Safety

Installation Manual

History

Version	Date	Author	Changes
1	2012-11-26		-
2	2015-05-15		Minor changes
3	2018-09-13		Branding actualization
4	2020-10-29		Actualization

Index

History 2
Index 2
Introduction 3
ONLY Security System 3
Electrical Installation 4
Connections 4
Connection of Detectors 5
Connection Schemes 6
Protections 10
Configurations 10
Measurements and Troubleshooting 13

INTRODUCTION

This document is intended to orientate the work of the installer of the ONLY security system on the site. The next chapters explain how the installation should be made, the precautions to take and the way to test and configure the system.
It is essential to respect it in order to achieve a proper and trouble-free installation.

ONLY SECURITY SYSTEM

The ONLY security system resembles the conventional security systems. It consists of a central, keyboards and expansion units communicating with each other by a BUS line.
The used protocol is similar to the protocol of other ONLY systems allowing the integration of all of them.
The ONLY security central has its own power supply that generates 1.5amps at 12V to supply the central itself, the keyboards and the detectors and is normally sufficient for the most common installations.
The central has 8 zones, a PSTN telephone dialler, relays to control water and gas valves and control of indoor and outdoor sirens.
The outdoor sirens can be self-powered with triggering by removing or applying + or – in the siren trigger line.
The central also has two tamper detection circuits one for the opening of the cover panel and the other for violation of the siren or of any detector.
Each expansion unit allows connection of further 4 zones configurable like the ones from the central for one of the following actions:

- Interior intrusion immediate
- Interior intrusion delayed
- Peripheral intrusion immediate
- Peripheral intrusion delayed
- Smoke or Fire
- Flooding
- Gas leakage
- Panic
- Partial intrusion immediate
- Partial intrusion delayed

The expansion units also serve as a support for the keyboards.

The central arms the intrusion alarm in 3 modes:

TOTAL mode - arms all intrusion zones
NIGHT mode - arms peripheral and partial zones
PARTIAL mode - arms only the partial zones

24 hours zones (smoke/fire, water and gas leakage and panic) are always armed, regardless if the alarm is armed or disarmed.
For more details about the features of the system, please refer to its user manual.

ELECTRICAL INSTALLATION

The security system should have its own tubing through which pass the wires of the BUS or the connection wires from the detectors to the central or expansion units.
The whole system is isolated from the mains network as usual in security systems, having a backup battery for supply in case of mains network failure.
The BUS cable must be of the type 2x0.5 + nx0.22 mm^2 and the wires of the larger section reserved for power supply.
The alarm cable can have several pairs of 0.22mm^2 wires depending on the number of zones you wish to pass through it.
You may opt for a centralized installation (all zones to the central), a distributed installation (zones connected to expansion units distributed in the house) or a mixed installation (central and expansion units) since there is no difference in operation.

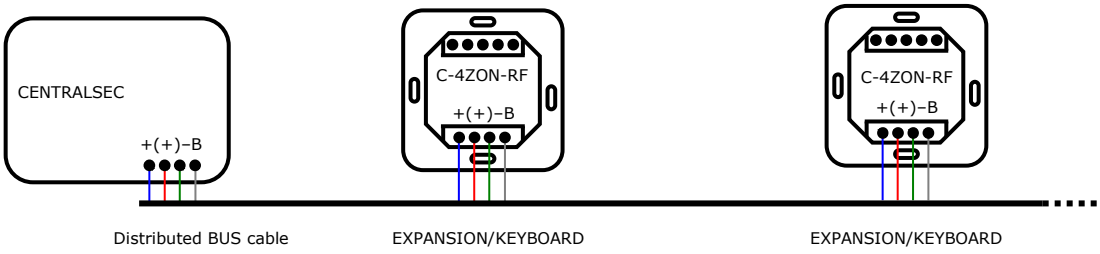
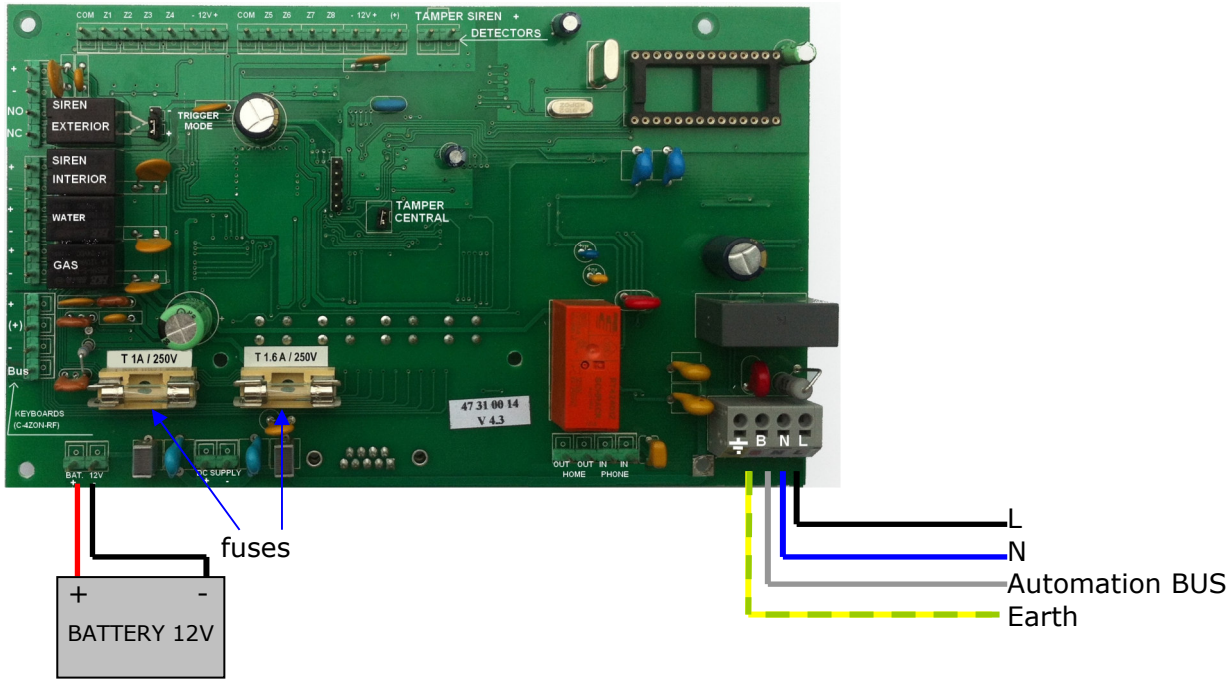


