for the detector. The diode senses when the detector is removed from its base. Dimensions: ø 102 mm, h 11 mm. Weight: 42 g.

**43RBX003****BASE WITH RELAY FOR CONVENTIONAL DETECTORS**

The base with relay for conventional detectors has a low-profile design and an extremely reliable sensor connection system that provides a secure fixing for the detector. The base is equipped with a 12 Vdc relay for interfacing with security systems. It can also operate in reset mode. Dimensions: ø 102 mm, h 11 mm. Weight: 46 g.

**43RBX004****BASE WITH DIODE FOR CONVENTIONAL DETECTORS 45 MA**

Base with diode for conventional detectors with a low-profile design and an extremely reliable sensor connection system that provides a secure fixing for the detector. Compatible with fire alarm panels, where the current in alarm status is  $\geq 45$  mA. The diode senses when the detector is removed from its base. Dimensions (ø x H): 102 x 11 mm. Weight: 42 g.

**43RBA002****SPACER FOR CONVENTIONAL DETECTORS**

The spacer enables the input of pipes for visible systems and the mounting of conventional and addressable sensors or sirens Art. 41SCB000, 41SAB000/IS, 48SAI020, 48SCI040, 48SCI060 on uneven surfaces, suspended ceilings, etc.

**43RBR003****SPACER FOR CONVENTIONAL SIRENS**

The spacer enables the input of pipes for visible systems and the mounting of conventional sirens Art. 48SAI020, 48SCI040 on uneven surfaces, suspended ceilings, etc.

**48FPT000****REMOTE LED INDICATOR**

Remote indicator that repeats status of detectors. Compatible with sensors and bases that support this function. Operating voltage: 18 Vdc. Current absorption in active state: 30 mA. Cable cross section: 0.4 - 2.5 mm<sup>2</sup>. Operating temperature -10°C / +60°C. Operating relative humidity: 93 (± 3)% @ 40°C. Dimensions: 85x85x20 mm. Weight: 42 g.

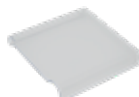
**43PAE020****OUTDOOR CONVENTIONAL MANUAL CALL POINT - IP67**

Manual call point with protection rating IP67, designed for use in conventional detection systems. The manual call point is equipped with a plastic recovery key (supplied) and, when it is activated by pressing the point indicated, it transmits an alarm signal to the panel. It has an LED at the front for indicating the alarm or test status. Resettable flexible element with special recovery key supplied. Wall mounting. Red ABS housing. Approved in compliance with EN54-11.

Note: the declared protection rating IP67 is only applicable if using IP67 rated cable guides.

**43PAM000****CONVENTIONAL MANUAL CALL POINT**

Manual call point with protection rating IP40, designed for use in conventional detection systems. The call point is equipped with a plastic recovery key (supplied) and, when it is activated by pressing the point indicated, it transmits an alarm signal to the panel. It has an LED at the front for indicating the alarm or test status. Resettable flexible element with special key. Wall mounting. Red ABS housing. Approved to EN54-11.

**43PAT000****PLASTIC COVER FOR MANUAL CALL POINTS, SET OF 5 PIECES**

Set consisting of 5 protective covers in transparent plastic material, for button models 41PAM000, 43PAM000, 43PAE020 and 41PAE020.

**43PAK000****SPARE KEY FOR MANUAL CALL POINT**

Spare key for manual call points art. 41PAM000, 43PAM000, 41PAE020 and 43PAE020.



## ADDRESSABLE SYSTEM

### GUIDE TO FIRE DETECTION

#### ADDRESSABLE PANELS

| ADDRESSABLE PANELS                      |                                                              |                                                                                   |                                                                                     |
|-----------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                                         |                                                              |  |  |
|                                         |                                                              | ATENA EASY                                                                        | ATENA                                                                               |
|                                         |                                                              | 41CPE012                                                                          | 41CPE024EN                                                                          |
| ARTICLE CODE                            |                                                              | ATENA EASY ADDRESSABLE FIRE PANEL                                                 | ATENA ADDRESSABLE PANEL WITH METAL CASE                                             |
| SOFTWARE/<br>FIRMWARE<br>SPECIFICATIONS | EVENT LOG NO.                                                | 10,000                                                                            | 10,000                                                                              |
|                                         | OPERATING MODE WITH/WITHOUT<br>SUPERVISION (DAY/NIGHT)       | Yes                                                                               | Yes                                                                                 |
|                                         | PROGRAMMING VIA PC                                           | With AtenaProg software                                                           | With AtenaProg software                                                             |
|                                         | LOCAL PROGRAMMING                                            | Via menu on display and keypad                                                    | Via menu on touchscreen display                                                     |
| FUNCTIONS                               | PROGRAMMABLE LOGIC FUNCTIONS                                 |                                                                                   | AND/OR logic                                                                        |
|                                         | SENSOR ADDRESSING WITH AUTO-<br>ACQUISITION OF LOOP DEVICES  | Yes                                                                               | Yes                                                                                 |
|                                         | SENSOR ADDRESSING WITH ELECTRONIC<br>PROGRAMMER 41SPG000     | Yes                                                                               | Yes                                                                                 |
|                                         | SIREN ACTIVATION DELAY                                       | 1 - 10 minutes                                                                    | 1 - 10 minutes                                                                      |
|                                         | DETECTION WITH CONFIRMATION (DUAL<br>ACTION)                 | Yes                                                                               | Yes                                                                                 |
|                                         | CONNECTIVITY                                                 | RS485, LAN (with accessory 41ECN000)                                              | RS485, LAN                                                                          |
| HARDWARE<br>CHARACTERISTICS             | DEDICATED INPUTS FOR INTERFAC. WITH<br>EXTINGUISHING SYSTEMS | 3                                                                                 |                                                                                     |
|                                         | ZONE STATUS INDICATOR LEDs                                   | 16                                                                                | 96                                                                                  |
|                                         | NUMBER OF LOOPS                                              | 1 standard, expandable to 2 with expansion to one loop<br>41ECL022                | 1 standard, expandable to 4 with expansion to one loop<br>41ECL020                  |
|                                         | NUMBER OF DETECTION ZONES<br>AVAILABLE                       | 48                                                                                | 96                                                                                  |
|                                         | MAX. NUMBER OF PANELS ON<br>REDUNDANT RS485 NETWORK          | 64                                                                                | 64                                                                                  |
|                                         | MAX. NUMBER OF DEVICES PER LOOP                              | 250                                                                               | 250                                                                                 |
|                                         | CONNECTION OVER ETHERNET                                     | Yes                                                                               | Yes                                                                                 |
| GENERAL DATA                            | IP PROTECTION RATING                                         | IP30                                                                              | IP30                                                                                |
|                                         | DIMENSIONS (W X H X D - mm)                                  | 306x412x81 mm                                                                     | 441x331x80 mm                                                                       |
|                                         | OPERATING TEMPERATURE (°C)                                   | -10 to 50                                                                         | -10 to 50                                                                           |
|                                         | MAX. OPERATING HUMIDITY RH (%)                               | (93 ± 3)% @ 40°C                                                                  | (93 ± 3)% @ 40°C                                                                    |
|                                         | CERTIFICATION STANDARD                                       | EN54-2, EN54-4                                                                    | EN54-2, EN54-4, LPCB                                                                |
|                                         | ENCLOSURE                                                    | Metal                                                                             | Metal                                                                               |
|                                         | DISPLAY                                                      | Alphanumeric LCD, 4 rows of 40 characters                                         | Graphic touchscreen LCD, 320x240 pixel                                              |
|                                         | WEIGHT WITHOUT BATTERY (G)                                   | 4200                                                                              | 6000                                                                                |
| TECHNICAL<br>CHARACTERISTICS            | ACTIVATION DELAY MANAGEMENT                                  | Yes                                                                               | Yes                                                                                 |
|                                         | MAIN POWER SUPPLY                                            | 230 VAC ±10% (0.3 A fuse)                                                         | 230 VAC ±10% (0.3 A fuse)                                                           |
|                                         | ABSORPTION (A)                                               | 0.065@230 VAC                                                                     | 0.095@230 VAC                                                                       |
|                                         | BACKUP POWER SUPPLY (BATTERIES NOT<br>SUPPLIED)              | 1x 12 VDC, 18 Ah, 4.5 A fuse                                                      | 1x 12 VDC, 18 Ah, 4.5 A fuse                                                        |
|                                         | POWER SUPPLY FOR EXTERNAL DEVICES<br>(VDC)                   | 1 x 24                                                                            | 1x24                                                                                |
|                                         | AUXILIARY DEVICES POWER SUPPLY<br>OUTPUT                     | 1 (24 VDC/0.5 A)                                                                  | 1 (24 VDC/0.3 A)                                                                    |
|                                         | PROGRAMMABLE RELAY OUTPUTS WITH<br>FREE CONTACT (NO/NC)      | 4 (15A@24 VDC)                                                                    | 4 (250 VAC/10 A, 24 VDC/15 A)                                                       |
|                                         | OUTPUTS FOR EXTINGUISHING SYSTEM<br>CONTROL                  | 1 (24 VDC/0.3 A)                                                                  |                                                                                     |
|                                         | MONITORED OUTPUTS FOR SIRENS                                 | 2 (24 VDC/0.5 A)                                                                  | 1 (24 VDC/0.3 A)                                                                    |

**41CPR000****PANEL REPEATER**

The repeater panel can receive all the signals from the system and execute all the commands, even in a location far away from the control panel that cannot be easily accessed by operators. Alphanumeric LCD display with 4 lines x 40 characters. Fire alarm, Fault, CPU Fault, Delayed Alarm, Exclusions, Test, Network Present, Alarm Silenced general indications. Direct commands for Silence buzzer, Silence siren, Reset, Evacuation, Signalling test. 4 menu navigation keys, ENTER key (Confirm), CANCEL key, keys 1,2,3,4 for setting the access code.

**41ECL020****1 LOOP EXPANDER CARD FOR ATENA**

Maximum number of devices that can be connected: 250. Maximum current absorption: 500 mA. Cable cross section: 0.4 - 2.5 mm<sup>2</sup>. Operating temperature -10°C / +65°C. Operating relative humidity: (93 ± 3)% @ 40°C. Dimensions: 75x80 mm. Weight: 30 g.

**41ECL022****1 LOOP EXPANDER CARD FOR ATENA EASY**

Maximum number of devices that can be connected: 250. Maximum current absorption: 500 mA. Cable cross section: 0.4-2.5 mm<sup>2</sup>. Operating temperature: -10°C - +65°C. Operating relative humidity: (93 ± 3)%@40°C. Dimensions:(LxH): 75x80 mm. Weight: 30 g.

**41ECB000****REDUNDANT BUS EXP. CARD FOR ATENA + ATENA EASY PANELS**

This card can be used to create a redundant serial communication network between multiple ATENA, ATENA EASY panels and repeater panels 41CPR000 (up to a maximum of 64), thereby ensuring a backup line of connection in the event of a fault in the physical communication link. Maximum current absorption: 500 mA. Network type: redundant serial line. Maximum number of panels in network: 64. Maximum distance between two cards: 1000 m.

**New****41ECN000****LAN EXPANSION FOR ATENA EASY**

Art. 41ECN000 is a LAN communication module, designed to operate via serial communication with the ATENA EASY fire panel art. 41CPE012 (FW version 3.8.3 or higher). The module transmits incoming events to the ATENA MANAGER supervision software (version 1.11 or higher) via LAN. This module is installed directly inside the ATENA EASY case and is connected using the "flat" cable supplied with the module. The LAN module art. 41ECN000 is programmed using the ATENA PROG programming software (version 5.3.9 or higher).

**New****41PRN000****PRINTER IN BOX FOR ATENA**

Thermal printer for ATENA addressable panel, housed in a metal box with the same dimensions as the panel and designed for installation in modular structures. LED for status indication. RS232 serial interface for connection to Atena panel. Box dimensions (LxHxD): 430 x 330 x 117 mm, colour: grey.

**New****41ALM072****POWER SUPPLY UNIT FOR ADDITIONAL 72 H STAND-BY, ATENA PANEL**

Additional external power supply unit, designed to provide the addressable ATENA panel with extra power. IP30 rated metal enclosure. Maximum battery capacity 2x12 VDC/18 Ah. Continuous monitoring available by activating the "Monitor external power supply unit" option in the Atena panel menu. LED for displaying power supply unit and battery status. Approved to EN54-4.

**41CRA000****5 PAIRS OF KEYS+LOCK, ATENA/ATENA EASY**

Set of 5 pairs of keys plus 5 spare locks for Atena, Atena Easy panels, additional power supply unit 41ALM072 and printer 41PRN000.

**DEVICE PROGRAMMER****41SPG000EN****DEVICE PROGRAMMER FOR ADDRESSABLE PRODUCTS**

The programmer 41SPG000EN is the instrument used to assign addresses to all the devices connected in the loop (detectors, modules, manual call points and audible/visual alarms). It can read and write the addresses and to set the parameters of the detectors and modules. It is supplied with a power supply unit with input 230 VAC/50 Hz and output 1.5÷12 VDC/500 mA (6 VA max., UK type plug) and with 2 cables for the connection of the modules and manual call points. It can also be powered by 4 x 1.5 V AA batteries. The detectors and audible and visual alarm devices can be directly connected to the base on the upper part of the programmer. Dimensions: 255x102x65 mm. Weight: 260 g.

**41SWS000****ATENA MANAGER SUPERVISION SOFTWARE**

ATENA MANAGER is an application for PC for the supervision of systems with ATENA and ATENA EASY panels. ATENA MANAGER constantly monitors the status of the devices in the field and displays the data in the most common graph formats. In the event of fault or alarm conditions, these are displayed graphically on the screen accompanied by the relative audible signals. ATENA MANAGER enables system configurations to be imported directly from the database created with the software ATENA PROG. It can launch commands to silence buzzers, silence sirens, initiate evacuation and reset the panel.



## ADDRESSABLE SYSTEM

### GUIDE TO FIRE DETECTION

## ADDRESSABLE DETECTORS

|                                         |                                              |  |  |                                                            |
|-----------------------------------------|----------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------|
|                                         | ARTICLE CODE                                 | 41RCS000                                                                          | 41RFU000                                                                            | 41RML000                                                   |
|                                         |                                              | ADDRESSABLE HEAT DETECTOR WITH ISOLATOR                                           | ADDRESSABLE OPTICAL SMOKE DETECTOR W/ ISOLATOR                                      | ADDR.MULTI-C.SMOKE/HEAT DET.+ISOLATOR                      |
| SOFTWARE/<br>FIRMWARE<br>SPECIFICATIONS | SENSITIVITY LEVEL SETTINGS                   | A1R/A2R/BS                                                                        | High/Normal*/Medium/Low                                                             | High/Normal*/Medium/Low (optics) - A1R (thermal)           |
| FUNCTIONS                               | LED INDICATORS                               | 2, 360° visibility                                                                | 2, 360° visibility                                                                  | 2, 360° visibility                                         |
| HARDWARE<br>CHARACTERISTICS             | IP PROTECTION RATING                         | IP30                                                                              | IP30                                                                                | IP30                                                       |
| GENERAL DATA                            | DETECTOR CLASS (IN ACCORDANCE WITH A EN54-5) | A1/R, A2/S, B/S                                                                   |                                                                                     | A1/R                                                       |
|                                         | COLOUR                                       | White                                                                             | White                                                                               | White                                                      |
|                                         | DIMENSIONS (ØXH - mm - BASE INCLUDED)        | 103x42                                                                            | 103x42                                                                              | 103x49                                                     |
|                                         | WEIGHT (G)                                   | 110                                                                               | 125                                                                                 | 125                                                        |
|                                         | CABLE CROSS-SECTION (mm²)                    | 0.4- 2.5                                                                          | 0.4- 2.5                                                                            | 0.4- 2.5                                                   |
|                                         | ISOLATOR                                     | Yes                                                                               | Yes                                                                                 | Yes                                                        |
|                                         | CERTIFICATION STANDARD                       | EN54-5, EN54-17                                                                   | EN54-7, EN54-17                                                                     | EN54-5, EN54-7, EN54-17                                    |
|                                         | TYPE OF DETECTION POINT                      | Heat detector / rate of rise detector                                             | Optical smoke detector                                                              | Multi-criteria smoke/heat detector + rate of rise detector |
| TECHNICAL<br>CHARACTERISTICS            | OPERATING TEMPERATURE (°C)                   | -10 to 60                                                                         | -10 to 60                                                                           | -10 to 60                                                  |
|                                         | SETTLING TIME ON POWER-UP (S)                | 30                                                                                | 30                                                                                  | 30                                                         |
|                                         | MAX. OPERATING HUMIDITY RH (%)               | (93 ± 3)% @ 40°C                                                                  | (93 ± 3)% @ 40°C                                                                    | (93 ± 3)% @ 40°C                                           |
| ELECTRICAL<br>SPECIFICATIONS            | RATED CURRENT ABSORPTION (STANDBY)           | <170 µA@27 VDC                                                                    | <190 µA@27 VDC                                                                      | <190 µA@27 VDC                                             |
|                                         | ABSORPTION IN ALARM (mA)                     | 6.5 mA                                                                            | 6.5 mA                                                                              | 6.5 mA                                                     |
|                                         | CURRENT CONSUMPTION IN COMMUNICATION         | <290 µA@27 VDC                                                                    | <310 µA@27 VDC                                                                      | <310 µA@27 VDC                                             |
|                                         | OPERATING VOLTAGE                            | 15-32 (27 VDC rated)                                                              | 15-32 (27 VDC rated)                                                                | 15-32 (27 VDC rated)                                       |
|                                         | OUTPUT IN ALARM STATE FOR REMOTE INDICATION  | 7.5 mA@7.5 VDC                                                                    | 7.5 mA@7.5 VDC                                                                      | 7.5 mA@7.5 VDC                                             |



41PAM000

### ADDRESSABLE MANUAL CALL POINT

Addressable manual call point with built-in isolator. The button is equipped with a resettable special plastic key element (supplied) and sends an alarm signal to the panel when it is activated by pressing the indicated point. It is equipped with an LED for signalling the alarm or test status. Wall mounting. Red ABS housing. Approved to **EN 54-11** and **EN 54-17**.



