CFN

CONVENTIONAL CONTROL PANEL

INSTALLER MANUAL

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PART 1
PRELIMINARY REMARKS FOR A CORRECT WORKING

1.1 LINE CABLE TEST PROCEDURE BEFORE LOOP CONNECTION

1.1.1 Line continuity

Check the resistor of line electro conductive cables with tester at 200 Ω of resistor for line electro conductive cables superior to 40 Ω is too high!!
Possible causes can be:

- the line is too long;
- loose clips;
- false contacts;
- cable of insufficient section;
- partly cut off or damaged cable.

The cables must usually present a resistor between 10 and 15 Ω.
Besides the resistor of the negative cable and the positive one must result similar.

1.1.2 Isolation between + / - of loop

With tester at 20KΩ and the detectors insert, it must measure a about value of the end of line resistor.

PART 2
DETAILS

The fire-prevention **CFN** control panel was designed in observance to the rules EN54-2 and EN54-4, and it has the following characteristics:

- ü The available versions of the control panel are at 2 – 4 – 6 zones.
- ü It is possible to install on a single zone up to 20 active points (detectors, points supplied from zone line) plus passive points (buttons, smoke linear barrier, ...) until to a maximum of 32 total points for zone.

The power supply to the device occurs through only 2 cables.

Connectible detectors:

Smoke detectors:	**RF1, SOD**
Heat detectors:	**RT, TV**
Multi-criteria detectors:	**RFT1**

Connectible modules:

Manual buttons:	**P, P1, P5**
Linear barrier smoke detectors:	**RLF1**
GAS detectors:	**GMR, GGR, GCR**
Relay output modules:	**All devices with a relay output**

- The detectors must be plain with a low power supply of 50µA, when the detector is in normally functioning. If it goes to alarm mode, the current is 25mA.

- The control panel have the panel with leds and buttons to view the status signal and to programmer the control panel. Faults and alarms are visualize through the led luminous and they are signal through the buzzer acoustic of control panel them.

- The control panel has:
  - o a supervised siren output for the alarm signalling (out1);
  - o a supervised siren output for the alarm/pre-alarm signalling (out2);
  - o a relay output C-NO-NC for the alarm signalling (Relay1);
  - o a relay output C-NO-NC normally on for the fault signalling (Relay2);
  - o six open collector outputs of zone alarm.

- All control panel programming must be made through the panel buttons.

PART 3
CONTROL PANEL INSTALLATION

3.1 ABOUT SAFETY

The control panel installation must be performed by qualified staff. Only authorized personnel are designated to open the control panel; inside it is possible to find some parts with tension.

Product installation location.

Install the product in a dry place to protect it from atmospheric agents. Allow plenty of space around the product to ensure ventilation. Do Not install the product across or near any heat sources or in dirty place or exposing it to corrosive substances .

Excessive heat and/or heating devices can compromise the working and the product integrity. Ensure a proper ventilation for the product.

Humidity or presence of condensation drops can damage the product. If there is condensation, make sure to wait for the product to dry. If the product has been conserved in cold place for a long time, it is necessary locate it in the installation place and wait two hours before connecting it to the 230Vac net line.

WARNING: Only authorized personnel are designated to open the control panel. DO NOT try to repair the product or else the warranty is not valid. Disconnect the power main and the batteries before performing the maintenance on the product.

3.2 HOW TO FIX THE CASE

3.2.1 Metal case

The control panel weighs about 3.5Kg without batteries inside. When fixing the case at a surface, make sure to use supporting elements fit to support this weight. In case reinforce the surface if necessary.

Precaution: only qualified staff who is well acquainted with the procedures described in this manual.

Insert the 230Vac net line in the case, keeping far away the same one from the printed circuits and the rest of wiring.

Supply to the control panel through a suitable magneto-thermic power switch. The net cable must have minimum section of 1.5mm and work voltage of 250Vac.

ASSEMBLY (see picture fig. 1)

1. open the control panel;
2. remove the complete panel of mother board;
3. punch out the pre-cut holes that are necessary to insert the cables;
4. install the case in the desired place using the four supporting holes;
5. replace the panel.

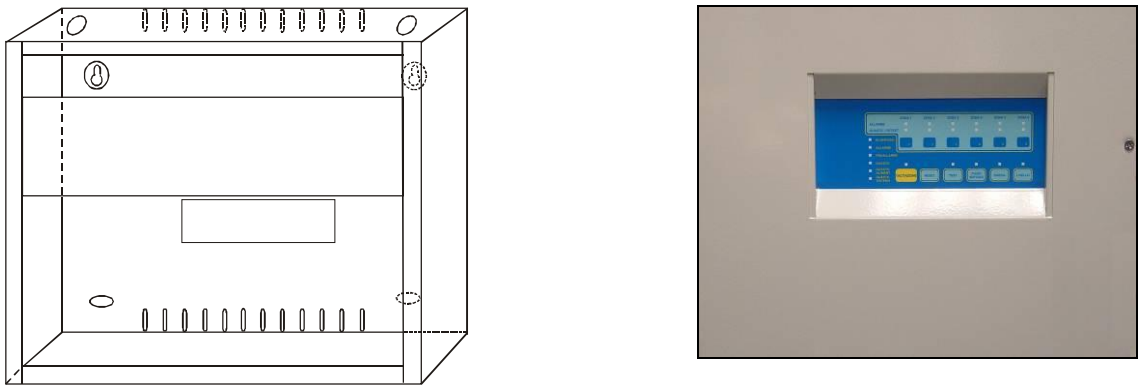


fig. 1

3.3 CONNECTION

The motherboard of the control panel in picture 2. The positions of the clips and fuses are pointed out.

