



Release EV2100

PASSAN PREMIUM

Access Control

Doorphone system

**Setup instructions
Manual**

Quick information's access

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Information on marking



■ In accordance with European directive UTE C00-200 describing directives 89/336CEE and 92/31 the EEC, Passan is in conformity with the standards NF IN 50081-1 for the electromagnetic emissions and NF IN 50082-1 for electromagnetic susceptibility.

Referencings and homologations

■ remote control radio frequency is approved for the use in France by ART under the number of approval 98 0164 PPL0

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Passan is a brand mark of FDI Matelec company.

1 Install Passan

1.1 Power supply / Power consumption

The control unit can only be powered with 12Vdc. The acceptable range of voltage is between 12 and 13.8V

The best solution consists of always dividing the control unit's power supply from the lock's power supply. The control unit's power supply should be regulated and filtered whereas the lock's power supply needs only to be regulated.

Note :

A few power consumption:

| | |
|--|--------|
| Passan board only | 100 mA |
| Extension board door 3&4 or door 5&6 | 30mA |
| Intercom option board to be inserted on Passan | 20 mA |
| Board 8 inputs (all activated) | 10 mA |
| Board 8 outputs (all activated) | 160 mA |
| Board 4 inputs / 4 outputs (all activated) | 90 mA |
| Lift Board with 40 floors activated | 1 A |
| Prox reader or HF 3 wires receiver | 30 mA |
| Keypad reader | 100mA |
| Module Pade (Calling module managed by Passan) | 150 mA |

More than twenty combinations are possible depending on the options and the reader type that we add to the control unit. According to cases, a power supply of 0.6 A to 2 A should be chosen.

1.2 Passan principle

1.2.1 How does it work?

The basic Passan module can control 2 doors. On each door you can connect a proximity reader or a RF receiver. It is then possible for you to add optional modules which will increase the management possibilities of your control unit. It is only possible to install 2 optional modules on each control unit. To increase the management capacity, you can also connect several control units together on a network.

1.2.2 Optional doors

There are two modules making it possible to manage additional doors. The plug-in Doors 3 and 4 and plug-in Doors 5 and 6. It is possible to use a control unit with the two optional modules carrying the capacity with management to a total of 6 doors. You can also install the plug-in Doors 3 and 4 and install a Vigik module.

1.2.3 Call module interface

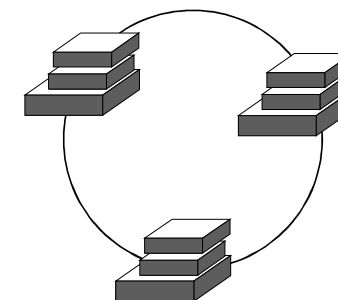
The module interfaces intercom makes it possible the Passan power station to manage 2 call modules with electronic directory. Each call module is independent but it is possible to connect them together in order to create a master and a slave unit. The below concepts will be necessary for you to install the call modules with electronic directory.

Riser

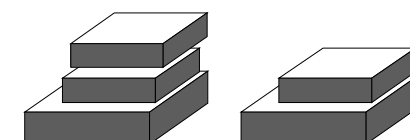
Means the pipe where are the cables between the call module and the Apartment.
There are 4 wires, ground, decoder power supply and 2 wires for audio door phone.

Decoders

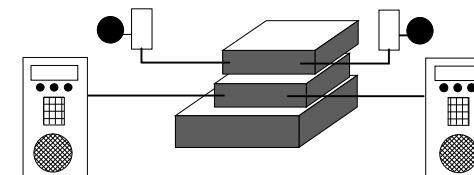
Special devices which afford to dispatch the call up to 10 apartment stations. The decoders all are in parallel on 4 wire of the rising main of the secondary call modules.



Network



Additional doors



Call module option

Secondary call module

A Secondary call module is associated to a building entry. This unit is always connected to a decoder.

Main call module

It is call module which is connected to the riser through a secondary call module. A Main call module can be connected to several slaves. Usually we set a Main call module when the building has a main entrance which afford 2 or more access in the building and where most of the residents can go through, in this case we will place on each secondary entry a secondary call module. However, if the same riser has to welcome two different call module cables then one must be master and the other must be slave.

Descending riser

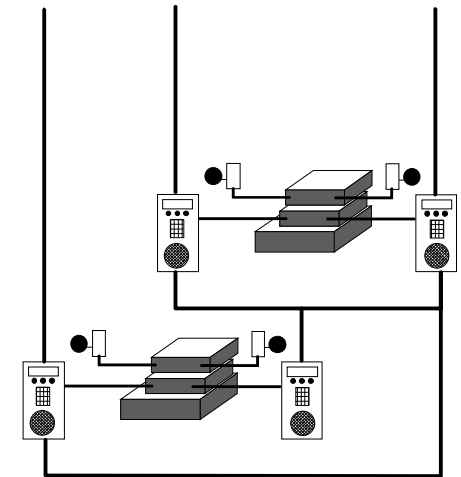
On a secondary call module, the descending riser is connected to ascending riser of the Main call module. On a Main call module, the descending riser is not in use.

Ascending Riser

On a secondary call module, the ascending riser goes to the decoders. On a secondary call module, the ascending riser is connected to the descending riser on the secondary call modules.