41PAE020

### OUTDOOR ADDRESSABLE MANUAL CALL POINT - IP67

Manual call point with protection rating IP67, designed for use in addressable detection systems. The manual call point is equipped with a plastic recovery key (supplied); when it is activated by pressing the point indicated, it transmits an alarm signal to the panel. It has an LED at the front for indicating the alarm or test status. Resettable flexible element with special recovery key. Wall mounting. Red ABS housing. Approved in compliance with **EN54-11** and **54-17**.

Note: the declared protection rating IP67 is only applicable if using IP67 rated cable guides.



43PAT000

### PLASTIC COVER FOR MANUAL CALL POINTS, SET OF 5 PIECES

Set consisting of 5 protective covers in transparent plastic material, for button models 41PAM000, 43PAM000, 43PAE020 and 41PAE020.



43PAK000

### SPARE KEY FOR MANUAL CALL POINT

Spare key for manual call points art. 41PAM000, 43PAM000, 41PAE020 and 43PAE020.



41RBX020

### BASE FOR ADDRESSABLE DETECTORS

The standard base for addressable detectors has a low-profile design and an extremely reliable sensor connection system that provides a secure fixing for the detector. Maximum cable cross-section: 3.0 mm². Operating temperature -10°C / +60 C. Operating relative humidity: (93 ± 3)% @ 40°C. Dimensions: 103x14.7 mm. Weight: 15 g.



43RBA002

### SPACER FOR ADDRESSABLE DETECTORS

The spacer enables the input of pipes for visible systems and the mounting of conventional and addressable sensors or sirens Art. 41SCB000, 41SAB000/IS, 48SAI020, 48SCI040, 48SCI060 on uneven surfaces, suspended ceilings, etc.



48FPT000

### REMOTE LED INDICATOR

Remote indicator that repeats status of detectors. Compatible with sensors and bases that support this function. Operating voltage: 18 Vdc. Current absorption in active state: 30 mA. Cable cross section: 0.4 - 2.5 mm². Operating temperature -10°C / +60 C. Operating relative humidity: 93 (± 3)% @ 40°C. Dimensions: 85x85x20 mm. Weight: 42 g.

## VISUAL AND AUDIBLE DEVICES



|                              |                                                                       |                                                                                   |                                                                                   |                                                                                    |                                                                                     |
|------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                              |                                                                       |  |  |  |  |
|                              | ARTICLE CODE                                                          | <b>41SCI000</b>                                                                   | <b>41SAI000</b>                                                                   | <b>41SCB000</b>                                                                    | <b>41SAB000/IS</b>                                                                  |
|                              |                                                                       | ADDRESSABLE INDOOR SIREN<br>W/ STROBE FOR CONN. TO LOOP                           | ADDRESSABLE INDOOR SIREN<br>FOR CONNECTION TO LOOP                                | ADDRESSABLE BASE WITH<br>SIREN AND STROBE                                          | BASE WITH SIREN FOR<br>CONNECTION TO LOOP                                           |
| HARDWARE<br>CHARACTERISTICS  | IP PROTECTION RATING                                                  | IP43C                                                                             | IP43C                                                                             | IP21C                                                                              | IP21C                                                                               |
|                              | FINISH TYPE                                                           | SAN                                                                               | ABS                                                                               | SAN                                                                                | ABS                                                                                 |
|                              | NUMBER OF TONES AVAILABLE                                             | 32                                                                                | 32                                                                                | 32                                                                                 | 32                                                                                  |
|                              | MAXIMUM NO. OF SIRENS ON LOOP, HIGH<br>VOLUME (TONE 27)               | 20 (Strobe active)                                                                | 30                                                                                |                                                                                    | 30                                                                                  |
|                              | MAXIMUM NO. OF SIRENS ON LOOP, LOW<br>VOLUME (TONE 27)                | 30 (Strobe active)                                                                | 60                                                                                |                                                                                    | 100                                                                                 |
| GENERAL DATA                 | COLOUR                                                                | Transparent red                                                                   | Red                                                                               | White                                                                              | White                                                                               |
|                              | DIMENSIONS (mm)                                                       | 116 (Ø) x 55 (H)                                                                  | 116 (Ø) x 55 (H)                                                                  | 102 (Ø) x 32 (H)                                                                   | 102 (Ø) x 32 (H)                                                                    |
|                              | WEIGHT (G)                                                            | 183                                                                               | 183                                                                               | 127                                                                                | 130                                                                                 |
|                              | EFFECTIVE CABLE CROSS-SECTION (mm²)                                   | 0.4 - 2.5                                                                         | 0.4 - 2.5                                                                         | 0.4 - 2                                                                            | 0.4 - 2.5                                                                           |
|                              | CERTIFICATION STANDARD                                                | EN54-3, EN54-17,<br>EN54-23                                                       | EN54-3, EN54-17                                                                   | EN54-3<br>*audible part only                                                       | EN54-3                                                                              |
|                              | VISUAL SIGNAL                                                         | Yes                                                                               |                                                                                   | Yes                                                                                |                                                                                     |
|                              | VISUAL INDICATION COLOUR                                              | White                                                                             |                                                                                   | White                                                                              |                                                                                     |
|                              | OPTICAL SIGNAL COVERAGE IN<br>ACCORDANCE WITH EN54-23                 | (W) 2.4 x 6 m                                                                     |                                                                                   |                                                                                    |                                                                                     |
| TECHNICAL<br>CHARACTERISTICS | MAX. OPERATING HUMIDITY RH (%)                                        | (93 ± 3)@40°C                                                                     | (93 ± 3)@40°C                                                                     | (93 ± 3)@40°C                                                                      | (93 ± 3)@40°C                                                                       |
|                              | OPERATING TEMPERATURE (°C)                                            | -10 to 50                                                                         | -10 to 50                                                                         | -10 to 60                                                                          | -10 to 60                                                                           |
| ELECTRICAL<br>SPECIFICATIONS | ABSORPTION WITH ISOLATOR ACTIVE                                       | <15 mA                                                                            | <15 mA                                                                            |                                                                                    |                                                                                     |
|                              | RATED CURRENT ABSORPTION (STANDBY)                                    | 500 uA/27 VDC                                                                     | 500 uA/27 VDC                                                                     | 470 uA/27 VDC                                                                      | 470 uA/27 VDC                                                                       |
|                              | POWER SUPPLY VOLTAGE (VDC)                                            | 15-32 (27 VDC rated)                                                              | 15-32 (27 VDC rated)                                                              | 15-32 (27 VDC rated)                                                               | 15-32 (27 Vdc rated)                                                                |
|                              | MAX. ABS. (OTHER TONES) HIGH VOLUME<br>(WITH AUDIO AND STROBE ACTIVE) | < 16.5 mA                                                                         | < 16.5 mA                                                                         |                                                                                    |                                                                                     |
|                              | MAX. ABS. (OTHER TONES) HIGH VOLUME<br>(WITH ONLY AUDIO ACTIVE)       | < 10 mA                                                                           | < 10 mA                                                                           |                                                                                    |                                                                                     |
|                              | MAX. ABS. (OTHER TONES) LOW VOLUME<br>(WITH AUDIO AND STROBE ACTIVE)  | < 11 mA                                                                           | < 11 mA                                                                           |                                                                                    |                                                                                     |
|                              | MAX. ABS. (OTHER TONES) LOW VOLUME<br>(WITH ONLY AUDIO ACTIVE)        | < 4 mA                                                                            | < 4 mA                                                                            |                                                                                    |                                                                                     |
|                              | MAX. ABS. MAIN TONE 27 HIGH VOLUME<br>WITH AUDIO AND STROBE ACTIVE    | <22 mA                                                                            | <22 mA                                                                            | 10 mA                                                                              |                                                                                     |
|                              | MAX. ABS. MAIN TONE 27 HIGH VOLUME<br>WITH ONLY AUDIO ACTIVE          | < 16.5 mA                                                                         | < 16.5 mA                                                                         |                                                                                    | < 9.8 mA                                                                            |
|                              | MAX. ABS. MAIN TONE 27 LOW VOLUME<br>WITH AUDIO + STROBE ACTIVE       | <12 mA                                                                            | <12 mA                                                                            |                                                                                    |                                                                                     |
|                              | MAX. ABS. MAIN TONE 27 LOW VOLUME<br>WITH ONLY AUDIO ACTIVE           | <5 mA                                                                             |                                                                                   |                                                                                    | < 2.8 mA                                                                            |
|                              | MAX. ABS. MAIN TONE 27 LOW VOLUME                                     |                                                                                   | <5 mA                                                                             |                                                                                    |                                                                                     |
|                              | SOUND POWER LEVEL (OTHER TONES) HIGH<br>VOLUME (dB@1 M)               | 80-95 dB±3 dB@1 m                                                                 | 80-95 dB±3 dB@1 m                                                                 | 90-100 dB±3 dB@1 m                                                                 | 90-100 dB±3 dB@1 m                                                                  |
|                              | SOUND POWER (OTHER TONES) LOW<br>VOLUME (dB@1 M)                      | 75-85 dB±3 dB@1 m                                                                 | 75-85 dB±3 dB@1 m                                                                 | 82-92 dB±3 dB@1 m                                                                  | 82-92 dB±3 dB@1 m                                                                   |
|                              | SOUND POWER (MAIN TONE 27) HIGH<br>VOLUME (dB@1 M)                    | 92 dB±5 dB@1 m                                                                    | 92 dB±5 dB@1 m                                                                    | 96 dB±3 dB                                                                         | 96 dB±3 dB                                                                          |
|                              | SOUND POWER (MAIN TONE 27) LOW<br>VOLUME (dB@1 M)                     | 80 dB±6 dB@1 m                                                                    | 80 dB±6 dB@1 m                                                                    | 88 dB±3 dB                                                                         | 92 dB±3 dB                                                                          |

**41SAC000**

**COVER FOR BASES 41SAB000/IS-41SCB000 (5 PCS)**  
5 plastic covers for art. 41SAB000, 41SAB000/IS and 41SCB000.

**41BSE000**

**BASE FOR ADDRESSABLE SIRENS - IP65**  
Base with IP65 protection rating for addressable sirens 41SAI000 and 41SCI000. Cable glands included.

**48PIN001EN**

**BOARD SIGN IN TRANSPARENT PLEXIGLASS**  
Board sign in transparent Plexiglass, with space dedicated to addressable siren 41SCI000, or conventional sirens 48SCI040/48SCI060, includes the adhesive label "FIRE ALARM".

**48LBL001**

ADHESIVE LABEL "GAS ALARM" FOR BOARD SIGN 48PIN001EN

**48LBL002**

ADHESIVE LABEL "EVACUATE IMMEDIATELY" FOR BOARD SIGN 48PIN001EN

**48LBL003**

ADHESIVE LABEL "DO NOT ENTER GAS RELEASED" FOR BOARD SIGN 48PIN001EN



## ADDRESSABLE SYSTEM

### GUIDE TO FIRE DETECTION

#### ADDRESSABLE MODULES

| ADDRESSABLE MODULES       |                                                        |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
|---------------------------|--------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                           |                                                        |  |  |  |  |
|                           |                                                        | <b>4110M000</b>                                                                   | <b>4110M122</b>                                                                   | <b>4110M022</b>                                                                     | <b>4110M040</b>                                                                     |
|                           |                                                        | <b>4110M000XL</b>                                                                 | <b>4110M122XL</b>                                                                 | <b>4110M022XL</b>                                                                   | <b>4110M040XL</b>                                                                   |
|                           |                                                        | ADDRESSABLE MODULE WITH 1 MONITORED OUTPUT                                        | ADDRESSABLE MODULE WITH 2 MONITORED INPUTS AND 2 MONITORED OR RELAY OUTPUTS       | ADDRESSABLE MODULE WITH 2 MONITORED INPUTS + 2 RELAY OUTPUTS                        | ADDRESSABLE MODULE WITH FOUR MONITORED INPUTS                                       |
| HARDWARE CHARACTERISTICS  | IP PROTECTION RATING                                   | IP40                                                                              | IP40                                                                              | IP40                                                                                | IP40                                                                                |
|                           | PLASTIC                                                | ABS                                                                               | ABS                                                                               | ABS                                                                                 | ABS                                                                                 |
|                           | NUMBER OF MONITORED INPUTS                             |                                                                                   | 2                                                                                 | 2                                                                                   | 4                                                                                   |
|                           | NUMBER OF RELAY OUTPUTS                                | 1 monitored                                                                       | 2 (0 monitored)                                                                   | 2                                                                                   |                                                                                     |
| GENERAL DATA              | COLOUR                                                 | Grey, transparent cover                                                           | Grey, transparent cover                                                           | Grey, transparent cover                                                             | Grey, transparent cover                                                             |
|                           | DIMENSIONS LXHXD (mm)                                  | 142x80x45                                                                         | 142x80x45                                                                         | 142x80x45                                                                           | 142x80x45                                                                           |
|                           | WEIGHT (G)                                             | 230                                                                               | 180                                                                               | 230                                                                                 | 230                                                                                 |
|                           | CABLE CROSS-SECTION (mm <sup>2</sup> )                 | 0.4 to 2.5                                                                        | 0.4 to 2.5                                                                        | 0.4 to 2.5                                                                          | 0.4 to 2.5                                                                          |
| TECHNICAL CHARACTERISTICS | CERTIFICATION STANDARD                                 | EN54-17, EN54-18                                                                  | EN54-17, EN54-18                                                                  | EN54-18                                                                             | EN54-17, EN54-18                                                                    |
|                           | OPERATING TEMPERATURE (°C)                             | -10 to 60                                                                         | -10 to 60                                                                         | -10 to 60                                                                           | -10 to 60                                                                           |
|                           | MAX. OPERATING HUMIDITY RH (%)                         | (93 ± 3)% @ 40°C                                                                  | (93 ± 3)% @ 40°C                                                                  | (93 ± 3)% @ 40°C                                                                    | (93 ± 3)% @ 40°C                                                                    |
|                           |                                                        |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
| ELECTRICAL SPECIFICATIONS | ABSORPTION WITH 1 LED ON (mA)                          | 3.6                                                                               |                                                                                   | 3.5                                                                                 | 4                                                                                   |
|                           | ABSORPTION IN STANDBY (mA)                             | 270 µA@27 VDC                                                                     |                                                                                   | 235 µA@27 VDC                                                                       | 270 µA@27 VDC                                                                       |
|                           | RATED POWER ABSORPTION                                 | 270 µA@27 VDC                                                                     |                                                                                   | 260 µA@27 VDC                                                                       | 330 µA@27 VDC                                                                       |
|                           | OUTPUT/S MAXIMUM CURRENT                               | 0.75 A@28 VDC/0.5 A@120 VAC                                                       | 2 A@30 VDC/0.5 A@125 VAC                                                          | 1 A@30 VDC/0.5 A@125 VAC                                                            |                                                                                     |
|                           | POWER SUPPLY VOLTAGE                                   | 15-32 VDC                                                                         | 15-32 VDC                                                                         | 15-32 VDC                                                                           | 15-32 VDC                                                                           |
|                           | ISOLATOR                                               | Yes                                                                               | Yes                                                                               | Yes                                                                                 | Yes                                                                                 |
|                           | RATED ABSORPTION (RELAY OUTPUTS SELECTED)              |                                                                                   | <0.87 mA@27 VDC                                                                   |                                                                                     |                                                                                     |
|                           | ABSORPTION WITH 1 LED ON (RELAY OUTPUTS SELECTED)      |                                                                                   | 3.9 mA                                                                            |                                                                                     |                                                                                     |
|                           | ABSORPTION WITH 2 LEDS ON (RELAY OUTPUTS SELECTED)     |                                                                                   | 7.2 mA                                                                            |                                                                                     |                                                                                     |
|                           | RATED ABSORPTION (MONITORED OUTPUTS SELECTED)          |                                                                                   | <1.03 mA@27 VDC                                                                   |                                                                                     |                                                                                     |
|                           | ABSORPTION WITH 1 LED ON (MONITORED OUTPUTS SELECTED)  |                                                                                   | 4.15 mA                                                                           |                                                                                     |                                                                                     |
|                           | ABSORPTION WITH 2 LEDS ON (MONITORED OUTPUTS SELECTED) |                                                                                   | 7.2 mA                                                                            |                                                                                     |                                                                                     |