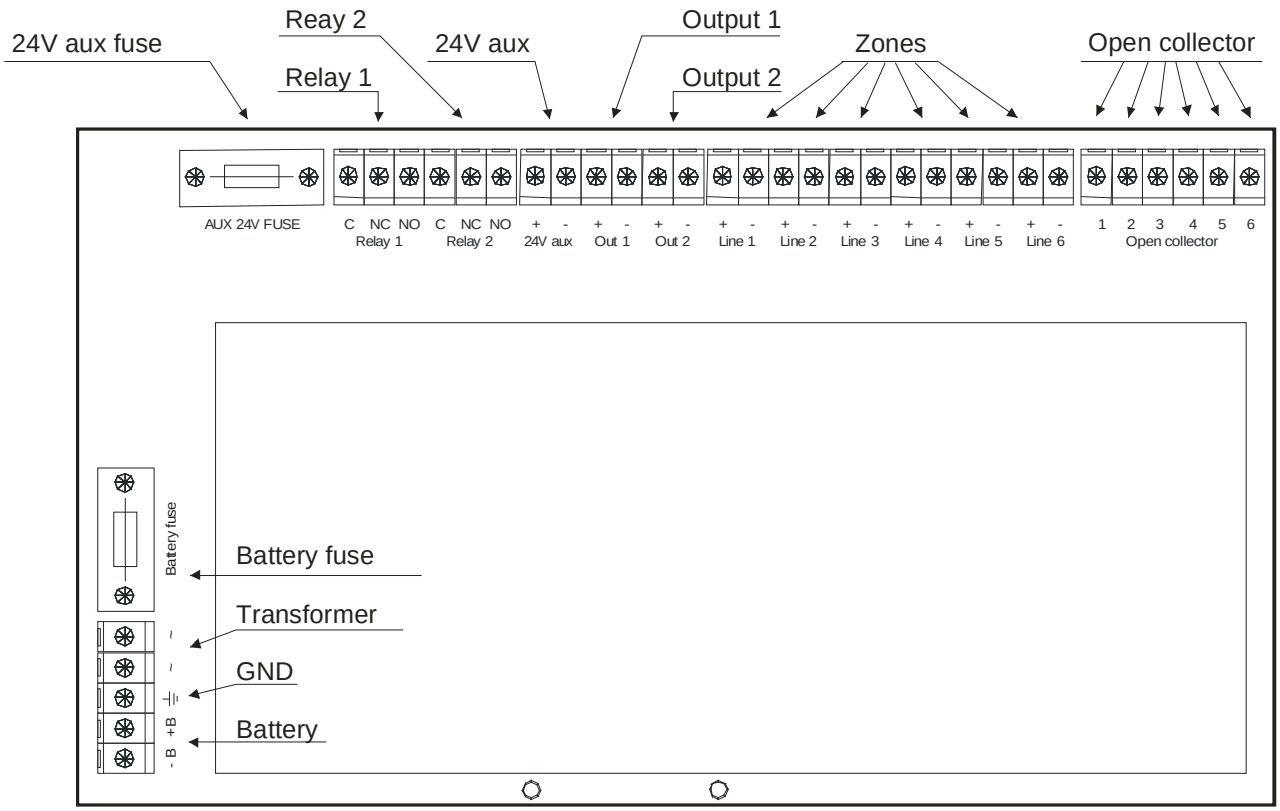
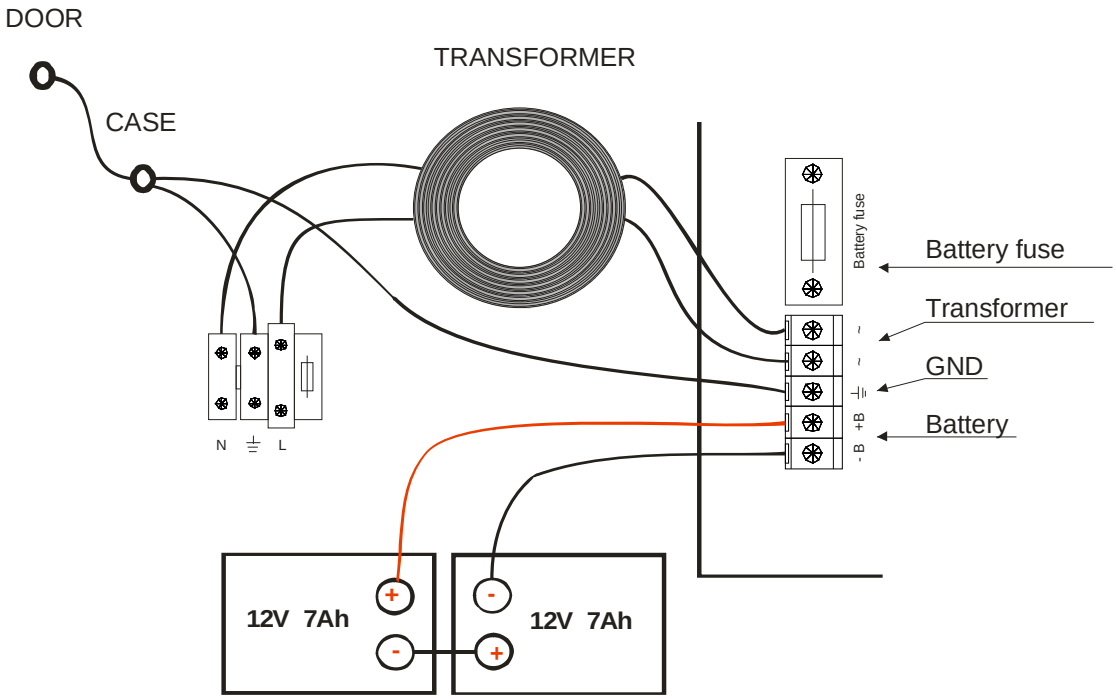


Fig.2
Description of motherboard of the control panel.

3.3.1 Block power supply



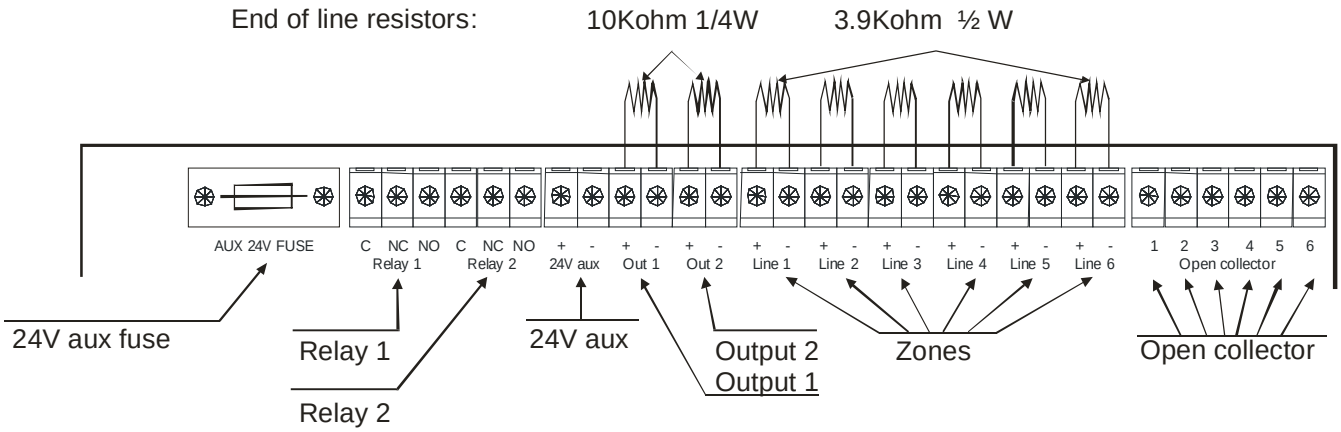
The block power supply is composed of:

1) Toroidal transformer 230Vac / 33Vac.
2) Clips for the connection to the 230Vac:
    a. Neutral.
    b. Line.
    c. GND.
    d. GND of the case.
    e. Protection fuse from the 230Vac.
3) Two batteries pad of 12V 7Ah.
4) Clips for the motherboard power supply:
    a. (-B, +B) battery pad.
    b. GND.
    c. (~ ~) transformer.
    d. Protection fuse from the battery connection.

WARNING: after the cable connection of the power supply to the GND-N-L clips of AC-DC Adaptor, it is important to immobilize the three electrical cables with a plastic strip. It is necessary to prevent that electrical cables are free to move.

WARNING: the power supply cable must have the ground electrical cable (GND) more long respect the line (L) and neuter (N) cables.

3.3.2 Motherboard



The motherboard is composed of:

1) One fuse for the 24Vdc aux output protection.
2) Two relay outputs (N-NC-NO):
    a. Relay 1 for the alarm signalling.
    b. Relay 2 normally on for the fault signalling.
3) Two supervised siren outputs:
    a. Output 1 for the alarm signalling.
    b. Output 2 for the pre-alarm/alarm signalling.
4) Two, four or six supervised zone inputs (variable number at depending on type of the control panel).
5) Outputs of zone repeat; two, four or six open collector outputs (variable number at depending on type of the control panel).

3.3.3 Connection to the power supply

Execute the connections with suitable materials and procedures prescribed by the rules in force. Do not execute the connection to the net without first disconnecting the external magneto-thermic.