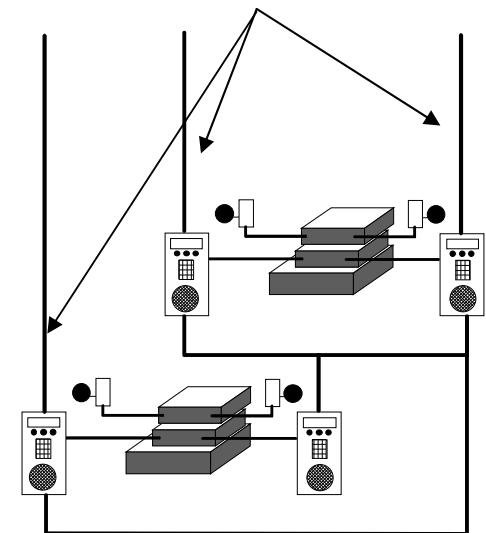
≧ IMPORTANT NOTICE ≦

- ▶ When an apartment is created, it must compulsory be programmed on a Secondary call module first. Then, according to the needs, you can program it on one or more Main call module.
- ▶ In a residence, only one Main call module can be in communication at the same time
- ▶ A control unit can manage a slave and Main call module or two of each.
- ▶ If you must install two or three call modules giving access to the same riser (same apartments), you must install a Secondary call module and 2 masters.



Installation with 2 control units, 3 call modules (slaves) and one master call module

Secondary call modules



1.3 Input and output modules

These three optional modules are used to interface Passan with other peripherals. The inputs could be used for door contacts or to recover a contact from another device such as a stand-alone biometric reader.

All the combinations are allowed:

- Alarm report from a boiler when a problem occurs
- Opening of door A possible only when doors B is closed

The outputs send dry contacts that can be parametered NO/NC. The outputs become activated according to certain events such as access granted or access denied, door opening, counting zone full... For each output, 50 types of events can be parametered with the option of And / Or. The outputs could be used to command some accessories such as lighting, send a contact for a video recording, in case of a damage of the readers' cables, or people detected on site. . .

► Important ◀

It is not possible to use two Input/Output boards on the same control unit. An Inputs/Outputs board is always the last board to be piled up on Passan.

The Inputs are said to be passive and should never be powered. In any case, the peripheral would send a dry contact to Passan option board.

1.4 The lift module

This option can be used to command two lifts of 40 floors each. The lift option is exclusive in Passan, this means that a control unit with a lift option will not be able to manage other access control readers. The Intercom options are not compatible either with the lift option. Therefore, the readers of a control unit managing lifts will always be three-wire readers (Prox, RF or Keypad).