#### ADDRESSABLE MODULES

|                           |                                |  |  |  |  |  |
|---------------------------|--------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|                           |                                | <b>4110M004</b>                                                                     | <b>411SC000</b>                                                                     | <b>4110M000/240</b>                                                                  | <b>4110M010</b>                                                                       | <b>48BOX000</b>                                                                       |
|                           |                                | <b>4110M004XL</b>                                                                   | <b>411SC000XL</b>                                                                   | <b>4110M000/240XL</b>                                                                |                                                                                       |                                                                                       |
|                           |                                | <b>ADDRESSABLE MODULE WITH FOUR RELAY OUTPUTS</b>                                   | <b>ADDRESSABLE MODULE FOR CONVENTIONAL ZONE</b>                                     | <b>ADDRESSABLE MODULE 1 RELAY OUTPUT 240 VAC</b>                                     | <b>ADDRESSABLE MINI MODULE 1 MONITORED INPUT</b>                                      | <b>OPTIONAL BOX FOR MODULES</b>                                                       |
| HARDWARE CHARACTERISTICS  | IP PROTECTION RATING           | IP40                                                                                | IP40                                                                                | IP40                                                                                 | IP21C                                                                                 | IP55                                                                                  |
|                           | PLASTIC                        | ABS                                                                                 | ABS                                                                                 | ABS                                                                                  |                                                                                       | PS MATERIAL                                                                           |
|                           | NUMBER OF RELAY OUTPUTS        | 4                                                                                   |                                                                                     | 1                                                                                    |                                                                                       |                                                                                       |
|                           | COLOUR                         | Grey, transparent cover                                                             | Grey, transparent cover                                                             | Grey, transparent cover                                                              |                                                                                       | Grey                                                                                  |
| GENERAL DATA              | DIMENSIONS LXHXD (mm)          | 142x80x45                                                                           | 142x80x45                                                                           | 142x80x45                                                                            | 43x25                                                                                 | 178x128x58 mm                                                                         |
|                           | WEIGHT (G)                     | 230                                                                                 | 230                                                                                 | 230                                                                                  | 12                                                                                    | 260                                                                                   |
|                           | CABLE CROSS-SECTION (mm²)      | 0.4 to 2.5                                                                          | 0.4 to 2.5                                                                          | 0.4 to 2.5                                                                           | 2.5                                                                                   |                                                                                       |
|                           | CERTIFICATION STANDARD         | EN54-17, EN54-18                                                                    | EN54-18                                                                             | EN54-17, EN54-18                                                                     |                                                                                       |                                                                                       |
| TECHNICAL CHARACTERISTICS | OPERATING TEMPERATURE (°C)     | -10 to 60                                                                           | -10 to 60                                                                           | -10 to 60                                                                            | -10 to 60                                                                             |                                                                                       |
|                           | MAX. OPERATING HUMIDITY RH (%) | (93 ± 3) % @ 40°C                                                                   | (93 ± 3) % @ 40°C                                                                   | (93 ± 3) % @ 40°C                                                                    | (93 ± 3) % @ 40°C                                                                     |                                                                                       |
|                           | ABSORPTION WITH 1 LED ON (mA)  | 4                                                                                   | 3                                                                                   | 4                                                                                    |                                                                                       |                                                                                       |
|                           | ABSORPTION IN STANDBY (mA)     | 175 uA@27 VDC                                                                       | 5.5 mA@27 VDC                                                                       | 175 uA@27 VDC                                                                        |                                                                                       |                                                                                       |
| ELECTRICAL SPECIFICATIONS | ABSORPTION IN SHORT-CIRCUIT    |                                                                                     |                                                                                     |                                                                                      |                                                                                       |                                                                                       |
|                           | RATED POWER ABSORPTION         | 220 µA@27 VDC                                                                       |                                                                                     | 220 µA@27 VDC                                                                        | 100 uA@27 VDC                                                                         |                                                                                       |
|                           | OUTPUT/S MAXIMUM CURRENT       | 1 A@30 VDC/0.5 A@125 VAC                                                            |                                                                                     | 5 A@30 VDC/5 A@250 VAC                                                               |                                                                                       |                                                                                       |
|                           | POWER SUPPLY VOLTAGE           | 15-32 VDC                                                                           | 15-32 VDC                                                                           | 15-32 VDC                                                                            | 15-32 VDC                                                                             |                                                                                       |
|                           | ISOLATOR                       | Yes                                                                                 | Yes                                                                                 | Yes                                                                                  |                                                                                       |                                                                                       |

Note: All modules with suffix XL are provided with the larger box art.48BOX000.

## COMMON ACCESSORIES

## GUIDE TO FIRE DETECTION

ADDRESSABLE  
SYSTEM

## BEAM DETECTORS

|                           |                                                         |                                                                                   |                                                                                    |                                                                                     |
|---------------------------|---------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                           |                                                         |  |  |  |
|                           | ARTICLE CODE                                            | <b>48BFC000</b>                                                                   | <b>48BFC002</b>                                                                    | <b>48BFC003</b>                                                                     |
|                           |                                                         | BEAM SMOKE DETECTOR WITH REFLECTOR,<br>3-30 M                                     | BEAM SMOKE DETECTOR WITH REFLECTOR<br>5-50 M                                       | BEAM SMOKE DETECTOR WITH REFLECTOR<br>50-100 M                                      |
| FUNCTIONS                 | LED INDICATORS                                          | 1                                                                                 | 1                                                                                  | 1                                                                                   |
| HARDWARE                  | IP PROTECTION RATING                                    | IP41                                                                              |                                                                                    |                                                                                     |
| CHARACTERISTICS           | FINISH TYPE                                             | ABS                                                                               | ABS                                                                                | ABS                                                                                 |
| GENERAL DATA              | COLOUR                                                  | White                                                                             | White                                                                              | White                                                                               |
|                           | DIMENSIONS (W X H X D - mm)                             | 115x115x78                                                                        | 128x80x84                                                                          | 128x80x84                                                                           |
|                           | WEIGHT (G)                                              | 700                                                                               | 350                                                                                | 350                                                                                 |
|                           | CABLE CROSS-SECTION (mm <sup>2</sup> )                  | 0.5 to 1.5                                                                        | 0.5 to 1.5                                                                         | 0.5 to 1.5                                                                          |
|                           | CERTIFICATION STANDARD                                  | EN54-12                                                                           | EN54-12                                                                            | EN54-12                                                                             |
|                           | AREA                                                    |                                                                                   | 130x150 mm                                                                         |                                                                                     |
| OPTICAL CHARACTERISTICS   | WAVELENGTH (NM)                                         | 940                                                                               |                                                                                    |                                                                                     |
|                           | DISTANCE (M)                                            | 3 - 30                                                                            | 5 - 50                                                                             | 50 - 100                                                                            |
|                           | MAX. ANGULAR MISALIGNMENT OF THE<br>OPTICAL PART (±, °) | 0.35                                                                              | 0.5                                                                                | 0.5                                                                                 |
|                           | MAX. ANGULAR MISALIGNMENT OF THE<br>REFLECTOR (±, °)    | 5                                                                                 | 5                                                                                  | 5                                                                                   |
|                           | MAX. ANGULAR MOVEMENT OF THE<br>OPTICAL PART (±, °)     | 1.8                                                                               |                                                                                    |                                                                                     |
|                           | FAULT THRESHOLD (%)                                     | 92                                                                                |                                                                                    |                                                                                     |
| TECHNICAL CHARACTERISTICS | OPERATING TEMPERATURE (°C)                              | -10 to 55                                                                         | -25 to 55                                                                          | -25 to 55                                                                           |
|                           | MAX. OPERATING HUMIDITY RH (%)                          | (95)% @ 40°C                                                                      | (95)% @ 40°C                                                                       | (95)% @ 40°C                                                                        |
|                           | MAIN POWER SUPPLY (VDC)                                 | 13 to 28                                                                          | 13 to 28                                                                           | 13 to 28                                                                            |
|                           | STANDBY CURRENT (@24 VDC - MA)                          | 2.8                                                                               | 8 to 30                                                                            | 8 to 30                                                                             |
|                           | CURRENT IN ALARM STATUS (@24 VDC - MA)                  | 12                                                                                | 20 to 100                                                                          | 20 to 100                                                                           |

**48BFA003****FLUSH MOUNTING BOX FOR 48BFC000**

Accessory for flush mounting of beam detector 48BFC000.

**48BFA004****SPARE REFLECTOR FOR 48BFC002**

Spare reflector for beam detector 48BFC002.

**48BFA005****ALARM TEST TOOL FOR 48BFC002**

Alarm test tool for 48BFC002 and 48BFC003; a filter for ALARM simulation and for checking that the fire beam are calibrated correctly.

**48BFA006****SPARE REFLECTOR FOR 48BFC003**

Spare reflector for beam detector 48BFC003.



## COMMON ACCESSORIES

### GUIDE TO FIRE DETECTION

#### VISUAL AND AUDIBLE WARNING DEVICES

|                           |                                                                    |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |
|---------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                           |                                                                    |  |  |  |  |  |  |  |
|                           | ARTICLE CODE                                                       | 48CLU003+48CLU006                                                                 | 48SAI020                                                                          | 48SCI040                                                                          | 48SCI060                                                                           | 48LMI000                                                                            | 48SCI000                                                                            | 48LMI020                                                                            |
|                           |                                                                    | ALARM WARNING SIGN WITH HIGH-EFFICIENCY LED                                       | INDOOR SIREN WITH 32 TONES                                                        | SIREN WITH RED STROBE                                                             | SIREN WITH WHITE STROBE                                                            | CEILING-MOUNTED WHITE STROBE - IP21                                                 | CEILING-MOUNTED SIREN AND WHITE STROBE - IP21                                       | WALL-MOUNTED WHITE STROBE - IP21                                                    |
| MAIN FEATURES             | FREQUENCY BAND                                                     |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     | 400-2900 Hz                                                                         |                                                                                     |
| HARDWARE CHARACTERISTICS  | IP PROTECTION RATING                                               | IP21C                                                                             | IP21C                                                                             | IP21C                                                                             | IP21C                                                                              | IP21                                                                                | IP21                                                                                | IP21                                                                                |
|                           | FINISH TYPE                                                        | ABS - V0 + Polycarbonate                                                          | ABS                                                                               | SAN                                                                               | SAN                                                                                | High-resistance polycarbonate                                                       | High-resistance polycarbonate                                                       | High-resistance polycarbonate                                                       |
|                           | NUMBER OF TONES AVAILABLE                                          | 16                                                                                | 32                                                                                | 32                                                                                | 32                                                                                 |                                                                                     | 32                                                                                  |                                                                                     |
|                           | COVER                                                              |                                                                                   |                                                                                   |                                                                                   |                                                                                    | (C) 3x15 m                                                                          | (C) 3x15 m                                                                          |                                                                                     |
| GENERAL DATA              | COLOUR                                                             | White                                                                             | Red                                                                               | Transparent red                                                                   | Transparent white                                                                  | Red                                                                                 | Red                                                                                 | Red                                                                                 |
|                           | DIMENSIONS (mm)                                                    | 275 x 135 x 50                                                                    | 102 (ø) x 32 (H)                                                                  | 102 (ø) x 32 (H)                                                                  | 102 (ø) x 32 (H)                                                                   | 100 (ø) x 94 (H)                                                                    | 100 (ø) x 94 (H)                                                                    | 100 (ø) x 100 (H)                                                                   |
|                           | WEIGHT (G)                                                         |                                                                                   | 248                                                                               | 248                                                                               | 248                                                                                |                                                                                     |                                                                                     |                                                                                     |
|                           | EFFECTIVE CABLE CROSS-SECTION (mm²)                                | 0.4 to 2.5                                                                        | 0.2 to 1.5                                                                        | 0.4 to 1.5                                                                        | 0.2 to 1.5                                                                         |                                                                                     |                                                                                     |                                                                                     |
|                           | CERTIFICATION STANDARD                                             | EN54-3, EN54-23                                                                   | EN54-3                                                                            | EN54-3<br>*audible part only                                                      | EN54-3, EN54-23                                                                    | EN54-23, LPCB                                                                       | EN54-3, EN54-23, LPCB                                                               | EN54-23, LPCB                                                                       |
|                           | VISUAL SIGNAL                                                      | Yes                                                                               |                                                                                   | Yes                                                                               | Yes                                                                                | Yes                                                                                 | Yes                                                                                 | Yes                                                                                 |
|                           | VISUAL INDICATION COLOUR                                           | Red                                                                               |                                                                                   | Red                                                                               | White                                                                              | White                                                                               | White                                                                               | White                                                                               |
|                           | LOW LEVEL AUDIBLE INDICATION (DB@1 M)                              | 71                                                                                | 94                                                                                | 94                                                                                | 94                                                                                 |                                                                                     | 94                                                                                  |                                                                                     |
| TECHNICAL CHARACTERISTICS | OPTICAL SIGNAL COVERAGE IN ACCORDANCE WITH EN54-23                 | (W) 3.6 x 9 m                                                                     |                                                                                   |                                                                                   | (O) 2.3 / 1.5 / 0.75                                                               | (C) 3 x 15 m                                                                        | (C) 3 x 15 m                                                                        | (W) 3.1 x 11.3 m                                                                    |
|                           | MAX. OPERATING HUMIDITY RH (%)                                     |                                                                                   | (93 ± 3)@40°C                                                                     | (93 ± 3)@40°C                                                                     | (93 ± 3)@40°C                                                                      | < 95                                                                                | < 95                                                                                | < 95                                                                                |
|                           | OPERATING TEMPERATURE (°C)                                         | -10 to 55                                                                         | -10 to 60                                                                         | -10 to 60                                                                         | -10 to 60                                                                          | -25 to 70                                                                           | -10 to 55                                                                           | -25 to 70                                                                           |
| ELECTRICAL SPECIFICATIONS | FLASHING FREQUENCY (HZ)                                            |                                                                                   |                                                                                   | 1                                                                                 | 1                                                                                  | 1                                                                                   | 1                                                                                   | 1                                                                                   |
|                           | POWER SUPPLY VOLTAGE (VDC)                                         | 19 to 30                                                                          | 20 to 28                                                                          | 20 to 28                                                                          | 20 to 28                                                                           | 17 to 60                                                                            | 17 to 60                                                                            | 17 to 60                                                                            |
|                           | MAX. ABS. (OTHER TONES) HIGH VOLUME (WITH AUDIO AND STROBE ACTIVE) |                                                                                   |                                                                                   |                                                                                   | 25 mA                                                                              | 20@0.5 Hz, 40@1 Hz (@24 VDC, strobe only)                                           |                                                                                     |                                                                                     |
|                           | MAX. ABS. (OTHER TONES) HIGH VOLUME (WITH ONLY AUDIO ACTIVE)       |                                                                                   |                                                                                   |                                                                                   | 22 mA                                                                              |                                                                                     |                                                                                     |                                                                                     |
|                           | MAX. ABS. (OTHER TONES) LOW VOLUME (WITH AUDIO AND STROBE ACTIVE)  |                                                                                   |                                                                                   |                                                                                   | 12 mA                                                                              |                                                                                     |                                                                                     |                                                                                     |
|                           | MAX. ABS. (OTHER TONES) LOW VOLUME (WITH ONLY AUDIO ACTIVE)        |                                                                                   |                                                                                   |                                                                                   | 8.5 mA                                                                             |                                                                                     |                                                                                     |                                                                                     |
|                           | MAX. ABS. (MA - OPTICAL PART/AUDIBLE PART)                         | 61                                                                                |                                                                                   |                                                                                   |                                                                                    | 20@0.5 Hz, 40@1 Hz (@24 VDC, strobe only)                                           | 25@0.5 Hz, 45@1 Hz                                                                  | 20@0.5 Hz, 40@1 Hz (@24 VDC, strobe only)                                           |
|                           | MAX. ABS. MAIN TONE 27 HIGH VOLUME WITH ONLY AUDIO ACTIVE          |                                                                                   | 22 mA@24 VDC                                                                      |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |
|                           | MAX. ABS. MAIN TONE 27 HIGH VOLUME                                 |                                                                                   | 22 mA@24 VDC                                                                      |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |
|                           | MAX. ABS. MAIN TONE 27 LOW VOLUME                                  |                                                                                   | 8.5 mA@24 VDC                                                                     |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |
|                           | SOUND POWER LEVEL (OTHER TONES) HIGH VOLUME (DB@1 M)               |                                                                                   | 90-102 dB                                                                         | 83-102 dB                                                                         | 85-104 dB                                                                          |                                                                                     |                                                                                     |                                                                                     |
|                           | SOUND POWER (MAIN TONE 27) HIGH VOLUME (DB@1 M)                    |                                                                                   | 102 dB                                                                            | 92-101 dB                                                                         | 95-104 dB                                                                          |                                                                                     |                                                                                     |                                                                                     |



**48CLU006**

Interchangeable "FIRE ALARM" text for visual/audible sign 48CLU003.

**48CLU007**

Interchangeable "EVACUATE IMMEDIATELY" text for optical/audible sign 48CLU003.

**48CLU008**

Interchangeable "DO NOT ENTER GAS RELEASED" text for optical/audible sign 48CLU003.



