



**FIRE FIGHTING AND DETECTION
SYSTEM**

**MANUAL &
DATA SHEETS**

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1.1 CONVENTIONAL FIRE ALARM PANEL ALPHA 4/8/12



Installation Commissioning Operation

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DOCUMENT UPDATES

Index	Date	Description	Page(s)
D	09/01/07	Document evolution according to the EN12094 conformity for the DEAG module, new function of the DEAG input: «Relay evacuation management mode», R7P2 supplement and possibility of using the sounder line with two inputs. Connections plan of products: HC68; HC105; TRI-10; TR-SDI; SUV; P7265, P7260 and EX4A4-EX.	3, 5, 9, 14, 17, 20, 30, 31, 32, 36, 37, 39, 40, 41.

INTRODUCTION

This manual provides information of the conventional fire alarm panel ALPHA 4/8/12.

- ALPHA 4/8/12 Basic panel with 4 lines
- EX4A4 Option: 4 line extension card
- REP4R Option: 4 relays card
- R12P2 Option: 12 relays card
- R7P2 Option: 7 relays card
- EX4A4EX Option: 4 lines expansion board EX version.
- DEAG Option: extinguishing card

The document includes instructions about

- installation
- operation
- commissioning
- analysis of deficiencies
- technical specification

The following information is given to benefit the safety of persons, to avoid damaging the installed equipment and to ensure the correct operation of the system.

The whole panel documentation shall be printed and placed close to the panel.

All modules comply with the EN 54-2 and EN 54-4 standards and with EN 12094-1 standard for the extinguishing part.

In addition to this document, these following items are necessary:

- One screwdriver TORX T10, one digital or analogue multimeter, one chronometer, an appropriate detector test product in accordance to the installed detectors
- The installation drawing of products on the site
- The specific installation drawing of each associated product (point -, beam -, aspirating detectors,...).

In order to comply with EN12094-1 it is necessary to use DEAG card in association with the R12P2 relay card.

Access levels

The operation access to the panel is divided on 3 levels

- Level 1** direct access for all personnel (no code).
No safety relevant operation is enabled
- Level 2** protected access for operator / safety officer (by digital code).
Safety relevant operation is enabled. E.g. switch detection lines on/off
- Level 3** protected access for installer (by digital code).
For configuration and maintenance. E.g. set a delay time for alarm and set association of detection line to the extinguishing channel.

Caution:

Before any intervention on the power supply of the equipment, make sure the mains (230V) are powered down using the external device of the building's electrical installation.

INSTALLATION

Mounting

Fix the panel box to the wall using the 3 attaching holes (see drawing in the appendix P.24)
The installation of the two batteries and the optional cards will be done during the commissioning.
Other equipment refers to their individual instruction manuals.

Connections

Cable inlets

In order to keep the initial degree of protection (IP40), the cables will enter either by the preformed orifice plate at the bottom or at the back of the box.
Do not connect the wires at the panel now; the connections will be done during the commissioning.

Power supply

The panel will be powered from the mains (230 V_{AC} 50 Hz).
Use the mains terminal block of the cabinet (at the right bottom).
A dedicated power line shall be used for the fire security.
The line shall be protected against high voltage peaks and high frequency voltage.
The panel has to be connected to electrical earth.
Recommendation:
Use the earth of weak signal equipment: «**weak current earth**» or «**computing earth**».

Cable types

Part	Line type	Wire type
Cabinet	Mains	≤ 3 x 2.5mm ² (2P +E)
Main card	Fire detection lines	Up to 500 m: 2x 0.5mm ² Up to 1000 m: 2x 1.0mm ² Up to 1500 m: 2x 1.5mm ² Up to 2000 m: 2x 2.0mm ² Up to 2500 m: 2x 2.5mm ² Recommendation: Pair-wise twisted and shielded
	24V _{DC} Output	2 x 1.5mm ² or 2 x 2.5mm ²
	Internal repetition by relay (optional)	Cable (pre installed)
	Sounders	2 x 1.5mm ² or 2 x 2.5mm ² Cable protected according to national standard
	Programmable input	≥ 1 mm ² (maximum length = 1Km)
Extension card	Fire detection lines	See under main card
Relay Card	Information transmit	≥ 2x 0.5mm ²
Extinguishing Card	-Extinguishing Manual Call Point Input -Remote inhibition Input -Low pressure Contact Input	≥ 2x 1 mm ² (maximum length = 1Km)
	24V external power supply for evacuation indicators and extinguishing actuators	≥ 2x 1.5 mm ²
	-Extinguishing indicators -Extinguishing actuators	≥ 2x 1.5 mm ²

COMMISSIONING

Preliminary inspections

Line checks

Before connecting and powering up the panel, the monitored lines for

- Detectors
- Sounders and Extinguishing indicators, Extinguishing actuators if used
- Input of main card and Inputs of Extinguishing card if used shall be checked for their quality.

For each line, check its **line resistance, rating resistance and insulation**.

Line resistance «LR»

Make a short circuit at the end of the line. Measure the resistance at the beginning of the line between the wires «+» and «-».

LR shall be $< 36 \Omega$

Rating resistance «RR»

Remove the short circuit and connect the Line Terminal Resistor (LTR=3,9k Ω) at the end of the line. Measure the resistance at the beginning of the line between the wires «+» and «-».

RR shall be between 3750 Ω and 4200 Ω

Insulation resistance «IR»

This measurement has to be done for each installation wire line of all panel cards.

Measure the resistance between each conductor (including shield) and the electrical earth.

IR $\geq 1M\Omega$.

Configuration

Generalities

Hardware configuration:

All equipment is powered off.

(If the panel is powered, first remove the battery and then the mains.)

If there are optional cards: mount the extension or Extinguishing card(s) and make sure that the **jumper ST1 at the left card is set**, and the **jumper ST1 at the right card is removed** (see figure below).

For the Extinguishing Card(s), select the different jumpers according the chosen configuration for the type of actuators, the actuators supply and sounders/indicators supply (see appendix).

Software configuration:

When the panel is powered, it allows to define some parameters and functions. This must be done, every time you remove or add a card, or a parameter has to be changed.

These settings will be saved in a non-volatile memory and can be changed only by overwriting.

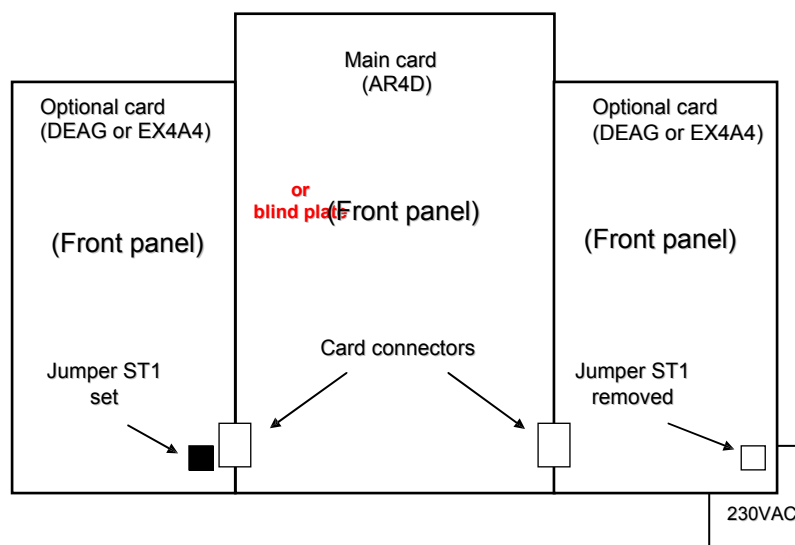
Powering Up

- Check the correct mains voltage (between 195V_{AC} and 253V_{AC})
- Connect the mains to the terminal block of the panel.
- Put the batteries in place and connect them to the panel.
- After the activation of the LED «supply fault», connect the 2 batteries.

The panel displays «System Fault», this LED turns off after a few seconds (initialisation time), then the fire detection lines are disabled.

Before any intervention it is indispensable to make sure that all parts controlled by the extinguishing circuit board are disconnected.

Jumper ST1 configuration.



Panel configuration

Software Parameters

As the first step, you have to enable the fire detection lines (see chapter “Access level 2 Enable \ Disable Fire detection”). Now make the panel configuration according the site requirements. The main parameters of the commissioning as follows:

(This is an overview. The function are described in more detail further down in this document)

Parameters	Access	Function	Factory default configuration
<ul style="list-style-type: none"> Enable/ disable fire detection zones, or enable/disable manual and/or automatic mode of extinguishing module Enable/disable test mode of detection zones and/or extinguishing channel 	Level 2	<p>Inhibition of information given by a fire detection line / inhibition of information received by extinguishing board. Fire detection zones are disabled at every starting up of the board.</p> <p>Enable to test the detectors of the installation without activation of the control device / enable to test the extinguishing system without activation of commanded devices</p>	Test mode disabled
<ul style="list-style-type: none"> Detection mode (alarm on one detector or on two detectors) Enable/disable sound broadcasters line 	Level 3 code BABA	<p>Allows to configure the line in 2 detectors alarm mode. This mode is forbidden for Manual Call Points.</p> <p>Allows to enable/disable the line of the main card dedicated to sound broadcasters</p>	<p>All fire detection zones are in alarm mode (on one detector)</p> <p>Sounders line enabled</p>
<ul style="list-style-type: none"> Joining alarm zone with detection zone (AZ/DZ) Joining extinguishing channel with detection zone (EZ/DZ) 	Level 3 code ABBB	<p>Allows to join the alarm zone to one or several fire detection zones.</p> <p>Allows to join the extinguishing channel to one or several fire detection zones.</p>	<p>All fire detection zones joined with the sounders line.</p> <p>No fire detection zones joined with the extinguishing channel.</p>
<ul style="list-style-type: none"> Sounders delay Extinguishing delay 	Level 3 code BAAA	<p>Delay between an alarm and the actuation of sounders line. 0 to 7 minutes in 1 minute steps.</p> <p>Delay between warning indicators panels activation and extinction actuation. 0 to 60s in 10 seconds steps.</p>	<p>No delay.</p> <p>No delay.</p>
Access code level 2 modification and fault delay modification	Level 3 Code AAAA	Allows to modify or to check the access code level 2 and to modify or to check the fault delay of main card's zones.	Simple access code level 2.
Setting of 4 open collector outputs	Level 3 Code BBBB	Allows to charge an event to each of the 4 open collector outputs (OC1 OC4) associated to the 4 detections zones.	Repetition of detection zone 1 to 4 by collector output.
Function of the input	Level 3 Code AABB	Allows to charge an event to the input	No selected function.

Level 2 and 3 access general mode

Access Level 2

The panel can have two different level 2 access codes (see p.14 chapter "Modification of access code level 2")

- 1) The standard level 2 access:
Simultaneously press keys A and B: The indicator «level 2 or 3» will flash for 15 seconds.
Within this time enter the code ABAB.
Simultaneously press A and B
- 2) If the code is correct, the LED «Access level 2 or 3» will light up permanently.
- 3) The simple level 2 access: press simultaneously keys A and B for level 2 to be activated (indicator is permanently on).

After a timeout of 2 minutes, the access level 2 will be deactivated automatically

Access Level 3

The Level 3 can be accessed if the panel is in level 2 and **if the system is not in alarm.**

The level 3 access codes are described in the list above.

Indication after a valid access level 3 code:

- The LED «level 2 or 3» is off and the LED «Fault system» is blinking.
- One other LED of the main panel will activate, according to the code which has been set.

The validation of the settings is done either automatically or by pressing the «Reset panel» key, depending on the chosen function.

The level 3 exit is done by pressing the key «Silence Buzzer».

Access level 2

The functions **Enable/disable fire detection zones and Enable/disable manual mode and/or automatic mode of extinguishing module** are accessible in level 2.

Access code: level 2 (press AB).

Panel indication:

LED « ACCESS LEVEL 2 or 3 » is on.

Enable/disable fire detection zones or enable/disable manual mode and/or automatic mode of extinguishing module:

FUNCTIONS	<u>For the fire detection cards:</u> Allows to enable / disable fire detection line(s) in order to activate or inhibit information given by a fire detection line. <u>For the extinguishing module:</u> Allows to enable / disable the automatic mode and/or the manual mode.
KEY and LED	<u>Fire detection:</u> <ul style="list-style-type: none">• Press the key « LEVEL 2 » of the function « DISABLE (TEST) » of each zone to switch the line on and off.• LED « FAULT/DISABLED/TEST » : On = line is switched off (standard configuration) Off = line is switched on <u>Extinguishing:</u> <ul style="list-style-type: none">• Press the key « LEVEL 2 » of « MODE ONLY MANUAL/MANUAL MODE DISABLED » to enable or disable each mode• LED « MODE ONLY MANUAL » : On = automatic mode disabled (standard configuration) Off = automatic mode enabled• LED « MANUAL MODE DISABLED » : On = manual mode disabled Off = manual mode enabled (standard configuration) Note: if the manual mode is disabled, the « DISABLED » LED is on.