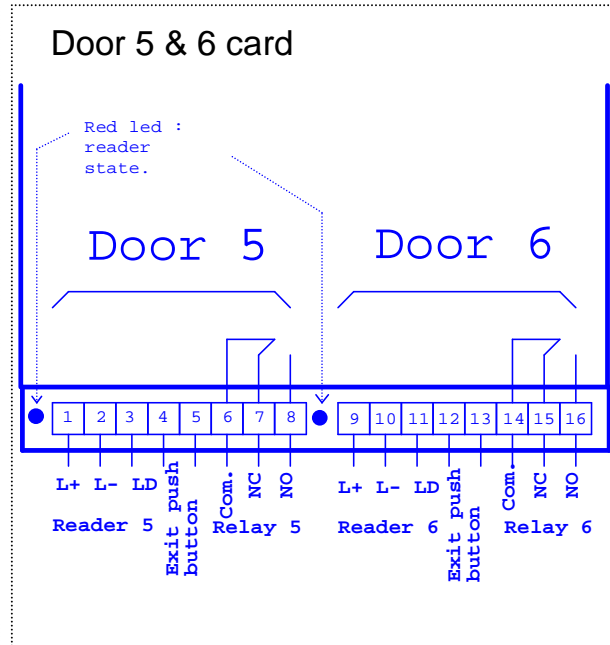
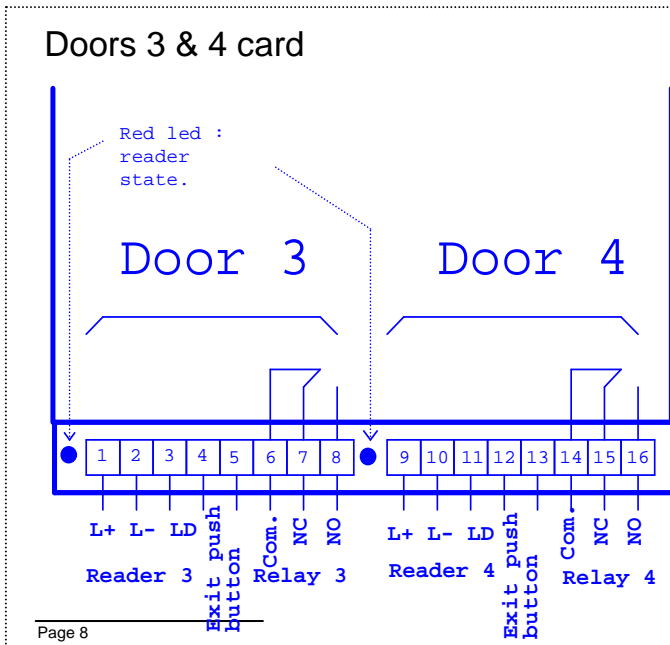
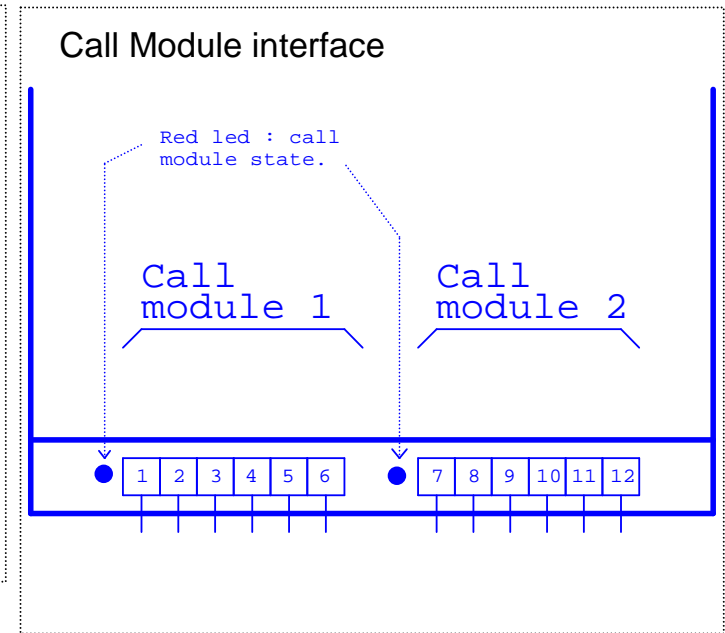
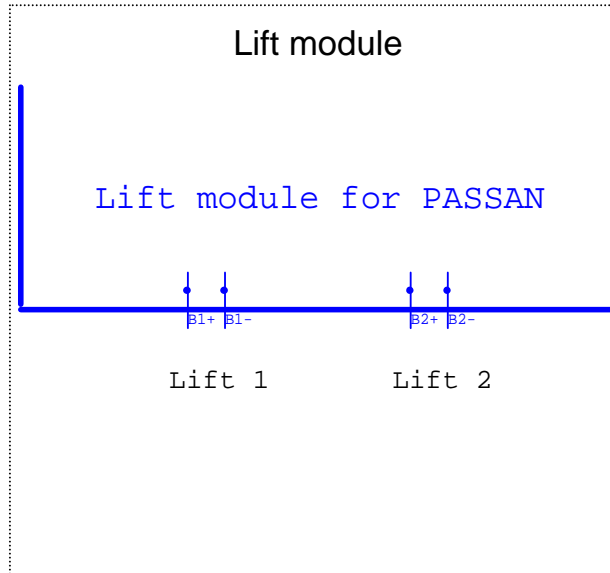
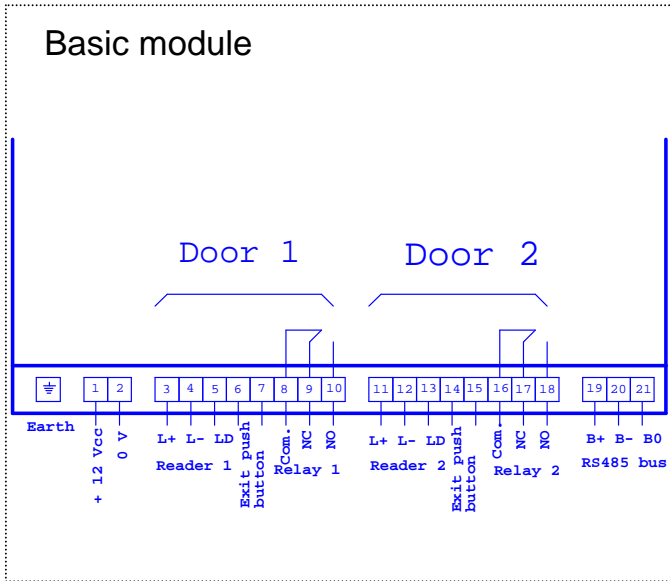
The only option that can be added on a control unit managing lifts is an Input/Output board.

1.5 Different configurations

| Differents configurations | | |
|---|--|---|
| Access control only : Control unit + doors 3&4 + doors 3&4 + doors 5&6 + I/O + doors 3&4 + I/O | Doorphone control unit : + doorphone module + doorphone module + I/O | Lift control unit : + lift module + lift module + I/O |