**43RBR003**

#### SPACER FOR CONVENTIONAL SIRENS

The spacer enables the input of pipes for visible systems and the mounting of conventional sirens Art. 48SAI020, 48SCI040 on uneven surfaces, suspended ceilings, etc.

|                                                                                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
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|  |  |  |  |  |  |  |  |
| <b>48SCI020</b>                                                                  | <b>48LME000</b>                                                                   | <b>48SCE000</b>                                                                   | <b>48LME020</b>                                                                   | <b>48SCE020</b>                                                                   | <b>48CME000</b>                                                                   | <b>48CMI000</b>                                                                     | <b>48SAE000</b>                                                                     |
| WALL-MOUNTED SIREN AND WHITE STROBE - IP21                                       | CEILING-MOUNTED WHITE STROBE - IP65                                               | CEILING-MOUNTED SIREN AND WHITE STROBE - IP65                                     | WALL-MOUNTED WHITE STROBE - IP65                                                  | WALL-MOUNTED SIREN AND WHITE STROBE - IP65                                        | 6" OUTDOOR BELL - IP55                                                            | 6" INDOOR BELL - IP33C                                                              | ELECTRONIC SIREN - IP66                                                             |
| 400-2900 Hz                                                                      |                                                                                   | 400-2900 Hz                                                                       |                                                                                   | 400-2900 Hz                                                                       |                                                                                   |                                                                                     |                                                                                     |
| IP21                                                                             | IP65                                                                              | IP65                                                                              | IP65                                                                              | IP65                                                                              | IP55                                                                              | IP33C                                                                               | IP66 with fixing backplate art. 48SAE001                                            |
| High-resistance polycarbonate                                                    | High-resistance polycarbonate                                                     | High-resistance polycarbonate                                                     | High-resistance polycarbonate                                                     | High-resistance polycarbonate                                                     | Aluminium                                                                         | Aluminium                                                                           | ABS                                                                                 |
| 32                                                                               |                                                                                   | 32                                                                                |                                                                                   | 32                                                                                | 1                                                                                 | 1                                                                                   | 32                                                                                  |
|                                                                                  | (C) 3x15 m                                                                        | (C) 3x15 m                                                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
| Red                                                                              | Red                                                                               | Red                                                                               | Red                                                                               | Red                                                                               | Red                                                                               | Red                                                                                 | Red                                                                                 |
| 100 (ø) x 100 (H)                                                                | 97.5 (ø) x 117 (H)                                                                | 97.5 (ø) x 117 (H)                                                                | 97.5 (ø) x 122 (H)                                                                | 97.5 (ø) x 122 (H)                                                                | 150 (ø) x 64 (H)<br>780                                                           | 150 (ø) x 53 (H)<br>410                                                             | 95 (ø) x 92 (H)                                                                     |
|                                                                                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   | 0.4 to 2.5                                                                        | 0.4 to 2.5                                                                          | 0.28 to 2.5                                                                         |
| EN54-3, EN54-23, LPCB                                                            | EN54-23, LPCB                                                                     | EN54-3, EN54-23, LPCB                                                             | EN54-23, LPCB                                                                     | EN54-3, EN54-23, LPCB                                                             | EN54-3                                                                            | EN54-3                                                                              | EN54-3                                                                              |
| Yes                                                                              | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                               |                                                                                   |                                                                                     |                                                                                     |
| White                                                                            | White                                                                             | White                                                                             | White                                                                             | White                                                                             |                                                                                   |                                                                                     |                                                                                     |
| 94                                                                               |                                                                                   | 94                                                                                |                                                                                   | 94                                                                                | 94                                                                                | 94                                                                                  | 94                                                                                  |
|                                                                                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
| (W) 3.1 x 11.3 m                                                                 | (C) 3 x 15 m                                                                      | (C) 3 x 15 m                                                                      | (W) 3.1 x 11.3 m                                                                  | (W) 3.1 x 11.3 m                                                                  |                                                                                   |                                                                                     |                                                                                     |
| < 95                                                                             | < 95                                                                              | < 95                                                                              | < 95                                                                              | < 95                                                                              | 45 to 85                                                                          |                                                                                     |                                                                                     |
| -10 to 55                                                                        | -25 to 70                                                                         | -10 to 55                                                                         | -25 to 70                                                                         | -10 to 55                                                                         | -10 to 50                                                                         | -10 to 50                                                                           | -25 to 70                                                                           |
| 1                                                                                | 1                                                                                 | 1                                                                                 | 1                                                                                 | 1                                                                                 |                                                                                   |                                                                                     |                                                                                     |
| 17 to 60                                                                         | 17 to 60                                                                          | 17 to 60                                                                          | 17 to 60                                                                          | 17 to 60                                                                          | 20.4 to 27.6                                                                      | 24                                                                                  | 9 to 30                                                                             |
|                                                                                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
|                                                                                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
|                                                                                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
|                                                                                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
| 25@0.5 Hz, 45@1 Hz                                                               | 20@0.5 Hz, 40@1 Hz<br>(@24 VDC, strobe only)                                      | 25@0.5 Hz, 45@1 Hz                                                                | 20@0.5 Hz, 40@1 Hz<br>(@24 VDC, strobe only)                                      | 25@0.5 Hz, 45@1 Hz                                                                | 12 (audible part only)                                                            | 11 (audible part only)                                                              | 39                                                                                  |
|                                                                                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
|                                                                                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
|                                                                                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
|                                                                                  |                                                                                   | 97 dB                                                                             |                                                                                   | 97 dB                                                                             | 100+5 dB                                                                          | 95 dB                                                                               |                                                                                     |
|                                                                                  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |

**48SAE001**

**BACKPLATE FOR SIREN 48SAE000, IP66 MOUNTING**  
Mounting backplate for the siren 48SAE000 with IP66 protection rating.

**43RBA002**

**SPACER FOR CONVENTIONAL DETECTORS**  
The spacer enables the input of pipes for visible systems and the mounting of conventional and addressable sensors or sirens Art. 41SCB000, 41SAB000/IS, 48SAI020, 48SCI040, 48SCI060 on uneven surfaces, suspended ceilings, etc.



## COMMON ACCESSORIES

### GUIDE TO FIRE DETECTION

#### MAGNETIC DOOR HOLDERS



48FME051

##### 50 KG MAGNETIC DOOR HOLDER

Electromagnet with 50 kg holding force for fire doors. Can be wall or floor mounted, with optional backplate (art. 48FMA03). Automatic release in the event of fire. Manual release button included. Connection terminals, equipped with diode for protection against inverse polarity and current limiting resistor. Quick-fix keeper plate. Nickel-plated steel body for maximum corrosion resistance. Fibreglass-reinforced thermoplastic base. Power supply 24 VDC. Absorption 50 mA. Low current absorption mode. **Approved to EN 1155.**



48FME052

##### 50 KG MAGNETIC DOOR HOLDER - 15 CM WALL/FLOOR BRACKET

Electromagnet with 50 kg holding force for fire doors. For wall-mounted or floor installation. Automatic release in the event of fire. Manual release button included. Connection terminals, equipped with diode for protection against inverse polarity and current limiting resistor. Quick-fix keeper plate. Nickel-plated steel body for maximum corrosion resistance. Fibreglass-reinforced thermoplastic base. Power supply 24 VDC. Absorption 50 mA. Low current absorption mode. 15 cm wall or floor backplate. **Approved to EN 1155.**



48FME053

##### 50 KG MAGNETIC DOOR HOLDER - 30 CM WALL/FLOOR BRACKET

Electromagnet with 50 kg holding force for fire doors. For wall-mounted or floor installation. Automatic release in the event of fire. Manual release button included. Connection terminals, equipped with diode for protection against inverse polarity and current limiting resistor. Quick-fix keeper plate. Nickel-plated steel body for maximum corrosion resistance. Fibreglass-reinforced thermoplastic base. Power supply 24 VDC. Absorption 50 mA. Low current absorption mode. 30 cm wall or floor backplate. **Approved to EN 1155.**



48FME101

##### 100 KG ELECTROMAGNET

Electromagnet with 100 kg holding force for fire doors. Can be wall or floor mounted, with optional backplate (art. 48FMA03). Automatic release in the event of fire. Manual release button included. Connection terminals, equipped with diode for protection against inverse polarity and current limiting resistor. Quick-fix keeper plate. Nickel-plated steel body for maximum corrosion resistance. Fibreglass-reinforced thermoplastic base. Power supply 24 VDC. Absorption 100 mA. Low current absorption mode. **Approved to EN 1155.**



48FMA01

##### ALUMINIUM COVER FOR 48FME051

Aluminium cover for electromagnetic door stop 48FME051



48FMA02

##### ALUMINIUM COVER FOR 48FME101

Aluminium cover for electromagnetic door stop 48FME101



48FMA03

##### FLOOR BRACKET FOR 48FME051 AND 48FME101

Aluminium backplate for floor mounting of electromagnetic door stops 48FME051 and 48FME101.

#### SPECIAL DETECTORS



48CAC001

##### DUCT DETECTOR

Test chamber designed to house an analogue or conventional detector for the testing of ventilation ducts; uses the Pitot tube principle to continuously sample air circulating through the duct and analyse it using the smoke detector housed in the chamber. Positioned inside the duct, the test chamber has an air inlet pipe and an outlet pipe; inside the test chamber the detector analyses the sampled air. To be used in conjunction with a base and an analogue or conventional smoke detector.



48CTR068

##### LINEAR THERMAL CABLE, NOT RESETTABLE 68°C

Linear thermal cable, not resettable 68°C; at the nominal temperature the insulation melts, causing a short circuit between the 2 wires and generating an alarm signal. Ideal for installation in hazardous areas or where access is difficult, it can be connected to conventional Comelit fire alarm panels or, if used in conjunction with addressable module 41ISC000, to addressable Comelit panels. **Take extra care with packaging and transportation, to prevent the cable from reaching its maximum storage temperature (40°C).**



48CTR105

##### LINEAR THERMAL CABLE, NOT RESETTABLE 105°C

Linear thermal cable, not resettable 105°C; at the nominal temperature the insulation melts, causing a short circuit between the 2 wires and generating an alarm signal. Ideal for installation in hazardous areas or where access is difficult, it can be connected to conventional Comelit fire alarm panels or, if used in conjunction with addressable module 41ISC000, to addressable Comelit panels. **Take extra care with packaging and transportation, to prevent the cable from reaching its maximum storage temperature (40°C).**

## ACCESSORIES

**ZSP100-2.5A-18****ADDITIONAL POWER SUPPLY UNIT 2.5 A**

Power supply unit designed to provide auxiliary power. IP44 rated metal enclosure. Total available current: 2.5 A. Maximum recommended capacity for battery housing (with connection in series) 2 x 12 V / 18 Ah. Power supply voltage: 230 VAC. Rated output voltage: 27.5 VDC (with batteries not connected). Dimensions (WxHxD): 395 x 356 x 96 mm. The power supply unit is equipped with 2 outputs with volt-free relays for the signals required by EN54-4. **Approved to EN54-4 and EN12101-10.**

**ZSP100-5.5A-18****ADDITIONAL POWER SUPPLY UNIT 5.5 A**

Power supply unit designed to provide auxiliary power. IP44 rated metal enclosure. Total available current: 5.5A. Maximum recommended capacity for battery housing (with connection in series) 2 x 12V 18Ah. Power supply voltage: 230 Vac. Rated output voltage: 27.5 Vdc (with batteries not connected). Dimensions (WxHxD): 395 x 356 x 96 mm. The power supply unit is equipped with 2 outputs with volt-free relays for the signals required by EN54-4. **Approved to EN54-4 and EN12101-10.**

**30076003****12 VDC / 7 AH LEAD BATTERY**

Lead battery with AGM technology. 12 Vdc / 7 Ah. Each individual battery cell is fitted with a one-way safety valve which guarantees the disposal of any gas build-up inside. Dimensions: 151x100x65 mm

**30076004****12 VDC / 18 AH LEAD BATTERY**

Lead battery with AGM technology. 12 Vdc / 18 Ah. Each individual battery cell is fitted with a one-way safety valve which guarantees the disposal of any gas build-up inside. Dimensions: 181x168x76 mm

**30076005****12 VDC / 27 AH LEAD BATTERY**

Lead battery with AGM technology. 12 Vdc / 27 Ah. Each individual battery cell is fitted with a one-way safety valve which guarantees the disposal of any gas build-up inside. Dimensions: 166x175x125 mm

**30076006****12 VDC / 40 AH LEAD BATTERY**

Lead battery with AGM technology. 12 Vdc / 40 Ah. Each individual battery cell is fitted with a one-way safety valve which guarantees the disposal of any gas build-up inside. Dimensions: 197x165x170 mm

**48CCB000****METAL HOUSING FOR ADDITIONAL BATTERIES**

Metal housing for additional batteries Can accommodate 2x 12 V - 18 Ah batteries. Dimensions 430 x 330 x 117 mm.

**48SDT001****AEROSOL FOR SMOKE DETECTOR TESTING**

Aerosol for smoke detector testing.



## ASPIRATING SYSTEM

### GUIDE TO FIRE DETECTION

#### ASPIRATING UNITS

|                           |                                 |                                                                                   |                                                                                    |                                                                                     |
|---------------------------|---------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                           |                                 |  |  |  |
|                           | ARTICLE CODE                    | <b>ILS-1</b>                                                                      | <b>ILS-2</b>                                                                       | <b>IFT-P</b>                                                                        |
|                           |                                 | <b>ASPIRATING DETECTOR, 1 ZONE, 1 DETECT.</b>                                     | <b>ASPIRATING DETECTOR, 2 ZONE, 2 DETECT.</b>                                      | <b>ASP. SMOKE DETECTOR, 1 ZONE, 2 PIPES</b>                                         |
| MAIN FEATURES             | DETECTION ELEMENTS              | 1 high-sensitivity detector (laser)                                               | 2 high-sensitivity point detectors                                                 | Single-zone laser detector with double thermal element                              |
|                           | COVERAGE AREA (M <sup>2</sup> ) | 1600                                                                              | 1600                                                                               | 1600                                                                                |
|                           | PIPE EXTERNAL DIAMETER (mm)     | 25                                                                                | 25                                                                                 | 25                                                                                  |
|                           | PIPE INTERNAL DIAMETER (mm)     | 21                                                                                | 21                                                                                 | 21                                                                                  |
|                           | PIPE NETWORK LENGTH             | 1 opening: 1x110 m                                                                | 2 openings: 100 m each                                                             | 2 openings: 100 m each                                                              |
|                           | SENSITIVITY                     | < 8.5% obs/m                                                                      | 0.06-6% obs/m                                                                      | 0.001-20% obs/m                                                                     |
|                           | CLASS A SAMPLING HOLES          | 3                                                                                 | 6                                                                                  | 12 (0.04% obs/m)                                                                    |
|                           | CLASS B SAMPLING HOLES          | 12                                                                                | 12                                                                                 | 36 (0.04 obs/m)                                                                     |
|                           | CLASS C SAMPLING HOLES          | 36                                                                                | 36                                                                                 | 36 (0.1% obs/m)                                                                     |
|                           | CERTIFICATIONS                  | EN54-20 (VdS)                                                                     | EN54-20 (VdS)                                                                      | EN54-20 (VdS)                                                                       |
| HARDWARE CHARACTERISTICS  | DIMENSIONS                      | 225x225x85 mm                                                                     | 259x184x166 mm                                                                     | 254x180x165 mm                                                                      |
|                           | IP PROTECTION RATING            | IP65                                                                              | IP65                                                                               | IP65                                                                                |
| GENERAL DATA              | OPERATING TEMPERATURE (°C)      | -10 to 50                                                                         | -10 to 50                                                                          | 0 to 39                                                                             |
|                           | OPERATING HUMIDITY RH (%)       | 10 to 95                                                                          | 10 to 95                                                                           | 10 to 95                                                                            |
|                           | SAMPLED AIR TEMPERATURE (°C)    |                                                                                   | -20 to 60                                                                          | -20 to 60                                                                           |
|                           | FILTER                          | Dual stage, replaceable cartridge                                                 | Replaceable internal (external optional)                                           | Replaceable double filter                                                           |
|                           | FLOW MONITORING                 | Programmable (2 levels, high/low)                                                 | Programmable (2 levels, high/low)                                                  | Thermal element twisted pair                                                        |
|                           | ASPIRATOR CONTROLLER            | 10 programmable speeds                                                            | 10 programmable speeds                                                             | 10 programmable speeds                                                              |
|                           | PROGRAMMING VIA SOFTWARE        |                                                                                   | Yes                                                                                | Yes                                                                                 |
| ELECTRICAL SPECIFICATIONS | POWER SUPPLY VOLTAGE            | 24 VDC                                                                            | 24 VDC                                                                             | 24 VDC                                                                              |
|                           | MAX. ABSORPTION (W)             | 7.2                                                                               | 7.2                                                                                | 30                                                                                  |
|                           | MAXIMUM CURRENT ABSORPTION (mA) | 350                                                                               | 300                                                                                | 1200                                                                                |
|                           | RELAYS                          | 6 (Fault/Action/Fire, NC/NO, 1 A@30 VDC)                                          | 6 (Fault/Action/Fire, NC/NO, 1 A@30 VDC)                                           | 4 alarm relays, 1 fault relay (NC/NO, 1 A@30 VDC)                                   |