Enable/disable the test mode of detection zones and/or extinguishing channel:

FUNCTIONS	Allows to activate the test mode of each detection zone and/or extinguishing channel.
KEY and LED	<ul style="list-style-type: none">• Press the key « LED – BUZZER TEST »• LED « TEST » on • Press the key « LEVEL 2 » of the function « DISABLE (TEST) » of each detection zone or extinguishing card to switch into test mode.• LED « FAULT/DISABLED/TEST » : Led slow blinking = test mode activated Led off = test mode deactivated (standard configuration)

To validate the settings and to exit of test mode you must reset the panel by pressing the key «RESET PANEL». (See note below)

Note: Once the zones have been programmed in test mode **wait 10s** before pressing « RESET PANEL » for exit. Exit of test mode is possible only when the zones in test mode are no longer in alarm status. On the other hand, you can reach Level 3 from test mode and this way disable test mode without taking the delay of 10s into account.

Access level 3

Access code: BABA:

- **Detection mode**
- **Enable / disable sound broadcasters line**

Operation access: **At level 2, set the code BABA, then press AB simultaneously**

Panel indication :

- LED « SYSTEM FAULT » is blinking
- LED « FAULT WARNING » in on

Detection mode.

FUNCTIONS	1) Allows to set Mode 1 (single detection) or Mode 2 (double detection) for each detection zone. <ul style="list-style-type: none">• Mode 1: Zone switches into alarm status if one detector is in alarm• Mode 2: Zone switches into alarm status if a second detector of the same zone is in alarm. 2) Allows to check the mode of each zone
KEY and LED	<ul style="list-style-type: none">• Press the key « LEVEL 2 » of the function « DISABLE (TEST) » of each detection zone to switch the line from mode 1 to mode 2 or from mode 2 to mode 1.• LED « FAULT/DISABLED/TEST »:<ul style="list-style-type: none">Off = mode 1 (standard configuration)On = mode 2

Note: After any setting in double detection mode **you must press the key « ON/OFF » of the function « DAY/NIGHT » (LED « ACTIVE » on) to activate/deactivate the 2 detectors mode.** This manipulation will be done under access Level 2.

Enable / disable sound broadcasters line

FUNCTIONS	1) Allows to enable/disable the line of the main card dedicated to sound broadcasters. 2) Allows to check the state of the sounders line (on or off)
KEY and LED	<ul style="list-style-type: none">• Press the key « ON/OFF » of the sounders line to switch on/off the line.• LED « FAULT WARNING » of the sounders line :<ul style="list-style-type: none">Off = Line is on (standard configuration)On = Line is off

To validate the settings and to exit you must reset the panel by pressing the key «SILENCE BUZZER»

Access level 3

Access code: **ABBB**;

- **Alarm zone and detection zone association.**
- **Extinguishing zone and detection zone association** (see next page).

Operation access: **At level 2, set the code ABBB, then press AB simultaneously**

Panel indication :

- LED « SYSTEM FAULT » is blinking.
- LED « TEST » in on.

Alarm zone and detection zone association

FUNCTIONS	1) Allows to associate one or several detection zones DZ to the alarm zone AZ <u>Note:</u> The alarm zone AZ corresponds to the line of the main card dedicated to the sound broadcasters. 2) Allows to check the association « AZ/DZ »
KEY and LED	<u>Check</u> <ul style="list-style-type: none">• Press the key « ON/OFF » of the sounders line.• LED « EVACUATE » of the sounders line is on.• LED « FAULT/DISABLED/TEST » of each detection zone DZ associated to the alarm zone AZ is on. (For exit you must reset the panel by pressing the key « SILENCE BUZZER ») <u>Association setting</u> (you must be in check mode) <ul style="list-style-type: none">• Press the key « LEVEL 2 » of the function « DISABLE (TEST) » to associate or not the chosen detection zone to the alarm zone.• LED « FAULT/DISABLED/TEST » :<ul style="list-style-type: none">On = DZ associated to AZ (standard configuration)Off = DZ not associated to AZ

- ⇒ **To validate and save the association settings press the key «RESET PANEL».**
The LED « EVACUATE » of the sounder line will turn off.

Note:As long as you have not reset the panel you can reach the association setting by pressing « ON/OFF » of the sounders line. Then a new association setting can be done.

Extinguishing zone and detection zone association

FUNCTIONS	<p>1) Allows to associate two (minimum to activate the extinguishing zone) or several detection zones DZ to the extinguishing zone EZ</p> <p>2) Allows to check the association « EZ/DZ »</p>
KEY and LED	<p><u>Check</u></p> <ul style="list-style-type: none"> • Press the key « LEVEL 2 » of the function « DISABLED » of the extinguishing card. • LED « DISABLED » of extinguishing card is on. • LED « FAULT/DISABLED/TEST » of each detection zone DZ associated to the extinguishing zone EZ is on. • <p>For exit you must reset the panel by pressing the key « SILENCE BUZZER »</p> <p><u>Association setting</u> (you must be in check mode)</p> <ul style="list-style-type: none"> • Press the key « LEVEL 2 » of the function « DISABLE (TEST) » to associate or not the chosen detection zone to the extinguishing zone. • LED « FAULT/DISABLED/TEST » : <ul style="list-style-type: none"> On = DZ associated to EZ Off = ZD not associated to EZ (standard configuration)

- ➡ **To validate and save the association settings press the key «RESET PANEL».**
The LED « DISABLED » of the extinguishing line will turn off.

Note:As long as you have not reset the panel you can reach the association setting by pressing « LEVEL 2 » of the function « DISABLED » of the extinguishing card. Then a new association setting can be done.

To Exit any of the previous parameter configurations and return to standard operation you must press the key « SILENCE BUZZER ».

Access level 3

Access code: BAAA.

- **Sounders delay.**
- **Extinguishing delay.** (See next page).

Operation access: **At level 2, set the code BAAA, then press AB simultaneously**

Panel indication:

- LED « SYSTEM FAULT » is blinking.
- LED « DISABLED » in on.

Sounders delay

FUNCTIONS	1) Allows to apply a delay for the activation of the sounders line. 2) Allows to check the delay.
LIMITS	0 to 7 minutes in 1 minute steps
KEY and LED	<u>Check</u> <ul style="list-style-type: none">• Press the key « ON/OFF » of the sounders line. The main card displays the programmed delay as follows : <ul style="list-style-type: none">• LED « FAULT WARNING » of sounders line is on = 1 min• LED « EVACUATE » of sounders line is on = 2 min• LED « ACTIVE » of the function « DAY/NIGHT » is on = 4 min• The various combinations of those LEDS allow to read a delay from 0 to 7 minutes• All the LEDS are off = no delay (standard configuration) <u>Setting</u> (You must be in check mode) <ul style="list-style-type: none">• Press the key A or B to decrease or to increase the delay.

➡ **To Validate and save the settings you must press the key « RESET PANEL »**

Extinguishing delay

FUNCTIONS	<p>1) Allows to apply a delay for the activation of the extinguishing zone.</p> <p>2) Allows to check the delay.</p>																																																																						
LIMITS	0 to 60 seconds in 5 seconds steps																																																																						
KEY and LED	<p><u>Check</u></p> <ul style="list-style-type: none"> • Press the key « LEVEL 2 » of the function « MODE ONLY MANUAL\MANUAL MODE DISABLED » of the extinguishing card to select the mode which you want to apply an extinguishing delay on. • LED « MODE ONLY MANUAL » is on if you select automatic mode or LED « MANUAL MODE DISABLED » is on if you select manual mode. <p>At level 3, the first 4 LEDs “FAULT IDENTIFICATION” indicate by their operation the evacuation time delay according to the code in the table below.</p> <table border="1"> <thead> <tr> <th>Delay</th> <th>0</th> <th>5</th> <th>10</th> <th>15</th> <th>20</th> <th>25</th> <th>30</th> <th>35</th> <th>40</th> <th>45</th> <th>50</th> <th>55</th> <th>60</th> </tr> </thead> <tbody> <tr> <td>Fault Id. 4</td> <td></td> <td>X</td> <td></td> <td>X</td> <td></td> <td>X</td> <td></td> <td>X</td> <td></td> <td>X</td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>Fault Id. 3</td> <td></td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td>X</td> <td>X</td> <td></td> <td></td> <td>X</td> <td>X</td> <td></td> </tr> <tr> <td>Fault Id. 2</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> <td></td> <td>X</td> </tr> <tr> <td>Fault Id. 1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> </tbody> </table> <p><u>Setting</u> (You must be in check mode) Press the key « LEVEL 2 » of the function « DISABLED » of the extinguishing card repeatedly to decrease or increase the delay between 0 (all LEDs off) and 60s with a step variation of 5s.</p>	Delay	0	5	10	15	20	25	30	35	40	45	50	55	60	Fault Id. 4		X		X		X		X		X		X		Fault Id. 3			X	X			X	X			X	X		Fault Id. 2					X	X	X	X					X	Fault Id. 1									X	X	X	X	X
Delay	0	5	10	15	20	25	30	35	40	45	50	55	60																																																										
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➡ To Validate and save the settings you must press the key « RESET PANEL »

To Exit any of the previous parameter configurations and return to standard operation you must press the key « SILENCE BUZZER ».

Access level 3

Access code: AAAA.

- **Modification of access code level 2**
- **Modification of the faults delay for zones of the main card.**

Operation access: **At level 2, set the code AAAA, then press AB simultaneously**

Panel indication:

- LED « SYSTEM FAULT » is on.
- LED « FAULT WARNING » in on.

Modification of access code level 2.

FUNCTIONS	Allows to modify or to check the access code level 2
KEY and LED	<u>Simple access code level 2</u> <ul style="list-style-type: none">• Press the key A to install the simple access code level 2.• LED « FIRE ALARM » of zone 1 is on (standard configuration) <u>Standard access code level 2</u> <ul style="list-style-type: none">• Press the key B to install the standard access code level 2.• LED « FIRE ALARM » of zone 2 is on <u>Remarks</u> <p>Simple access code level 2 = «AB» Standard access code level 2 = «AB, A,B,A,B, AB»</p>

Modification of the faults delay for zones of the main card.

FUNCTIONS	Allows to modify the faults delay for zones of the main card.
KEY and LED	<u>Short delay</u> (only for the 4 detection zones of the main card): <ul style="list-style-type: none">• Press the key « LEVEL 2 » of the function « DISABLE (TEST) » of zone 4 to set a short delay (1 s for a short-circuit and 4 s for an open circuit).• LED « FAULT/DISABLED/TEST » of zone 4 is on = short delay. <u>Standard delay</u> (only for the 4 zones of the main card): <ul style="list-style-type: none">• Press the key « LEVEL 2 » of the function « DISABLE (TEST) » of zone 3 to set a short delay (20 s for a short-circuit and 30 s for an open circuit).• LED « FAULT/DISABLE/TEST » of zone 3 is on (standard configuration) <u>Note:</u> For the detection zones of the optional cards, the delay remains the same (1 s for a short-circuit and 12 s for an open circuit). For the extinguishing card, the delay remains the same (5 s for a short/open circuit in the low pressure line, 2 s for a short/open circuit in the manual extinguishing line, 1 s for a short/open circuit in the 3 others lines).

To validate the settings and exit the mode you must press the key « SILENCE BUZZER » to reset the system.

Access level 3

Access code: BBBB.

- **Setting of the 4 open collector outputs.**

Operation access: **At level 2, set the code BBBB, then press AB simultaneously**

Panel indication:

- LED « ACCESS LEVEL 2 OR 3 » slow blinking.

Setting of the 4 open collector outputs

FUNCTIONS	Allows to charge an event to each of the 4 open collector outputs. The panel has 4 open collector outputs (OC1 OC4) associated to the 4 detection zones. The association is the following: OC1/DZ1, OC2/DZ2, OC3/DZ3 and OC4/DZ4.
KEY and LED	<p><u>Selection of the output(OC1 ...OC4)</u></p> <ul style="list-style-type: none"> • Press the key « LEVEL 2 » of the function « DISABLE (TEST) » of the corresponding zone (see association of fire alarm lines on the diagram below). <p><u>Output setting</u></p> <p>Successively press the key «A» or «B» to select the function as follows:</p> <ul style="list-style-type: none"> • LED « FIRE ALARM » of detection zone is on (standard configuration). • LED « FIRE ALARM » of detection zone is blinking (mode 2 detectors, if mode « DAY/NIGHT » activated). • LED « FIRE ALARM » of the main card for mode 2 detectors (if used) is blinking. • LED « DISABLED » is on. • LED « TEST » is on. • LED « SYSTEM FAULT » is on. • LED « POWER SUPPLY FAULT » is on. • LED « FAULT WARNING » of the sounders line is on. • LED « EVACUATE » of the sounders line is on. • LED « ACTIVE » of mode Day/Night is on. • Buzzer active state (short beep). • Reset panel state (long beep).

