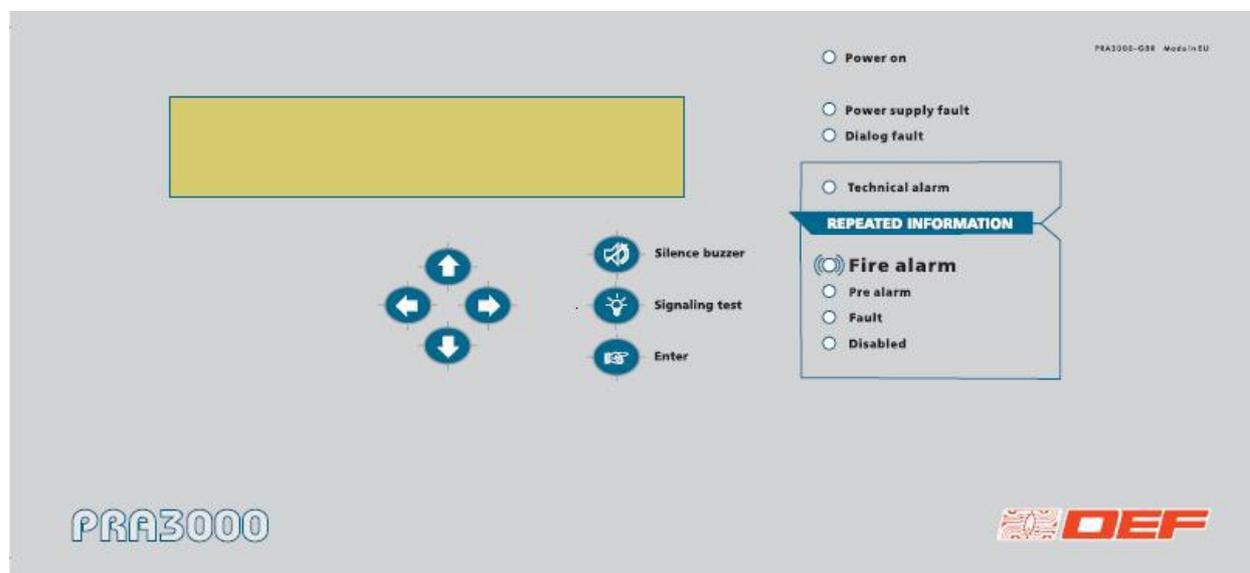


REMOTE INDICATION PANEL

PRA3000



This document is composed of 15 pages and 4 annexes.

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EVOLUTION OF THE DOCUMENT

Rev	LIST OF MODIFICATIONS	DATE
1	Creation	29/03/08
2	Modification "programming" paragraph	10 / 07 / 08
3	Lexan modification	01 / 03 /09
4	Selective programming erasing	10 / 02 /10
5	Technical alarm report, removing of selective mode LED	20 / 07/ 11

A. INTRODUCTION

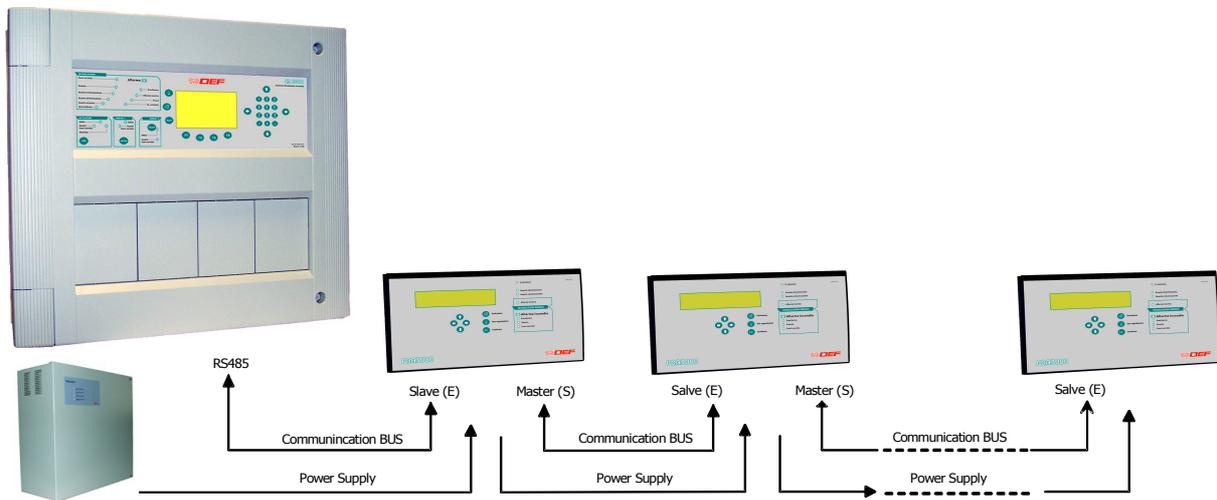
The **PRA3000** is a remote indication panel to be associated with analogical addressed fire detection control panels and is used to remotely report the following information about the status of the system.