## ASPIRATING ACCESSORIES

|                                                                                     |                |                                                                                                                      |
|-------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------------------|
|    | <b>PIP-001</b> | <b>RED ABS 25 mm PIPE, 20X 3 METRES</b><br>20x 3 metre lengths of RAL3000 ABS 25 mm pipe.                            |
|    | <b>PIP-002</b> | <b>CONNECTION SOCKET FOR 25 mm PIPE (10 PCS)</b><br>Connection socket for 25 mm pipe (10 pieces).                    |
|    | <b>PIP-003</b> | <b>SOCKET UNION FOR 25 mm PIPE (10 PCS)</b><br>Socket union for 25 mm pipe (10 pieces).                              |
|    | <b>PIP-005</b> | <b>90 ELBOW FOR 25 mm PIPE (10 PCS)</b><br>90° elbow for 25 mm pipe (10 pieces).                                     |
|    | <b>PIP-006</b> | <b>45 ELBOW FOR 25 mm PIPE (10 PCS)</b><br>45° elbow for 25 mm pipe (10 pieces).                                     |
|   | <b>PIP-007</b> | <b>END CAP FOR 25 mm PIPE (10 PCS)</b><br>End cap for 25 mm pipe (10 pieces).                                        |
|  | <b>PIP-008</b> | <b>EQUAL TEE FOR 25 mm PIPE (10 PCS)</b><br>Equal Tee for 25 mm pipe (10 pieces).                                    |
|  | <b>PIP-009</b> | <b>CLIP FOR 25 mm PIPE (20 PCS)</b><br>Clip for 25 mm pipe (20 pieces).                                              |
|  | <b>PIP-014</b> | <b>PIPE CUTTERS</b><br>Pipe cutters (1 piece).                                                                       |
|  | <b>PIP-015</b> | <b>FLUSH SAMPLE POINT HEAD FOR CAPILLARY PIPE</b><br>Flush sample point head for capillary pipe (1 piece).           |
|  | <b>144-013</b> | <b>CONICAL SAMPLE POINT HEAD</b><br>Conical sample point head (1 piece).                                             |
|  | <b>059-007</b> | <b>CONICAL SAMPLE POINT KIT AND 2 M PIPE</b><br>Conical sample point kit and 2 metre length of 10 mm pipe (1 piece). |
|  | <b>059-001</b> | <b>FLUSH SAMPLE POINT KIT AND 2 M PIPE</b><br>Flush sample point kit and 2 metre length of 10 mm pipe (1 piece).     |
|  | <b>222-059</b> | <b>DISCREET END CAP FOR CAPILLARY PIPE (10 PCS)</b><br>End cap for capillary pipe (10 pieces).                       |
|  | <b>221-035</b> | <b>RED 10 mm CAPILLARY PIPE (100 M)</b><br>RAL3000 10 mm capillary pipe (100 m reel).                                |



## ASPIRATING SYSTEM

### GUIDE TO FIRE DETECTION

|                                                                                     |                  |                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <b>221-036</b>   | <b>CLEAR 10 mm CAPILLARY PIPE (100 M)</b><br>Clear 10 mm capillary tube (100 m reel).                                                                                                                                                                                     |
|    | <b>PIP-016</b>   | <b>TEE ADAPTER FOR CAPILLARY PIPE (10 PCS)</b><br>Tee adapter for capillary pipe (10 pieces).                                                                                                                                                                             |
|    | <b>PIP-027</b>   | <b>REMOTE SAMPLING TEST POINT FOR CAPILLARY TUBE</b><br>Remote sampling test point for 10 mm capillary tube (1 piece).                                                                                                                                                    |
|    | <b>PIP-026</b>   | <b>25 mm FLEXIBLE CONNECTOR, 30 CM</b><br>25 mm flexible connector, 30 cm (1 piece).                                                                                                                                                                                      |
|    | <b>PIP-021</b>   | <b>25 mm FLEXIBLE CONNECTOR, 100 CM</b><br>25 mm flexible connector, 100 cm (1 piece).                                                                                                                                                                                    |
|    | <b>128-014</b>   | <b>ROUND SAMPLING POINT LABEL (100 PCS)</b><br>Round sampling point label (100 pieces on roll).                                                                                                                                                                           |
|  | <b>128-046</b>   | <b>RECTANGULAR SAMPLING POINT LABEL (100 PCS)</b><br>Rectangular sampling point label (200 pieces on roll).                                                                                                                                                               |
|  | <b>128-015</b>   | <b>SMOKE DETECTOR PIPE LABEL (100 PCS)</b><br>Smoke detector pipe label (100 pieces).                                                                                                                                                                                     |
|  | <b>PIP-025</b>   | <b>WATER FILTER WITH TRANSPARENT PIPE AND VALVE</b><br>Water trap with clear pipe and ball valve (1 piece).                                                                                                                                                               |
|  | <b>VSP-850-R</b> | <b>25 mm IN-LINE EXTERNAL FILTER - RED</b><br>25 mm in-line external filter - Red - for use when installing aspirating detectors in contaminating environments such as sawmills, vehicle scrapping plants, etc. Internal filtering elements should be replaced regularly. |
|  | <b>VSP-855-4</b> | <b>REPLACEMENT FOR FILTER VSP-850-R - 4 PCS</b><br>Filtering elements for the external in-line filter VSP-850. Pack of 4 filtering elements.                                                                                                                              |
|  | <b>02-FL53</b>   | <b>SPARE FILTER FOR ILS2 AND IFT-P - 10 PCS</b><br>Spare filter for aspirating detectors ILS-2 and IFT-P (20 ppi). For the IFT-P detector, this filter element can replace the first stage filter. Pack of 10 units.                                                      |
|  | <b>02-FL56</b>   | <b>REPLACEMENT FILTER ELEMENT, IFT-P STAGE 2, 10 PCS</b><br>Replacement filter elements for aspirating detector IFT-P (45 ppi). Replaces the second stage filter. Pack of 10 units.                                                                                       |
|  | <b>COLL250</b>   | <b>ADHESIVE FOR PIPES AND SOCKETS 250 ML</b><br>Adhesive for pipes and connections. Supplied with applicator brush. Contents: 250 ml.                                                                                                                                     |





## ATEX DETECTION

### GUIDE TO FIRE DETECTION

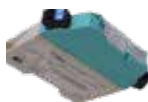
#### ATEX



**48BAZ000**

##### ZENER BARRIER FOR ATEX DETECTORS

Zener barrier certified as an electrical system with built-in safety. Designed specifically for use with our detector 48RCX000 and the manual call point 48PAX000. Voltage: 24 V d.c. Dimensions: 104 x 70 x 12.2 mm. Approved in compliance with standards CE 0081 II (1/2) G [Eex ia/ib] IIC/IIB/PTB 01 ATEX 2088.



**48BAZ001**

##### ZENER BARRIER FOR ATEX SIREN

Zener barrier certified as an electrical system with built-in safety. Designed specifically for use with our siren 48SAX00. Voltage: 15-28 V d.c. Dimensions: 70 x 80 x 10 mm. Approved in compliance with standards CE 0359 II (1) GD [Eex ia] IIC/BAS 01 ATEX 7005.



**48RBX000**

##### MOUNTING BASE FOR ATEX DETECTORS

Mounting base for ATEX detectors 48RCX000.



**48RCX000**

##### ATEX HEAT-RATE OF RISE DETECTOR

Temperature detector 59°C and rate of rise 9°C/min with static safety of 59°C for zones with an atmosphere with a very high risk of explosion. Pairs with barrier 48BAZ000. Voltage: 12-30 V d.c. Current absorption in standby: 120 µA. Approved in compliance with standards CE 0081 II 1 G Eex ia IIC T6/LCIE 03 ATEX 6350 X.



**48SAX000**

##### ATEX SIREN

Siren for environments with an atmosphere with a high risk of explosion, pairs with Zener barrier 48BAZ001. Operating voltage: 15-28 V d.c. Approved in compliance with standards CE 0359 II 1 G Eex ia IIC T4/BAS 00 ATEX 1181.



**48PAX000**

##### ATEX ALARM BUTTON

Manual call point for atmospheres with a high risk of explosion. Pairs with barrier 48BAZ000. Activated mechanically, by pressing the front window. Includes an operating element that can be reset with the aid of special key. Operating voltage: from 13 to 28 V d.c. Current absorption: 150 µA. Approved to EN 60079-0 (09), EN 60079-11 (07) and complies with ATEX directives 94/9/CE.

## FIRE EXTINGUISHING SYSTEM

## GUIDE TO FIRE DETECTION

## EXTINGUISHING PANEL



|                           |                                                      |                                         |
|---------------------------|------------------------------------------------------|-----------------------------------------|
|                           | ARTICLE CODE                                         | <b>46EST003</b>                         |
|                           |                                                      | <b>EXTINGUISHING PANEL</b>              |
| MAIN FEATURES             | EXTINGUISHING ZONES                                  | 2 (AND)                                 |
|                           | FIRE ALARM ZONES                                     | 1                                       |
|                           | MAX. NUMBER OF DEVICES PER ZONE                      | 32                                      |
|                           | MECHANICAL KEY FOR MODE SELECTION                    | Yes                                     |
|                           | MAXIMUM NUMBER OF EVENT LOGS                         | 1000                                    |
|                           | EVENT LOG MODULE (OPTIONAL)                          | Art. 46LEP000                           |
| GENERAL DATA              | IP PROTECTION RATING                                 | IP30                                    |
|                           | DIMENSIONS (W X H X D - mm)                          | 324x314x82 mm                           |
|                           | WEIGHT (G)                                           | 3200                                    |
|                           | OPERATING TEMPERATURE (°C)                           | -5 to 40                                |
|                           | MAX. OPERATING HUMIDITY RH (%)                       | (93 ± 3)% @ 40°C                        |
|                           | STORAGE TEMPERATURE (°C)                             | -10 to 60                               |
|                           | CERTIFICATION STANDARD                               | EN54-2, EN54-4, EN12094-1               |
| TECHNICAL CHARACTERISTICS | MONITORED INPUT FOR MANUAL RELEASE                   | Yes                                     |
|                           | MONITORED INPUT FOR PORT STATUS: LOCK/RELEASE        | Yes                                     |
|                           | MONITORED INPUT FOR MODE SELECTION                   | Yes                                     |
|                           | MONITORED INPUT FOR ENABLING/DISABLING EXTINGUISHING | Yes                                     |
|                           | MONITORED INPUT FOR LOW PRESSURE                     | Yes                                     |
|                           | MONITORED INPUT FOR FLOW CONTROL                     | Yes                                     |
|                           | OUTPUT FOR DISPLAYING PORT STATUS: LOCK/RELEASE      | Yes                                     |
|                           | OUTPUT FOR DISPLAYING EXTINGUISHING DISABLING        | Yes                                     |
|                           | OUTPUT FOR DISPLAYING LOW PRESSURE                   | Yes                                     |
|                           | OUTPUT FOR DISPLAYING MANUAL MODE                    | Yes                                     |
| ELECTRICAL SPECIFICATIONS | MAIN POWER SUPPLY                                    | 110-230 VAC ±10%                        |
|                           | ABSORPTION (A)                                       | 0.3@230 VAC / 0.7@110 VAC               |
|                           | FREQUENCY (HZ)                                       | 47 to 60                                |
|                           | AUXILIARY POWER SUPPLY OUTPUT                        | 26 VDC / 1.5 A                          |
|                           | MONITORED OUTPUTS FOR SIRENS                         | 2 (24 VDC/0.3 A)                        |
|                           | MONITORED OUTPUTS FOR EXTINGUISHING                  | 1 (24 VDC/1 A 5 min - 24 VDC/3 A 20 ms) |
|                           | NON-MONITORED RELAY OUTPUTS FOR ALARM INDICATION     | 2 (5-30 VDC / 1 A)                      |
|                           | NON-MONITORED RELAY OUTPUTS FOR FAULT INDICATION     | 1 (5-30 VDC / 1 A)                      |
|                           | BACKUP BATTERIES (NOT INCLUDED)                      | 2 (12 VDC/7 Ah)                         |
|                           | MAXIMUM CURRENT FOR CHARGING BATTERIES (A)           | 0.3                                     |

**46LEP000****EVENT LOG FOR EXTINGUISHING PANEL**

Optional module for recording and viewing the events log of the fire extinguishing system panel 46EST003; provides the possibility to store up to 1000 events.

**46PMA000****YELLOW MANUAL CALL POINT FOR EXTINGUISHING ACTIVATION**

Standard button used to activate extinguishing, with resettable element. Yellow.



## GAS DETECTION

### GUIDE TO FIRE DETECTION

#### EASY DIN RAIL GAS PANELS

|                                                                                     |                                                            |                                              |
|-------------------------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------|
|  |                                                            |                                              |
| MAIN FEATURES                                                                       | ARTICLE CODE                                               | <b>47CDG206</b>                              |
|                                                                                     |                                                            | <b>EASY DIN GAS PANEL FOR 2 - 6 SENSORS</b>  |
|                                                                                     | PRE-PROGRAMMED SENSORS                                     | Yes                                          |
|                                                                                     | GAS LEVEL DISPLAY IN REAL TIME                             | Yes                                          |
|                                                                                     | NUMBER OF PASSWORD-PROTECTED ACCESS LEVELS                 | 3                                            |
| GENERAL DATA                                                                        | SERIES OF CONNECTABLE SENSORS                              | Art. 47RTSxxx, 47TS255CB                     |
|                                                                                     | DIMENSIONS (W X H X D - mm)                                | 90x60x71                                     |
|                                                                                     | WEIGHT (G)                                                 | 195                                          |
|                                                                                     | OPERATING TEMPERATURE (°C)                                 | 5                                            |
|                                                                                     | OPERATING TEMPERATURE (°C)                                 | 40                                           |
| TECHNICAL CHARACTERISTICS                                                           | DISPLAY BACKLIGHTING COLOUR                                | Amber                                        |
|                                                                                     | NUMBER OF KEYS ON THE BACKLIT KEYPAD                       | 4                                            |
|                                                                                     | NUMBER OF SYSTEM STATUS LEDS                               | 3                                            |
|                                                                                     | INTERNAL BUZZER                                            | Yes                                          |
|                                                                                     | PROGRAMMABLE TRIGGER THRESHOLDS                            | Yes                                          |
| ELECTRICAL SPECIFICATIONS                                                           | NUMBER OF PANEL-SENSOR CABLES                              | 3                                            |
|                                                                                     | POWER SUPPLY VOLTAGE                                       | 12-24 VDC (-10% to +15%)                     |
|                                                                                     | MAXIMUM ABSORPTION                                         | 15 W                                         |
|                                                                                     | NUMBER OF LINEAR INPUTS 4-20 MA                            | 2 as standard, + 4 (with card art. 47EDG020) |
|                                                                                     | SENSOR INPUT POWER SUPPLY                                  | 20 VDC (-10% to +15%)                        |
|                                                                                     | RELAY CONTACT CAPACITY                                     | 3 A@230 VAC / 2 A@30 VDC                     |
|                                                                                     | INPUT CHARGE INTERNAL RESISTANCE (Ω)                       | 200                                          |
|                                                                                     | MAXIMUM DETECTOR DISTANCE WITH SHIELDED CABLE 3X1.5mm2 (M) | 300                                          |
|                                                                                     | MAXIMUM DETECTOR DISTANCE WITH SHIELDED CABLE 3X2.5mm2 (M) | 600                                          |

#### EASY DIN PANEL ACCESSORIES



##### **47EDG020**

##### **2-SENSOR EXPANDER FOR PANEL 47CDG206**

Expansion module for two sensors. 2 modules art. 47EDG020 can be added to panel art. 47CDG206, for the connection of up to 6 sensors. Connection to the panel: 4 wires. Dimensions: 2 DIN modules.



##### **47ADG206**

##### **DIN RAIL POWER SUPPLY UNIT FOR PANEL 47CDG206**

Power supply unit 230 VAC/24 VDC. Capable of powering panel art. 47CDG206, as well as additional modules art. 47EDG020 and the corresponding sensors connected to them. Dimensions: 3 DIN modules.



##### **47ADB012**

##### **POWER SUPPLY UNIT FOR 12 V LITHIUM BATTERY**

230 VAC power supply unit with 12 VDC output. Can be used to recharge lithium batteries art. 47BDL012. Dimensions: 3 DIN modules.



##### **47BDL012**

##### **LITHIUM BATTERY ON DIN RAIL**

Lithium battery for panel art. 47CDG206 which provides 30/40 minutes of independent run time with a full system setup. Can be installed on DIN rail, with obvious advantages in terms of space and cost. Dimensions: 3 DIN modules. Output voltage: 10.8 VDC. Capacity of 1.7 Ah.