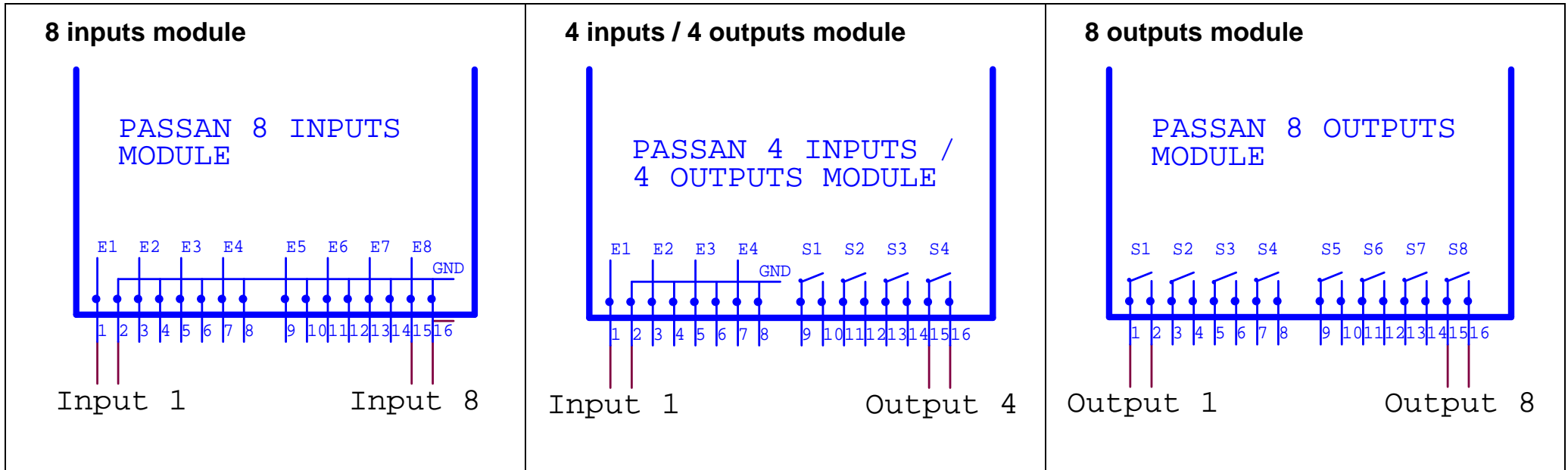
2 Cabling drawing of each module

2.1 Basic modules and available option



The indicators placed on the modules make it possible to diagnose the installation and to detect malfunctions or faulty operations.




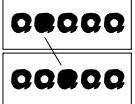
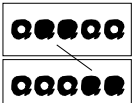
The meaning of the LED indicators is given in the next paragraph.



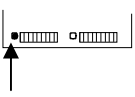
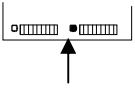
2.2 LED identification

2.2.1 Basic Modules LED

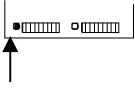
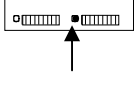
| LED | Meaning | Led switch off | Led switch on | Blinker LED | Solutions |
|-----|--|---|---|--|---|
| | Power <i>Normal State : on</i> | Too low voltage (below 10,7V) | Correct voltage level | <ul style="list-style-type: none"> ▶ Too high voltage (over 15,7 V) <p style="text-align: center;">or</p> <ul style="list-style-type: none"> ▶ Too important rippling (over 250mV peak to peak) | Use power supply minimum 12V/ 1A. Peak to peak do not exceed 200mV. |
| | Network Communication <i>Normal Sate :on or twinkling</i> | Must not be switching off permanently, must light every 4 seconds at least, means communication network on. | The control unit is identified as "00" Address. | <ul style="list-style-type: none"> Bus communication error. The control unit does not succeed contacting the « 00 » control unit.' | <p>Check if you have at least one control unit in your system which has the « 00 » address.</p> <p>If you only use one control unit, please call it "00".</p> |

| | | | | | |
|--|---|--|------------------------|--|---|
|  | Communication in progress with external device (PC) | No communication in progress. | Connection in progress | Communication error with the PC | Check cable |
|  | Door 1 Reader status | Reader is not detected | Reader is detected | Communication error with the reader | Check the cable Check the distance between reader and control unit |
|  | Door 2 Reader status | Reader is not detected | Reader is detected | Communication error with the reader | |
|  | Data error | LED 2 and 3 blinked simultaneously to indicate that the control unit information's are not accessible .The control unit memory should be erased before any new installation. | | Use the free UPGRADE software to update the control unit and erase the incorrect information's. | |
|  | No soft in the control unit | LED 2-3 and 4-5 blinked simultaneously in order to advice that there is no software in the control units. | | Load the free UPGRADE software in the control unit. | |

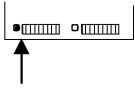
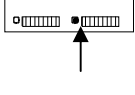
2.2.2 Plug-in modules Door 3 and 4

| LED | Meaning | Led switch off | Led switch on | Blinker LED | Solutions |
|--|----------------------|---------------------|-----------------|----------------------|---|
|  | Door 3 reader status | Reader not detected | Reader detected | Led must never blink | Check the cable Check the distance between reader and control unit |
|  | Door 4 reader status | Reader not detected | Reader detected | Led must never blink | |

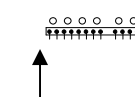

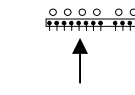
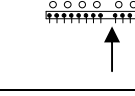
2.2.3 Plug-in modules Door 5 and 6

| LED | Meaning | Led switch off | Led switch on | Blinker LED | Solutions |
|---|----------------------|---------------------|-----------------|----------------------|--|
|  | Door 5 reader status | Reader not detected | Reader detected | Led must never blink | <p>Check the cable</p> <p>Check the distance between reader and control unit</p> |
|  | Door 6 reader status | Reader not detected | Reader detected | Led must never blink | |