The possibility is envisaged to use it in a **selective** way; i.e. the PRA3000 can report the information concerning only the zones selected by the user.

The PRA3000 comes in the form of an elegant and compact plastic housing.

Connection between the remote panel and CIE needs a communication BUS (RS485) and a power supply that can be drawn directly by the CIE, although it is also possible to use a certified external power supply.

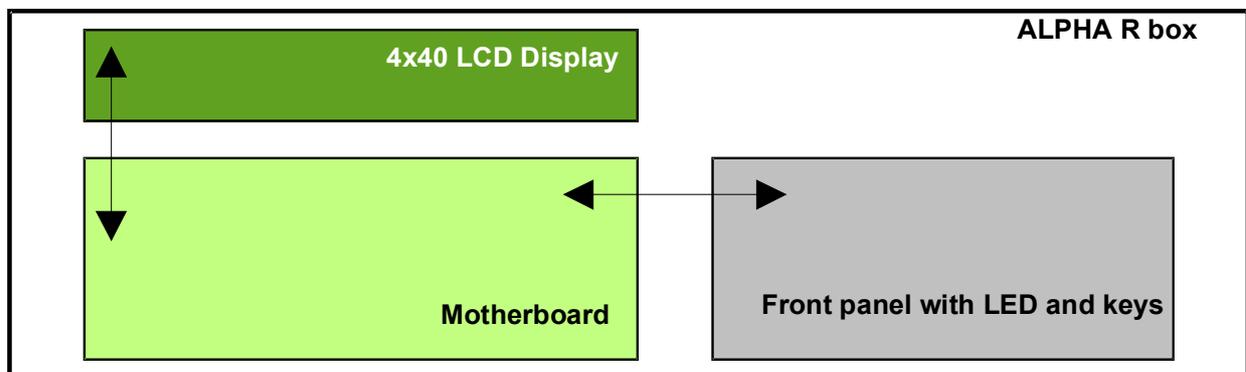
For the latter case, the panel is equipped with 2 inputs able to report to the CIE the information of mains fault and batteries fault.



A.1. COMPOSITION

PRA3000 is composed by the following sub-systems:

- Plastic Housing.
- Front panel with 4 lines x 40 characters LCD, LED and Keys.
- Motherboard to manage keypad, display and communication with CIE.



B. GENERAL SPECIFICATIONS

B.1. CHARACTERISTICS

Functional characteristics	
Management capabilities	Repeats information presents on CIE at which it's connected, limited to 30 events for each of following typologies: <ul style="list-style-type: none">• Alarm• Pre-alarm• Technical alarm• Fault• Out of service
Mechanical characteristics	
Dimensions (L x h x p)	370 x 170 x 55 mm
Weight	2 Kg
Colour of housing	Grey anthracite
IP protection index	IP30
Electrical characteristics	
Power supply	15 ÷ 30 Vdc 24Vdc nominal
Max. stand-by consumption	50mA
Max. consumption (test LED)	200mA @ 15Vdc 130mA @ 24Vdc 100mA @ 30Vdc
Power supply source	Locale PSU 24Vdc CIE 24Vdc auxiliary output, (verify the max. consumption)
Climatic characteristics	
Operating temperature	-10°C ÷ +50°C
Max. operating humidity	93%hr without condensation
Storage temperature	+10°C ÷ +50°C
Max. storage humidity	85%hr without condensation
Other characteristics	
Used components	Responding to 3K5 class of CEI 721-3-3.
Power supply	Conformity to safety prescription of EN 60-950 standard.