## PROFESSIONAL INDUSTRIAL GAS PANELS

|                           |                                                                         |                                                                                   |                                                                                     |
|---------------------------|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                           |                                                                         |  |  |
|                           | ARTICLE CODE                                                            | <b>47CPG408</b>                                                                   | <b>47CPG424</b>                                                                     |
|                           |                                                                         | WALL-MOUNTED GAS PANEL FOR 4 - 8 SENSORS                                          | WALL-MOUNTED GAS PANEL FOR 4 - 24 SENSORS                                           |
| MAIN FEATURES             | PRE-PROGRAMMED SENSORS                                                  | Yes                                                                               | Yes                                                                                 |
|                           | GAS LEVEL DISPLAY IN REAL TIME                                          | Yes                                                                               | Yes                                                                                 |
|                           | NUMBER OF PASSWORD-PROTECTED ACCESS LEVELS                              | 3                                                                                 | 3                                                                                   |
|                           | RESET FUNCTION                                                          | Yes                                                                               | Yes                                                                                 |
|                           | AND/OR/PARKING OP. LOG. (D.M. 1/2/86 OR EN50545-1) USED BY ZONE         | Yes                                                                               | Yes                                                                                 |
|                           | FW UPDATING VIA SD CARD                                                 | Yes                                                                               | Yes                                                                                 |
|                           | PROGRAMMING AND EVENT LOG BACKUP ON SD CARD                             | Yes                                                                               | Yes                                                                                 |
|                           | MAXIMUM NUMBER OF EVENT LOGS                                            | 100                                                                               | 100                                                                                 |
| GENERAL DATA              | SERIES OF CONNECTABLE SENSORS                                           | Art. 47RTSxxx, 47TS255CB                                                          | Art. 47RTSxxx, 47TS255CB                                                            |
|                           | IP PROTECTION RATING                                                    | IP42                                                                              | IP42                                                                                |
|                           | DIMENSIONS (W X H X D - mm)                                             | 379x241x133                                                                       | 379x241x133                                                                         |
|                           | WEIGHT (G)                                                              | 2200                                                                              | 2200                                                                                |
|                           | OPERATING TEMPERATURE (°C)                                              | 5 to 40                                                                           | 5 to 40                                                                             |
|                           | MAX. OPERATING HUMIDITY RH (%)                                          | 5-90% RH                                                                          | 5-90% RH                                                                            |
|                           | DISPLAY BACKLIGHTING COLOUR                                             | White                                                                             | Colour                                                                              |
|                           | NUMBER OF KEYS ON THE BACKLIT KEYPAD                                    | 8                                                                                 | 18                                                                                  |
| TECHNICAL CHARACTERISTICS | NUMBER OF SYSTEM STATUS LEDS                                            | 3                                                                                 | 3                                                                                   |
|                           | INTERNAL BUZZER                                                         | Yes                                                                               | Yes                                                                                 |
|                           | NUMBER OF TRIGGER THRESHOLDS                                            | 3                                                                                 | 3                                                                                   |
|                           | FAULT TRIGGER THRESHOLDS                                                | Yes                                                                               | Yes                                                                                 |
|                           | PROGRAMMABLE TRIGGER THRESHOLDS                                         | Yes                                                                               | Yes                                                                                 |
|                           | PROGRAMMABLE ZONE TRIGGER THRESHOLDS                                    | Yes                                                                               | Yes                                                                                 |
|                           | NUMBER OF PANEL-SENSOR CABLES                                           | 3                                                                                 | 3                                                                                   |
| ELECTRICAL SPECIFICATIONS | POWER SUPPLY VOLTAGE                                                    | 90-264 VAC / 47-63 Hz                                                             | 90-264 VAC / 47-63 Hz                                                               |
|                           | BACKUP POWER SUPPLY                                                     | 24 VDC                                                                            | 24 VDC                                                                              |
|                           | MAXIMUM ABSORPTION                                                      | 1.6 A@110 VAC / 1 A@230 VAC                                                       | 1.6 A@110 VAC / 1 A@230 VAC                                                         |
|                           | MAXIMUM CURRENT DELIVERED BY THE POWER SUPPLY UNIT                      | 2.7 A@27.6 VDC                                                                    | 2.7 A@27.6 VDC                                                                      |
|                           | NUMBER OF LINEAR INPUTS 4-20 mA                                         | 4 as standard, + 4 (with card art. 47ESP040)                                      | 4 as standard, + 4 (with art. 47ESP040), + 16 (with 2 art. 47ESP080)                |
|                           | NUMBER OF INSTANT ALARM INPUTS                                          | 1                                                                                 | 1                                                                                   |
|                           | SENSOR INPUT POWER SUPPLY                                               | 24 VDC (-10% / +15%) / 100 mA                                                     | 24 VDC (-10% / +15%) / 100 mA                                                       |
|                           | NUMBER OF PROGRAMMABLE OUTPUTS                                          | 5 as standard, + 4 (with card art. 47REL040)                                      | 5 as standard, + 4 (with card art. 47REL040)                                        |
|                           | RELAY CONTACT CAPACITY                                                  | 3 A@230 VAC / 2 A@30 VDC                                                          | 3 A@230 VAC / 2 A@30 VDC                                                            |
|                           | INPUT CHARGE INTERNAL RESISTANCE (Ω)                                    | 100                                                                               | 100                                                                                 |
|                           | MAXIMUM DETECTOR DISTANCE WITH SHIELDED CABLE 3X0.75mm <sup>2</sup> (M) | 300                                                                               | 300                                                                                 |
|                           | MAXIMUM DETECTOR DISTANCE WITH SHIELDED CABLE 3X1.5mm <sup>2</sup> (M)  | 500                                                                               | 500                                                                                 |
|                           | MAXIMUM DETECTOR DISTANCE WITH SHIELDED CABLE 3X2.5mm <sup>2</sup> (M)  | 800                                                                               | 800                                                                                 |

**47ESP040****4-INPUT EXPANSION FOR GAS PANELS**

Expansion card with 4 inputs for 4-20 mA sensors; can be connected to panel 47CPG408 (max. 1 expansion) and to panel 47CPG424 (max. 1 expansion).

**47ESP080****8-INPUT EXPANSION FOR PANELS 47CPG424**

Remote unit with 8 inputs for sensors 4-20 mA, for connection to panel art. 47CPG424 only via RS485 ports (max. 2 units). Power supply 230 Vac.

**47REL040****4-RELAY EXPANSION FOR GAS PANELS**

Expansion card with 4 relay outputs; can be connected to panel 47CPG408 (max. 1 expansion) and to panel 47CPG424 (max. 1 expansion).

**47SER080****CARD WITH 4 RELAY OUTPUTS FOR 47ESP080 (MAX 2)**

Additional expansion card with 4 relay outputs, for connection to remote unit 47ESP080 (max. 2 expansions per unit).



## GAS DETECTORS

### GUIDE TO FIRE DETECTION

#### INDUSTRIAL GAS DETECTORS FOR EASY DIN AND PROFESSIONAL PANELS

|                           |                                                  |                                                                                   |                                                                                     |                                                                                     |  |
|---------------------------|--------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--|
|                           |                                                  |  |  |  |  |
|                           | ARTICLE CODE                                     | <b>47TS255CB</b>                                                                  | <b>47RTS282KM</b>                                                                   | <b>47RTS282KG</b>                                                                   |  |
|                           |                                                  | INDUSTRIAL DUAL GAS DETECTOR 4-20 MA                                              | INDUSTRIAL AUTONOMOUS GAS DETECTOR                                                  | INDUSTRIAL AUTONOMOUS GAS DETECTOR                                                  |  |
| MAIN FEATURES             | TYPE OF GAS DETECTED                             | Carbon monoxide (CO), petrol                                                      | Methane                                                                             | LPG                                                                                 |  |
|                           | INSTALLATION HEIGHT (M)                          | 1.6                                                                               |                                                                                     | 0.3                                                                                 |  |
|                           | INSTALLATION HEIGHT (CM FROM THE CEILING)        |                                                                                   | 30                                                                                  |                                                                                     |  |
|                           | KEYS FOR CALIBRATION AND CHECKING WITH CODE (N°) | 2                                                                                 | 2                                                                                   | 2                                                                                   |  |
|                           | SENSOR TYPE                                      | Electrochemical, Catalytic                                                        | Catalytic                                                                           | Catalytic                                                                           |  |
|                           | INTERCHANGEABLE CARTRIDGE                        | Yes                                                                               | Yes                                                                                 | Yes                                                                                 |  |
| GENERAL DATA              | PROTECTION RATING                                | IP65                                                                              | IP65                                                                                | IP65                                                                                |  |
|                           | STORAGE TEMPERATURE (°C)                         |                                                                                   | -20 to 55                                                                           | -20 to 55                                                                           |  |
|                           | STORAGE HUMIDITY (RH - % - NON-CONDENSING)       |                                                                                   | 5 to 95                                                                             | 5 to 95                                                                             |  |
|                           | MAXIMUM STORAGE TIME (MONTHS)                    | 3                                                                                 |                                                                                     |                                                                                     |  |
|                           | OPERATING TEMPERATURE (°C)                       | -20 to 50                                                                         | -10 to 50                                                                           | -10 to 50                                                                           |  |
|                           | OPERATING HUMIDITY (RH - % - NON-CONDENSING)     | 15 to 90                                                                          | 10 to 90                                                                            | 10 to 90                                                                            |  |
|                           | DIMENSIONS (W X H X D - mm)                      | 166.5x175x70                                                                      | 238x106x75                                                                          | 238x106x75                                                                          |  |
| TECHNICAL CHARACTERISTICS | NUMBER OF STATUS LEDS                            | 5                                                                                 | 5                                                                                   | 5                                                                                   |  |
|                           | AVERAGE CARTRIDGE LIFE (YEARS - CLEAN AIR)       | 5                                                                                 | 5                                                                                   | 5                                                                                   |  |
|                           | MEASURING RANGE (PPM)                            | 0 to 300                                                                          |                                                                                     |                                                                                     |  |
|                           | FIELD OF MEASUREMENT (% LEL)                     | 0 to 20                                                                           | 0 to 20                                                                             | 0 to 20                                                                             |  |
|                           | DETECTION ACCURACY (%)                           | 10% ± 10%                                                                         | ± 10%                                                                               | ± 10%                                                                               |  |
|                           | SENSOR OPERATING LIMIT (PPM)                     | 1500                                                                              |                                                                                     |                                                                                     |  |
|                           | SENSOR OPERATING LIMIT (% LEL)                   | 30                                                                                |                                                                                     |                                                                                     |  |
|                           | MAXIMUM RESPONSE TIME (T90 -S.)                  | 60                                                                                | 60                                                                                  | 60                                                                                  |  |
|                           | MAXIMUM LONG-TERM DRIFT (%/MONTH)                |                                                                                   |                                                                                     |                                                                                     |  |
|                           | MAXIMUM LONG-TERM DRIFT (%/YEAR)                 | 5                                                                                 | 4                                                                                   | 4                                                                                   |  |
| ELECTRICAL SPECIFICATIONS | POWER SUPPLY                                     | 12-24 VDC (-10% / +15%)                                                           | 12-24 VDC (-10% / +15%)                                                             | 12-24 VDC (-10% / +15%)                                                             |  |
|                           | CONSUMPTION (W)                                  | 3                                                                                 | 3                                                                                   | 3                                                                                   |  |
|                           | LOAD RESISTANCE                                  | 50 Ω@12 VDC (-10%) / 500 Ω@24 VDC (-10%)                                          |                                                                                     |                                                                                     |  |
|                           | NUMBER OF 4-20 MA LINEAR OUTPUTS                 | 2                                                                                 | 1                                                                                   | 1                                                                                   |  |
|                           | NUMBER OF ALARM RELAY OUTPUTS                    |                                                                                   | 3                                                                                   | 3                                                                                   |  |
|                           | NUMBER OF FAULT RELAY OUTPUTS                    |                                                                                   | 1                                                                                   | 1                                                                                   |  |
|                           | RELAY CONTACT CAPACITY                           |                                                                                   | 1 A@24 VDC                                                                          | 1 A@24 VDC                                                                          |  |
|                           | ALARM LEVEL PROGRAMMING WITH DIP-SWITCHES        |                                                                                   | Yes                                                                                 | Yes                                                                                 |  |

Note: ATEX version available for each gas detector

#### REPLACEABLE CARTRIDGES



**47ZSK01/IP** GAS CARTRIDGE, METHANE AND LPG  
Replacement cartridge for methane of LPG detector.

**47ZSK02/IP** GAS CARTRIDGE, HYDROGEN  
Replacement cartridge for Hydrogen detector.

**47ZSKB/IP** GAS CARTRIDGE, GASOLINE  
Replacement cartridge for gasoline fumes detector.

**47ZSEC/IP** GAS CARTRIDGE, CO  
Replacement cartridge for Carbon Monoxide detector.

|  |  |  |  |  |
|--|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  | <b>47RTS282KI</b>                                                                 | <b>47RTS282KB</b>                                                                 | <b>47RTS282EO</b>                                                                 | <b>47RTS282EC-S</b>                                                                 |
|  | INDUSTRIAL AUTONOMOUS GAS DETECTOR                                                | INDUSTRIAL AUTONOMOUS GAS DETECTOR                                                | INDUSTRIAL AUTONOMOUS GAS DETECTOR                                                | INDUSTRIAL AUTONOMOUS GAS DETECTOR                                                  |
|  | Hydrogen                                                                          | Gasoline vapours                                                                  | Oxygen                                                                            | Carbon monoxide (CO)                                                                |
|  |                                                                                   | 0.4                                                                               | 1.6                                                                               | 1.6                                                                                 |
|  | 30                                                                                |                                                                                   |                                                                                   |                                                                                     |
|  | 2                                                                                 | 2                                                                                 | 2                                                                                 | 2                                                                                   |
|  | Catalytic                                                                         | Catalytic                                                                         | Electrochemical                                                                   | Electrochemical                                                                     |
|  | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                                 |
|  | IP65                                                                              | IP65                                                                              | IP65                                                                              | IP65                                                                                |
|  | -20 to 55                                                                         | -20 to 55                                                                         | 0 to 20                                                                           | 0 to 20                                                                             |
|  | 5 to 95                                                                           | 5 to 95                                                                           | 5 to 95                                                                           | 5 to 95                                                                             |
|  |                                                                                   |                                                                                   | 3                                                                                 | 3                                                                                   |
|  | -10 to 50                                                                         | -10 to 50                                                                         | -20 to 50                                                                         | -20 to 50                                                                           |
|  | 10 to 90                                                                          | 10 to 90                                                                          | 15 to 90                                                                          | 15 to 90                                                                            |
|  | 238x106x75                                                                        | 238x106x75                                                                        | 238x106x75                                                                        | 238x106x75                                                                          |
|  | 5                                                                                 | 5                                                                                 | 5                                                                                 | 5                                                                                   |
|  | 5                                                                                 | 5                                                                                 | 2                                                                                 | 3                                                                                   |
|  |                                                                                   |                                                                                   |                                                                                   | 0 to 300                                                                            |
|  | 0 to 20                                                                           | 0 to 20                                                                           | 0 to 25                                                                           | 0 to 20                                                                             |
|  | ± 10%                                                                             | ± 10%                                                                             | ± 2% of the signal in air                                                         | 10%                                                                                 |
|  |                                                                                   |                                                                                   |                                                                                   | 1000                                                                                |
|  |                                                                                   |                                                                                   | 30                                                                                |                                                                                     |
|  | 60                                                                                | 60                                                                                | 20                                                                                | 60                                                                                  |
|  |                                                                                   |                                                                                   | 2                                                                                 | 2                                                                                   |
|  | 4                                                                                 | 4                                                                                 |                                                                                   |                                                                                     |
|  | 12-24 VDC (-10% / +15%)                                                           | 12-24 VDC (-10% / +15%)                                                           | 12-24 VDC (-10% / +15%)                                                           | 12-24 VDC (-10% / +15%)                                                             |
|  | 3                                                                                 | 3                                                                                 | 2                                                                                 | 2                                                                                   |
|  |                                                                                   |                                                                                   |                                                                                   | 50 Ω@12 VDC (-10%) / 500 Ω@24 VDC (-10%)                                            |
|  | 1                                                                                 | 1                                                                                 | 1                                                                                 | 1                                                                                   |
|  | 3                                                                                 | 3                                                                                 | 3                                                                                 | 3                                                                                   |
|  | 1                                                                                 | 1                                                                                 | 1                                                                                 | 1                                                                                   |
|  | 1 A@24 VDC                                                                        | 1 A@24 VDC                                                                        | 1 A@24 VDC                                                                        | 1 A@24 VDC                                                                          |
|  | Yes                                                                               | Yes                                                                               | Yes                                                                               | Yes                                                                                 |