2.2.4 Call module interface LED

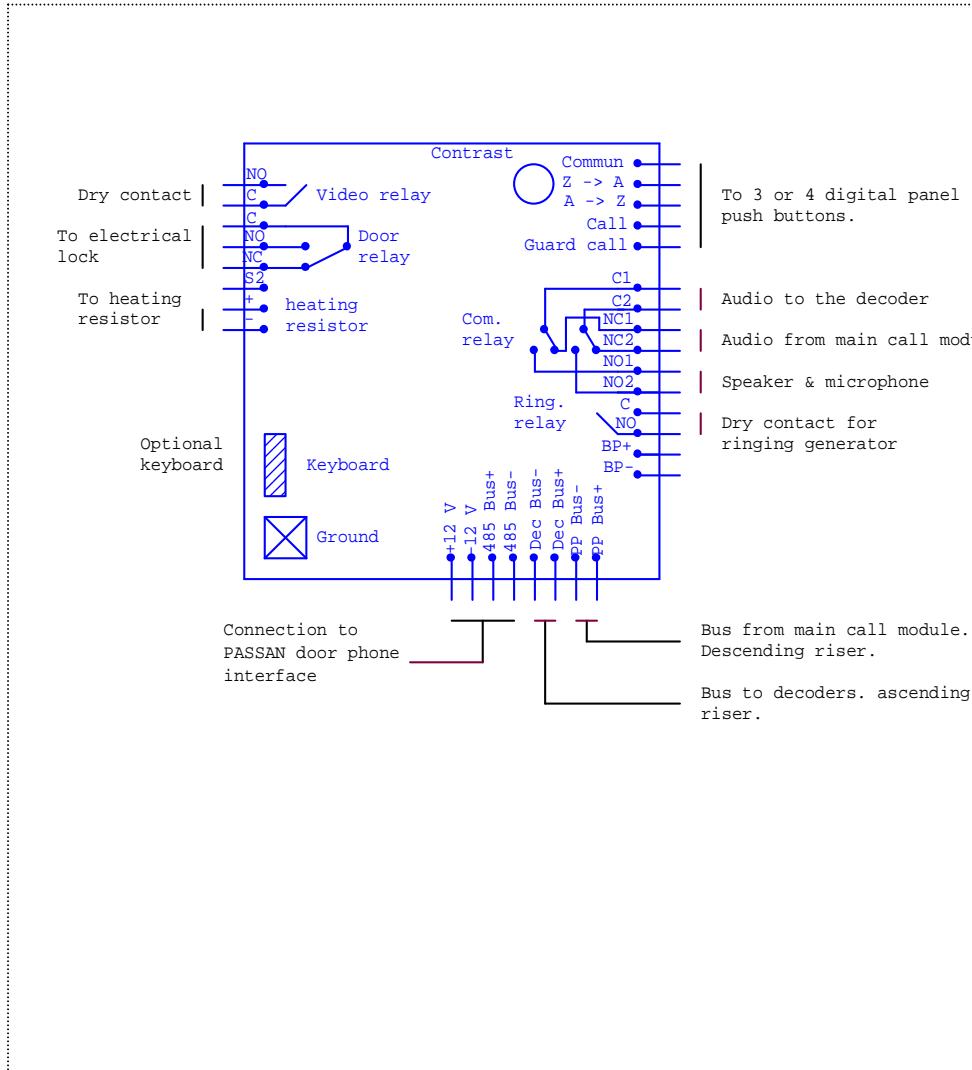
| LED | Meaning | Led switch off | Led switch on | Blinker LED | Solutions |
|---|-----------------------------|--------------------------|----------------------|----------------------|---|
|  | Call module N°1 line status | Call module not detected | Call module detected | Led must never blink | <p>Check the cable</p> <p>Check the distance between reader and control unit</p> <p>Check the ambient temperature (0 to 50°C)</p> <p>Check the cabling of the call module</p> |
|  | Call module N°2 line status | Call module not detected | Call module detected | Led must never blink | |