B.2. SIGNALISATIONS

Remote panel optical signalisations	
Power On	Green LED
Power supply fault	Yellow LED steady or blinking
Dialog fault	Yellow LED steady or blinking
Events and conditions from the menu	

Optical signalling reported by the CIE	
Alarm	Red LED steady
Pre-alarm	Red LED steady
Technical alarm	Yellow LED steady
Fault	Yellow LED steady
Disabled	Yellow LED steady

Acoustical signalling	
Alarm o Pre-alarm	Intermittent sound (priority signalling)
Fault	Fixed sound

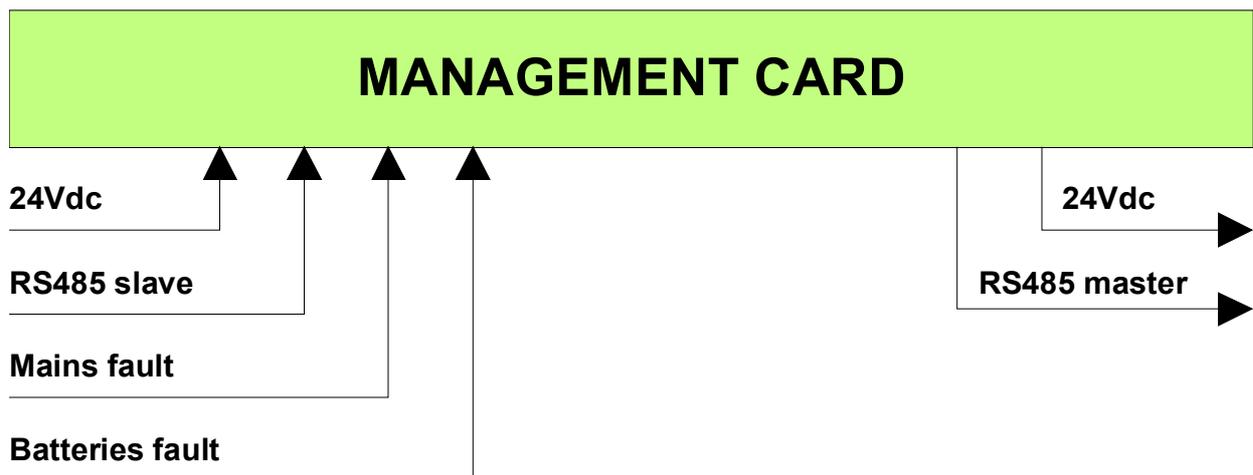
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B.3. COMMANDS

Commands	
Level 1	Buzzer silencing Signalling Test (LED e buzzer) Confirmation Manu navigation using 4 arrows (HMI – Human Machine Interface)
Access to level 2	3 digit specific numeric code (Factory default "123")
Access to level 3	3 digit specific numeric code (Factory default "456")
Level 3	Remote panel configuration: SW1-1 = CIE reset authorisation SW1-2 = configuration By menu = Last or intermediate panel

B.4. TERMINAL BLOCK

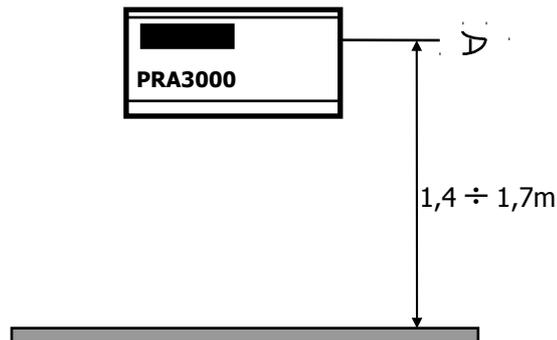
Terminal ID	Type	Funzione
B1 M-; M+	Bus RS485 master	Communication BUS at 9600 or 34800 bauds, 8+1 bit, N, 1 start bit, 1 stop bit. Allows the connection to next PRA3000 remote panel.
B1 E-; E+	Bus RS485 slave	Communication BUS at 9600 or 34800 bauds, 8+1 bit, N, 1 start bit, 1 stop bit. Allows the connection to previous PRA3000 remote panel or to the CIE.
B3 -E; +E; -S; +S	Power Supply	Remote panel power supply 24Vdc nominal.
B4 DS; DB; 0V	Mains fault and batteries fault inputs.	Allows reporting of mains and batteries fault of auxiliary power supply and transmitting to CIE Connect only NO free voltage contacts.