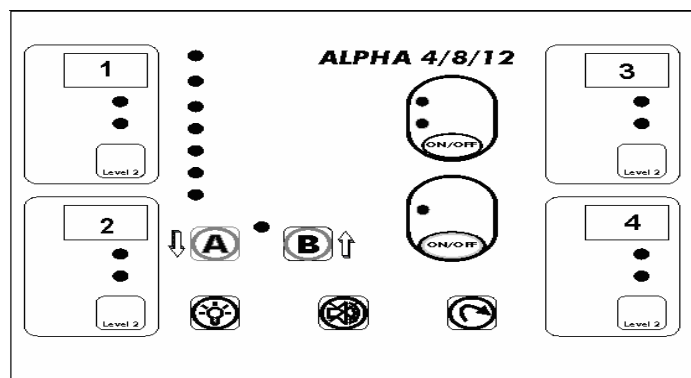
To validate and save the settings press the key « RESET PANEL ».

This will switch off the LEDs of the chosen zone and the chosen function.

New settings can be done at this moment. (Press the key « LEVEL 2 » of the function « DISABLE (TEST) » of the corresponding zone).

To Exit the mode and reset the system press the key « SILENCE BUZZER »

Association of fire alarm lines in AR4D board.



Access level 3

Access code: AABB.

- **Function of the input.**

Operation access: At level 2, set the code AABB, then press AB simultaneously

Panel indication:

- LED « SYSTEM FAULT » is on.
- LED on according to input programmed or irregular beep for external reset

Function of the input

This input is normally used to do an external reset.

Alternatively this input can be used to active the LED « POWER SUPPLY FAULT » or to activate the sounders line.

FUNCTIONS	Allows to charge an event to the input.
KEY and LED	<u>Setting:</u> Press successively the keys « A » or « B » to program the input as follows: <ul style="list-style-type: none">• LED « POWER SUPPLY FAULT » is on for external supply state monitoring (standard configuration)• LED « EVACUATE » is on for external activation of sounders line.• IRREGULAR BEEP for external reset panel• LED « FAULT WARNING » is for external sounder inhibition.• LED « FAULT/DISABLED/TEST » from zone 1 is on for the « Relay evacuation management» mode.(see note below)

To Validate the settings and Exit this mode press the key « SILENCE BUZZER » to reset the system.

Note: « Relay evacuation management » mode description:

This mode configuration allows using the R12P2 board relays to control zone evacuation.

- When the input is set on this mode, the R12P2 relays are monitored by the alarm detection zones 1 to 12. If zone 1 is in alarm mode, then relay 1 from R12P2 is activated and sounder line delay starts, at the end of the delay all the relays of R12P2 are switched on. If the sounder line is switched off by pressing the key « ON/OFF » of the sounder, then the R12P2 relays are switched off, this process is the same for manual activation.
- The activation/deactivation of this input allows to activate/deactivate the R12P2 relays and has no effect on the sounder line.

CONTROLS AND TESTS

Connection

After finishing the software configuration, connect all detection fire lines, the sounders line and the other lines except to the extinguishing actuators according to the schematics in the appendix.

WARNING!

Before effecting any control the extinguishing actuators have to disconnect if it is used.

Test power supply

Make the test as follows:

Control	Action	Result
Batteries (secondary supply)	Disconnect mains (230 V).	Blinking LED «Power Supply Fault» Steady LED «Fault Warning» Continuous Buzzer.
Mains (primary supply)	Connect mains Disconnected one wire of the batteries	Steady LED «Power Supply Fault» Steady LED «Fault warning» Continuous Buzzer.
Return at initial state	Connect the wires of the batteries	Only the green LED «Power» is on.

Working tests

Note

These tests are a real control of the fire detection installation.

It is recommended to make these tests in a first step having the fire safety control equipment neutralised. When the test are ok., repeat all test having the fire safety control equipment connected. Before carrying out these tests, make sure the security department is informed about the fire alarm testing.

Fire detection lines

For each fire detection line:

- Check if the line is in standby.
In case of problem, identify the fault at first (no LTR, bad connection, insulation fault,...).
- Plug out the line and verify if the LED « Fault/disabled/test » blinks. Then plug in the line again.
- For a line with automatic detector heads: remove a detector from the socket and verify if the LED « Fault/disabled/test » blinks. Then insert the detector again.
- Set the line in test mode and check the correct working of all detection points.
- Set the line in standby mode again.
- Enable all outputs and the sounder line.
- Activate one detector and verify the alarm at the panel and check the delay. Check the correct working of sounders and other equipment associated to the evacuation.
- After 5 minutes, reset the panel.
- Disconnect the battery. Now release an alarm and check the reaction of the system.
- After 5 minutes, reset the panel.

Evacuation Function

- Press the sounders key «On/Off» during 3 seconds.
- Check the LED sounders «Active» is on.
- Check the correct working of sounders and other equipment associated to the evacuation.
- Press the sounders key «On/Off» to switch off the sounders.
- Check the EOL resistor (3,9K Ω) is set. If you disconnect this resistor the LED “FAULT/WARNING” of the sounder line starts to blink and activate continuous sound on the buzzer.

Input line.

- Check the EOL resistor (3,9K Ω) is set. If you disconnect this resistor the general LED “FAULT WARNING” of the panel switches on and activate continuous sound on the buzzer.

Extinguishing Function

- Make sure that all the monitored lines connected to the panel are in a normal status.
- In case of anomaly, identify the fault before continuing with the next test.
- For all monitored lines, Disconnect it from the panel and make sure that panel signals the corresponding fault.
- Plug again it with the panel and make sure the fault warning disappears.
- After having checked that the actuators are disconnected, activate the automatic zone alarm inputs and make sure the extinguishing cycle starts with the correct operations and delay.
- Reset the system and activate the manual extinguishing input and make sure the extinguishing cycle starts with the correct operations and delay.
- Reset the system and make sure the remote inhibition line and 2nd stage MCP (Manual Call Point) line operate correctly.

Final work

After completing the tests successfully

- Note the software settings.
- Put the line names on the panel

Hand over the system to the customer, including:

- Instruction of the responsible person(s)
- System manual
- Software settings
- Installation drawings

Electrical and mechanical characteristics

	ALPHA4/8/12	ALPHA4/8/12 + 1 X4A4	ALPHA4/8/12 + 2 EX4A4
Detector lines			
Number of lines	4	8	12
Line terminal element (EOL)	Resistor 3.9 K Ω , ¼ W, \pm 5%		
Line voltage	20V _{DC} (between 18.5 V @100mA and 21V @0mA)		
Number of detectors per line	According to the list below with a maximum of 32 points		
Number of manual call points per line	According to the list below with a maximum of 32 points		
Outputs			
Output «General Fault»	1 relay, potential free, switch over contacts 1A/30V _{DC}		
Output «Fire Alarm»	1 relay, potential free, switch over contacts 1A/30V _{DC}		
Number of fire detection line outputs	4		
Type of fire detection line outputs	Open collector. 100mA _{DC} / 50 V _{DC} . Not protected. Switch to GND.		
Output «24VDC Supply»	Power output protected with polyswitch, 24V _{DC} 400mA		
Input			
Number of programmable input	1		
Type of programmable input	Monitored input with LTR = 3.9 K Ω , ¼ W, \pm 5% Active by resistor 1 K Ω , ¼ W, \pm 5% in parallel		
Sounders line			
Number of sounders line outputs	1		
Characteristic of sounders line output	Output voltage: 24V _{DC} , 450 mA maximum.		
Line Terminal element for the sounders line	1 Resistor 3.9 K Ω , ¼ W, \pm 5%, with use of 1 line only. 2 Resistor 51K Ω , ¼ W, \pm 5%, if use of two lines in parallel, use of a 51K Ω resistor per line. (NB: short circuit and cut of 1 line produces a system Fault on both lines).		
Supply			
Mains voltage	230 V _{AC} (+10, -15%), 50 – 60Hz		
Mains power consumption	< 75 W		
Batteries supply	2 lead-acid batteries. 12V/7.2Ah. Connected in series. Autonomy time: approx. 24h in standby and 5 min. in alarm. Battery voltage disconnected: 21.6V (\pm 0.2V). Current on battery : < 0.95A		
Main card Current on batteries	51mA @ EOL = 3.9K Ω (30mA + 4 x 20V / EOL)		
Line extension card current on batteries	35mA @ EOL = 3.9K Ω (14mA + 4 x 20V / EOL)		
Supply input voltage main card	Nominal: 30V _{AC} (26 V _{AC} to 33 V _{AC})		
Battery voltage disconnected	21.6V (\pm 0.2V)		
Panel batteries	2 batteries 12V / 7.2 Ah		
Panel Limitation current	0.95A by electronic protection		
Mechanical Characteristics			
Box	ABS 5V		
Colour	Black RAL 7035		
Dimensions	Height x Width x Depth: 300 mm x 370 mm x 118 mm		
Approximate weight	2 kg (without batteries)		
Protection class	IP40		
Operating temperature range	-10°C to +50°C		
Storage temperature range	-20°C to +60°C		
Cable terminal blocks	Max. wire cross section for all terminal blocks: 2.5 mm ²		
Wires inlets	From below and from the back of the box		
Others characteristics			
Used components	In conformity with the category 3K5 of CEI 721-3-3.		
Power supply and battery charging	In conformity with EN60950 standard.		
Standards	EN54-2 / EN54-4	EN54-2 / EN54-4	EN54-2 / EN54-4

Admissible weighting on one detector line* :35μ					
Type	Reference	Weight	Type	Reference	Weight
Ionisation smoke detector	IY2	0.9μ	Rate of rise + static T°	TVY2	2μ
Optical smoke detector	OY2	2.3μ	Laser beam	DLF	30μ
Conventional multisensor (opt. heat)	MCY2	3μ	Manual call point with reset and LED	BMY2 or BMLY2	0μ
Ultraviolet flame detector	SUV	3.3μ	Infrared flame detector	IRY2	5.5μ
New range					
Optical smoke	OC05	0.4μ	Heat static T°	TSC05	0.4μ
Heat rate of rise	TRC05	0.4μ	Beam	DLFB-C	28μ

*with a maximum number of 32 points per line. (Standard EN54)

Relay card

REP4R	
input lines	
Number of lines	4
Type	To be driven from ALPHA 4/8/12 open collector outputs.
Output	
Number of outputs	4
Type	1 relay, potential free, switch over contact 30V/1A

R7P2	
Output	
Quantity of output	7
Type	1 relay, potential free, switch over contact 30V/1A

R12P2	
Output	
Quantity of output	12
Type	1 relay, potential free, switch over contact 30V/1A

Electrical characteristics of extinguishing card.

Input lines	
Extinguishing Manual Call Point (Double Knock)	<p><i>Number</i> : 1. <i>Nature</i> : monitored line <i>Function</i> : The activation of one manual call point on that line produces a Stage 2 FIRE ALARM. <i>End of line component</i> : 3.9 KΩ 1/4W ±5%. <i>Connection pins</i> : 9 et 10. <i>Characteristic</i> :</p> <ul style="list-style-type: none"> The cut or a short circuit on that line makes the LED "FAULT IDENTIFICATION 3" blinks. Active if a R = 1Kohm is connected on the line.
Inhibition device	<p><i>Number</i> : 1. <i>Nature</i> : monitored line <i>Function</i> : The extinguishing discharge command is inhibited via the inhibition input line. <i>End of line component</i> : 3.9 KΩ 1/4W ±5%. <i>Connection pins</i> : 7 et 8. <i>Characteristic</i> :</p> <ul style="list-style-type: none"> The cut or short circuit of that line makes the LED «FAULT IDENTIFICATION 4» blinks. Active if a R = 1Kohm is connected on the line.

Contact low pressure	<p><i>Number</i> : 1. <i>Nature</i> : monitored line <i>Function</i>: the opening of the pressure contact produces a low pressure fault. <i>End of line component</i>: 3.9 KΩ 1/4W \pm5%. <i>Connection pins</i>: 5 et 6. <i>Characteristic</i>:</p> <ul style="list-style-type: none"> • The cut or a short circuit on that line makes the LED « FAULT IDENTIFICATION 5 » blinks. • The low pressure fault makes the LED « FAULT IDENTIFICATION 7 » blinks. • Active if a R = 1Kohm is connected on the line.
External Power Supply	<p><i>Number</i> : 1. <i>Nature</i>: input 24V nominal – 3A maximum. <i>Function</i>: Allows to connect an external power supply to provide a consistent source of energy to the extinguishing command and signal devices. <i>Connection pins</i>: 11+ et 12-. <i>Characteristic</i>:</p> <ul style="list-style-type: none"> • When this function is active if the energy supply is missing, The LED “FAULT IDENTIFICATION 6” blinks.
Outputs	
Evacuation indicators	<p><i>Number</i> : 1. <i>Nature</i> : Voltage output <i>Function</i>: if a fire alarm is confirmed, the output delivers a nominal voltage of 24 V. <i>End of line component</i>: 3.9 KΩ 1W \pm5%. <i>Protection</i>: electronic disjunction. <i>Connection pins</i>: 3+ et 4- (sounder diagram). <i>Characteristics</i> :</p> <ul style="list-style-type: none"> • Possibility to provide a maximal current of 1 A on this output from an external supply (24V/3Amax) during at least 15min. • The cut or a short circuit on that line makes the LED “FAULT IDENTIFICATION 2” blinks.
Extinguishing actuators	<p><i>Number</i> : 1. <i>Nature</i>: monitored line. <i>Function</i>: At the end of the evacuation delay, this line is closed for 4s for pyroelectric actuators or 20s for solenoid actuators. Maximum current provided:</p> <ul style="list-style-type: none"> • 1,2A in 4s for “fast” pyroelectric or solenoid actuators or 0.5A in 20s for “slow” solenoid actuators on internal power supply or • 1,2A in 4s for “fast” pyroelectric or solenoid actuators or 1.5A in 20s for “slow” solenoid actuators on external power supply. <p><i>End of line component</i>: 3.9 KΩ 1W \pm5%. <i>Protection</i>: electronic disjunction. <i>Connection pins</i>: 1+ et 2- (coil diagram). <i>Characteristics</i> :</p> <ul style="list-style-type: none"> • Possibility to select internal power supply or external power supply • Possibility to Enable\Disable this mode; • The cut or a short circuit on that line makes the LED “FAULT IDENTIFICATION 1” blinks.