**47ZSE0/IP**

**GAS CARTRIDGE, OXYGEN**  
Replacement cartridge for Oxygen detector.

**47ZSEC1**

**GAS CARTRIDGE 47TS255CB CO**  
Replacement cartridge for Carbon Monoxide detector art. 47TS255CB.

**47ZSK04**

**GAS CARTRIDGE 47TS255CB, GASOLINE VAPOURS**  
Replacement cartridge for gasoline fumes detector art. 47TS255CB.



## GAS DETECTORS

### GUIDE TO FIRE DETECTION

#### COMPACT INDUSTRIAL GAS PANELS SUITABLE FOR THERMAL PLANTS

|                           |                                                                        |                                                                                   |                                                                                     |
|---------------------------|------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                           |                                                                        |  |  |
|                           | ARTICLE CODE                                                           | <b>47CMZ001</b>                                                                   | <b>47CPZ003</b>                                                                     |
|                           |                                                                        | <b>WALL-MOUNTED SINGLE-ZONE GAS PANEL</b>                                         | <b>WALL-MOUNTED GAS PANEL, 3 DETECTORS</b>                                          |
| MAIN FEATURES             | GAS LEVEL DISPLAY IN REAL TIME                                         | Yes                                                                               | Yes                                                                                 |
|                           | RESET FUNCTION                                                         | Yes                                                                               | Yes                                                                                 |
|                           | SERIES OF CONNECTABLE SENSORS                                          | Art. 47SE192KM, 47SE192KG                                                         | Art. 47SE192KM, 47SE192KG                                                           |
| GENERAL DATA              | IP PROTECTION RATING                                                   | IP65                                                                              | IP65                                                                                |
|                           | DIMENSIONS (W X H X D - mm)                                            | 202x153x104                                                                       | 202x153x104                                                                         |
|                           | WEIGHT (G)                                                             | 700                                                                               | 700                                                                                 |
|                           | OPERATING TEMPERATURE (°C)                                             | -10 to 50                                                                         | -10 to 50                                                                           |
|                           | MAX. OPERATING HUMIDITY RH (%)                                         | 5-90% RH                                                                          | 5-90% RH                                                                            |
| TECHNICAL CHARACTERISTICS | NUMBER OF TRIGGER THRESHOLDS                                           | 2                                                                                 | 2                                                                                   |
|                           | ALARM TRIGGER THRESHOLD 1                                              | 10% LEL                                                                           | 10% LEL                                                                             |
|                           | ALARM TRIGGER THRESHOLD 2                                              | 20% LEL                                                                           | 20% LEL                                                                             |
|                           | NUMBER OF PANEL-SENSOR CABLES                                          | 3                                                                                 | 3                                                                                   |
| ELECTRICAL SPECIFICATIONS | NON-MONITORED RELAY OUTPUTS FOR ALARM INDICATION                       | 2 (5-30 VDC / 1 A)                                                                | 2 (5-30 VDC / 1 A)                                                                  |
|                           | NON-MONITORED RELAY OUTPUTS FOR FAULT INDICATION                       | 1 (5-30 VDC / 1 A)                                                                | 1 (5-30 VDC / 1 A)                                                                  |
|                           | POWER SUPPLY VOLTAGE                                                   | 230 VAC/12-24 VAC (-15% to +10%)/50 Hz/3 VA, 12-24 VDC (-10% to +15%)/1.5 W       | 230 VAC (-15% to +10%)/50 Hz/8 VA, 24 VDC (-10% to +15%)/9 W                        |
|                           | NUMBER OF LINEAR INPUTS 4-20 MA                                        | 1                                                                                 | 3                                                                                   |
|                           | NO. OF AUX INPUTS FOR SOLENOID VALVE WITH MAGNETIC SENSOR              | 1                                                                                 | 1                                                                                   |
|                           | RELAY CONTACT CAPACITY                                                 | 3 A@230 VAC / 2 A@30 VDC                                                          | 3 A@230 VAC / 2 A@30 VDC                                                            |
|                           | MAXIMUM DETECTOR DISTANCE WITH SHIELDED CABLE 3X1.5mm <sup>2</sup> (M) | 100                                                                               | 100                                                                                 |
|                           | MAXIMUM DETECTOR DISTANCE WITH SHIELDED CABLE 3X2.5mm <sup>2</sup> (M) | 200                                                                               | 200                                                                                 |

#### GAS DETECTORS FOR COMPACT PANELS

|                                                                                     |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>47SE192KM</b> | <b>METHANE GAS DETECTOR</b><br>Catalytic sensor for methane gas. Exclusively for connection to panels art. 47CMZ001/47CPZ003. Completely unaffected by temperature and humidity, with professional-level sensitive element. Ideal for installation in thermal or small/medium operation panels, for detecting potential gas leaks. Powered directly by panel art. 47CMZ001/47CPZ003. Power supply 12 VDC, absorption 1 W, output 4-20 mA. Field of measurement 0-20% L.E.L., protection rating IP44. Approximate duration 5 years. |
|                                                                                     | <b>47SE192KG</b> | <b>LPG GAS DETECTOR</b><br>Catalytic sensor for LPG. Exclusively for connection to panels art. 47CMZ001/47CPZ003. Completely unaffected by temperature and humidity, with professional-level sensitive element. Ideal for installation in thermal or small/medium operation panels, for detecting potential gas leaks. Powered directly by panel art. 47CMZ001/47CPZ003. Power supply 12 VDC, absorption 1 W, output 4-20 mA. Field of measurement 0-20% L.E.L., protection rating IP44. Approximate duration 5 years.             |

#### DETECTORS FOR DOMESTIC USE

|                                                                                     |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>47RFM000</b> | <b>METHANE GAS DETECTOR FOR DOMESTIC USE</b><br>This domestic use Methane gas leak detector utilises a visible signal (3 LEDs) and an audible signal (internal buzzer) to alert users to the presence of gas in the atmosphere. It is designed to work as a gas detector with voltage-free relay output. Contacts capacity 8 A-250 VAC/30 VDC. The detector is calibrated to detect a gas concentration of 10% of the L.E.L. (Lower Explosive Limit); this threshold may vary depending on environmental conditions but will not exceed 15% of the L.E.L. during the first 4 years. |
|                                                                                     | <b>47RFG000</b> | <b>LPG GAS DETECTOR FOR DOMESTIC USE</b><br>This domestic use LPG leak detector utilises a visible signal (3 LEDs) and an audible signal (internal buzzer) to alert users to the presence of gas in the atmosphere. It is designed to work as a gas detector with voltage-free relay output. Contacts capacity 8 A-250 VAC/30 VDC. The detector is calibrated to detect a gas concentration of 10% of the L.E.L. (Lower Explosive Limit); this threshold may vary depending on environmental conditions but will not exceed 15% of the L.E.L. during the first 4 years.             |









## FIRE ALARM INDEX - 1 OF 2

| Article        | BRIEF DESCRIPTION                                            | PAGE |
|----------------|--------------------------------------------------------------|------|
| 02-FL53        | SPARE FILTER FOR ILS2 AND IFT-P - 10 PCS                     | 46   |
| 02-FL56        | REPLACEMENT FILTER ELEMENT, IFT-P STAGE 2, 10 PCS            | 46   |
| 059-001        | FLUSH SAMPLE POINT KIT AND 2 M PIPE                          | 45   |
| 059-007        | CONICAL SAMPLE POINT KIT AND 2 M PIPE                        | 45   |
| 128-014        | ROUND SAMPLING POINT LABEL (100 PCS)                         | 46   |
| 128-015        | SMOKE DETECTOR PIPE LABEL (100 PCS)                          | 46   |
| 128-046        | RECTANGULAR SAMPLING POINT LABEL (100 PCS)                   | 46   |
| 144-013        | CONICAL SAMPLE POINT HEAD                                    | 45   |
| 221-035        | RED 10 mm CAPILLARY PIPE (100 M)                             | 45   |
| 221-036        | CLEAR 10 mm CAPILLARY PIPE (100 M)                           | 46   |
| 222-059        | DISCREET END CAP FOR CAPILLARY PIPE (10 PCS)                 | 45   |
| 30076003       | 12 VDC / 7 AH LEAD BATTERY                                   | 43   |
| 30076004       | 12 VDC / 18 AH LEAD BATTERY                                  | 43   |
| 30076005       | 12 VDC / 26 AH LEAD BATTERY                                  | 43   |
| 30076006       | LEAD BATTERY 12 VDC 40 AH                                    | 43   |
| 41ALM072       | BASE FOR ADDRESSABLE SIRENS - IP65                           | 35   |
| 41BSE000       | BASE FOR ADDRESSABLE SIRENS - IP65                           | 37   |
| 41CPE012       | ATENA EASY ADDRESSABLE FIRE PANEL                            | 34   |
| 41CPE024EN     | ATENA ADDRESSABLE PANEL WITH METAL CASE                      | 34   |
| 41CPR000       | REPEATER PANEL FOR ATENA AND ATENA EASY PANELS               | 35   |
| 41CRA000       | 5 PAIRS OF KEYS+LOCK, ATENA/ATENA EASY                       | 35   |
| 41ECB000       | REDUNDANT BUS EXP. CARD FOR ATENA + ATENA EASY PANELS        | 35   |
| 41ECL020       | 1 LOOP EXPANSION CARD FOR ATENA ADDRESSABLE PANEL            | 35   |
| 41ECL022       | 1 LOOP EXP. CARD FOR ATENA EASY ADDRESSABLE PANEL            | 35   |
| 41ECN000       | LAN EXPANSION FOR ATENA EASY                                 | 35   |
| 41IOM000       | ADDRESSABLE MODULE WITH 1 MONITORED OUTPUT                   | 38   |
| 41IOM000XL     | ADDRESSABLE MODULE WITH 1 MONITORED OUTPUT                   | 38   |
| 41IOM000/240   | ADDRESSABLE MODULE 1 RELAY OUTPUT 240 VAC                    | 38   |
| 41IOM000/240XL | ADDRESSABLE MODULE 1 RELAY OUTPUT 240 VAC                    | 38   |
| 41IOM004       | ADDRESSABLE MODULE WITH FOUR RELAY OUTPUTS                   | 38   |
| 41IOM004XL     | ADDRESSABLE MODULE WITH FOUR RELAY OUTPUTS                   | 38   |
| 41IOM010       | ADDRESSABLE MINI MODULE WITH 1 INPUT                         | 38   |
| 41IOM022       | ADDRESSABLE MODULE WITH 2 MONITORED INPUTS + 2 RELAY OUTPUTS | 38   |
| 41IOM022XL     | ADDRESSABLE MODULE WITH 2 MONITORED INPUTS + 2 RELAY OUTPUTS | 38   |
| 41IOM040       | ADDRESSABLE MODULE WITH FOUR MONITORED INPUTS                | 38   |
| 41IOM040XL     | ADDRESSABLE MODULE WITH FOUR MONITORED INPUTS                | 38   |
| 41IOM122       | ADDRESSABLE MODULE WITH 2 INPUTS AND 2 OUTPUTS               | 38   |
| 41IOM122XL     | ADDRESSABLE MODULE WITH 2 INPUTS AND 2 OUTPUTS               | 38   |
| 41ISC000       | ADDRESSABLE MODULE FOR CONVENTIONAL ZONE                     | 38   |
| 41ISC000XL     | ADDRESSABLE MODULE FOR CONVENTIONAL ZONE                     | 38   |
| 48BOX000       | OPTIONAL BOX FOR MODULES                                     | 38   |
| 41PAE020       | OUTDOOR ADDRESSABLE MANUAL CALL POINT - IP67                 | 36   |
| 41PAM000       | ADDRESSABLE MANUAL ALARM BUTTON                              | 36   |
| 41PRN000       | PRINTER IN BOX FOR ATENA                                     | 35   |
| 41RBX020       | BASE FOR ADDRESSABLE SENSORS                                 | 36   |
| 41RCS000       | ADDRESSABLE HEAT DETECTOR WITH ISOLATOR                      | 36   |
| 41RFU000       | ADDRESSABLE OPTICAL SMOKE DETECTOR W/ISOLATOR                | 36   |
| 41RML000       | ADDR.MULTI-C.SMOKE/HEAT DET.+ISOLATOR                        | 36   |
| 41SAB000/IS    | BASE WITH SIREN FOR CONNECTION TO LOOP                       | 37   |
| 41SAC000       | COVER FOR BASES 41SAB000 (5 PCS)                             | 37   |
| 41SAI000       | ADDRESSABLE INDOOR SIREN FOR CONNECTION TO LOOP              | 37   |
| 41SCB000       | ADDRESSABLE BASE WITH SIREN AND STROBE                       | 37   |
| 41SCI000       | ADDRESSABLE INDOOR SIREN W/ STROBE FOR CONN. IN LOOP         | 37   |
| 41SPG000       | PROGRAMMING DEVICE FOR ADDRESSABLE PRODUCTS                  | 35   |

|              |                                                     |       |
|--------------|-----------------------------------------------------|-------|
| 41SWS000     | ATENA MANAGER SUPERVISION SOFTWARE                  | 35    |
| 43CPC002EN   | ERACLE CONV. FIRE ALARM PANEL 2 ZONES               | 30    |
| 43CPC004EN   | ERACLE CONV. FIRE ALARM PANEL 4 ZONES               | 30    |
| 43CPC008EN   | ERACLE CONV. FIRE ALARM PANEL 8 ZONES               | 30    |
| 43CPC016EN   | ERACLE CONV. FIRE ALARM PANEL 16 ZONES              | 30    |
| 43CRE000     | SET OF 5 PAIRS OF KEYS FOR ERACLE PANEL             | 31    |
| 43ECR032     | 8-RELAY EXPANSION MODULE FOR ERACLE 8/16            | 31    |
| 43ECS020     | 4 SIREN EXPANSION MODULE FOR ERACLE 16              | 31    |
| 43ECZ020     | 4 ZONE EXPANSION MODULE FOR ERACLE 16               | 31    |
| 43EOL000     | SET OF 5 END-OF-LINE RES. FOR CONVENTIONAL ZONE     | 31    |
| 43LEC000     | EVENT LOG FOR ERACLE 16                             | 31    |
| 43PAE020     | OUTDOOR CONVENTIONAL MANUAL CALL POINT - IP67       | 33    |
| 43PAK000     | SPARE KEY FOR COMELIT MANUAL CALL POINT BUTTONS     | 33-36 |
| 43PAM000     | CONVENTIONAL MANUAL ALARM BUTTON                    | 33    |
| 43PAT000     | PROTECTIVE CALL POINT BUTTON COVER, SET OF 5 PIECES | 33-36 |
| 43RBA002     | SPACER FOR CONVENTIONAL SENSORS                     | 33    |
| 43RBR003     | SPACER FOR CONVENTIONAL SIRENS                      | 33    |
| 43RBX000     | BASE FOR CONVENTIONAL SENSORS                       | 33    |
| 43RBX001     | BASE WITH DIODE FOR CONVENTIONAL SENSORS            | 33    |
| 43RBX003     | BASE WITH RELAY FOR CONVENTIONAL SENSORS            | 33    |
| 43RBX004     | BASE WITH DIODE FOR CONVENTIONAL DETECTORS 45 MA    | 33    |
| 43RCS100     | CONVENTIONAL HEAT AND RATE OF RISE DETECTOR         | 32    |
| 43RCS101     | CONVENTIONAL HEAT DETECTOR                          | 32    |
| 43RFU100     | CONVENTIONAL OPTICAL SMOKE DETECTOR                 | 32    |
| 43RML100     | CONVENTIONAL MULTI-CRITERIA SMOKE/HEAT DETECTOR     | 32    |
| 46EST003     | EXTINGUISHING PANEL                                 | 49    |
| 46LEP000     | EVENT LOG FOR EXTINGUISHING PANEL                   | 49    |
| 46PMA000     | YELLOW BUTTON FOR EXTINGUISHING ACTIVATION          | 49    |
| 47ADB012     | POWER SUPPLY UNIT FOR 12 V LITHIUM BATTERY          | 50    |
| 47ADG206     | DIN RAIL POWER SUPPLY UNIT FOR PANEL 47CDG206       | 50    |
| 47BDL012     | LITHIUM BATTERY ON DIN RAIL                         | 50    |
| 47CDG206     | GAS PANEL ON DIN RAIL 2 - 6 SENSORS                 | 50    |
| 47CMZ001     | WALL-MOUNTED SINGLE-ZONE GAS PANEL                  | 54    |
| 47CPG408     | WALL-MOUNTED GAS PANEL FOR 4 - 8 SENSORS            | 51    |
| 47CPG424     | WALL-MOUNTED GAS PANEL FOR 4 - 24 SENSORS           | 51    |
| 47CPZ003     | WALL-MOUNTED GAS PANEL, 3 SENSORS                   | 54    |
| 47EDG020     | 2-SENSOR EXPANSION FOR PANEL 47CDG206               | 50    |
| 47ESP040     | 4-INPUT EXPANSION FOR GAS PANELS                    | 51    |
| 47ESP080     | 8-INPUT EXPANSION FOR PANELS 47CPG424               | 51    |
| 47REL040     | 4-RELAY EXPANSION FOR GAS PANELS                    | 51    |
| 47RFG000     | LPG GAS DETECTOR FOR DOMESTIC USE                   | 54    |
| 47RFM000     | METHANE GAS DETECTOR FOR DOMESTIC USE               | 54    |
| 47RTS282EC-S | AUTONOMOUS INDUSTRIAL GAS DETECTOR, CO              | 53    |
| 47RTS282EO   | AUTONOMOUS INDUSTRIAL GAS DET., OXYGEN              | 53    |
| 47RTS282KB   | AUTONOMOUS INDUSTRIAL GAS DETECTOR, GASOLINE        | 53    |
| 47RTS282KG   | AUTONOMOUS INDUSTRIAL GAS DETECTOR, LPG             | 52    |
| 47RTS282KI   | AUTONOMOUS INDUSTRIAL GAS DET., HYDROGEN            | 53    |
| 47RTS282KM   | AUTONOMOUS INDUSTRIAL GAS DETECTOR, METHANE         | 52    |
| 47SE192KG    | LPG GAS DETECTOR FOR THERMAL PANELS                 | 54    |
| 47SE192KM    | METHANE GAS DETECTOR FOR THERMAL PANELS             | 54    |
| 47SER080     | CARD WITH 4 RELAY OUTPUTS FOR 47ESP080 (MAX 2)      | 51    |
| 47TS255CB    | INDUSTRIAL DUAL GAS DETECTOR 4-20 MA                | 52    |
| 47ZSEC1      | DETECTOR CARTRIDGE 47TS255CB CO                     | 53    |
| 47ZSEC/IP    | AUTONOMOUS INDUSTRIAL GAS CARTRIDGE, CO             | 52    |