C. INSTALLATION

In order to allow a correct visualisation and to ensure sufficient accessibility to the panel, it is necessary that this latter one is installed with the following limitations:

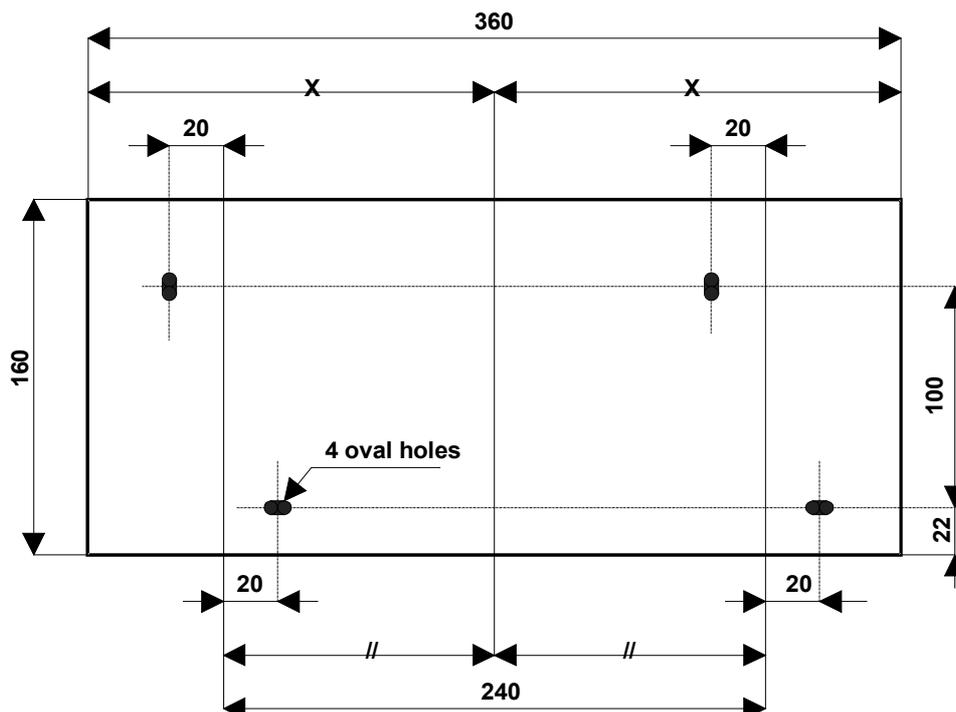
- fixing **height** between **1,4 + 1,7m** with respect to the floor;
- an **operative area** of at least **10cm** around the panel's perimeter.



C.1. INSTALLATION PROCEDURE

Mounting of PRA3000 must proceed according to the following steps:

- Drill holes in the wall to insert the expansion bolts.
- Separate the cover from the bottom of the housing by extracting the two clips located on the lower side of the panel.
- Fix the bottom to the wall by screw down the four screws in the expansion bolts.
- Check that cables are correctly run from the wall into the housing; pay attention to the possible contacts with the housing since the latter one is realized with a good conductor material.
- Make all the electrical connections (see the following paragraphs).
- Mount back the front panel.



C.2. WIRINGS

C.2.1. COMMUNICATION LINE

The PRA3000 panels are connected through a shielded two cores cable with minimum section 0,5mm². The maximum distance between the PRA3000 and the control panel or between two PRA3000 is **700m**.

C.2.2. POWER SUPPLY LINE

It is possible to supply one or more PRA3000 panels directly from the CIE (check the energy balance) or use an appropriate local power supply.

To define the maximum length of power cable, consider the following data:

- Typical power voltage: 24Vdc
- Minimum operating voltage of remote panel: 15Vdc
- Maximum voltage drop (24V-15V): 9Vdc
- Average consumption at this voltage: 0,18A, $\approx (0,15A+0,2A)/2$
- Resistance of 2 x 0,5mm² cable: 72Ω/1000m
- Resistance of 2 x 1,5mm² cable: 23Ω/1000m

PRA3000 QTY	1	5	10	16
R _{max}	50Ω (9V/0,18A)	10Ω (9V/0,9A)	5Ω (9V/1,8A)	3,1Ω (9V/2,88A)
L _{max} using 0,5mm ²	700m ^(*) (50/72)	140m (10/72)		
L _{max} using 1,5mm ²	700m ^(*) (50/23)	430m (10/23)	215m (5/23)	135m (3,1/23)

L_{max} = max. distance between PSU (power supply unit) and last remote panel on power supply cable.

(*) = distance limited by maximum length of bus cable.

D. COMMISSIONING

Commissioning is achieved in 4 steps:

D.1. PRELIMINARY CHEKS

Before connecting the bus communication wires, it's necessary to verify the quality of their insulation. Measure the resistance between each conductor, including the screen, and the electric ground of the plant.