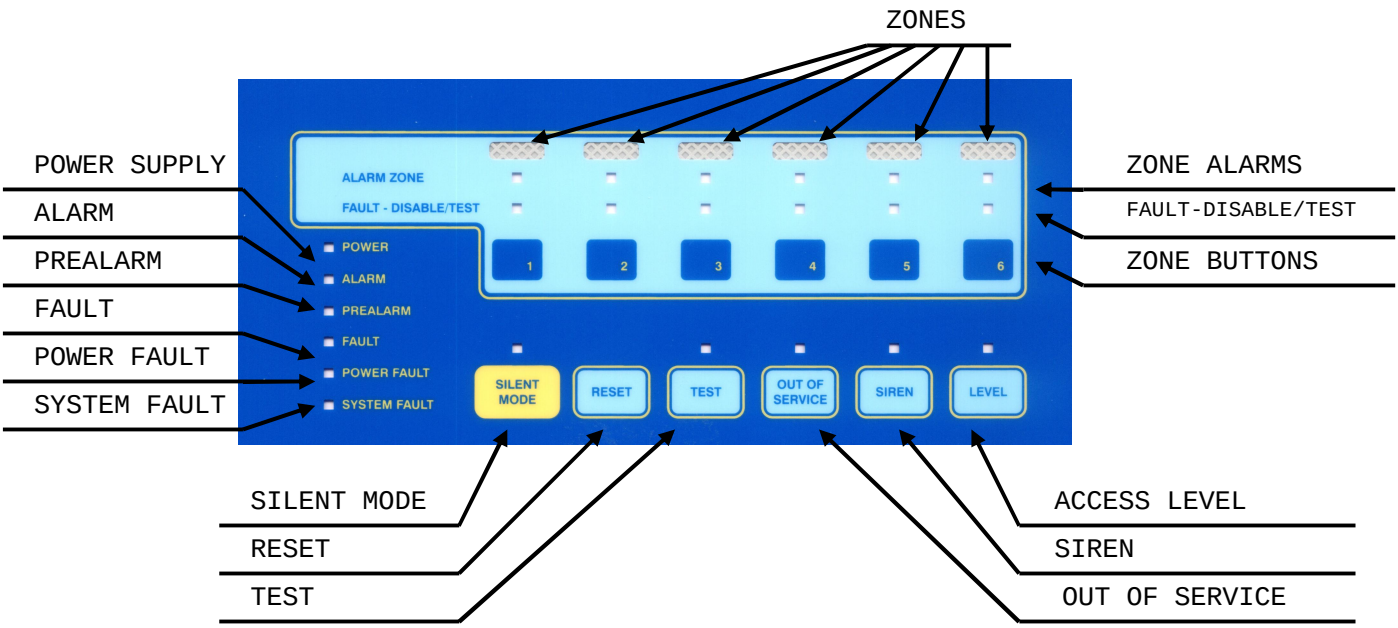
NOTE

- At the time of installation always connect first the net 230Vac and then the batteries. In that way dangerous sparks are avoided.
- The net input cable to the control panel must be connected to a suitable magneto-thermic power switch to make easier the maintenance. The minimum section of net cable must be of 1.5mm.
- All the cables connected to the control panel must be fireproof. The cable of earth, the net ground must be connected to the earth clip of net input.

3.4 INSERTION AND REMOVING POINTS

To modify / insert / remove points of a zone, it is necessary to put it in out of service and to disconnect the cables from the control panel clips.
The user must not install other bypass or expansion which do not belong to same production range, because the control of the cable status is only guaranteed at the line that has the end of line resistor.
For the point connections to the zone (detector, button, etc…), the user must reference at the chapter PART 9.

3.5 PANEL DESCRIPTION



3.5.1 Led for shared functions

Listed below there are the description of the corresponding main leds:

LED	Colour	Description
POWER SUPPLY	Green	Normally on, it indicates if the control panel is supplied. Slow flashing it indicates if the 230Vac power is missing. After about 20 minutes from the 230Vac is missing, the control panel goes to fault. Off when the control panel is not supplied.
ALARM	Red	Normally off. Slow flashing it indicates the alarm status. Fixed light it indicates that the alarm is silenced.
PREALARM	Red	Normally off. Slow flashing it indicates the pre-alarm status. Fixed light it indicates that the pre-alarm is silenced.
FAULT	Yellow	Normally off. Slow flashing it indicates the fault status. Fixed light it indicates that the fault relay output is placed to out of service.
POWER FAULT	Yellow	Normally off. Slow flashing it indicates that the 230Vac is missing. Fixed light it indicates the battery fault.
SYSTEM FAULT	Yellow	Normally off. Fixed light it indicates the control panel fault.
TEST	Yellow	Normally off. Fast flashing when the control panel is in the zone test status.
OUT OF SERVICE	Yellow	Normally off. Fixed light when at last a zone or a output (siren or relay) is in out of service.
SIREN	Yellow	Normally off. Slow flashing it indicates the fault status of the siren output (open circuit or short circuit). Fast flashing it indicates that a siren output is active. Fixed light it indicates that the alarm/pre-alarm outputs are in out of service.
LEVEL	Yellow	Normally off. Fixed light it indicates that the level 2 is active. Slow flashing it indicates that the level 3 is active. Fast flashing it indicates that the level access is active.

3.5.2 Led of the zone

Listed below there are the description of the corresponding leds for the zones:

LED	Colour	Description
ZONE ALARM	Red	Normally off. Fixed light it indicates the alarm/pre-alarm of the zone. Fast flashing it indicates the alarm status of the zone causes from a manual alarm.
FAULT – OOS/TEST	Yellow	Normally off. Fixed light it indicates that the zone is to out of service. Slow flashing it indicates the fault status of the zone. Fast flashing it indicates the test status of the zone.

3.5.3 Button descriptions

Listed below there are the description of the corresponding button commands:

Button	Description
SILENT	Level 1: it permits the silent of the internal buzzer. Level 2: it permits the silent of the internal buzzer and siren and relay outputs.
RESET	Level 2: it permits the reset of the alarms and faults signalling (led, relay and siren outputs). Level 3: it permits the reset of the alarms and faults signalling, and the default setting

	restoration of the control panel.
TEST	**Level 2: it lights all leds and internal buzzer for a time of 5s.** **Level 3: it permits to put a zone in test mode.**
OUT OF SERVICE	**Level 2: it permits to set the zone and the siren/relay outputs to out of service.** **Level 3: it permits to set the zone as alarm or pre-alarm mode.**
SIREN	**Level 2: it permits to active the siren outputs.** **Level 2, on alarm status, it permits to put the delays to zero of siren output.** **Level 3: it permits to set the siren output delays.**
LEVEL	**It permits to access to 2 and 3 levels.** **It permits to escape from menus without modification.** **Level 2: it permits to change the password of 2 level.** **Level 3: it permits to change the password of 3 level.**

3.6 MAINTENANCE

The maintenance measures advised in EN 54-14 must be followed.

3.6.1 Leds/buzzer test

It is possible to execute the leds and buzzer test from the control panel.

Procedure:

- Access at level 2.
- Push <TEST> button.

This function lights up all leds and it actives the internal buzzer and fault relay for a time of 5s.

3.6.2 Daily control

The user will check that:

- ü The control panel works properly. Otherwise the faults will be reported and registered and the maintenance staff must be informed.
- ü It is advisable that all or any faults during testing or noted previously, are solved as soon as possible, for a correct functioning of the control panel.