Fig. 1: Security BUS

CONNECTIONS

The CENTRALSEC is powered by 230 V and receives also the automation BUS line for communication with the rest of the system.
ATTENTION: PHASE AND NEUTRAL MUST NOT BE INVERTED, since these damages the central.



The security central also has a connection to the backup battery for when the mains network fails. The left fuse protects the battery charging circuit. You should use a fuse of the type T 1A.
The other fuse is to protect the central (T 1.6A).

CONNECTION OF DETECTORS

The detectors receive power from the security central via the same cable as the one for zone connection. Typically each intrusion detector needs 4 or 6 conductors:

- 2 for supply
- 2 for detection (and tamper if end-of-line resistors are used)
- 2 for tamper (if no end-of-line resistors are used)

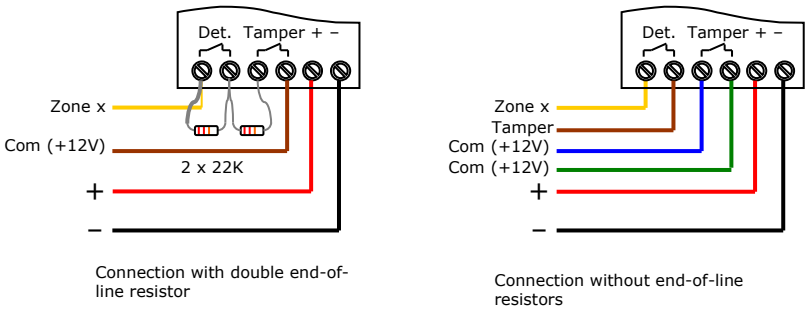


Fig. 2: Examples of connection of intrusion detectors

The security detectors need typically only 4 conductors:

- 2 for supply
- 2 for detection

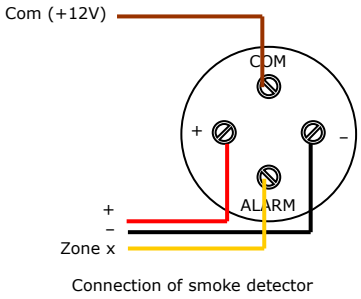
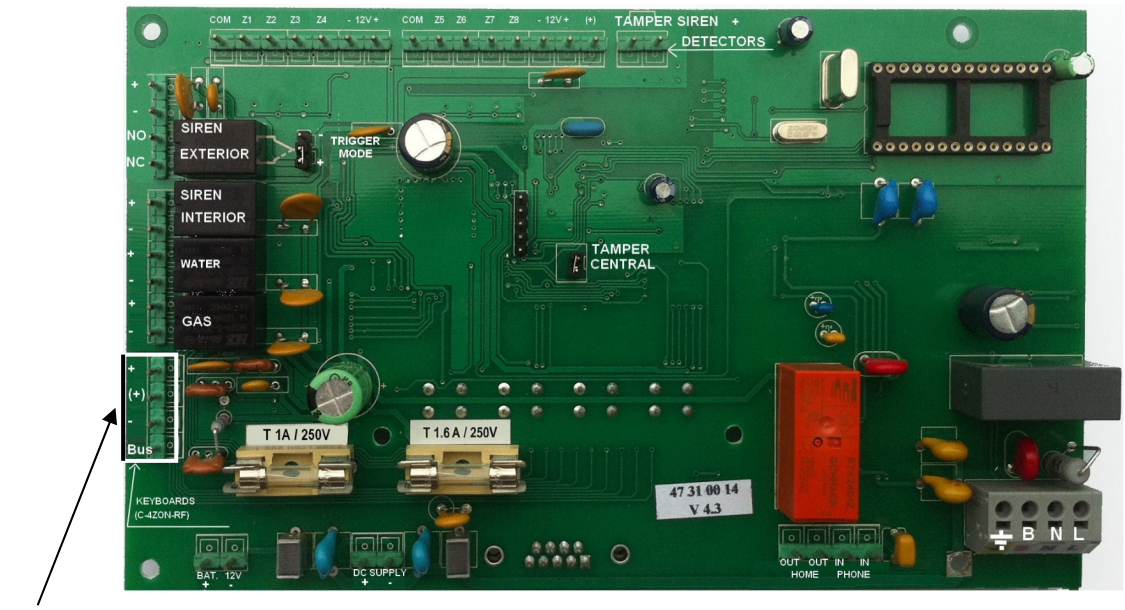