2.2.5 Input / output modules

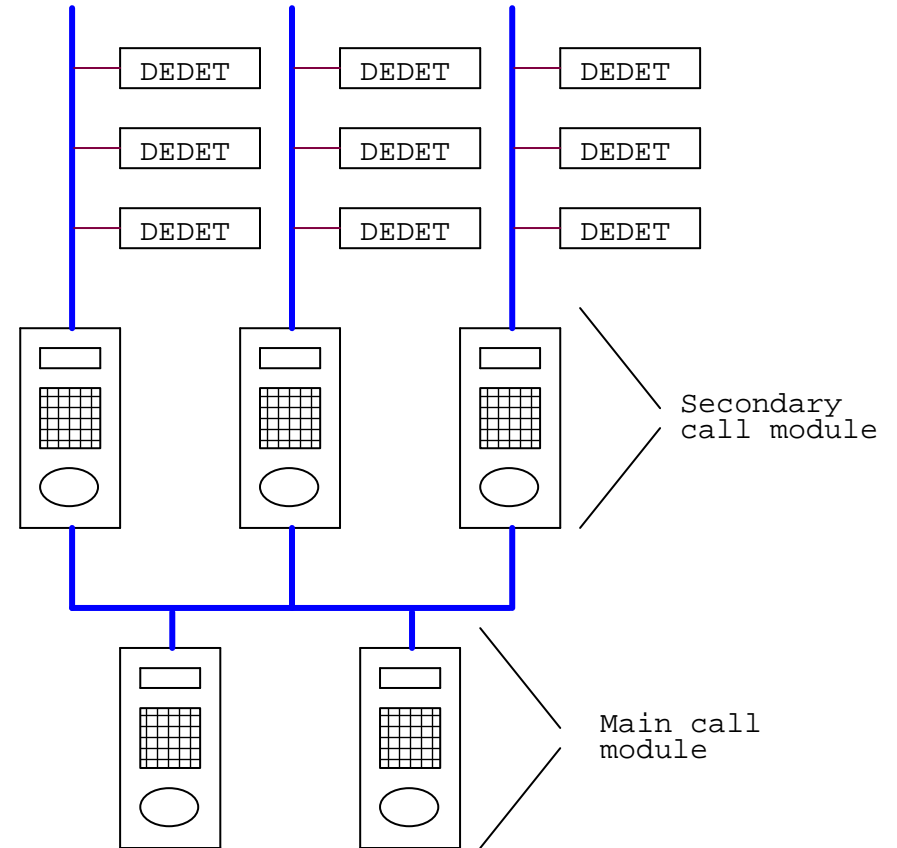
| Led | Meaning | Led switch off | Led switch on | Blinker LED | Solutions |
|---|-----------------|------------------------------|------------------------------|--------------------------------------|--|
|  | Input 1 status | Input dry contact is opened | Input dry contact is closed | |  |
|  | Output 3 status | Output dry contact is opened | Output dry contact is closed | Output is setup on 'repetition mode' | |
|  | Input 7 status | Input dry contact is opened | Input dry contact is closed | | |

2.3 Optionnal module wiring

2.3.1 Call module

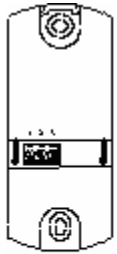


Install example

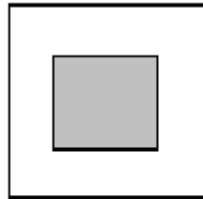


2.3.2 Proximity readers and RF receivers

Proximity readers



Inside contactless reader.

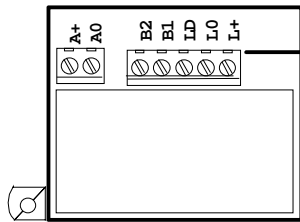


Outside contactless reader.

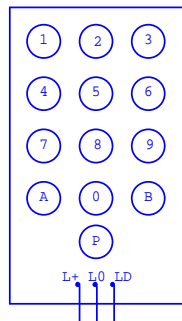


3 wires readers

RF receivers

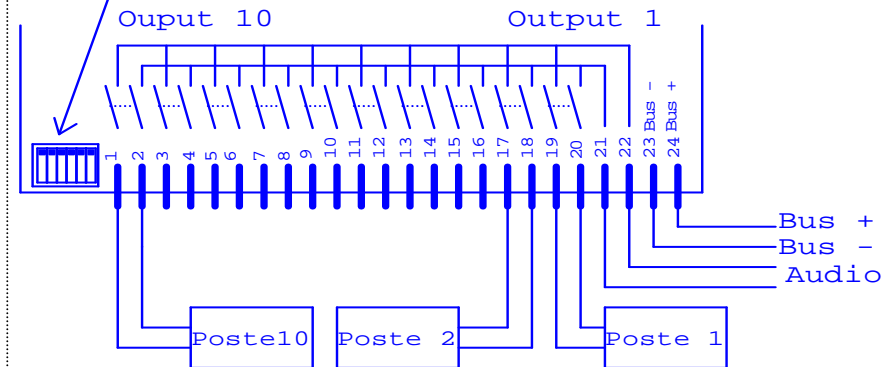


Keypad



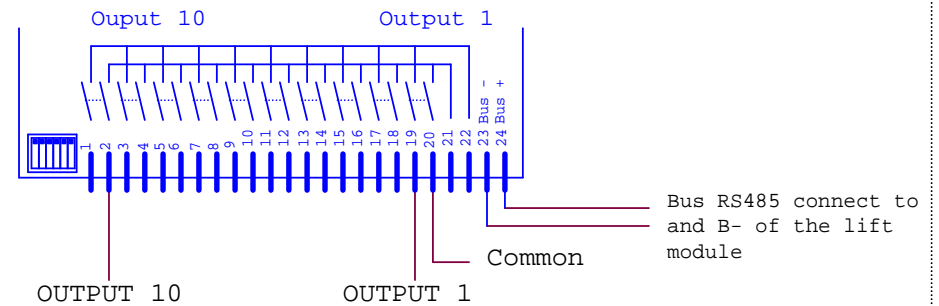
Doorphone decoder

All switch to On : Doorphone numbers are 001 to 010.