3.6.3 Weekly control

- ü It is advisable to check the status of disconnected and connected batteries.
- ü A detector or a button will be started up to test the control panel and the connected fittings of alarm. It is suitable to check a different zone every month.
- ü Where it is admitted, inform the fire brigade or the control centre.

Any malfunctioning must be noted in the event register. The problems must be solved as soon as possible, in case contacting the installer.

3.6.4 Four-monthly control

The maintenance staff must carry out the following controls:

- ü Look over the notes of the event register.
- ü Examine all the connections of batteries.
- ü Check the alarm functioning, auxiliary fault of the control device and signaller.

- ü Visual inspection of the control devices and signaller, a possible rise in humidity or any other type of decay.
- ü Check there are not structural changes that can cause the malfunctioning of the detectors, manual buttons or sirens. In this case carry out a visual inspection, too.

Any problem must be noted in the event register, solving the probable problems as soon as possible.

3.6.5 Yearly control

The maintenance staff must have the duty to perform the following controls:

- ü Carry out the control procedures advised daily, monthly and four-monthly.
- ü Test the control panel and check all the detectors work as recommended by the manufacturer (check the parameters).
- ü Look over visually all the connections to the devices and relative supports are safe, they are not damaged and are protected properly.
- ü Examine and check all the batteries.

Any fault must be noted in the event register, solving the problems as soon as possible.

PART 4
RAPID PROCEDURE OF CONFIGURATION CONTROL PANEL

WARNING: IMPORTANT NOTES FOR THE START UP OF THE CONTROL PANEL

All the zones and siren outputs must have to connect the end of line resistors (for your values to see PART 9). At first activation of the control panel, to connect the power supply and after the batteries.
To verify that the start test has not faults.

4.1 DEFAULT SETTING

At first time the control panel has the following setting:

1) all zones are in service (no out of service);
2) all zones are in alarm mode (single consent) and the “Automatic activation” property of the <Out1> output is disabled (see chapter 7.3.1);
3) the siren output delay is set up on zero seconds (0s).

The control panel programming remains in the memory, also if the control panel is off. If the user wants to restore the default parameters, it is necessary to do a 2nd level reset (see the chapter 6.8).

PART 5
ABOUT PROGRAMMING

5.1 ACCESS LEVELS

5.1.1 Levels for final user and installer

The control panel is has been planned following the EN54-2 norms. This rule gives at least three different access level.
The access levels are divided as described below.
The control panel is normality status at level 1. To access to superior levels, it is necessary to insert the appropriated codes.

N.B.: the code of level 3 must be used only by the qualified technician to the programming of the control panel.

5.1.2 Level 1

Level for the final user. It permits to check the control panel status and to do the silence mode of the internal buzzer.

5.1.3 Level 2

Access allowed to the system management. All signals and commands of the control panel are available. In this level it is possible to enabled or disabled the zones, to activate the outputs, to test the leds and the internal buzzer, to restore alarms or faults and to silence outputs.

Procedure:

- Push <LEVEL> button (the led flashes fast).
- Insert the password of level 2 (default 222).

The led <LEVEL> is on at fixed light.
To abort the procedure, push <LEVEL> button.

Procedure to modify the password of level 2:

- Push <LEVEL> button (the led flashes fast).
- Insert the password of level 2.
- Push <LEVEL> button within 2 seconds (the leds <TEST>, <OUT OF SERVICE> and <SIREN> flash fast).
- Insert the new password of level 2.
- Reinsert the new password of level 2 (a double beep gives the password change; a long beep gives a change error).

It is not possible to have the password of level 3 equal to level 2.
To abort the procedure, push <LEVEL> button.

5.1.4 Level 3

Access allowed only to the installer. All functions are accessible in this level and it is possible whichever modification to change every setting: to restore the default configuration, to start the test function, to set alarm or pre-alarm of the zones and to delay the siren outputs.

Procedure:

- Push <LEVEL> button (the led flashes fast).
- Insert the password of level 3 (default 333).

The led <LEVEL> is on and it flashes slow.
To abort the procedure, push <LEVEL> button.

Procedure to modify the password of level 3:

- Push <LEVEL> button (the led flashes fast).
- Insert the password of level 3.
- Push <LEVEL> button within 2 seconds (the leds <TEST>, <OUT OF SERVICE> and <SIREN> flash fast).
- Insert the new password of level 3.
- Reinsert the new password of level 3 (a double beep gives the password change; a long beep gives a change error).

It is not possible to have the password of level 2 equal to level 2.
To abort the procedure, push <LEVEL> button.

PART 6
ALARM – PREALARM - FAULT

When the control panel works in normal mode, it is in zones and siren outputs control status. The control panel changes status only when there are these cases:

1. Alarm
2. Pre-alarm
3. Fault
4. System fault

6.1 ALARM

When the control panel finds a alarm, it gives:

- led <ALARM> on, slow flashing;
- led <ALARM ZONE> on, continuous if one or two detectors have gone into alarm; on with quick intermittent flashes if a manual alarm has been triggered;
- internal buzzer is active and led <SILENCE> on, slow flashing;
- the outputs <Out1> and <Out2> are activated after the preset delay time has elapsed; at the activation of one of the two outputs, the led <SIREN> flashes quickly whenever one of the two siren outputs is activated. The delays are reset to 0 value if and when: another detector of the zone in alarm is activated, or if a manual alarm is triggered. When several detectors are in alarm simultaneously on different zones, the delay will not be automatically reset;
- the Open Collector output of the alarmed zone is activated;
- output <Relay1> active.

In case of silence mode the leds <ALARM> and <SILENCE> remain always on.

6.2 PRE-ALARM

In case a pre-alarm mode is engaged (just with one detector in alarm and one zone preset for the pre-alarm mode), the control panel reveals the following signals:

- led < PRE-ALARM> on, slow flashing;
- led <ALARM ZONE> on, continuous;
- internal buzzer is active and led <SILENCE> on, slow flashing;
- the output <Out2> is activated after having waited the preset delay; the activation of both outputs, the led <SIREN> has quick intermittent flashing signal to confirm the <Out2> is on. The delays are reset to 0 value if and when: another detector of the zone in alarm is activated, or if a manual alarm is triggered. When several detectors are in alarm simultaneously on different zones, the delay will not be automatically reset;
- the output <Out1> remains off and it activates if “Automatic activation” setting is enabled (see chapter 7.3);
- the Open Collector output of the alarmed zone is activated.

In case of silence mode the leds <PRE-ALARM> and <SILENCE> remain always on.
If the Control Panel reveals another alarm activity, it switches from the pre-alarm state to Alarm.

6.3 FAULT

When the control panel finds a fault:

- led < FAULT> on, slow flashing;
- intermittent buzzer active;
- the output switches to <Relay2>;
- the power source led turns on.

This fault status remains until the faults are restored.

6.3.1 Zone fault

If a zone goes to fault (short circuit or open circuit) the led zone relative to the zone will turn on and give a slow flash intermittence. As the fault on the zone is restored, the control panel is restored too.

6.3.2 Output fault

If a siren output goes to fault (short circuit or open circuit) The <SIREN> led is on with a slow flash intermittence. As the fault of the output is restored, the control panel is restored too.

6.3.3 Power fault

There are two types of power faults:

230Vac fault

If the 230Vac is missing for more 5 minutes, the power fault signalling is given, the <POWER FAULT> led begins to flash with a slow flash intermittence and the control panel goes to fault status.

If the fault is restored, the control panel is restored too.