Fig. 3: Example of connection of a smoke detector

All intrusion and security detectors must have normally-closed contacts except for water leakage detectors that should be normally-open.



Supply of keyboards, expansion units and detectors

The central offers 2 types of power supply to the expansion units, keyboards and detectors, one continuous and another switched.

The connections are marked as follows:

BUS	for connection of the BUS to the expansion units
-	ground (0V)
(+)	switched power supply
+	continuous power supply

The continuous power supply is intended to feed the intrusion detection units and the expansion units.
The switched power supply is intended to feed the security detectors that need a power cut to perform a RESET. This is the case for example for smoke or gas detectors. During the first 10 seconds after an order to arm, the power supply is cut to RESET the detectors.

In the same detection circuit (zone) one or various detectors can be connected. In all cases except in the water leakage detection zone, the zones must be normally closed, being normally open in case of water leakage. For this reason, the connection of the various detectors must be made in series except for the water leakage that must be made in parallel.

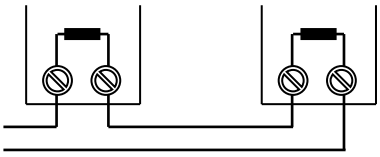
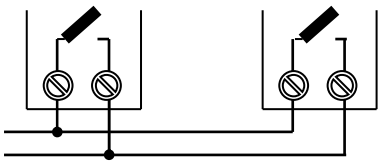