NB: While using the internal power supply of the card, the sum of the required currents to activate the extinguishing actuators, Evacuation indicator, sounder line and the load of other lines (Detection lines and 24V output) shall not exceed 950mA. However it is acceptable to use 1.2A during 4s on the Extinguishing actuators output while using a sum current of 700 mA on the other lines. (Evacuation line, sounder output, 24V output and output detection lines).

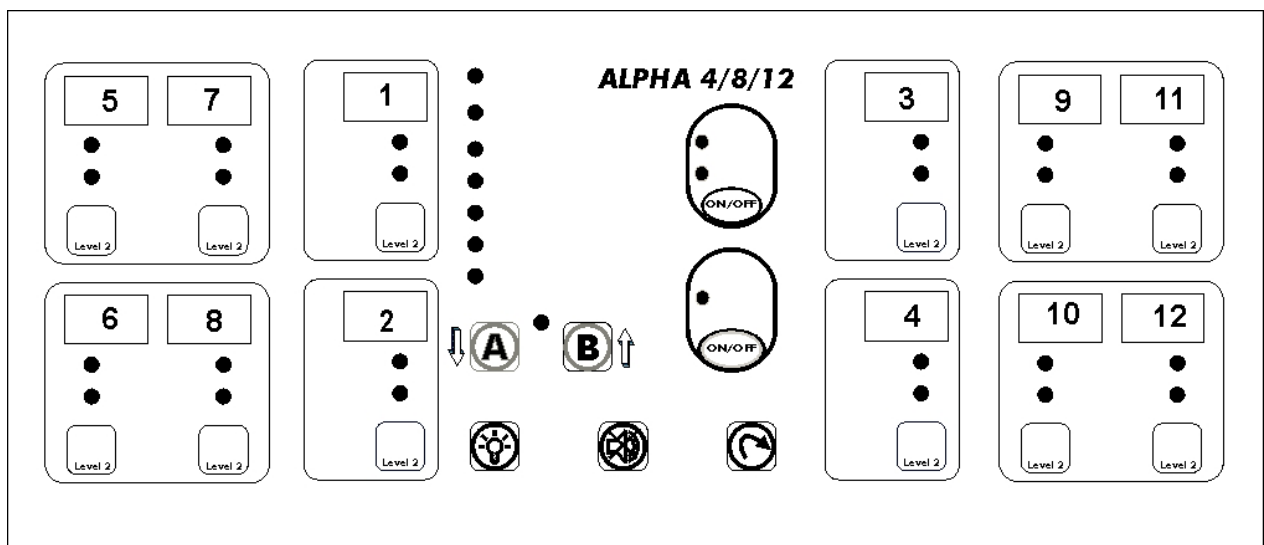
Type of Actuators and Type of command

Type of actuators	Type of command	
	Internal Power supply	External Power supply
Solenoid	24V per 20s I _{max} = 600mA	24V per 20s I _{max} = 1.5A
Pyroelectric	1,2 A per 4s	1,2 A per 4s

Switches position and extinguishing board operating mode.

ST1	Not set, the board is installed on the right of the DEAG module. Set, the board is installed on the left of the DEAG module.
ST2 et ST3 « TYPE OF ACTUATORS »	Set according to actuators type, set on "B" for fast Solenoid and Pyroelectric actuators (supplied during 4s), set on "A" for "slow" solenoid (supplied during 20s)
ST4 et ST5 « ACTUATORS SUPPLY »	Set on « INTERNAL » to deliver power from internal supply: 1.2A for fast Solenoid and Pyroelectric actuators or 0.5A for "slow" solenoid. Set on « EXTERNAL » to deliver power from an external supply connected to the DEAG module. 1.2A for fast Solenoid and Pyroelectric actuators or 1.5A for "slow" solenoid.
ST6 et ST7 « SOUNDERS INDICATORS SUPPLY »	Set on « INTERNAL » if sounders indicators are supplied from an internal power supply (0.5A max on that line). Set on « EXTERNAL » if sounders indicators are supplied from an external power supply 24V/3Amax (1A max on that line).
SW1-1	Not used
SW1-2	<ul style="list-style-type: none"> Set "on" (factory position) allows to confirm an alarm confirmation stage 2: which means a zone in alarm mode confirmed with a second zone in alarm. Set "OFF": allows to confirm an even zone in alarm by an odd zone in alarm only and vice versa.(see diagram below for parity zone correspondance).

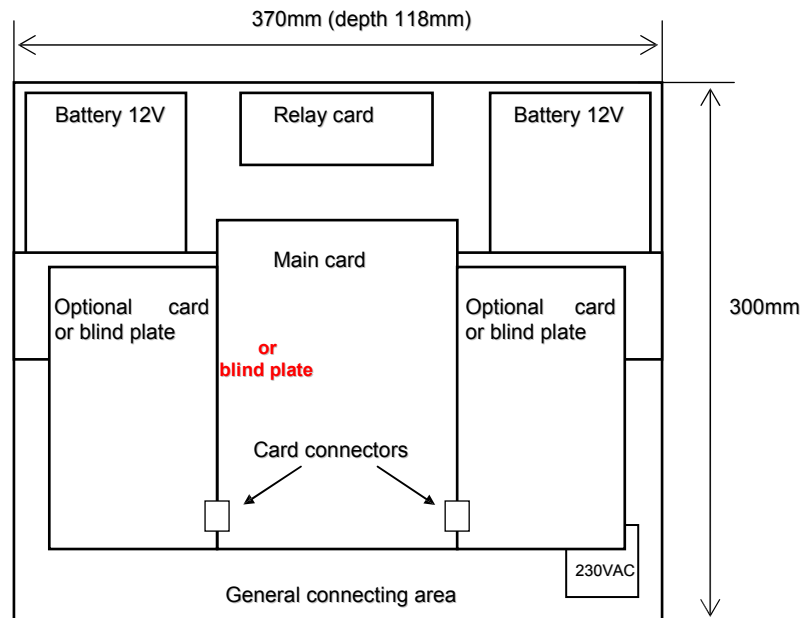
Zones parity (odd and even).