## FIRE ALARM INDEX - 2 OF 2

|            |                                                                                    |       |
|------------|------------------------------------------------------------------------------------|-------|
| 47ZSE0/IP  | AUTONOMOUS INDUSTRIAL GAS CARTRIDGE, OXYGEN                                        | 53    |
| 47ZSK01/IP | AUTONOMOUS INDUSTRIAL GAS CARTRIDGE, METHANE AND LPG                               | 52    |
| 47ZSK02/IP | AUTONOMOUS INDUSTRIAL GAS CARTRIDGE, HYDROGEN                                      | 52    |
| 47ZSK04    | DETECTOR CARTRIDGE 47TS255CB, GASOLINE VAPOURS                                     | 53    |
| 47ZSKB/IP  | AUTONOMOUS INDUSTRIAL GAS CARTRIDGE, GASOLINE                                      | 52    |
| 48BAZ000   | ZENER BARRIER FOR ATEX DETECTORS                                                   | 48    |
| 48BAZ001   | ZENER BARRIER FOR ATEX SIREN                                                       | 48    |
| 48BFA003   | FLUSH MOUNTING BOX FOR BARRIER 48BFC000                                            | 39    |
| 48BFA004   | SPARE REFLECTOR FOR 48BFC002                                                       | 39    |
| 48BFA005   | ALARM TEST TOOL FOR 48BFC002                                                       | 39    |
| 48BFA006   | SPARE REFLECTOR FOR 48BFC003                                                       | 39    |
| 48BFC000   | LINEAR BEAM SMOKE DETECTOR WITH REFLECTOR 3-30 M                                   | 39    |
| 48BFC002   | LINEAR BEAM SMOKE DETECTOR WITH REFLECTOR 5-50 M                                   | 39    |
| 48BFC003   | LINEAR BEAM SMOKE DETECTOR WITH REFLECTOR 50-100 M                                 | 39    |
| 48CAC001   | TEST CHAMBER FOR DUCTS                                                             | 42    |
| 48CCB000   | METAL HOUSING FOR ADDITIONAL BATTERIES                                             | 43    |
| 48CLU003   | VISUAL-AUDIBLE WARNING SIGN EN54-3/23                                              | 40    |
| 48CLU006   | INTERCHANGEABLE "FIRE ALARM" TEXT FOR OPTICAL/AUDIBLE SIGN 48CLU003                | 40    |
| 48CLU007   | INTERCHANGEABLE "EVACUATE IMMEDIATELY" TEXT FOR OPTICAL/AUDIBLE SIGN 48CLU003      | 40    |
| 48CLU008   | INTERCHANGEABLE "DO NOT ENTER GAS RELEASED" TEXT FOR OPTICAL/AUDIBLE SIGN 48CLU003 | 40    |
| 48CME000   | 6" OUTDOOR BELL - IP55                                                             | 41    |
| 48CMI000   | 6" INDOOR BELL - IP33C                                                             | 41    |
| 48CTR068   | LINEAR THERMAL CABLE, NOT RESETTABLE 68°C                                          | 42    |
| 48CTR105   | LINEAR THERMAL CABLE, NOT RESETTABLE 105°C                                         | 42    |
| 48CVE115   | EVAC CABLE EN50200 CEI20-105 PH30 2X1.5 100 M                                      | 59    |
| 48CVE125   | EVAC CABLE EN50200 CEI20-105 PH30 2X2.5 100 M                                      | 59    |
| 48FMA01    | ALUMINIUM COVER FOR 48FME051                                                       | 42    |
| 48FMA02    | ALUMINIUM COVER FOR 48FME101                                                       | 42    |
| 48FMA03    | FLOOR BRACKET FOR 48FME051 AND 48FME101                                            | 42    |
| 48FME051   | 50 kg MAGNETIC DOOR HOLDER                                                         | 42    |
| 48FME052   | 50 kg MAGNETIC DOOR HOLDER - 15 cm WALL/FLOOR BRACKET                              | 42    |
| 48FME053   | 50 kg MAGNETIC DOOR HOLDER - 30 cm WALL/FLOOR BRACKET                              | 42    |
| 48FME101   | 100 kg MAGNETIC DOOR HOLDER                                                        | 42    |
| 48FPT000   | REMOTE LED INDICATOR                                                               | 33-36 |
| 48LBL001   | ADHESIVE LABEL "GAS ALARM" FOR BOARD SIGN 48PIN001EN                               | 37    |
| 48LBL002   | ADHESIVE LABEL "EVACUATE IMMEDIATELY" FOR BOARD SIGN 48PIN001EN                    | 37    |
| 48LBL003   | ADHESIVE LABEL "DO NOT ENTER GAS RELEASED" FOR BOARD SIGN 48PIN001EN               | 37    |
| 48LME000   | CEILING-MOUNTED WHITE STROBE - IP65                                                | 42    |
| 48LME020   | WALL-MOUNTED WHITE STROBE - IP65                                                   | 42    |
| 48LMI000   | CEILING-MOUNTED WHITE STROBE - IP21                                                | 40    |
| 48LMI020   | WALL-MOUNTED WHITE STROBE - IP21                                                   | 40    |
| 48PAX000   | ATEX ALARM BUTTON                                                                  | 48    |
| 48PIN001EN | INDICATOR PANEL IN TRANSPARENT PLEXIGLASS                                          | 37    |
| 48RBX000   | MOUNTING BASE FOR ATEX DETECTORS                                                   | 48    |
| 48RCX000   | ATEX HEAT-RATE OF RISE DETECTOR                                                    | 48    |
| 48SAE000   | ELECTRONIC SIREN - IP66                                                            | 42    |
| 48SAE001   | BACKPLATE FOR SIREN 48SAE000, IP66 MOUNTING                                        | 41    |
| 48SAI020   | INDOOR SIREN WITH 32 TONES                                                         | 40    |
| 48SAX000   | ATEX SIREN                                                                         | 48    |
| 48SCE000   | CEILING-MOUNTED SIREN AND WHITE STROBE - IP65                                      | 41    |
| 48SCE020   | WALL-MOUNTED SIREN AND WHITE STROBE - IP65                                         | 41    |
| 48SCI000   | CEILING-MOUNTED SIREN AND WHITE STROBE - IP21                                      | 40    |
| 48SCI020   | WALL-MOUNTED SIREN AND WHITE STROBE - IP21                                         | 41    |
| 48SCI040   | SIREN WITH RED STROBE                                                              | 40    |

|                |                                               |    |
|----------------|-----------------------------------------------|----|
| 48SCI060       | SIREN WITH WHITE STROBE                       | 40 |
| 48SDT001       | AEROSOL FOR SMOKE DETECTOR TESTING            | 43 |
| COLL250        | ADHESIVE FOR PIPES AND SOCKETS 250 ML         | 46 |
| IFT-P          | ASP. SMOKE DETECTOR, 1 ZONE, 2 CHANNELS       | 44 |
| ILS-1          | ASPIRATING DETECTOR, 1 ZONE, 1 DETECT.        | 44 |
| ILS-2          | ASPIRATING DETECTOR, 1 ZONE, 2 DETECT.        | 44 |
| PIP-001        | RED ABS 25 mm PIPE, 20X 3 METRES              | 45 |
| PIP-002        | CONNECTION SOCKET FOR 25 mm PIPE (10 PCS)     | 45 |
| PIP-003        | SOCKET UNION FOR 25 mm PIPE (10 PCS)          | 45 |
| PIP-005        | 90 ELBOW FOR 25 mm PIPE (10 PCS)              | 45 |
| PIP-006        | 45 ELBOW FOR 25 mm PIPE (10 PCS)              | 45 |
| PIP-007        | END CAP FOR 25 mm PIPE (10 PCS)               | 45 |
| PIP-008        | EQUAL TEE FOR 25 mm PIPE (10 PCS)             | 45 |
| PIP-009        | CLIP FOR 25 mm PIPE (20 PCS)                  | 45 |
| PIP-014        | PIPE CUTTERS                                  | 45 |
| PIP-015        | FLUSH SAMPLE POINT HEAD FOR CAPILLARY PIPE    | 45 |
| PIP-016        | TEE ADAPTER FOR CAPILLARY PIPE (10 PCS)       | 46 |
| PIP-021        | 25 mm FLEXIBLE CONNECTOR, 100 CM              | 46 |
| PIP-025        | WATER FILTER WITH TRANSPARENT PIPE AND VALVE  | 46 |
| PIP-026        | 25 mm FLEXIBLE CONNECTOR, 30 CM               | 46 |
| PIP-027        | REMOTE SAMPLING TEST POINT FOR CAPILLARY TUBE | 46 |
| VSP-850-R      | 25 mm IN-LINE EXTERNAL FILTER - RED           | 46 |
| VSP-855-4      | REPLACEMENT FOR FILTER VSP-850-R - 4 PIECES   | 46 |
| ZSP100-2.5A-18 | ADDITIONAL POWER SUPPLY UNIT 2.5 A            | 43 |
| ZSP100-5.5A-18 | ADDITIONAL POWER SUPPLY UNIT 5.5 A            | 43 |

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- [ IT ] **Comelit Group Spa**  
Via Don Arrigoni 5  
24020 Rovetta S. Lorenzo  
Bergamo Italy  
Tel. +39 (0) 346 750011  
Fax +39 (0) 346 71436  
www.comelitgroup.com  
info@comelit.it
- [ AU ] **Comelit Australia Pty Ltd**  
Unit 6/11 Sabre Drive  
Port Melbourne  
Victoria 3207  
Ph. 1300 889000  
enquiries@comelitgroup.com.au
- [ BE ] **Comelit Group Belgium**  
Kleinewinkellan 24  
1853 Grimbergen  
Belgium  
Tel. +32 2 411 50 99  
Fax. +32 2 411 50 97  
www.comelit.be  
info@comelit.be
- [ CO ] **Comelit Colombia**  
Carrera 76#73-44, 2° piso  
Bogotá, Colombia  
Tel. (57-1) 4929358/79686  
james.quimbaya@comelit.it  
www.comelit.com.co
- [ DE ] **Comelit Group S.p.A. Deutschland**  
Konrad-Zuse-Str. 2  
41516 Grevenbroich  
Deutschland  
Tel. 0 21 82-82 96-0  
Fax: 0 21 82-82 96-299  
www.comelit.de  
info@comelit.de
- [ ES ] **Comelit Group Spa Sucursal en Espana**  
Calle Pintor Roig i Soler, 28  
08916 - Badalona (Barcelona)  
Tel. +34 932 430 376  
Fax +34 934 084 683  
www.comelit.es  
info@comelit.es
- [ FR ] **Comelit Immotec**  
18, rue Séjourné  
94000 CRETEIL CEDEX  
Tél. +33 (0) 1 43 53 97 97  
Fax +33 (0) 1 43 53 97 87  
www.comelit.fr  
contact@comelit-immotec.fr
- [ GR ] **Comelit Hellas - Telergo Security Ltd**  
Roumelis, 59  
16451 Argyroupoli - Athens  
Tel. +30 210 99 68 605-6  
Fax +30 210 99 45 560  
www.comelit.gr  
telergo@otenet.gr
- [ IE ] **Comelit Ireland**  
Ground Floor  
14 Herbert Street - Dublin 2  
Tel. +353 (0) 1 619 0204  
Fax +353 (0) 1 619 0298  
www.comelit.ie  
info@comelit.ie
- [ NL ] **Comelit Nederland BV**  
Buitendijks 1-3356 LX  
Papendrecht  
Tel. +31 786511201  
Fax +31 786170955  
www.comelit.nl  
info@comelit.nl
- [ SG ] **Comelit South East Asia**  
Victory Centre  
110 Lorong 23 Geylang, #05-10  
388410 Singapore  
Tel. +6567024780  
www.comelit.sg  
office@comelit.sg
- [ AE ] **Comelit Middle East**  
Office 1-154, Techno Hub  
Dubai Silicon Oasis  
Free zone - Dubai, UAE  
www.comelit.ae  
info@comelit.ae
- [ GB ] **Comelit Group UK Ltd**  
Unit 4 Mallow Park Watchmead  
Welwyn Garden City Herts  
AL7 1GX  
Tel: +44 (0)1707377203  
Fax: +44 (0)1707377204  
www.comelitgroup.co.uk  
info@comelitgroup.co.uk
- [ US ] **Comelit Usa**  
2021 S. Myrtle Avenue  
Monrovia, CA 91016  
Tel. +1 626 930 0388  
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www.comelitusa.com  
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- [ RU ] **Comelit Group Russia**  
Moscow,  
Krasnogvardeiskiy bulvar, 7A  
tel: +7(495)789-49-33  
www.comelit.ru  
mail: tsn@comelit.ru  
mail: info@comelit.ru
- [ HK ] **Comelit Hong Kong**  
Representative Office  
Rm 601, 6/F, Tung Hip  
Commercial Building,  
248 Dex Voeux Road Central,  
Hong Kong  
Office direct line:  
+852 3582 1632  
www.comelit.hk  
info@comelit.hk

## Comelit Group Spa

Via Don Arrigoni 5  
24020 Rovetta S. Lorenzo  
Bergamo [Italy]  
Tel. +39 (0) 346 750011  
Fax +39 (0) 34671436  
www.comelitgroup.com



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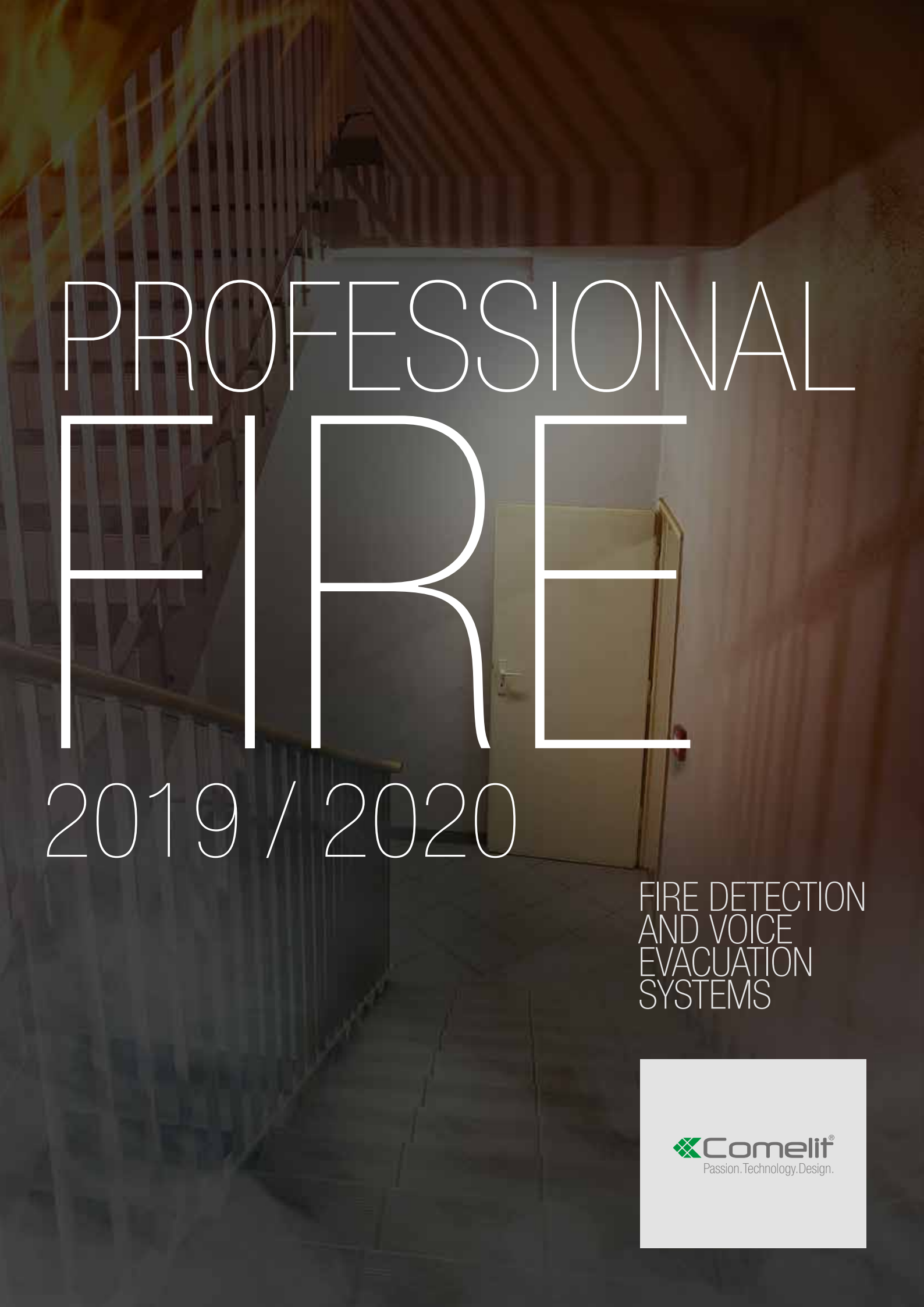
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