Fig. 4: A series of detectors normally closed

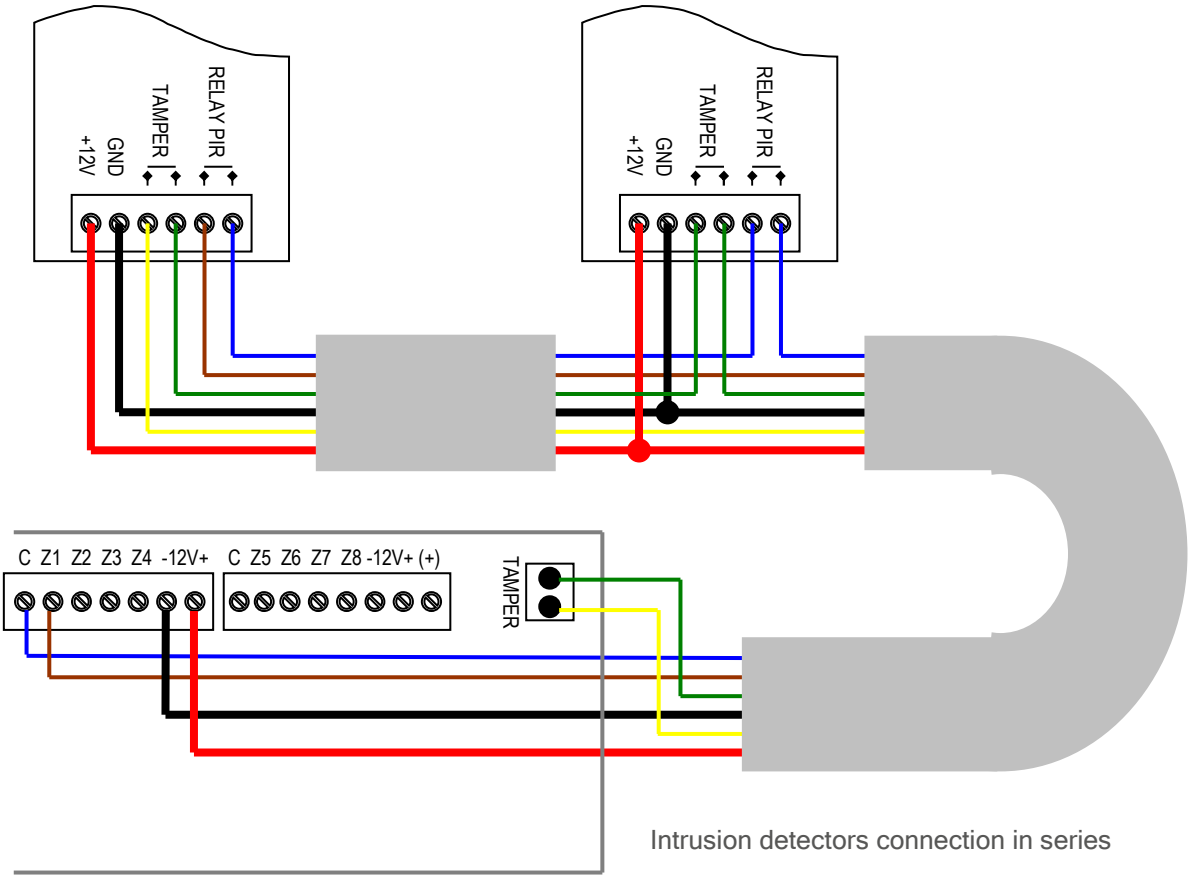


A parallel of detectors normally open

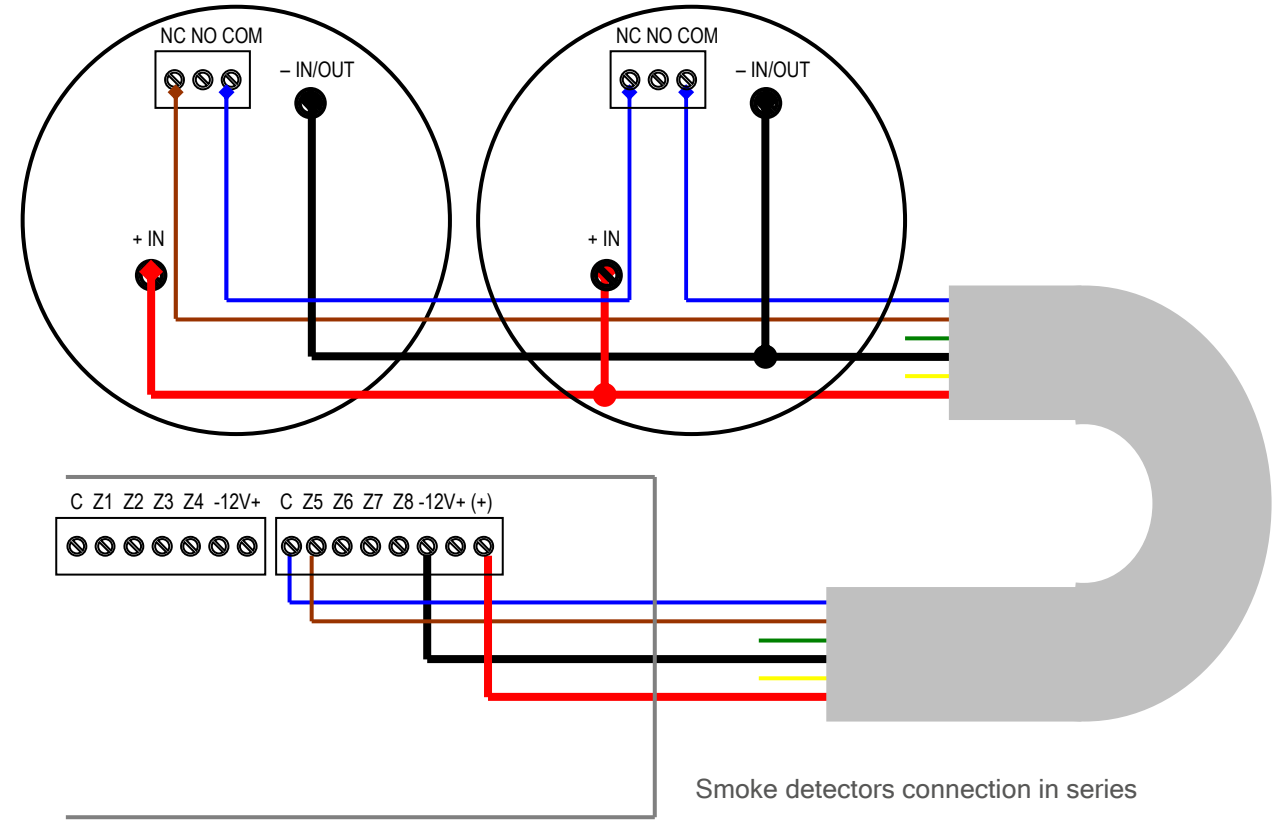
CONNECTION SCHEMES

You will find here some wiring diagrams of various types of detectors and sirens. Since there is no consistency of markings on the detectors, the indications found in these diagrams may not correspond with the ones on the detectors.