Battery fault

If the battery is missing/foult for more 5 minutes, the power fault signalling is given, the <POWER FAULT> led is on and the control panel goes to fault status.

If the fault is restored, the control panel is restored too.

6.4 SYSTEM FAULT

This fault type has source from a bad functioning of the micro-controller. This fault is not resolved from final user, but it is necessary to contact the system installer.

To resolve this problem it is possible to put off the control panel (to take off power supply and battery). To wait more or 10s (+/-) and then connect again the battery and power supply. If the fault persists; contact the manufacturer.

During this procedure, the <Relay2> fault relay and internal buzzer will be activated.

6.5 SILENCE (1st LEVEL)

First level silence permits only to silent the internal buzzer.

Procedure:

- Push <SILENCE> button.

The <SILENCE> led is on until:

1) a new status change of the control panel that requires the buzzer activations;
2) there is an automatic reset of the fault which has generated the buzzer activation;
3) the reset procedure is launched.

6.6 SILENCE (2nd LEVEL)

Second level silence permits to silent the internal buzzer and to restore the siren relay outputs.

Procedure:

- Access at level 2.
- Push <SILENCE> button.

The <SILENCE> led is on until:

1) a new status change of the control panel that it requires the buzzer activations;
2) there is an automatic reset of the fault which has generated the buzzer activation;
3) the reset procedure is launched.

6.7 RESET

The control panel reset permits to restore the normal status of the control panel.
The reset command does:

1) restoration of the siren and relay outputs;
2) silent mode of the internal buzzer;
3) restoration of all zones (during the reset, all zone outputs are set to 0V);
4) restoration of all fault and alarm signals.

Procedure:

- Access at level 2.
- Push <RESET> button.

The reset employs approximately 10s; during this procedure, all leds are on. The opearation terminates with the sound of a double “beep”.

6.8 DEFAULT SETTING RESTORATION

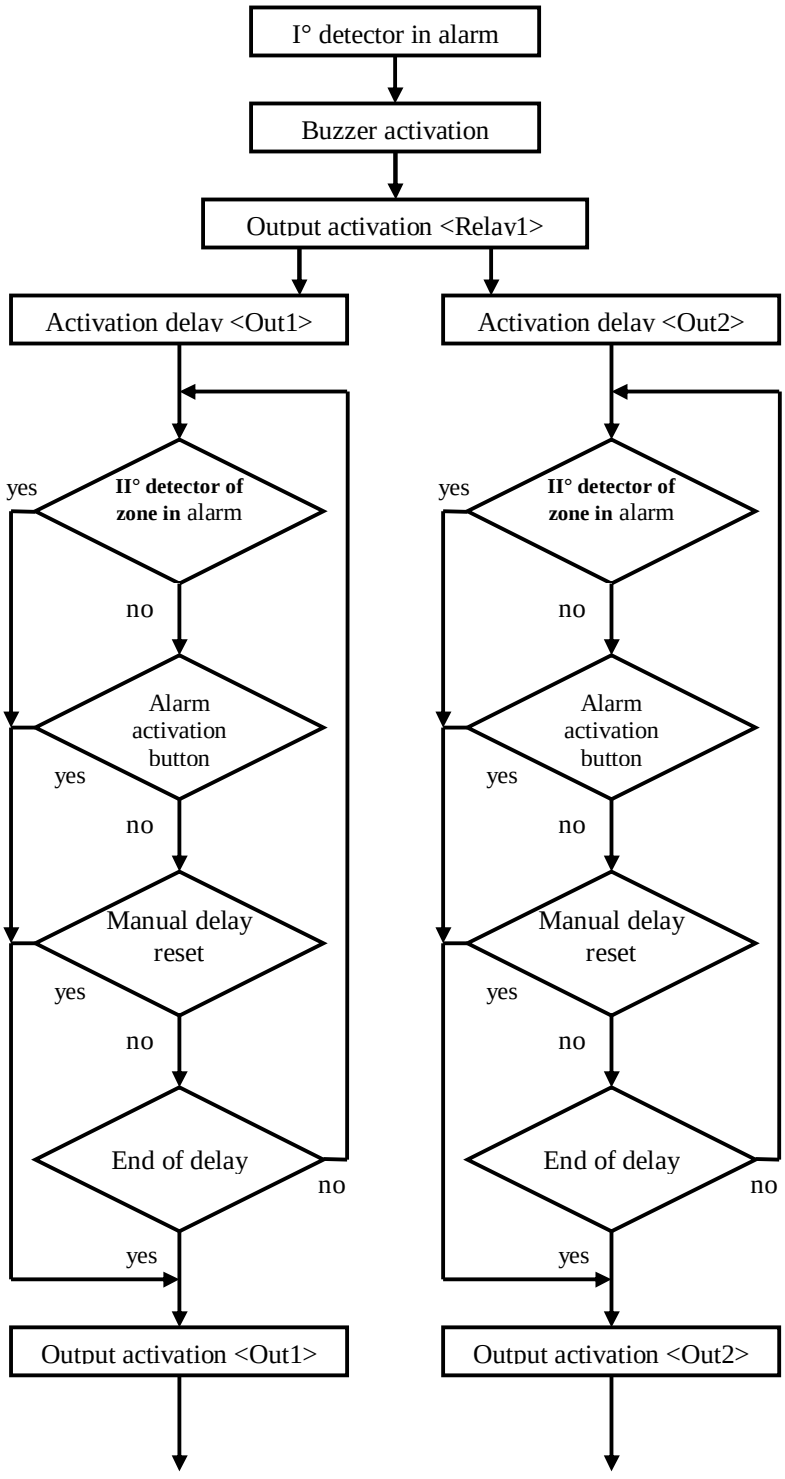
This procedure has same functions of reset (chapter 6.7) and besides it permits to set the control panel with factory default values (see chapter 4.1).

Procedure:

- Access at level 3.
- Push <RESET> button.

The reset employs approximately 10s; during this procedure, all leds are on(with the exception of the one that indicates the system fault).

6.9 PROGRAM SCHEMATICS



The Open Collector outputs have the activation status of the zones (for example: zone 3 in alarm then OC3 is on).

PART 7
ZONE PROGRAMMING

For every zones it is possible to define until a maximum of 32 detector points; they are divided in this mode:

- ü max 20: active detectors that are supplied from zone cables (about 50µA for the normal current);
- ü remaining point to achieve the maximum number allowed: passive points (supplying 0A) such as buttons, smoke linear barriers, alarm devices with relay output, …

Quite apart if the user uses all zones, for every zones must to be installed the end of line resistor. If the zone is used, the resistor must to be placed at end line. If a zone is not used the resistor must to be installed to zone clips of the motherboard.
The resistor absence or the incorrect value generate a fault zone signal.

7.1 OUT OF SERVICE OF ZONE

This procedure permits to disable the alarm and fault controls.
The control panel indicates the out of service of zone with <OUT OF SERVICE> and <FAULT – OOS/TEST> leds of the interested zone. The <OUT OF SERVICE> led is on as long as there is at least a zone in out of service.

NOTE: a zone in out of service stands to have a 24Vdc as normal zone. If the user wants to do maintenance at a zone, it is necessary to put it to out of service and to disconnect the cables from motherboard clips.

Procedure:

- Access at level 2.
- Push <OUT OF SERVICE> button. The led <OUT OF SERVICE> quick flashes.
- To modify the out of service status of the zones with the <ZONE BUTTON>.
  - o Zone led is on: out of service enabled.
  - o Zone led is off: out of service disabled.
- To confirm the modification to push < OUT OF SERVICE > button.