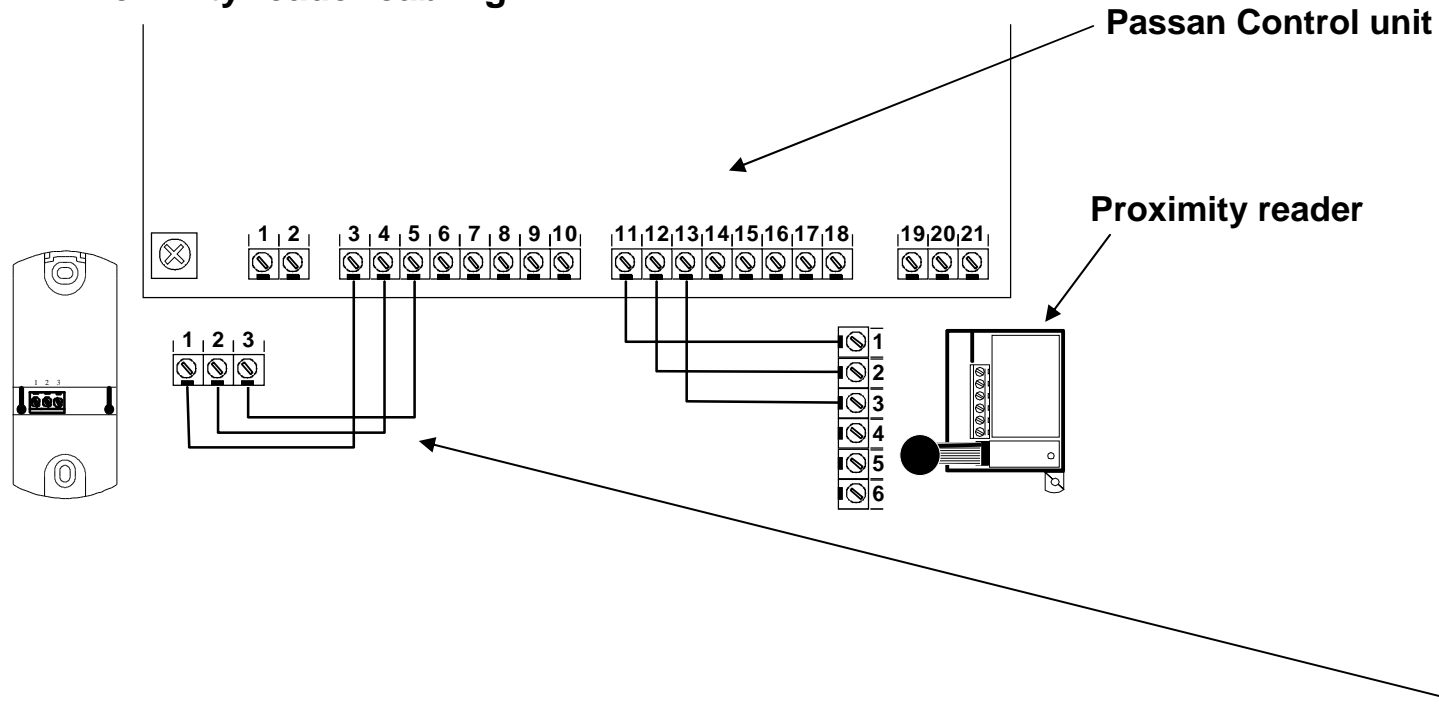
Lift decoder




DEDET



2.4 Readers connections diagram

2.4.1 Proximity reader cabling



 **3 wires**
 **100m**
 **0,6 mm**

Very sensible cabling

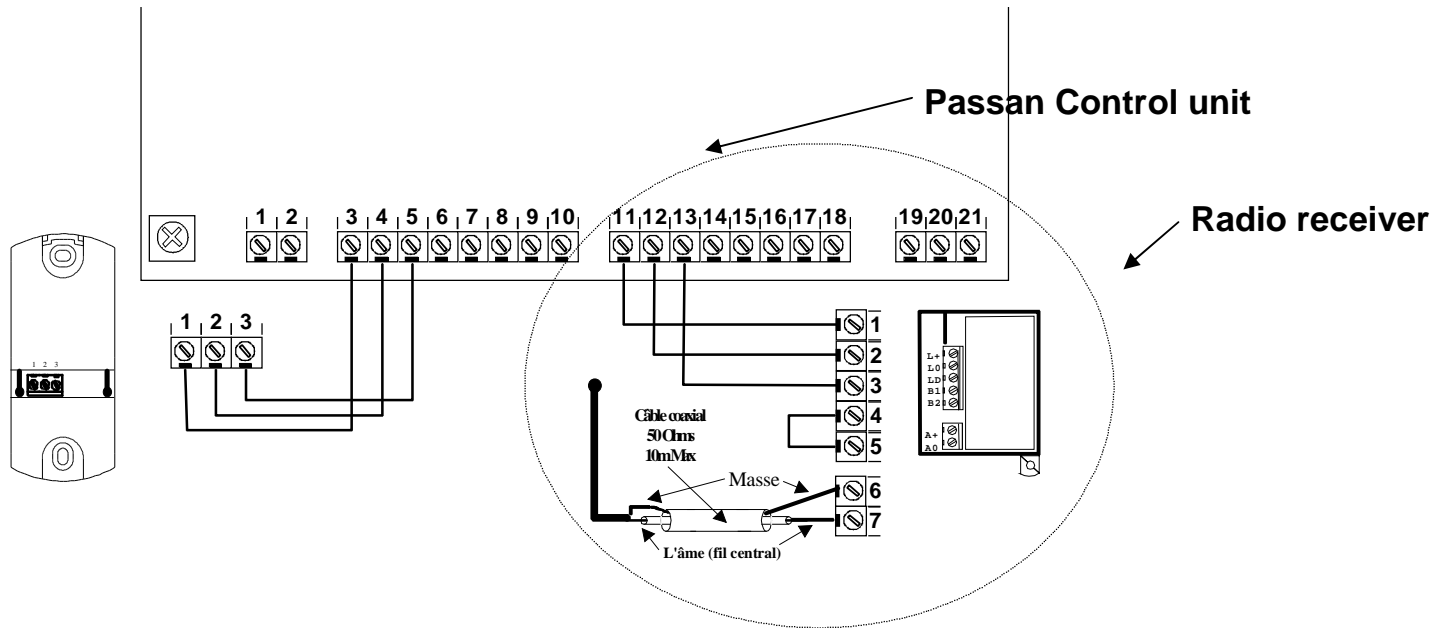
Screen : optional




You just need to connect the 3 wires of the reader on the 3 first connector's blocks of the Basic module interface reader or the Plug-in Doors (3 and 4).

► **Important** ◀

Do not connect the readers wires near high voltage (220 Vac) cables or door lock.

2.4.2 Proximity readers / RF receiver cabling



 3 wires
 100m
 0,6 mm

Very sensible cabling

Screen : optional

You just need to connect the 3 wires of the reader on the 3 first connector's blocks of the Basic module interface reader or the Plug-in Doors (3 and 4).