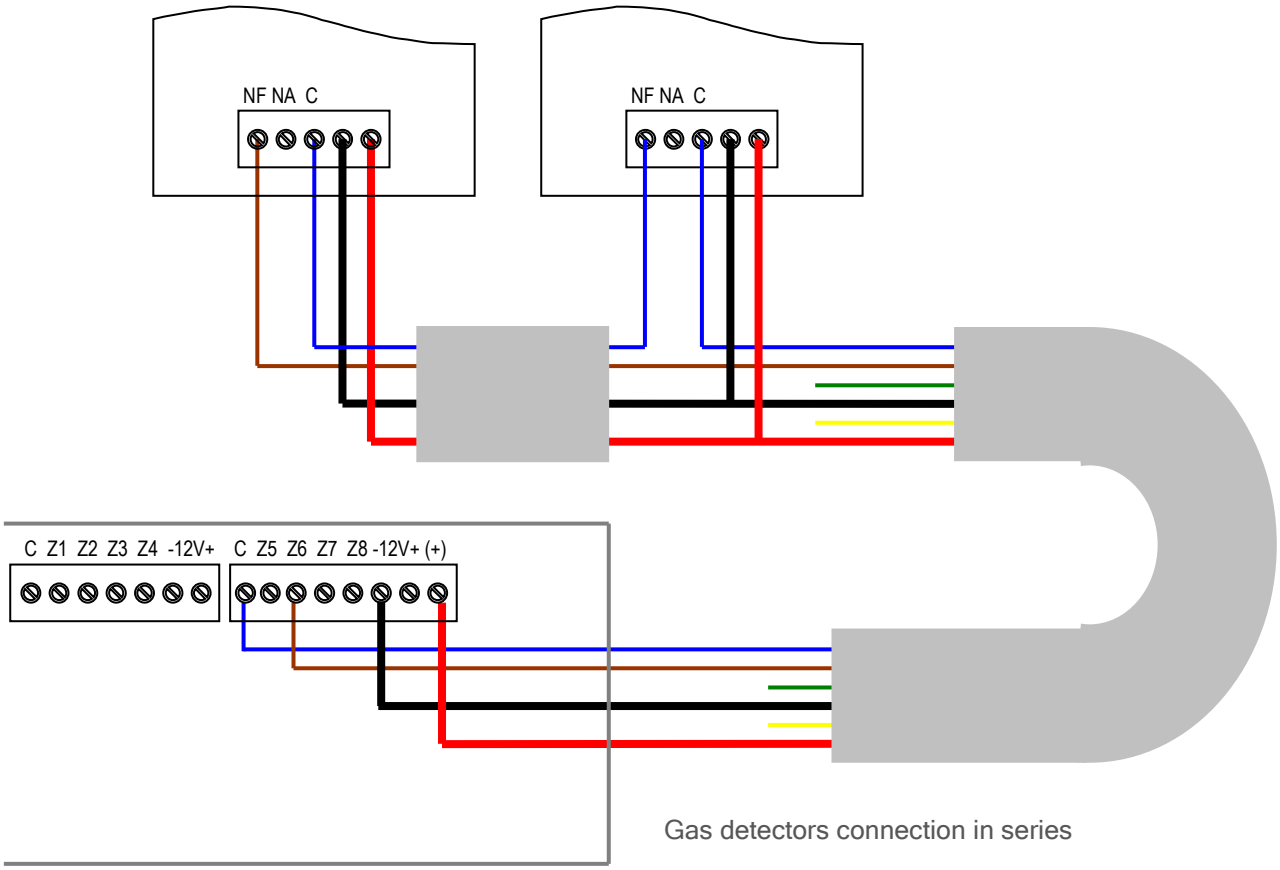
In case of doubt, consult the distributor of security material.



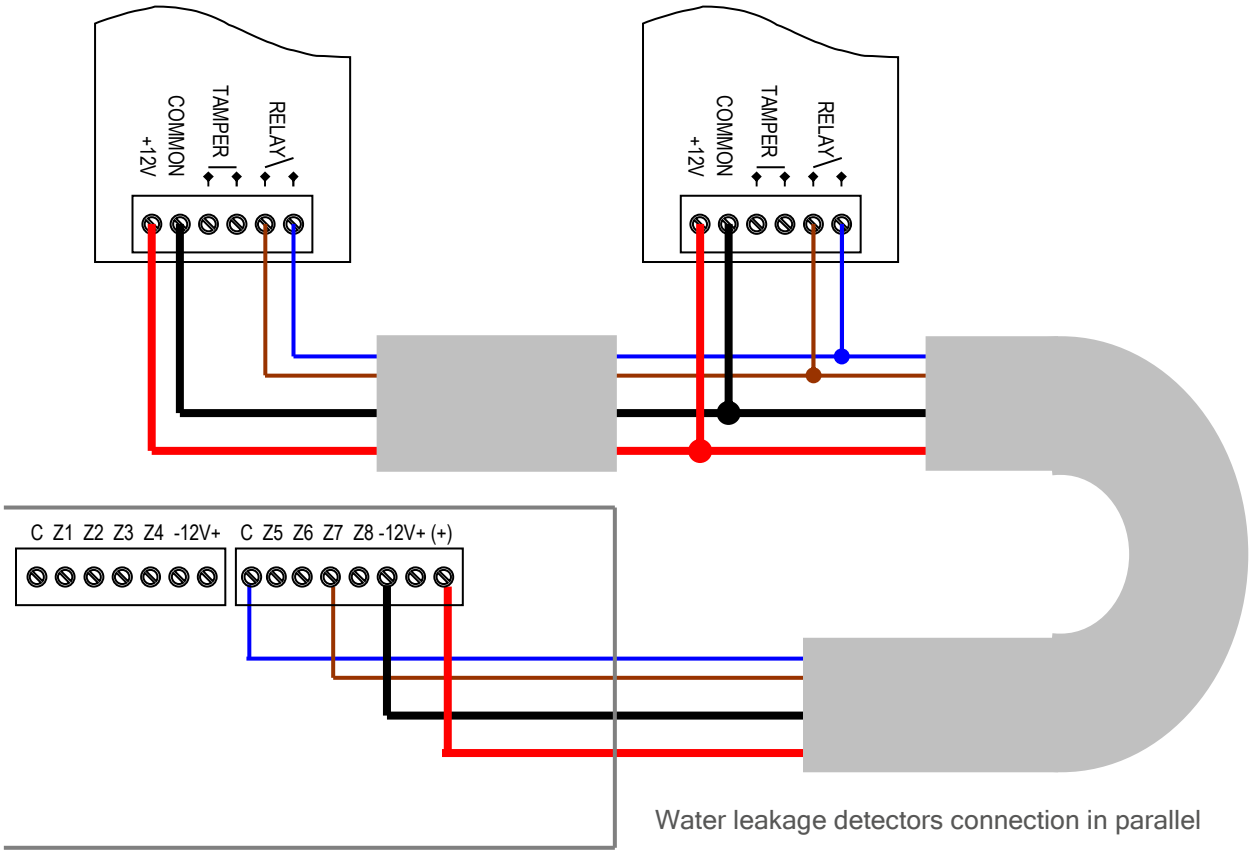
Intrusion detectors connection in series