To interrupt the procedure and return to level 1 without having applied any changes, press the <LEVEL> button.

7.2 ZONE TEST

The zone test permits to verify the correct functioning of detectors or zone in the case which of an alarm. In this status, the control panel does not activate the siren and relay outputs if a zone in test modality goes to alarm or fault status.

Procedure:

- Access at level 3.
- Push <TEST> button. The led <TEST> flashes with quick intermittence.
- To put or remove the test function of a zone, it is necessary to push <ZONE BUTTON>. The zone led start to flash with quick intermittence to indicate the test status.

- At this step it is possible to active a alarm through a detector or alarm point. The control panel lights up the <ZONE ALARM> led to indicate that zone is alarmed.
- After about 5s, the control panel restores the alarm signal and it is possible to pass to other detectors or alarm point.

To finish this test procedure, to push <LEVEL> button. The control panel restores all zones.

NOTE: if during the test a zone, that it is not in test, goes to alarm, the control panel finishes test procedure and it starts that of alarm. The zones that during the test mode were in alarm status, they are not restore.
NOTE: if during the test the control panel finds a fault signal not from the zones in test, the control panel finishes test procedure and it starts that of alarm. All zones are restored.

7.3 ZONE PREALARM

It is possible to set a zone in pre-alarm mode, that is the alarm signal activation when at least two detectors are alarmed.
For all devices that they do not work for absorption (buttons, smoke linear barriers, etc.) which the user wants to set pre-alarm, it is necessary to use the specific resistor (see chapter PART 9).

Procedure:
- Access at level 3.
- Push <OUT OF SERVICE> button. The led <OUT OF SERVICE> flashes with quick intermittence. The <ZONE ALARM> and <FAULT – OOS/TEST> leds for every zone are lit if the alarm or pre-alarm the zone is:
  - <ZONE ALARM> led is on: alarm.
  - <GUASTO – FS/TEST > led is on: pre-alarm.
- To modify the alarm/pre-alarm status of the zones with the <ZONE BUTTON>.
- To confirm the modification to push < OUT OF SERVICE > button.

To interrupt the procedure and return to level 1 without having applied any changes, press the <LEVEL> button.

7.3.1 Automatic activation <Out1>

Of default, the <Out1> output is off until the control panel finds a new fire alarm. It is possible activate the <Out1> output after delay of 180s from the pre-alarm:

Procedure:
- Access at level 3.
- Push <OUT OF SERVICE> button. The led <OUT OF SERVICE> flashes with quick intermittence. With the <SIREN> button it is possible change:
  - <SIREN> led is on: <Out1> output is activated after a delay of 180s from the pre-alarm revelation.
  - <SIREN> led is off: <Out1> output is disabled (it is activated if the control panel finds a new fire alarm).
- To confirm the modification to push < OUT OF SERVICE > button.

To interrupt the procedure and return to level 1 without having applied any changes, press the <LEVEL> button.

PART 8
SIREN OUTPUT PROGRAMMING

The control panel has two supervisory siren outputs (alarm and pre-alarm outputs). The control is at polarity inversion with a minimum output voltage, this voltage is sufficient to control the line status. To do this, it is necessary that for every output it is installed an and of line resistor.

NOTE: the outputs are the current limited: max 250mA.
A superior current absorption (caused from a short circuit) causes the activations of the power surge controller. Of consequence the zone cables have null voltage and the fault is signalled.

8.1 MANUAL ACTIVATION OUTPUT

Procedure:

- Access at level 2.
- Push <SIREN> button. The led <SIREN> flashes with quick intermittence.
- To select the output:
  - To push zone <1> button for output 1.
  - To push zone <2> button for output 2.
- To finish this test procedure, to push <LEVEL> button.

8.2 SIREN OUTPUT SILENT

If the control panel is in alarm status and the user wants to silence all siren outputs, without to lose the information about alarmed zone (case which the <RESET> button is pressed), it is necessary to do the silence procedure of 2nd level (see chapter 6.6).

8.3 OUTPUT DELAY

It is possible to set a siren output delay (alarm and pre-alarm outputs).

Procedure:

- Access at level 3.
- Push <SIREN> button. The led <SIREN> flashes with T=0.5. At this time the <ZONE ALARM> and <FAULT – OOS/TEST> leds attributed to 1 and 2 zone, it gives the delay information on 1 and 2 outputs.
- To modify the 1 zone delay the user must use <1> button and for the 2 zone the <2> button.

Output delay	Led <ZONE ALARM>	Led <FAULT – OOS/TEST>
0s	Off	Off
30s	Off	On
60s	On	Off
120s	on	On

- To confirm the modification to push <SIREN> button.

To interrupt the procedure and return to level 1 without having applied any changes, press the <LEVEL> button.

NOTE: the output delay is ignored if more than one detector goes into alarm, or if an alarm button has been pressed (or a device where it is been installed a an alarm resistor).
If the user wants enable the delay at device with output relay, it is necessary to use a pre-alarm resistor.

For this resistor values see chapter PART 9.

Two relay outputs are not delay.

To reset the delay time elapsed in alarm phase, it is necessary to press the <SIREN> button at level 2.

PART 9
TECHNICAL CHARACTERISTICS

GENERAL	
Case size:	Metal case: base x depth x height 351x95x292mm.
Protection index:	IP40.
Weight:	Metal case: 3.5Kg without battery.
Operating temperature:	-5° / +40°C.
Relative humidity:	95% maximum.
Power supply:	230Vac ±10/-15%, 50Hz.
Max absorption:	50VA.
Power supply fuse:	T 500mA L 250V.
Transformer block output:	34Vac.
24V aux output:	21,5Vdc to 28Vdc. **WARNING**: the 24V aux is protected from a fuse, but it is not supervised. The control panel does not control the fuse status.
24V aux fuse:	F 315mA L 250V.
Battery charger:	27.6Vdc at 20°C.
Battery:	Lead sealed at Pb 24V – 7,2Ah.
Battery fuse:	T 2A L 250V.
ZONE	
Zones:	Control panels from 2, 4 or 6 zones.
Max. number of detectors:	20.
End of line resistor:	3.9KΩ 1/2W.
Alarm current:	25mA.
Alarm resitor:	220Ω 2W.
Prealarm resistor:	1KΩ 1W.
SIREN OUTPUT	
Siren output:	2 supervisory siren outputs. Short and open circuit control. Output 1: alarm. Output 2: pre-alarm.
Max. current:	250mA.
End of line resistor:	10KΩ 1/4W.

RELAY OUTPUT	
Relay output:	2 relay outputs (C-NO-NC). Relay 1: alarm. Relay 2: fault; the relay is normally excited.
Max. current:	Max. 1A, 30Vdc - 0.5A, 125Vac.
OPEN COLLECTOR OUTPUT (available only request)	
Open Collector outputs:	6 outputs per zone.
Max. current:	25mA.

PART 10
INSTALLER MENU

In this chapter are viewed the control panel menu structure. They are divided for access levels. To access at levels to do reference at the chapter 5.1.

10.1 LEVEL 1

- Silent mode of 1st level (§ 6.5).

10.2 LEVEL 2

- Silent mode of 2nd level (§ 5.1.3).
- Alarm/fault reset (§ 0).
- Leds/buzzer test (§ 3.6.1).
- Out of service of zone (§ 7.1).
- Siren outputs activation (§ 8.1).