For all the conductors, the measured resistance must be **greater than 1MΩ**.

D.2. SWITCHES SETTING

Switch	Function
SW1-1 Rearm	Set to "ON" if you want the possibility to reset the CIE from PRA3000 remote panel.
SW1-2 Code DDS	Must be set to "OFF" during system operation. Set to "ON" to configure remote panel operating mode: <ul style="list-style-type: none">• Level 2 and 3 access code modification;• Remote panel position on RS485 BUS (intermediate or final)• Communication protocol selection
SW1-3 Test	Must be set to "OFF" during system operation. Used in factory to perform an automatic panel test.
SW1-4 BUZZER	Must be set to "ON" during system operation. Se impostato su "OFF" disabilita le segnalazioni acustiche



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BP1
RESET

Performs the remote panel reset.

D.3. PROGRAMMING

After the installation of remote panel and setting of the switches, verify the power cable voltage and connect it.

Verify that the green LED "Power on" be steady on.

Connect 9V battery, supplied with the panel, to appropriate connector and make the following SW configuration.

This procedure must be performed on each PRA3000 remote panel connected to the CIE.
In order for the PRA3000 remote panel functions properly, you must declare the presence in the configuration data of the CIE

D.3.1. KEYBOARD USE

When the display prompts you to enter digits, the arrows "↑" and "↓" allow you to increase or decrease the selected number, while the arrows "←" and "→" allow you to switch to the next and previous digit.

The 4 arrows also allow you to navigate through menus proposed by the display.

The "Enter" key allows you to validate your choices.

D.3.2. CONFIGURATION

Position the SW1-2 switch to "ON" and reset the panel by pressing the "RESET" key. The following menu will appear on the display:

```
Device in last position?  
Yes - No
```

Select the answer using the "←" and "→" keys and confirm with the "Enter" key. The display will now show:

```
Memorisation of access level 2  
Access level 2 : 123  
Validate with the enter key
```

Set the code level 2 as desired:

- using the "←" and "→" keys select the digit to be modified.
- using "↑" and "↓" increased/decreased the selected digit value.
- use the "Enter" key to confirm settings.

The display will now show:

```
Memorisation of access level 3  
Access level 3 : 456  
Validate with the enter key
```

Set the code level 3 as desired:

- using the "←" and "→" keys select the digit to be modified.
- using "↑" and "↓" increased/decreased the selected digit value.
- use the "Enter" key to confirm settings.

The display will now show:

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Display contrast
■■■■■■●●●●●●
50%
Validate with the enter key

Set the desired contrast using the "←" and "⇒" keys.
Use the "Enter" key to confirm settings.
The display will now show:

Choice of the baud rate
9600 - 38400

Select the baud rate of the communication protocol (depending on the connected CIE) using the "←" and "⇒" keys.

Protocol baud rate	CIE
38400	CA3000
9600	Other CIEs

Use the "Enter" key to confirm settings.
The display will now show:

Choice of the protocol's type
AA - AA+

Select the type of protocol (depending on the connected CIE) using the "←" and "⇒" keys.

Protocol type	Control panel
AA+	CA3000
AA	Other panels

Use the "Enter" key to confirm settings.
The display will now show:

END OF SETTINGS
REMOVE SW1-2 AND PRESS RESET

D.3.3. CONNECTING A 9V BATTERY

The PRA3000 is provided with a 9V battery useful to generate a local audible signal (that can not be silenced) in case of system fault at the panel itself or in case of sudden lack of power. Anyway, when such conditions should occur, also the control panel connected to the panel will provide an indication of communication fault with the panel.

E. SELECTIVE OPERATION

To configure the panel for selective operation (i.e. in such a way that the status of only part of the detection zones of the system is reported) position the SW1-1 switch to "ON" and reset the panel by pressing the "RESET" key.

Access then the menu "**4 Setting the operation mode**". Select "**Move to selective operation**".

Then select the menu "**4 Setting the operation mode**", and then "**2 Enter the controlled zones**". Enter now the number of the first and last zone of the range to be controlled.

If necessary, select the menu "**4 Setting the operation mode**", then "**3 Enter non-controlled zones**".

Now enter the number of first and last zone that is not to be controlled within the range of the zones to be controlled.

By having access to the menu "**4 Setting the operation mode**" and then "**3 List of the controlled zones**" it is possible to scroll, using the "↑" and "↓" keys, all controlled zones.