APPENDIX

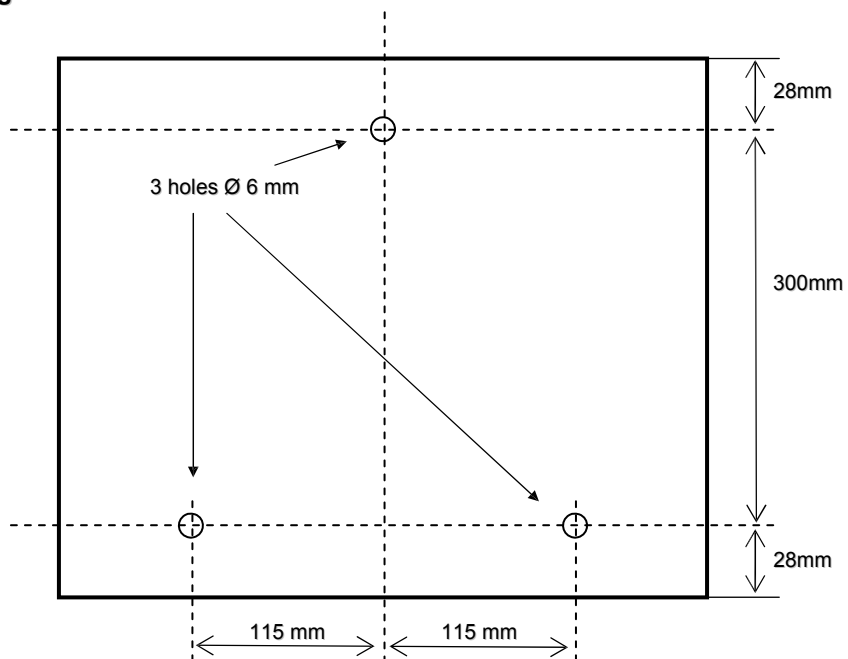
Mechanical drawing

Product equipment

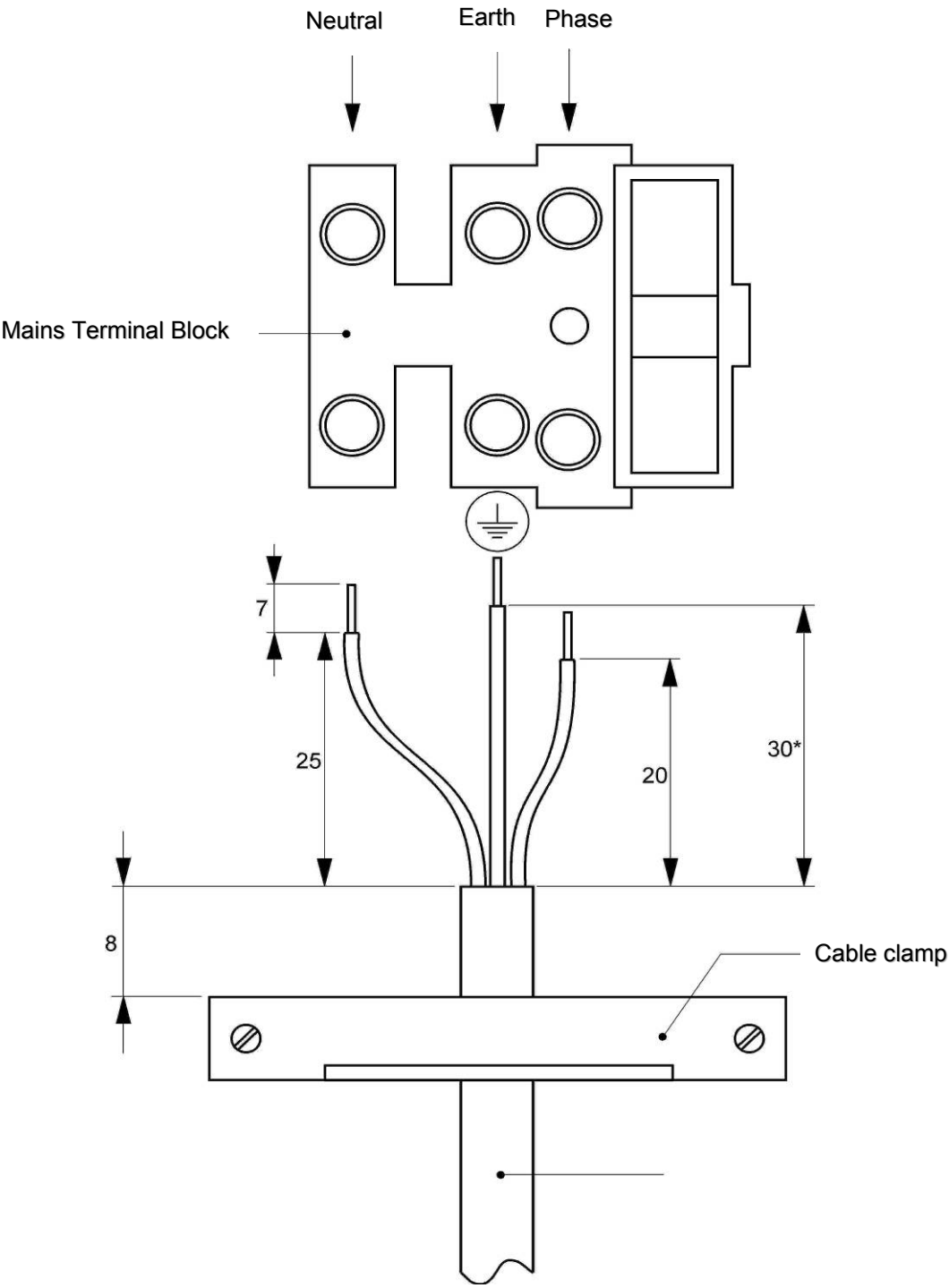


Anticipate a free area of 150mm around the cabinet

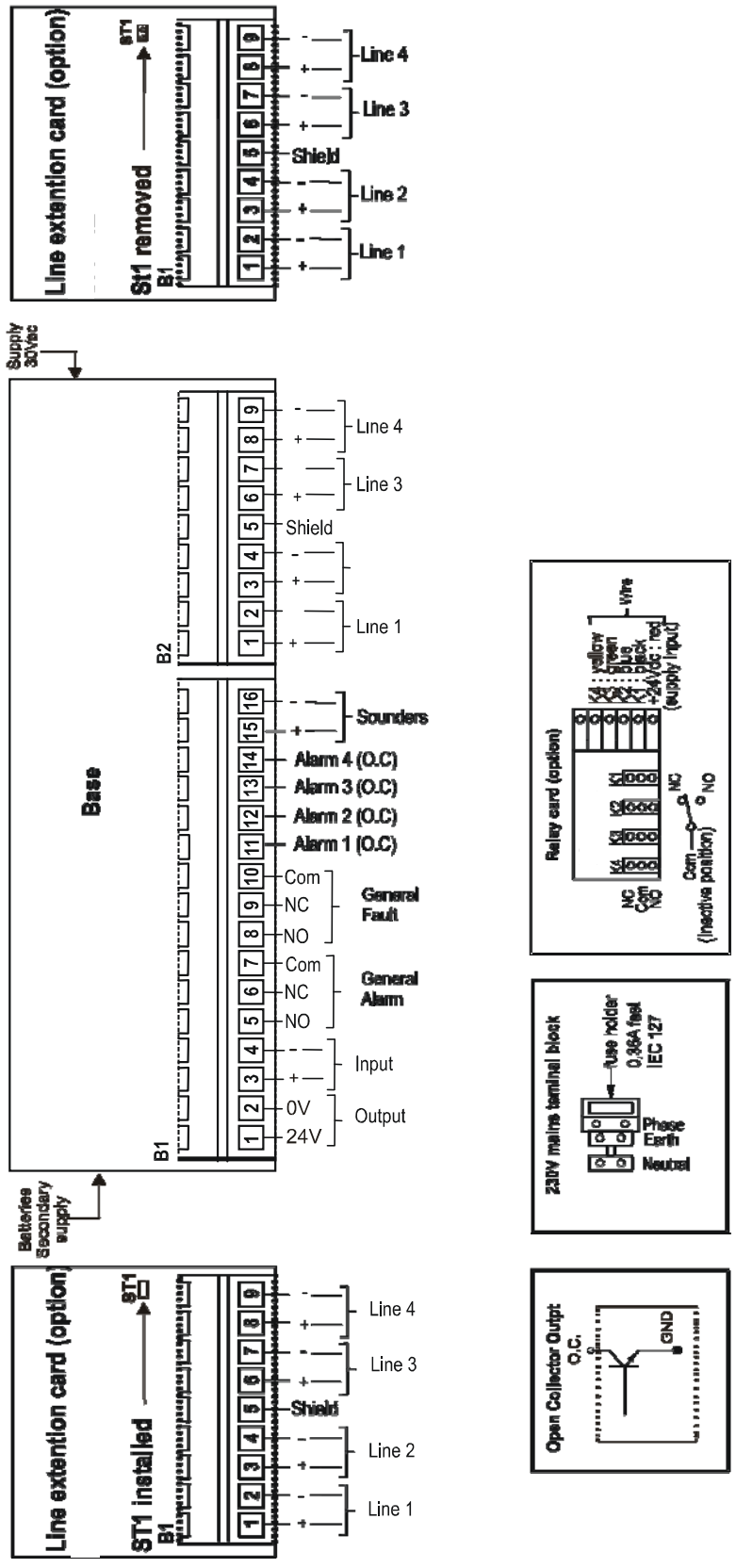
Wall mounting



Mains connecting plan

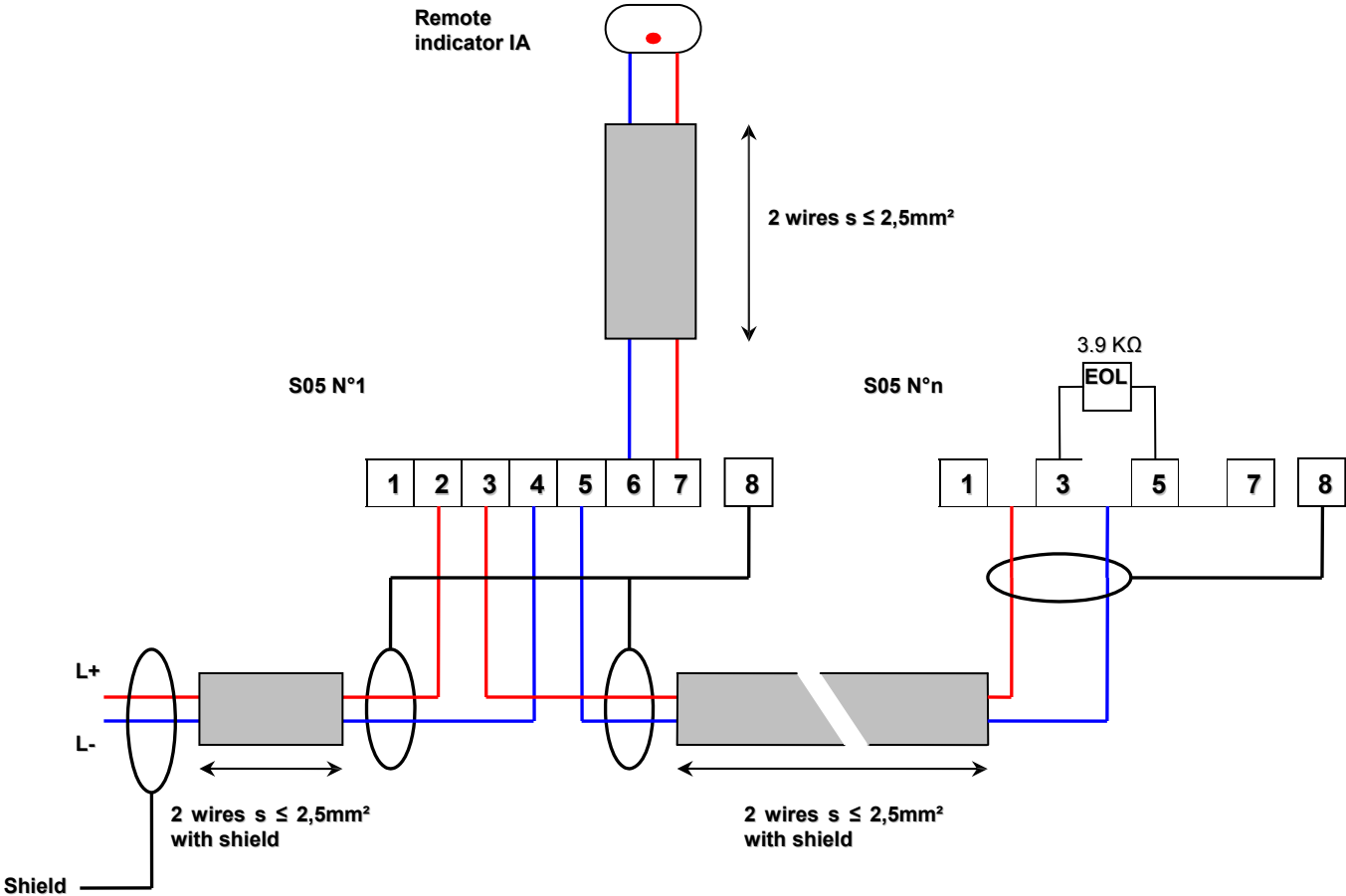


Panel connecting plan

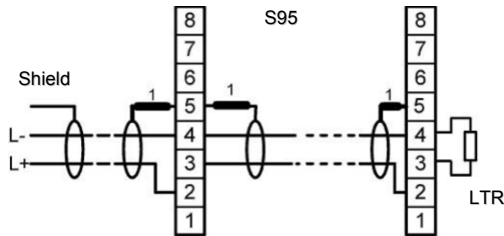


Detectors and Sounders connection plan

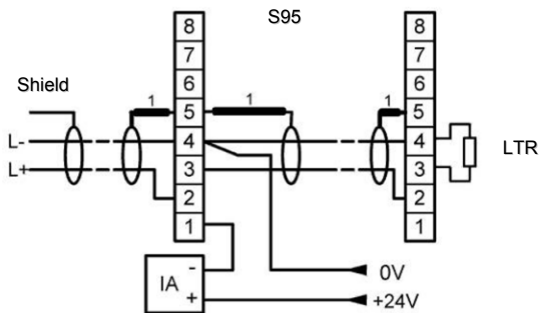
Point detectors – 05 range (S05 base connection).



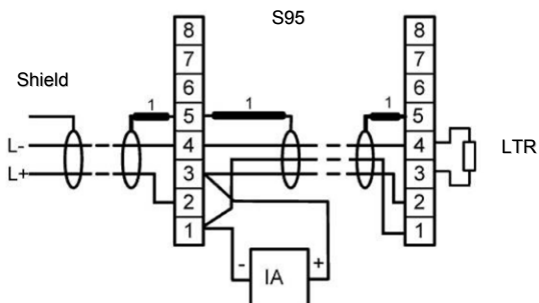
Point detectors – 95 range (S95 base connection)



Type A: Basic connection



Type B: With individual indicator



Type C: With common indicator

GENERAL REMARKS

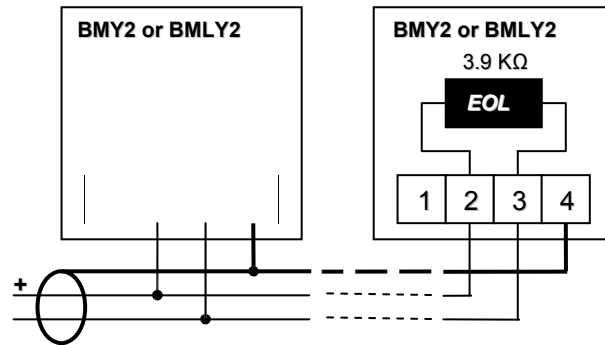
1 Recommendation: All cable screens are protected by spaghetti tubing.

2 All types (A to C) can be mixed together

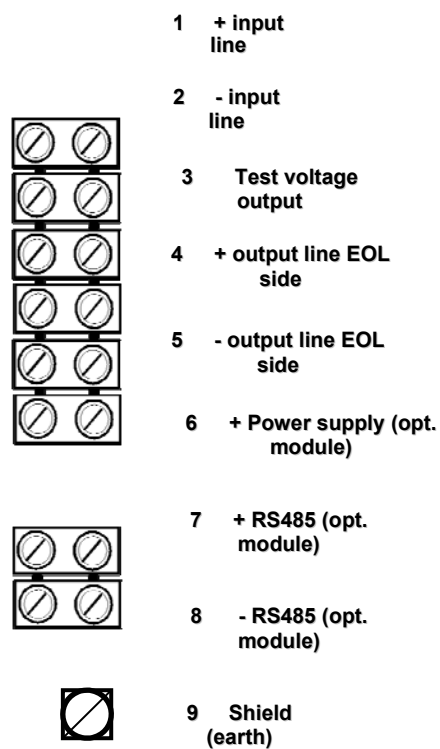
3 LTR: Line Terminal Resistor (**3.9 KΩ**)