10.3 LEVEL 3

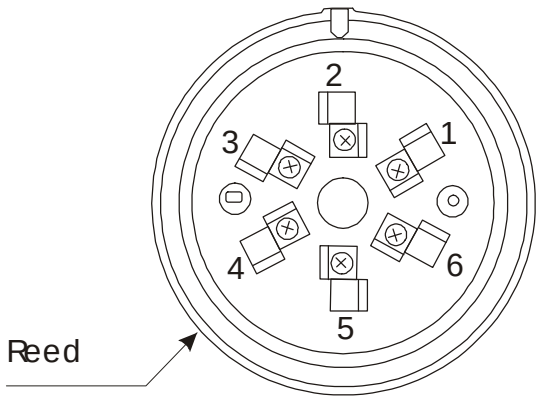
- Default setting restoration (§ 6.8).
- Zone test (§ 7.2).
- Zone alarm/prealarm (§ 7.3) and programming “Automatic activation” of the <Out1> outputs (§ 7.3.1).
- Siren outputs delay (§ 8.3).

PART 11
POINTS DESCRIPTION AND UTILIZATION

11.1 DETECTOR

All conventional detectors (smoke, heat and multicriterion) have the same base. These detectors have a double led indicator at high visibility (360°) and a low height.

CLIPS DESCRIPTION OF THE BASE



1 / +	+ input line.
2 / R	not connected.
3 / R	not connected.
4 / SCR	negative output for outside door repeater.
5 / -	- line.
6 / +	+ output line.

11.1.1 Smoke detector

The smoke detector reacts to the presence of elements caused by the combustion (visible smoke). The working principle is based on the light dispersion technique (Tyndall effect).

11.1.2 Heat detector

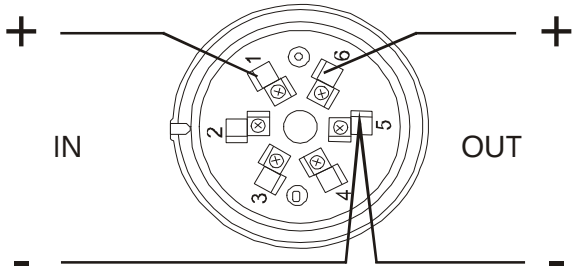
The heat detector has been designed to activate itself when the heat exceeds a previously fixed level. It is available a heat detector with rate-of rise function; this detector has been designed to activate itself the speed with which this increment is produced is high, even though the scheduled level has not been exceeded.

11.1.3 Multicriterion detector

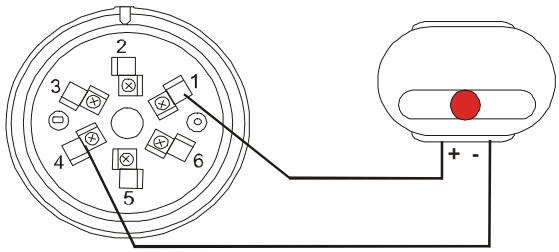
The smoke/heat multicriterion detector reacts to the presence of elements caused by the combustion (visible smoke) in regards to the smoke detection. The working principle is based on the light dispersion technique (Tyndall effect). For the detection of the heat, it has been designed to activate itself when the heat exceeds a certain previously fixed level or when the speed with which this increment is produced is high, even though the programmed level has not been exceeded.

11.1.4 Electrical schemes

CONNECTION TO LOOP



OUTSIDE DOOR REPEATER



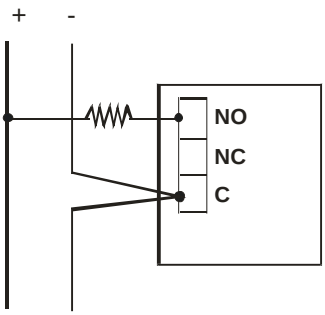
11.2 CONVENTIONAL BUTTON

There are three button types:

1) Glass break.
2) Glass break with led.
3) Rearm able with key.

11.2.1 Glass break / Push button

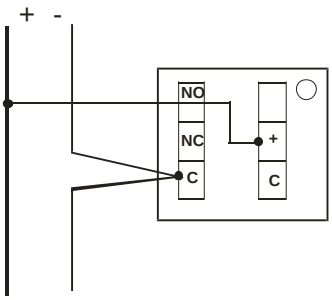
This button has C-NO clips at which to install the alarm resistor (see the value at chapter PART 9).



If the button has inside a resistor, the user must control if this resistor has a compatible value with that one requested.

11.2.2 Glass break button with led

This button has a lad that it indicates if the button is been pressed. The user must control if the alarm internal resistor has a compatible value with that one requested.



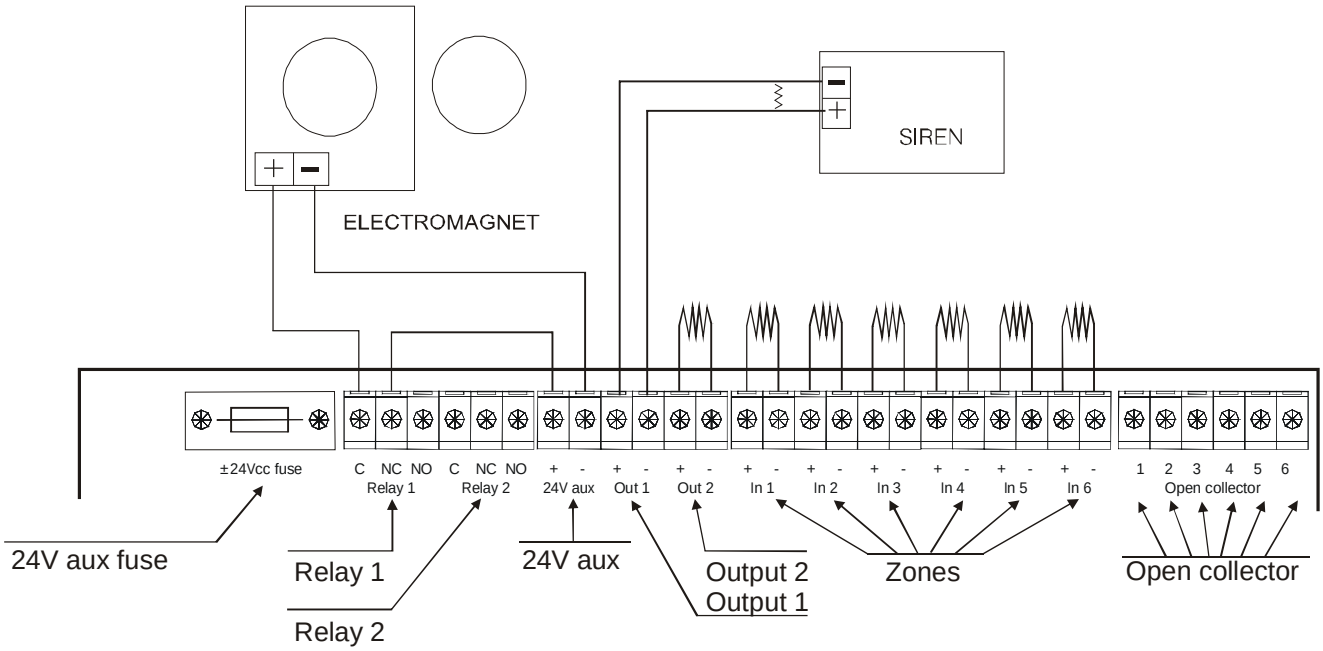
11.2.3 Rearmable button with key

This type of button has a key for the rearmament in the case if it is pressed.
The electrical scheme to see chapter of the “Glass break button”.