F. OPERATION

F.1. ACCESS LEVELS

LEVEL 0

Corresponds to direct access by unqualified personnel, generally, at this level, only manual alarm buttons are accessible.

LEVEL 1

Corresponds to the direct access only to the security personnel and not to the public, whether qualified or not.
Generally, at this level, all acoustic and visual signals are accessible.

Associated function

Buzzer silencing
Test of signalling device
Access to menu and event display

LEVEL 2

Corresponds to the checks and commands by qualified personnel who assumes responsibility for the actions taken.
The access is protected by a numerical code.

LEVEL 3

Corresponds to access by authorized personnel to set-up operations and maintenance.

F.2. VISUALISATIONS

STAND-BY CONDITION

Corresponds to normal state.
Only "Power on" LED is ON and the display shows the programmed test.

ALARM

"Fire alarm" LED is steady ON and buzzer is active.
The display shows information about the points in alarm condition.
Use the arrows to scroll the alarm list.

Action

Silence the buzzer.

Instrument

Press "Silence buzzer" key



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Identify the point / zone in alarm.	On the display, read the text associated with the point in alarm.
Apply specified instructions.	Follow the procedures specified in the fire alarms management plan.
After the alarm, reset the system.	Follow the specified procedure.

FAULT	
The yellow LED "FAULT" is steady on and the buzzer active.	
Action	Instrument
Silence the buzzer. Identify the point / zone and reach the scene	Press "Silence buzzer" key On the display, read the text associated with the fault point and verify that it is not caused deliberately.
Inform the maintenance service Apply the specified instructions.	Follow the specified procedure.
DISABLED	
The yellow LED "Disabled" is steady on and the buzzer is active. Silence the buzzer. This condition is generated by a deliberate action performed on the CIE.	

F.3. MENU STRUCTURE

Menu

- 1) Points status
 - _____ 1) Points in alarm
 - _____ 2) Points in pre-alarm
 - _____ 3) Points in fault
 - _____ 4) Points in technical alarm
 - _____ 5) Points disabled
- 2) Information
 - _____ 1) SW versions
 - _____ 2) Panel position
 - _____ 3) Operations
 - _____ 4) Device type
- 3) Change language
 - _____ 1) French
 - _____ 2) English
 - _____ 3) Italian
 - _____ 4) Dutch
 - _____ 5) Estonian
 - _____ 6) Polish
 - _____ 7) German
 - _____ 8) Russian
- 4) Configuration
 - _____ 1) General / Selective mode
 - _____ 2) Entering controlled zones
 - _____ 3) Entering not controlled zones
 - _____ 4) Controlled zones list
 - _____ 5) Erase configuration

4 lines x 40 characters LCD

- In stand-by conditions the display shows the name of installation.
 - In case of alarm, the first line specifies the type and the event number displayed, compared to the total number of the events of that type, the third line indicates the zone and address of the point and time of the event, the fourth line the text associated to the point
 - In case of fault, the display shows information in the same way as for alarm.
 From the main menu is still possible choose to view points that have a specific state (alarm, pre-alarm, fault,)
 There are also other functions useful during commissioning.
Selective mode: If programmed to operate in selective mode, the panel shows only the events belonging to the controlled zones. By default the panel controls all zones of the CIE.

Yellow steady LED

Indicates the presence of at least a technical alarm in a zone controlled by the panel.
 Details are available across the menu.

Green steady LED.

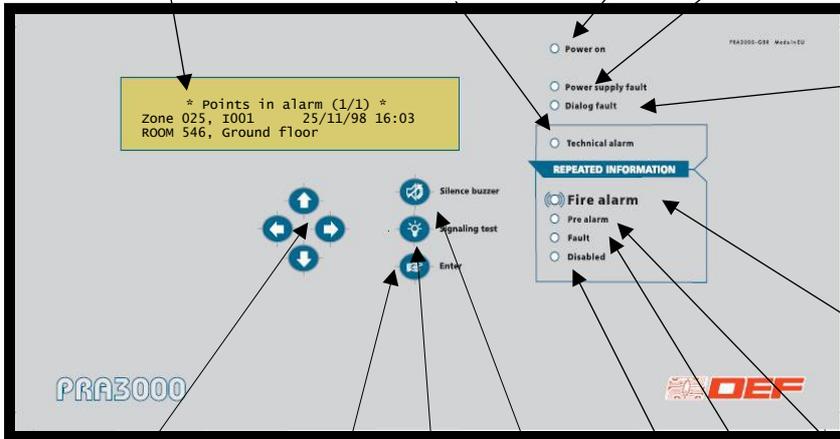
Indicates that the panel is powered.