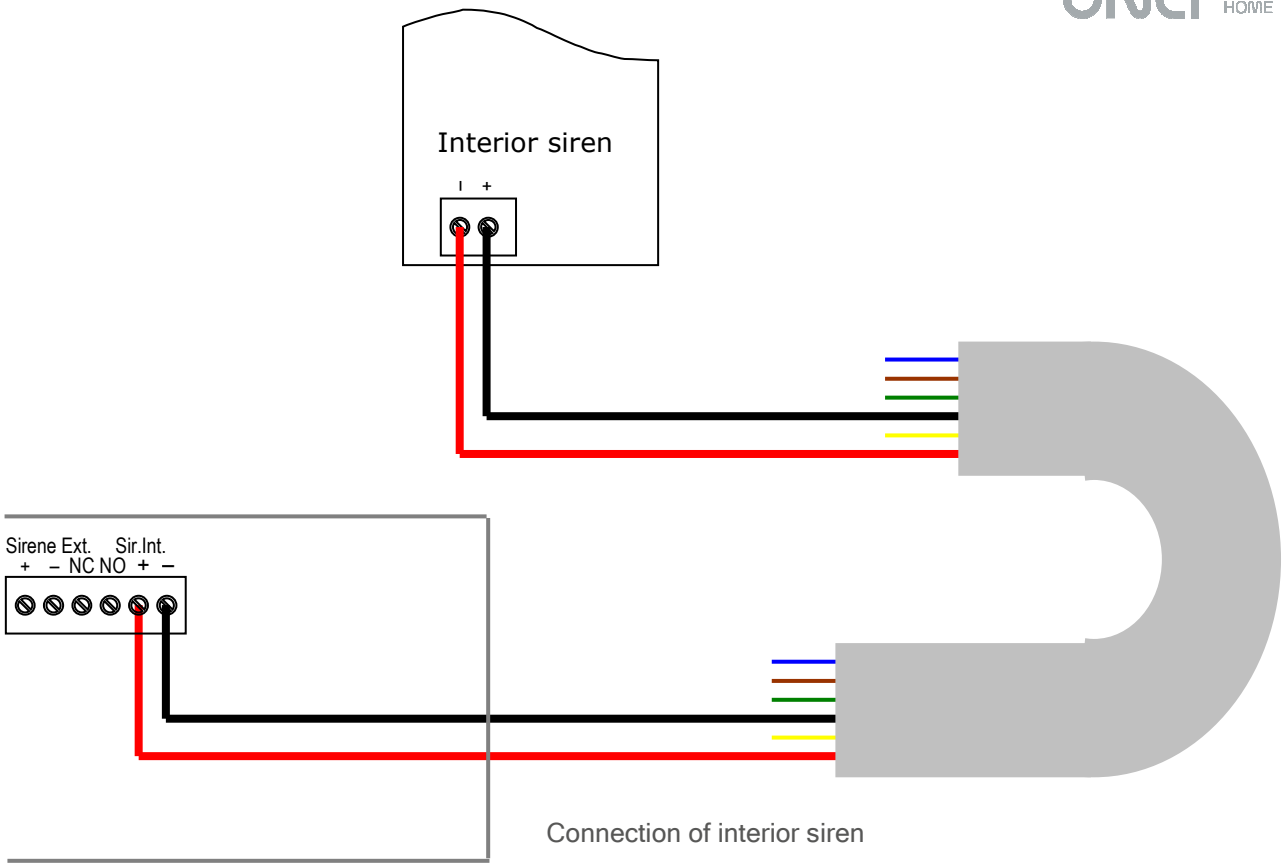
Smoke detectors connection in series



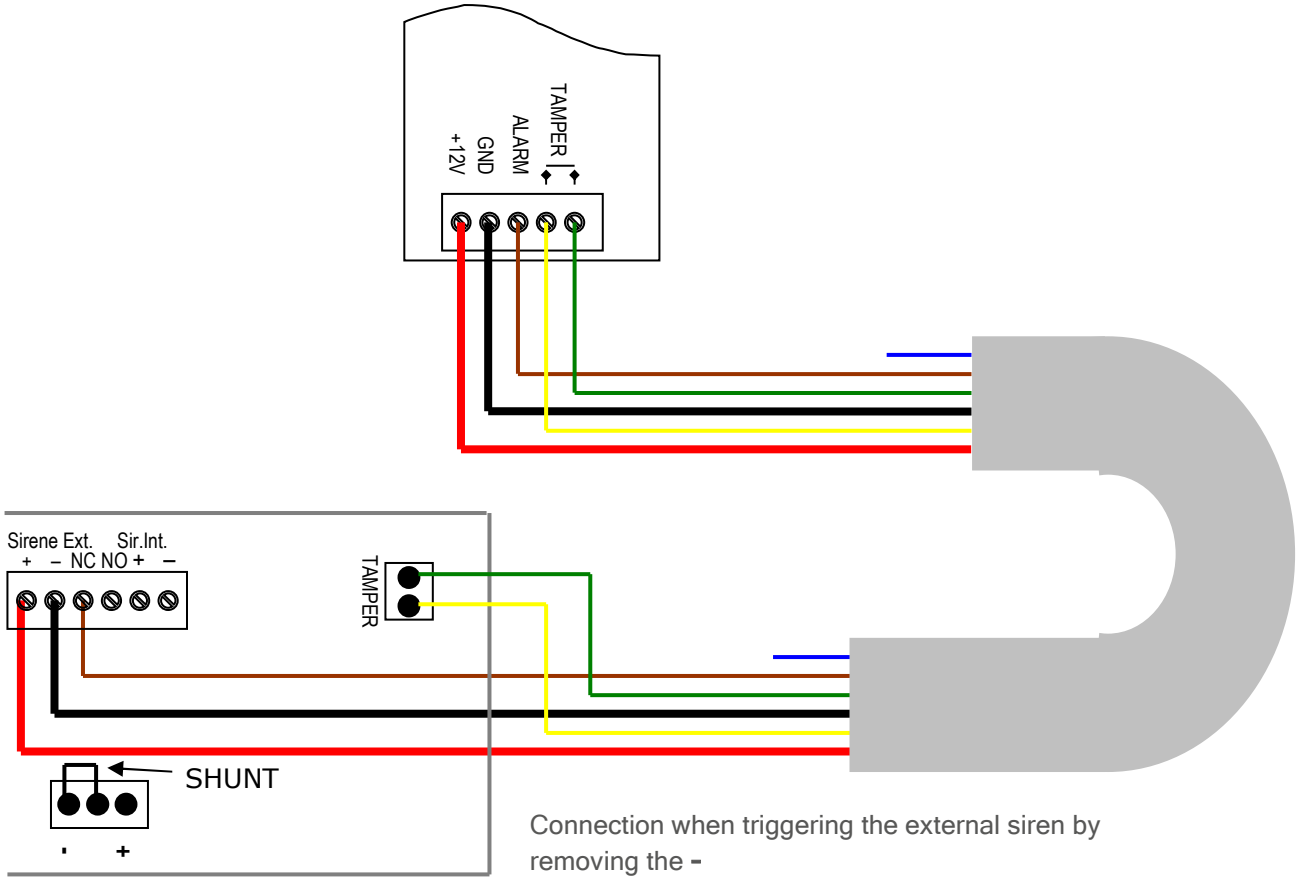
Gas detectors connection in series



Water leakage detectors connection in parallel



Connection of interior siren



Connection when triggering the external siren by removing the -

PROTECTIONS

As we can see the security central receives 230V and the automation BUS line. A 6 amps circuit breaker must be provided to protect the security central. The rest of the security system functions with 12VDC, so isolated from the mains supply network.
The power outputs for the detectors and other equipment all have a resettable fuse that protects the power supply of the central from eventual defects.

CONFIGURATIONS

Part of the parameters of the security central can be configured by the keyboard, others only through a PC.

Configuration via the keyboard

To enter the installation menu, enter the installer code. The factory default setting for the installer code is 98765432.

The available options are the following:

1 – definition of zone type
2 – definition of exit time
3 – definition of entry time
4 – definition of the number of telephone rings before answering
5 – definition of night time
6 – definition of alarm time
7 – sirens only when intrusion is confirmed
8 – programming telephone numbers
9 – definition of station ID for 24-hour call centres
0 – change the service code

Defining the type of zone

To define the type of zone, proceed as follows:

1. Introduce the installer code.
2. Press option **1**: you can now select option **1** to **4** and **0**.
3. You can now select to set the zone type expander of the command behind the keyboard by pressing on of the keys **1** to **4** or to adjust the zones of the security central by pressing **0**.
4. If you choose 0, you will have the opportunity to choose the Nº of the zone of the central that you wish to adjust by pressing one of the keys **1** to **8**. You will hear the number of beeps corresponding to the actual mode of this zone.
   If you choose to configure one of the expansion unit zones, you will hear the number of beeps corresponding to the actual mode of this zone.
5. You can now select the desired mode by pressing the PROG key successively until the desired mode is reached.