4 IA : Remote Indicator

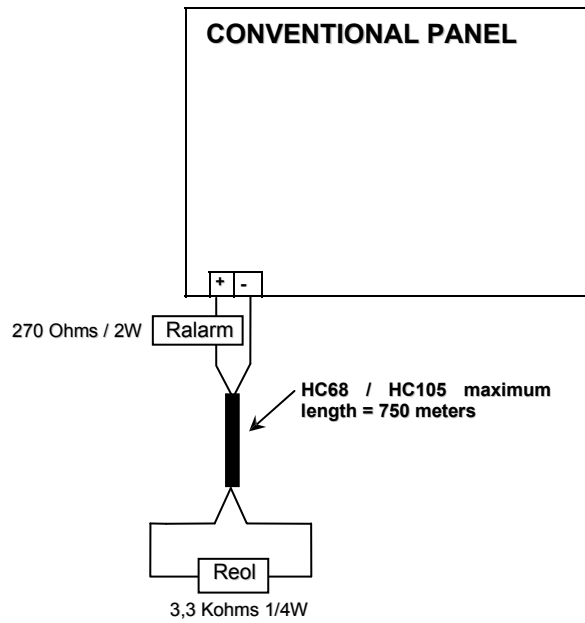
Manual call points – BMY2 and BMLY2



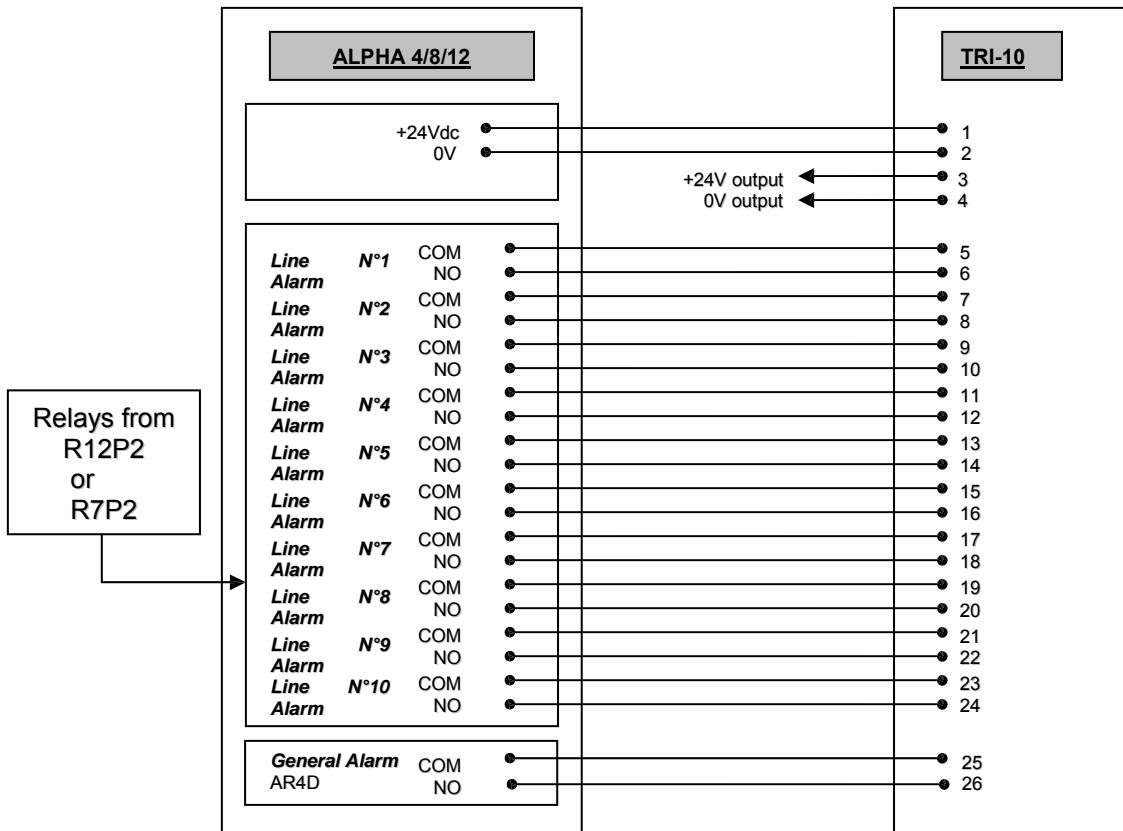
Linear detector – DLFB



Linear heat detection cable – HC68 & HC105.

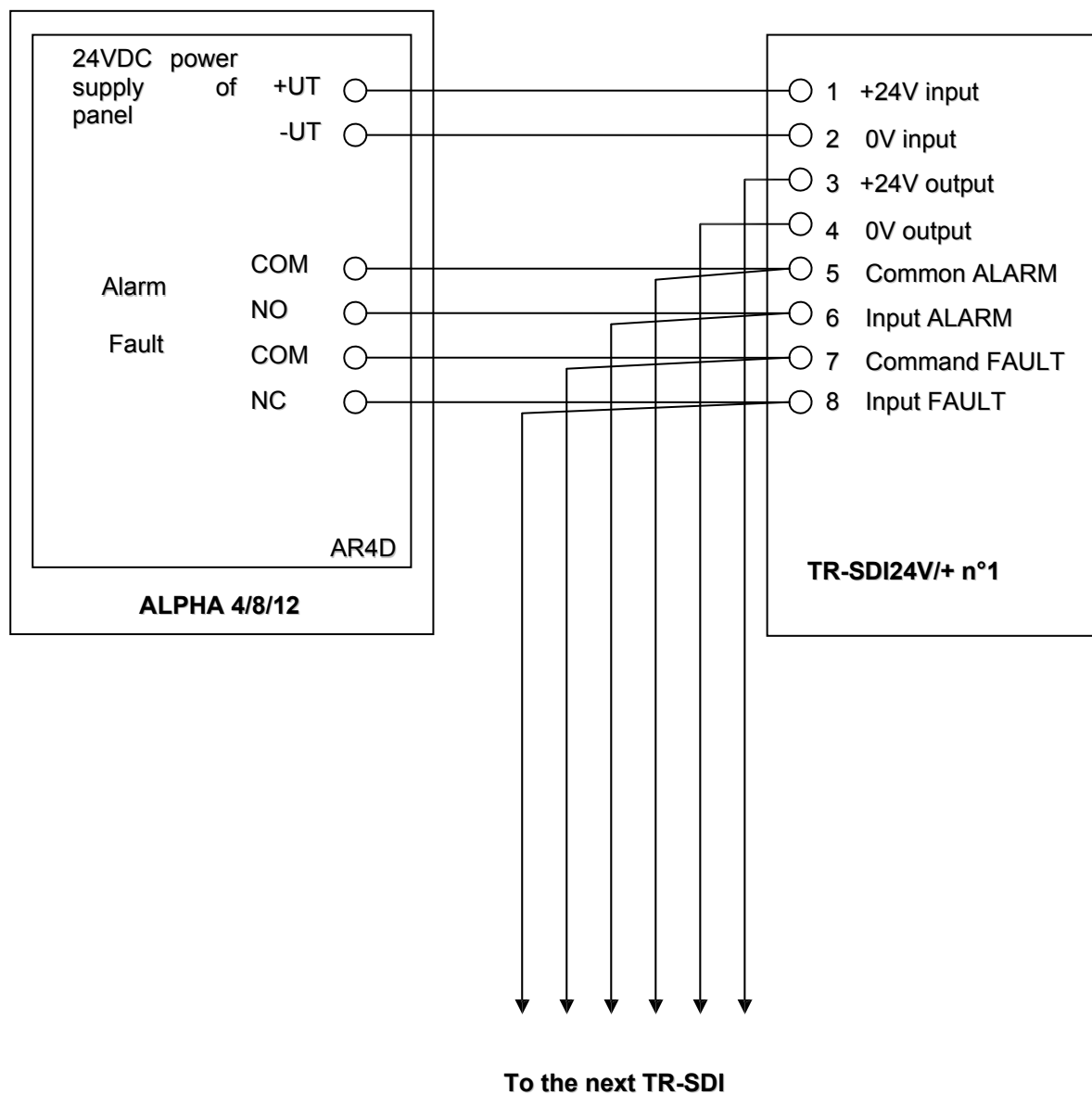


TRI – 10



*Note: use NC instead of NO if the relay is positive security. (Activated while standby state).

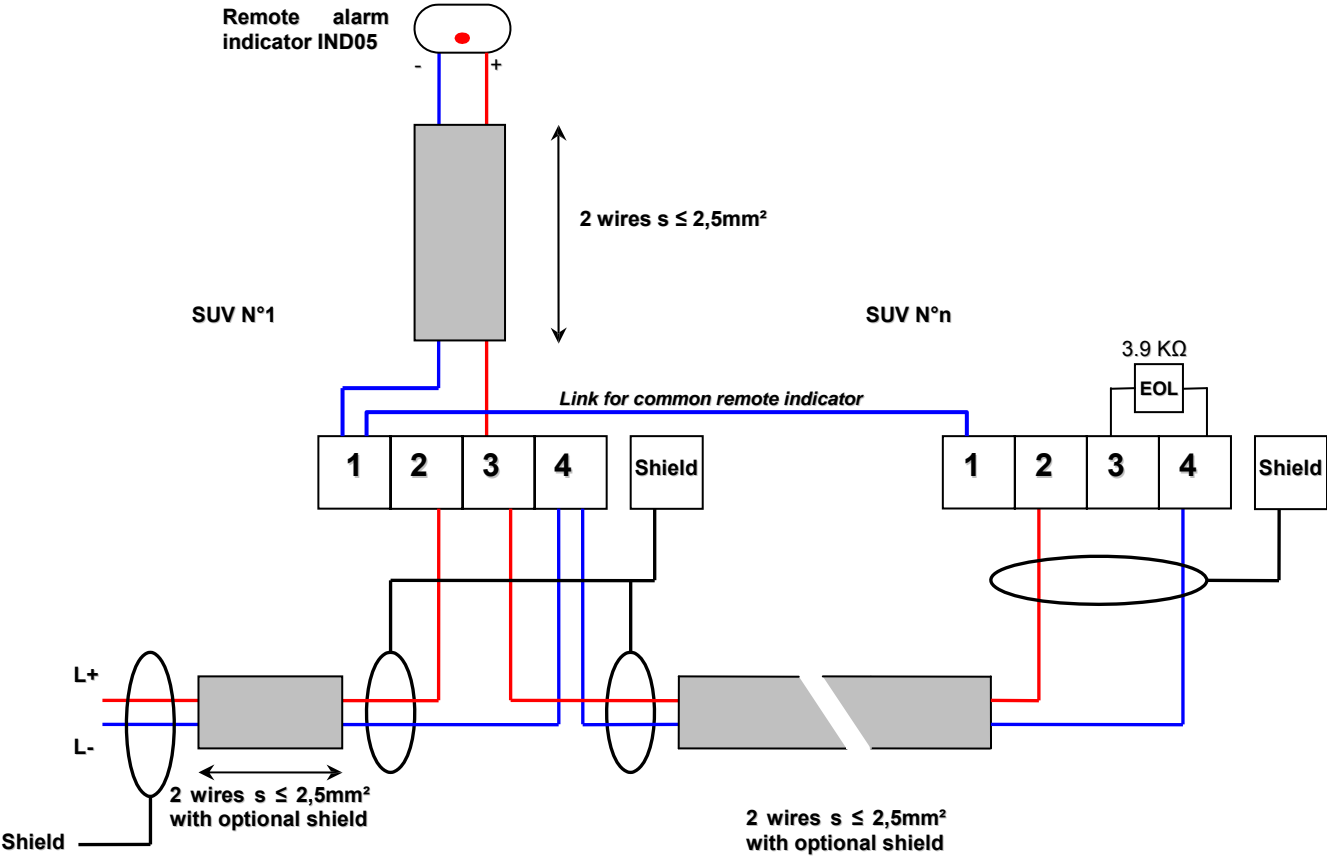
TR – SDI



Designation and purpose of each terminal:

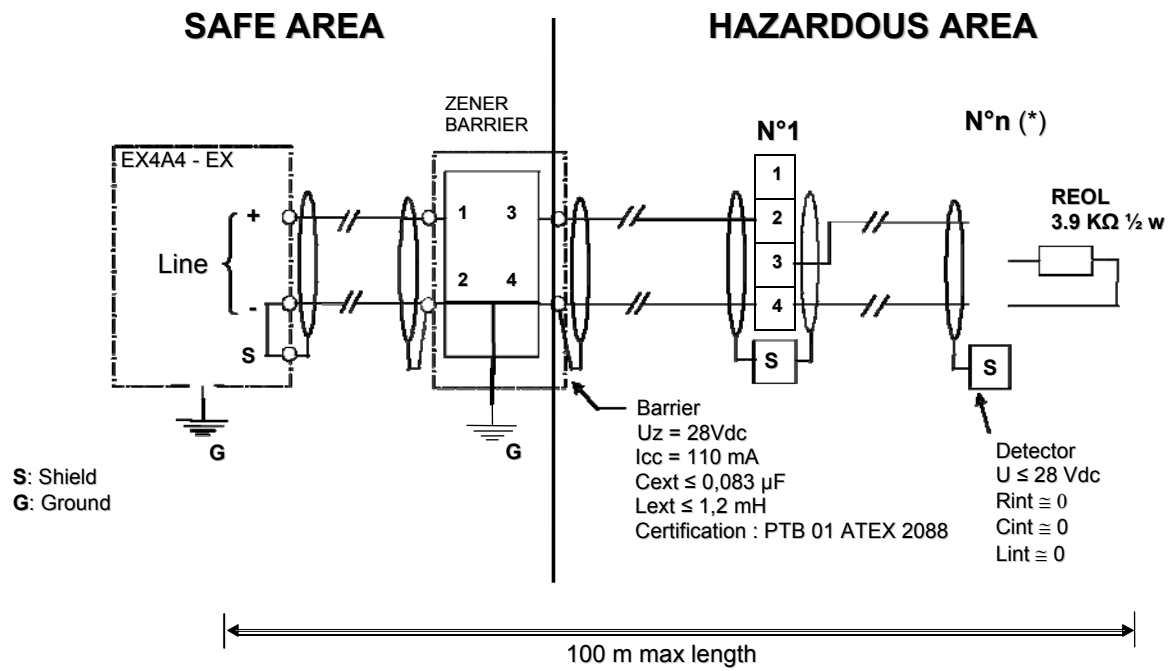
- Terminal 1: +24V input
- Terminal 2: 0V input
- Terminal 3: +24V output
- Terminal 4: 0V output
- Terminal 5: common (+24V) of command "ALARM"
- Terminal 6: input command "ALARM"
- Terminal 7: common (+24V) of command "FAULT"
- Terminal 8: input command "FAULT"

SUV – Conventional ultraviolet flame detector

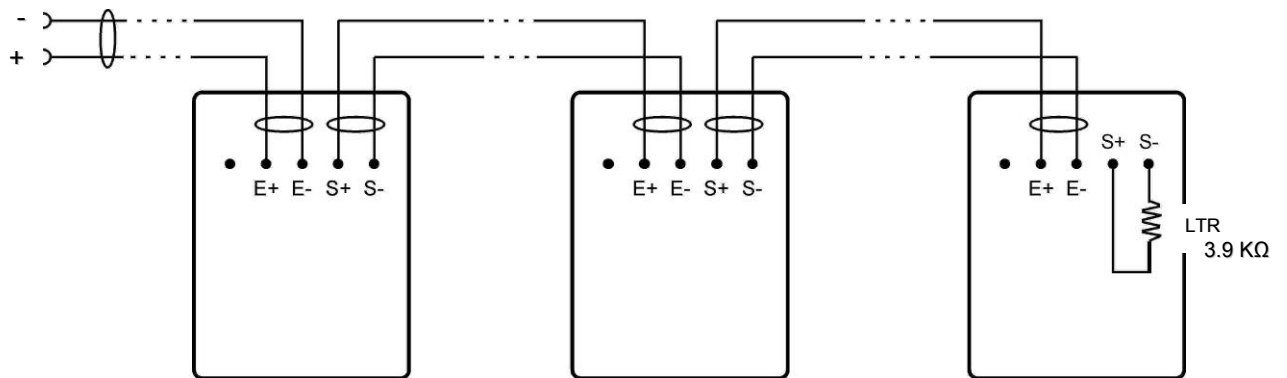


EX4A4-EX connections.