Yellow steady LED

Indicates a mains fault of the external power supply

Yellow blinking LED

Indicates an external batteries fault.



Yellow steady LED

Indicate a communication fault with the previous device (CIE or panel) connected on the bus.

Yellow blinking LED

Indicate a communication fault with the next PRA3000 connected on the bus.

Red steady LED

Indicates the presence of at least one alarm in a zone controlled by the panel.
 Details are available across the menu.

Red steady LED

Indicates the presence of at least one pre-alarm in a zone controlled by the panel.
 Details are available across the menu.

Yellow steady LED

Indicates the presence of at least one fault in the CIE. If the fault is related to a zone controlled by the panel, further details are available across the menu.

Yellow steady LED

Indicates the presence of at least one point disabled in a zone controlled by the panel.
 Details are available across the menu.

4 arrows keys

The keys ↑ and ↓ increase or decrease a number or to scroll a list.
 The keys → e ← allow to choose a digit or an answer.

Button accessible to Level 1

Allows you to validate data entered or choices made.

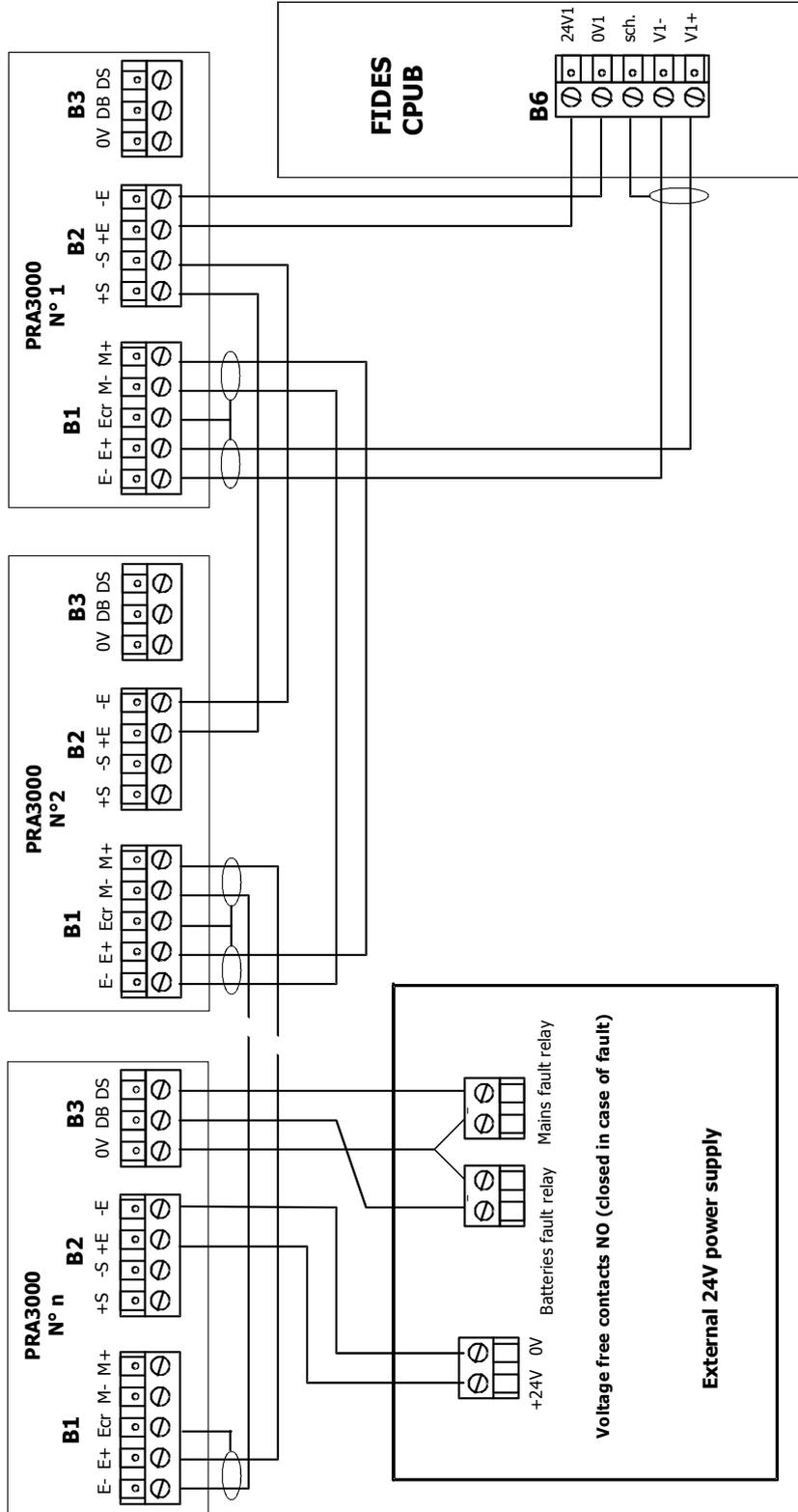
Button accessible to Level 1

Allows to silence the buzzer panel we restart with the next event.

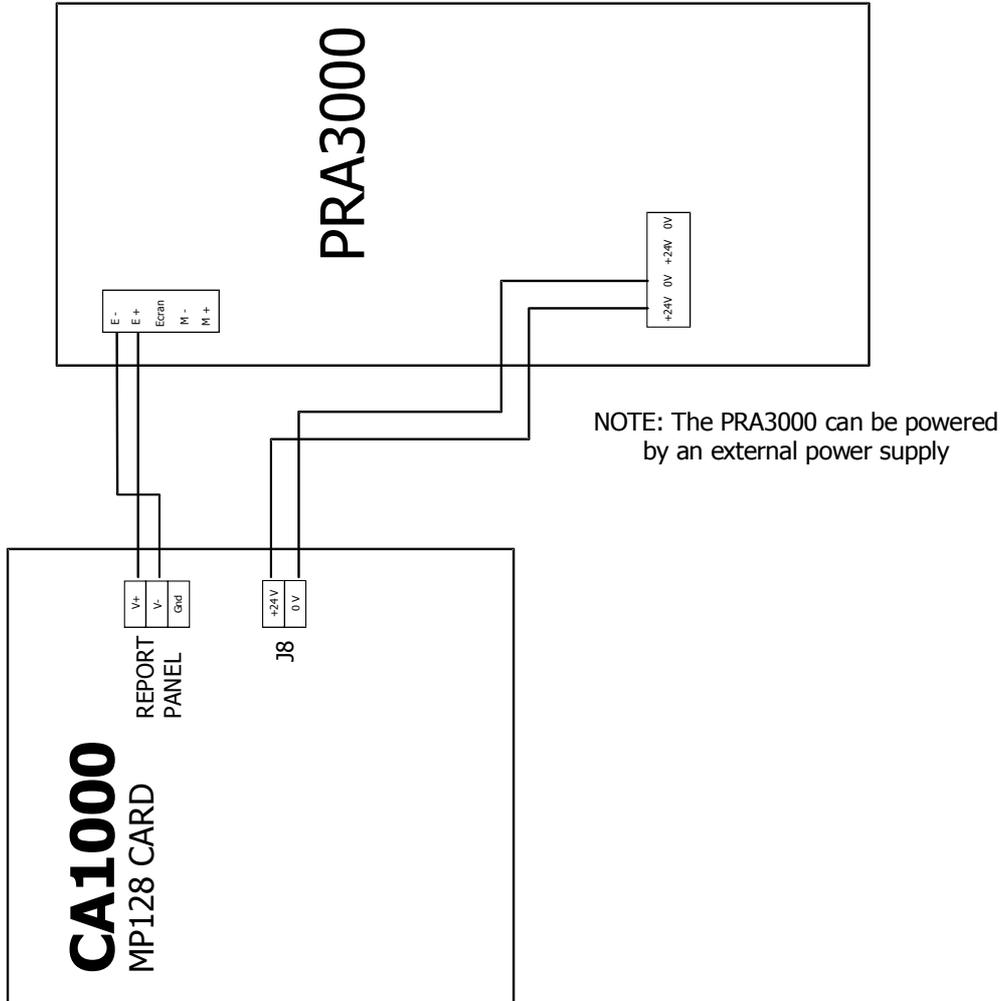
Button accessible to Level 1

Allows to verify the correct operation of the display, the LEDs and keys

CONNECTION PRA3000 - FIDES



CA1000 <=> PRA3000 CONNECTION



COLLEGAMENTO PRA3000 - CA3000