The zone types are:

Type	Function
1	Interior intrusion immediate
2	Interior intrusion delayed
3	Peripheral intrusion immediate
4	Peripheral intrusion delayed
5	Smoke or fire
6	Flooding
7	Gas
8	Panic button

6. Press again the zone number to leave or press another zone you wish to configure. If you press again the selected zone, you will leave the installer menu.

Defining the entry and exit times

To define the entry or exit time proceed as follows:

1. Introduce the installer code.
2. Press the option **2** (entry) or **3** (exit): you will hear the number of beeps corresponding to the actual mode.
3. Enter the time you want in seconds using always 3 digits: minimum is 001 and maximum is 255 seconds.
4. When the last digit is entered the installer, menu is left.

Programming the number of telephone rings before answering

To select the nº of rings of the telephone, proceed as follows:

1. Introduce the installer code.
2. Press option **4**: you will hear the number of beeps corresponding to the actual mode.
3. Now press the PROG key until the desired value is selected. The possible values are:

Mode	Nº of rings
1	1 ring
2	2 rings
3	3 rings
4	4 rings
5	5 rings
6	6 rings
7	7 rings

4. Pressing one of the options attributes this value and leaves the installer menu.

Defining the night time

To select the night time, proceed as follows:

1. Introduce the installer code.
2. Now press option **5**.
3. Introduce the start time HHMM (e.g. 23:15) and afterwards the end time HHMM (e.g. 06:30).
4. When the last digit is entered the installer, menu is left.

Defining the alarm time

To define the alarm time, proceed as follows:

1. Introduce the installer code
2. Now press option **6**: you will hear the number of beeps corresponding to the actual mode.
3. Now press PROG until the desired value is selected. The possible values are:

Mode	Alarm time
3	3 minutes
4	4 minutes
5	5 minutes
6	6 minutes
7	7 minutes
8	8 minutes
9	9 minutes

4. Pressing one of the options will attribute this value and leave the installer menu.

Selecting confirmed alarm

Proceed as follows to switch confirmed alarm on and off:

1. Introduce the installer code.
2. The LED is on if the confirmed alarm option is activated.
3. To switch this option off press **7**. Pressing again switches the option on again.
4. Press the key to leave the menu.

Programming telephone numbers

To program telephone numbers proceed as follows:

1. Introduce the installer code.
2. Press the key **8**.
3. Now choose the memory you wish to program by pressing one of the available options:
   - **0** - call of station ID to 24-hour call centre
   - **1** - normal voice call
   - **2** - normal voice call
   - **3** - normal voice call
   - **4** - normal voice call
   - **5** - normal voice call
   - **6** - emergeny or panic voice call
   - **7** - data call to computer
4. If you pretend to delete the earlier existing number press before pressing any other digit: the existing number is deleted and the installer menu is left.
   As an alternative you can also introduce the number you wish to program.
5. Now, introduce the telephone number.
6. Confirm with : the number is programmed on top of the existing one and leaves the installer menu.

Programming the STATION ID code (CONTACT ID)

For connection to a 24-hours call centre it is necessary to define an installation code. This code is assigned by the 24-hours central. This 4-digit code identifies the installation at the 24-hour call centre.
To define the installation code, proceed as follows:

1. Introduce the installer code E.g.: 98765432.
2. Press option **9**.
3. Now, introduce the code. The digits are obtained via the following keys:
   - **B** key
   - **C** key
   - **D** key
   - **E** key
   - **F** key
4. The key leaves the installer menu without defining the code.

MEASUREMENTS AND TROUBLESHOOTING

The ONLY security system functions at 12V isolated from the mains supply. The power supply of the central also allows feeding the detectors as long as their consumption doesn't surpass the maximum permitted current.
The central can supply the following currents:

Connector	Pole	Maximum current
KEYBOARDS/EXPANSION UNITS	+	650 mA
	(+)	300 mA
ZONES	+	650 mA
EXTERNAL SIREN	+	750 mA
INTERNAL SIREN	+	300 mA
GAS	+	300 mA
WATER	+	300 mA

The total current supplied by the central cannot surpass 1.3 amps.

It is important to verify that the supply voltage of the detectors and expansion units/keyboards is not below 12V. If this is the case you should verify the consumption of the installed units or the integrity of the cable.
The security BUS line should also be 12V.

The TAMPER circuits must be closed and must be around +3V related to – of the supply.

The voltage of contacts in normally-closed zones should be higher than 12V.

The voltage of contacts of the zones with double end-of-line resistors should be 2.3V when there is no detection and less than 1.3V when there is a detection.