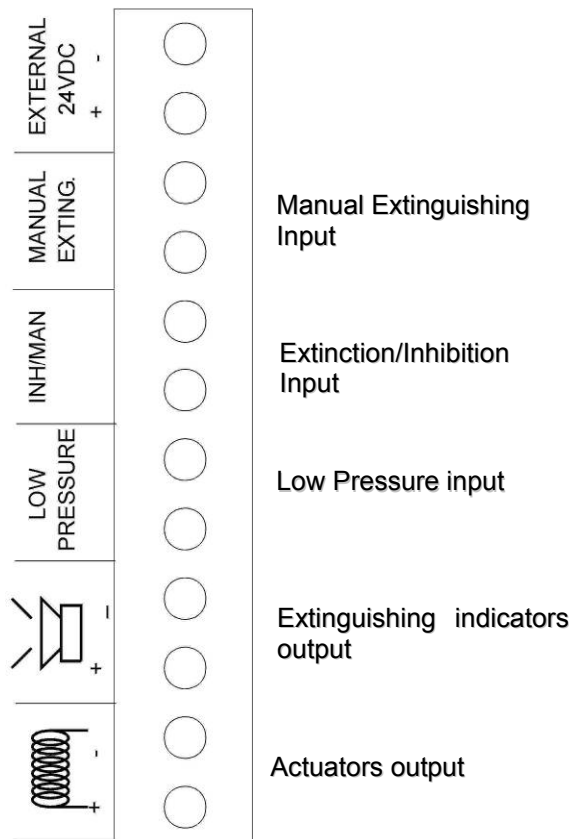
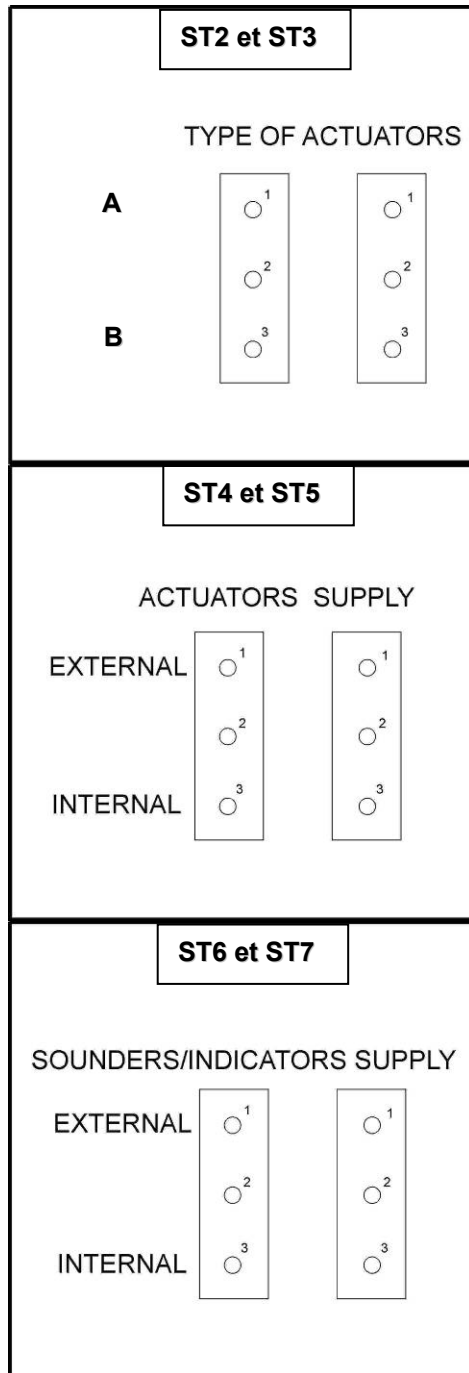
(*) n = quantity of detectors							
VIREX	0	1	2	3	4	5	6
VTEX/ VOEX	10	8	7	5	4	2	1



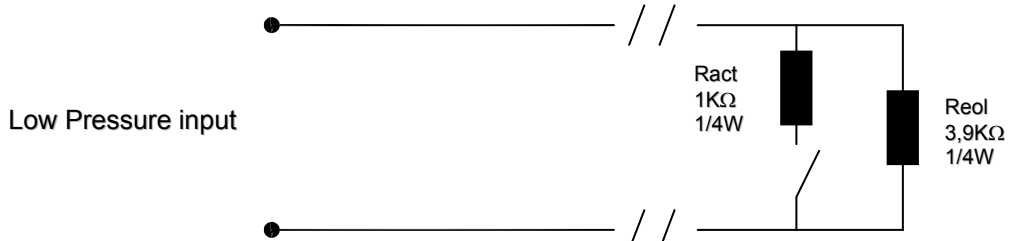
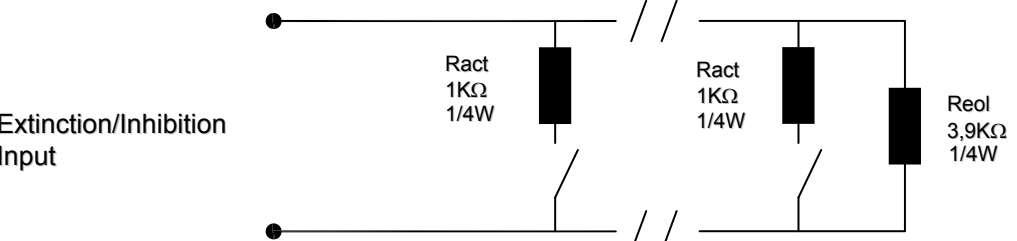
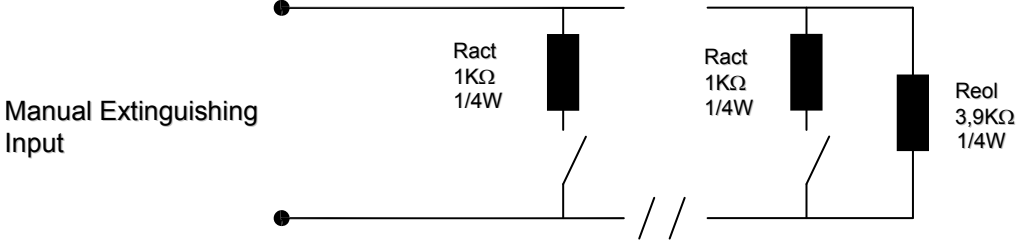
Sounders line



Extinguishing configuration and connecting plan

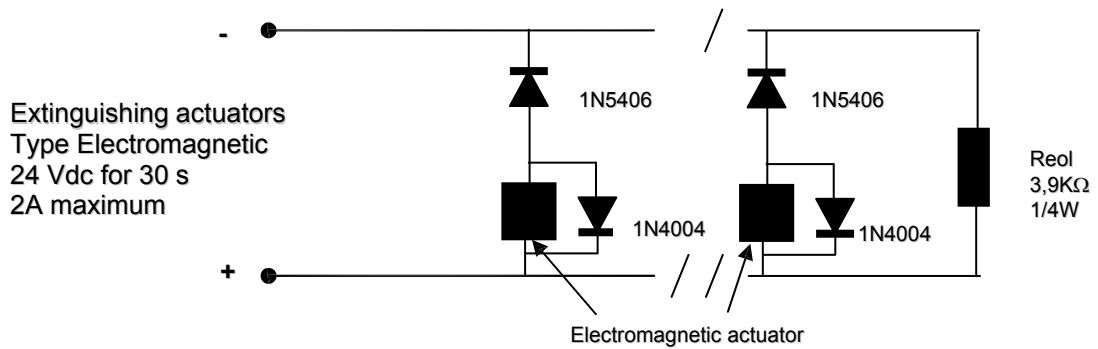


Input lines connection

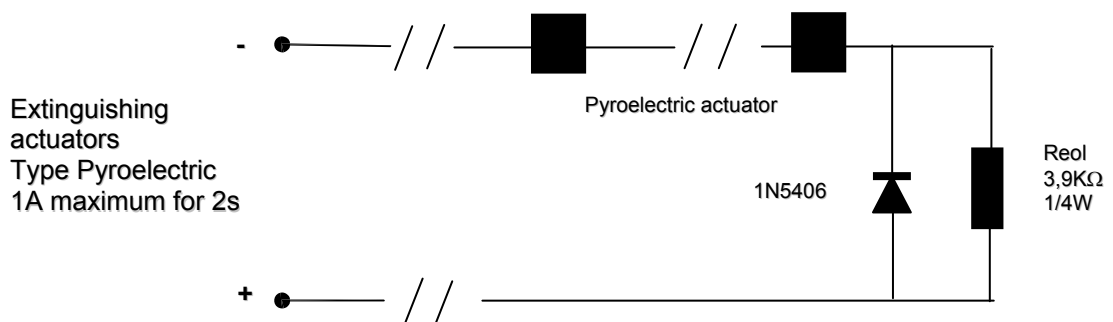


Output connection

Connection for electromagnetic actuators

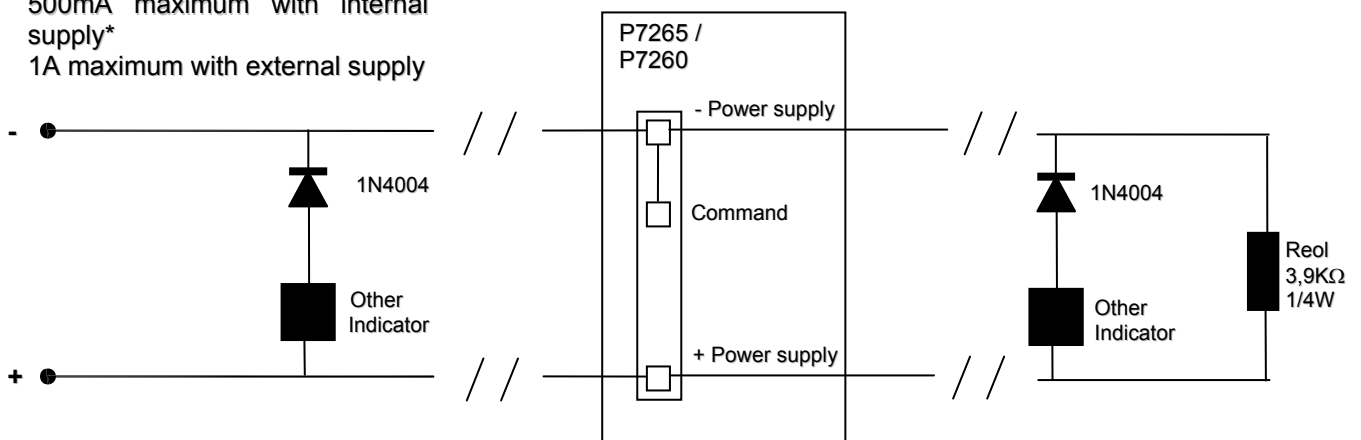


Connection for pyroelectric actuators



Connection for extinguishing indicators

Extinguishing indicators 24Vdc
500mA maximum with internal supply*
1A maximum with external supply



*Using panel power supply, the sum of current required by the extinguishing indicator, by extinguishing actuators, by sounders output and by the load connected on 24Vdc output must be lesser than 950 mA.

Checklist Commissioning

This is a brief instruction. For detailed information refer to the corresponding chapter in the manual.