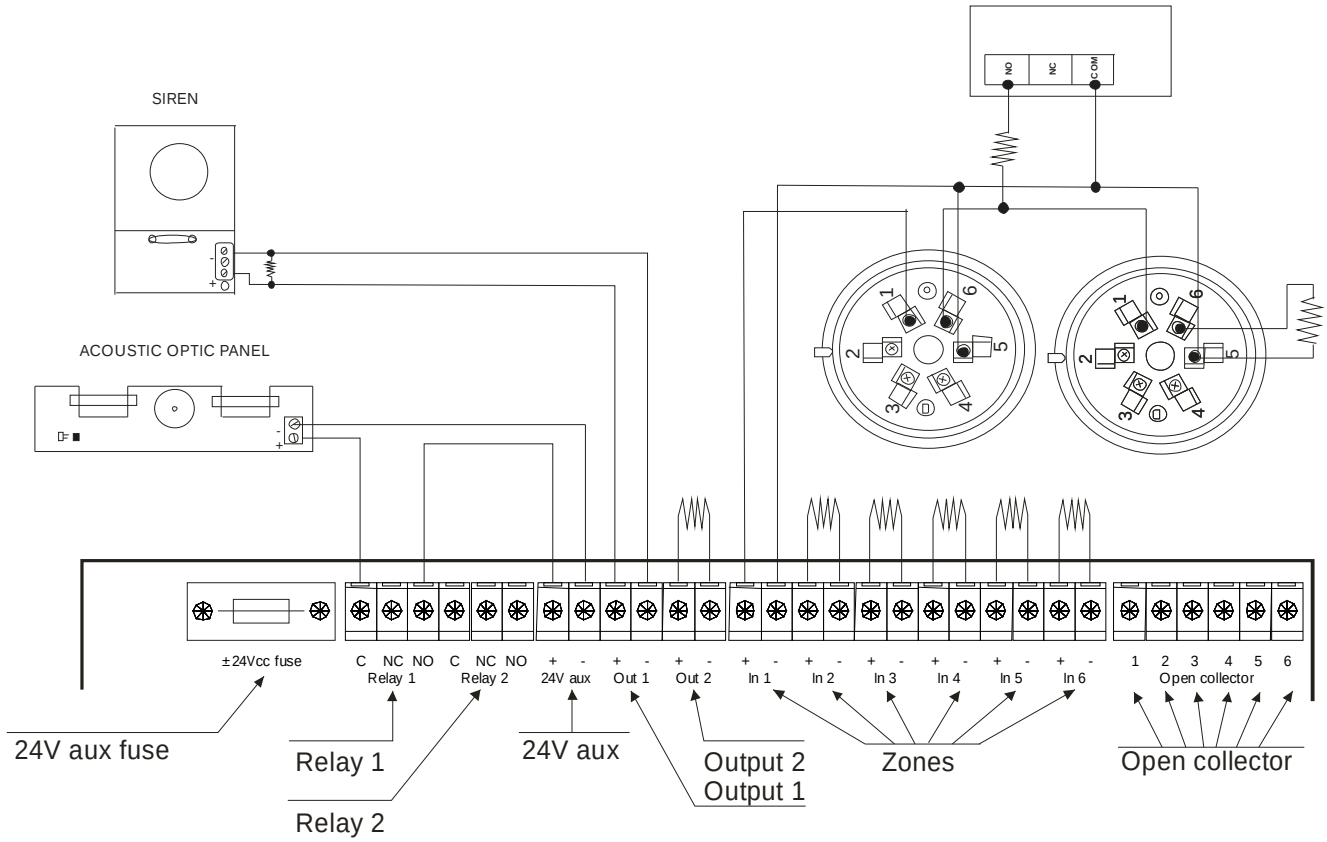
PART 12
GENERIC ELECTRICAL SCHEMES

In this chapter, there are implementing examples of the control panel.

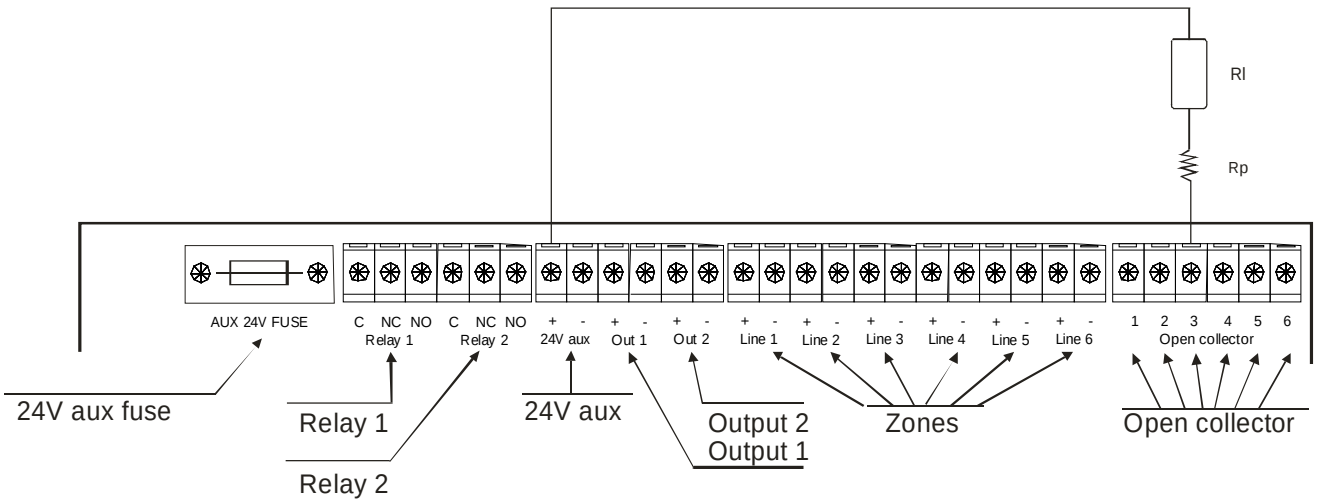
12.1 SIREN AND ELECTROMAGNET CONNECTION TO THE CONTROL PANEL



12.2 SOME CONNECTION POINTS



12.3 OPEN COLLECTOR CONNECTION



Rl is the load to command.
Rp is the protection resistor of the Open Collector to have a maximum current of 25mA on the output.

PART 13
HOW TO SOLVE THE PROBLEMS

Problem	Cause	Solution
SYSTEM FAULT	A problem with the micro-controller.	To contact the installer of the control panel.
ZONE FAULT	A problem on the zone line.	To check if there are short circuit or open circuit along the zone line.
	The end of line resistor missing.	To check if there is the end of line resistor at the end of zone line.
	Zone line loss of balance.	To check the equivalent resistor of the zone line. It must have a value near at the end of line resistor.
SIREN FAULT	A problem on a output siren.	To check if there are short circuit or open circuit along the siren line.
	The end of line resistor missing.	To check if there is the end of line resistor at the end of siren line.
	Siren line loss of balance.	To check the equivalent resistor of the siren line. It must have a value near at the end of line resistor.
POWER FAULT	Fault on 230Vac / fuse.	To check the connections, the fuse, the value of the 230Vac input voltage.
	Fault battery / fuse.	To check the connections, the fuse, the value of the battery voltage.
24Vdc aux fault	24Vdc aux fault / fuse.	To check the fuse and the 24Vdc aux output voltage.

If the control panel programming does not correspond to that the user has made, it is possible that there is been an error during the programming. To restore the control panel at the default (§4.1).