1. If needed, mount the optional card(s). Make sure that the jumper ST1 at the left card is installed and the jumper ST1 at the right card is removed.
2. All the detector lines must have an end resistor of 3,9 k Ω (3705 Ω ...4095 Ω).
Check this value by means of a multimeter
3. The sounders line and the input of ALPHA4/8/12 must have an end resistor of 3k9 Ω . If extinguishing card is used, all input lines and output lines must have an end resistor of 3k9 Ω .
Check this value by means of a multimeter
4. Connect the mains (230V_{AC}) to the panel.
The LED «System Fault» will light up for a short moment (during initialisation of the panel)
The LED «Fault/Off» of every line is on.
5. Put the 2 batteries in the box. Connect the bridge from bat.1 «+» to bat.2 «-».
Connect the battery cables from the panel to bat.1 «-» and to bat.2 «+».
6. Enter access level2
- Press «A» and «B» simultaneously. The LED «Access level 2 or 3» starts to blink.
- Now press A, B, A, B successively, then AB simultaneously. Now the LED lights steady.
Rem.: Exit level 2 by pressing AB simultaneously or automatically after a timeout of 2 min.
7. Enable all detection lines. Press «Fault/Off» of each line.
Caution: from now on, the panel is active. In case of alarms, the output will be activated.
8. Make the required software settings. When you are in access level 2, use the following code.
Rem.: By default, all the lines are associated to the alarm zone.

Code	Key	Function
BABA, «AB»	«Disable(test)» of each line	1 or 2 detector alarm
	«On/Off» sounders	Disable / enable sounders
ABBB, «AB»	«On/Off» sounders	Alarm zone AZ
	«Disable(test)» of each line	Join / not join the AZ
BAAA, «AB»	«On/Off» sounders	Delay time of the sounders
	«A»	Decrease delay time
	«B»	Increase delay time
AAAA, «AB»	«A»	Simple level 2 access
	«B»	Standard level 2 access
BBBB, «AB»	See list in manual	Programming open collector output (O.C)
AABB, «AB»	See list in manual	Programming input

Extinguishing module software settings:

Rem: The line (minimum 2 lines) must be associated to the extinguishing zone to allow the extinguishing activation.

Code	Key	Function
ABBB, «AB»	Extinguishing key Disabled «On/Off».	Extinguishing zone EZ
	«Disable(test)» of each line	Join / not join the EZ
BAAA, «AB»	Extinguishing key « MODE ONLY MANUAL / MANUAL MODE DISABLED »	Delay time of the Extinguishing activation
	Extinguishing key Disabled «On/Off»	Decrease or Increase delay time

9. Make the necessary tests.

User Maintenance / System Inspection

It states the responsibility to carry out all routine tests and maintenance rests with the owner/ manager of property in which the fire alarm system is installed. The following tests are advised.

WARNING!

Before effecting any control disconnect the extinguishing actuators if it is used.

DAILY INSPECTION

Check that the System Energised LED is lit.
Check no other LEDs are lit and that no sounders are operating.
Report any faults to the designated site maintenance engineer.

WEEKLY TEST

Press the Led/Buzzer Test to check that all LEDs lights show and the warning beeper sounds.
Switch off the mains supply and verify the fault signalling are given.
Stop the beeper sounds.
Switch on again the mains supply.

MONTHLY TEST

One Fire Detector Point or one Manual Call Point have to be tested to check the system can operate in case of Fire. During each control, Test a different zone each week and always use a different call point or smoke/heat detector for each test so that all devices are tested in rotation.
Check that the alarm sounders operate.

QUARTERLY TEST

Visually inspect the battery and its connections. **Please note: Lethal voltages are present inside the panel. Do not open the panel unless you are qualified to do so and DO NOT touch the power supply unit.**

Operate a call point or sensor in each zone to test the fire alarm as in the monthly test above.
Remove the mains supply and check that the battery is capable of supplying the alarm sounders.

ANNUAL TEST:

As for the monthly and quarterly test but check every detector, call point, sounder, and all auxiliary equipment for correct operation.

EVERY 2 to 3 YEARS:

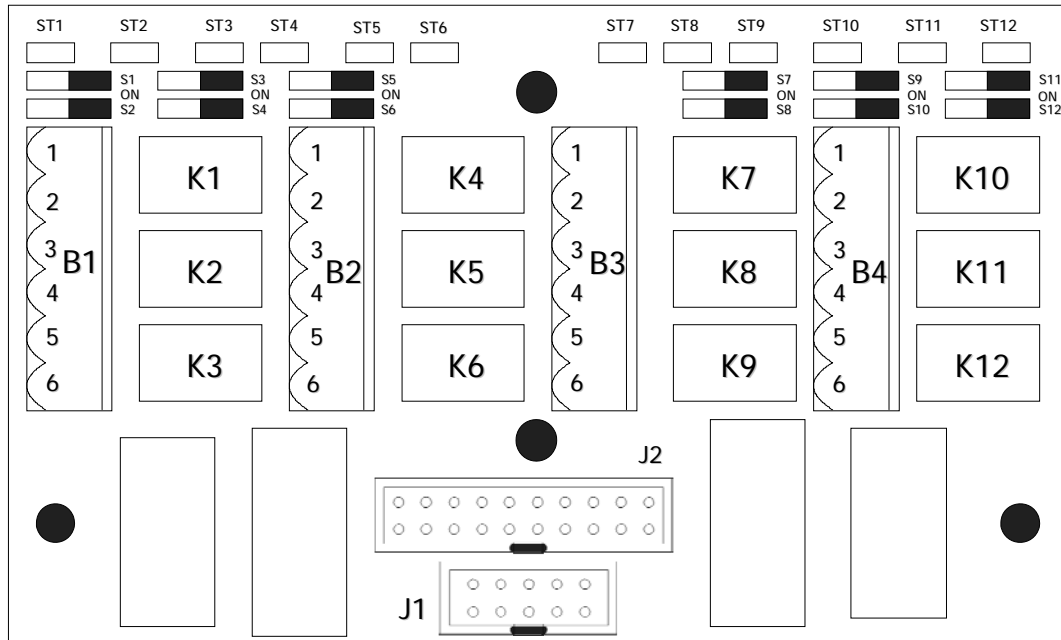
Clean the smoke/ heat detector s to ensure the correct operation and freedom from false alarms.

SERVICING:

REGULAR SERVICING IS HIGHLY RECOMMENDED, preferably on a continuous maintenance contract and by a competent organisation. A full-itemised report of the installation should be obtained at least annually.

Relay cards configuration and connecting plan

The R12P2 or R7P2 relay card is connected to the main board by flat cable. It is connected to the pin J5 on the base board and on the pin J1 on R12P2 board.



Switches S1, S2, ..., S12:

select normally open (N.O) or normally closed (N.C) relay's contact on terminal blocks.



Jumpers ST1, ST2... ST12:

Allow to insert of a 560 ohm resistor in series to the contact. If the jumper is present, the resistor is short circuited and then the contact is clean



Terminal J1: Connexion via flat cable to ALPHA 4/8/12 (J5)

Terminal J2: not used

Terminal blocks

B1			B2			B3			B4		
B1.1	COM	Relay	B2.1	COM	Relay	B3.1	COM	Relay	B4.1	COM	Relay
B1.2	N.O./N.C.	K1	B2.2	N.O./N.C.	K4	B3.2	N.O./N.C.	K7	B4.2	N.O./N.C.	K10
B1.3	COM	Relay	B2.3	COM	Relay	B3.3	COM	Relay	B4.3	COM	Relay
B1.4	N.O./N.C.	K2	B2.4	N.O./N.C.	K5	B3.4	N.O./N.C.	K8	B4.4	N.O./N.C.	K11
B1.5	COM	Relay	B2.5	COM	Relay	B3.5	COM	Relay	B4.5	COM	Relay
B1.6	N.O./N.C.	K3	B2.6	N.O./N.C.	K6	B3.6	N.O./N.C.	K9	B4.6	N.O./N.C.	K12

Note: The relays K7, K8, K9, K10 and K12 are **not present** on the 7 relay card R7P12.

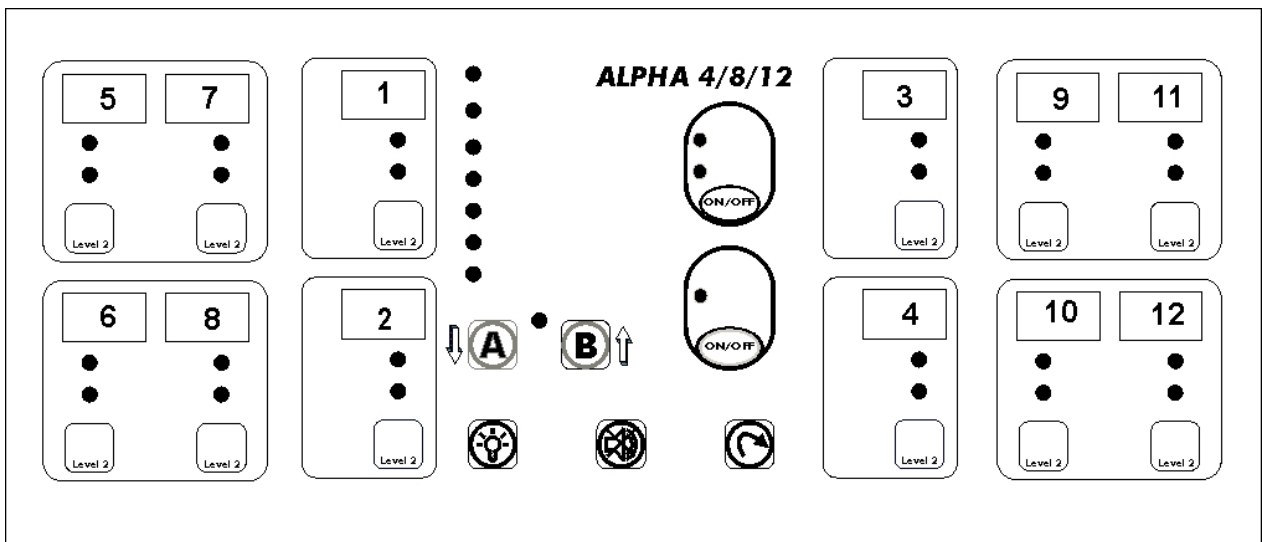
Contact association

Terminal	Relay R12P2	Relay R7P2	Module	ALPHA 4-8-12	
B1.1-1.2	1	1	Main	Fire alarm line 1*	
B1.3-1.4	2	2		Fire alarm line 2*	
B1.5-1.6	3	3		Fire alarm line 3*	
B2.1-2.2	4	4		Fire alarm line 4*	
				EX4A4	DEAG
B2.3-2.4	5	5	Extension card at left position ST1 set	Fire alarm line 5*	Extinguishing actuators ch.1 active
B2.5-2.6	6	6		Fire alarm line 6*	Channel 1 in evacuation status
B3.1-3.2	7	Absent		Fire alarm line 7*	Channel 1 in inhibition status
B3.3-3.4	8	Absent		Fire alarm line 8*	Channel 1 in manual mode
				EX4A4	DEAG
B3.5-3.6	9	Absent	Extension card at right position ST1 removed	Fire alarm line 9*	Extinguishing actuators ch. 2 active
B4.1-4.2	10	Absent		Fire alarm line 10*	Channel 2 in evacuation status
B4.3-4.4	11	11		Fire alarm line 11*	Channel 2 in inhibition status
B4.5-4.6	12	Absent		Fire alarm line 12*	Channel 2 in manual mode

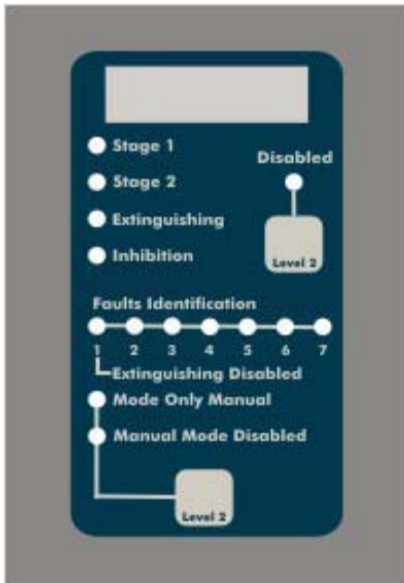
* association of the fire alarm lines see drawing below.

Note: With the use of the **R7P2** relay card, as the relays 7, 8, 9, 10 and 12 **are not connected**, no contact relay is associated with the functions specified on the table.

Association with number of fire alarm lines



Operation instructions of extinguishing module



LED indication	
Stage 1	Red Steady At least one detection line associated with the extinguishing channel is in alarm.
Stage 2	Red Steady Extinguishing cycle (delay) in progress. At least two detection lines associated with the extinguishing channel are in alarm.
Extinguishing	Red Steady Discharge actuators are activated.
Inhibition	Yellow Steady. Discharge command is inhibited via the inhibition input line.
Disabled	Yellow Steady only Shows the DEAG module is disabled When associated with the following yellow LED: <ul style="list-style-type: none"> • « Fault identification 1 » steady, disablement of the actuators or • "MANUAL MODE DISABLED" steady, disablement of the manual call point line.
Fault identification	7 blinking yellow LEDs allow to identify the possible fault origin. 1 – Extinguishing actuators line 2 – Evacuation indicator line 3 – Extinguishing Manual Call Point line 4 – Inhibition (aut/man) line 5 – Contact low pressure line 6 – External Power supply not connected 7 – Low pressure
Mode only manual	Yellow Steady Manual mode is on
Manual mode disabled	Yellow Steady Automatic mode is on (See LED indication « DISABLED »).

Note: It is technically possible to connect two DEAG cards on the board. This configuration is not conform with the EN12094.