► Important ◀

Do not connect the decoder wires near high voltage (220 Vac) cables or door lock.




► Important ◀

So that the code is sent to the control unit, it is necessary that the B1 connector blocks and B2 of the receiver are connected. If you use a vehicle detector to validate the radio reception, connect the relay of your detector to the B1 and B2 points so that, when a vehicle is detected, these two points are connected. If you do not use any external validation, connect a wire between these two points (as on the diagram).

► Important ◀

Do not place the receiver in a metal box: this decreases the RF signal efficiency.

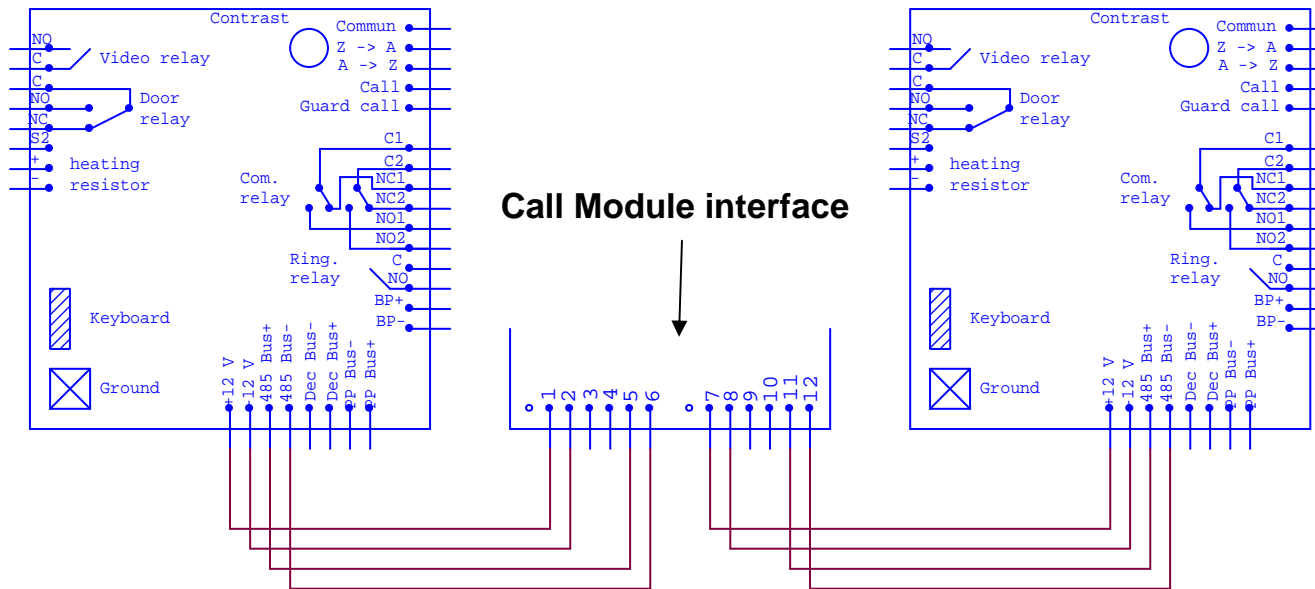
2.4.3 Call module and control unit connections

 4 wires
 100m
 0,6 mm

Very sensible cabling

Screen : optional

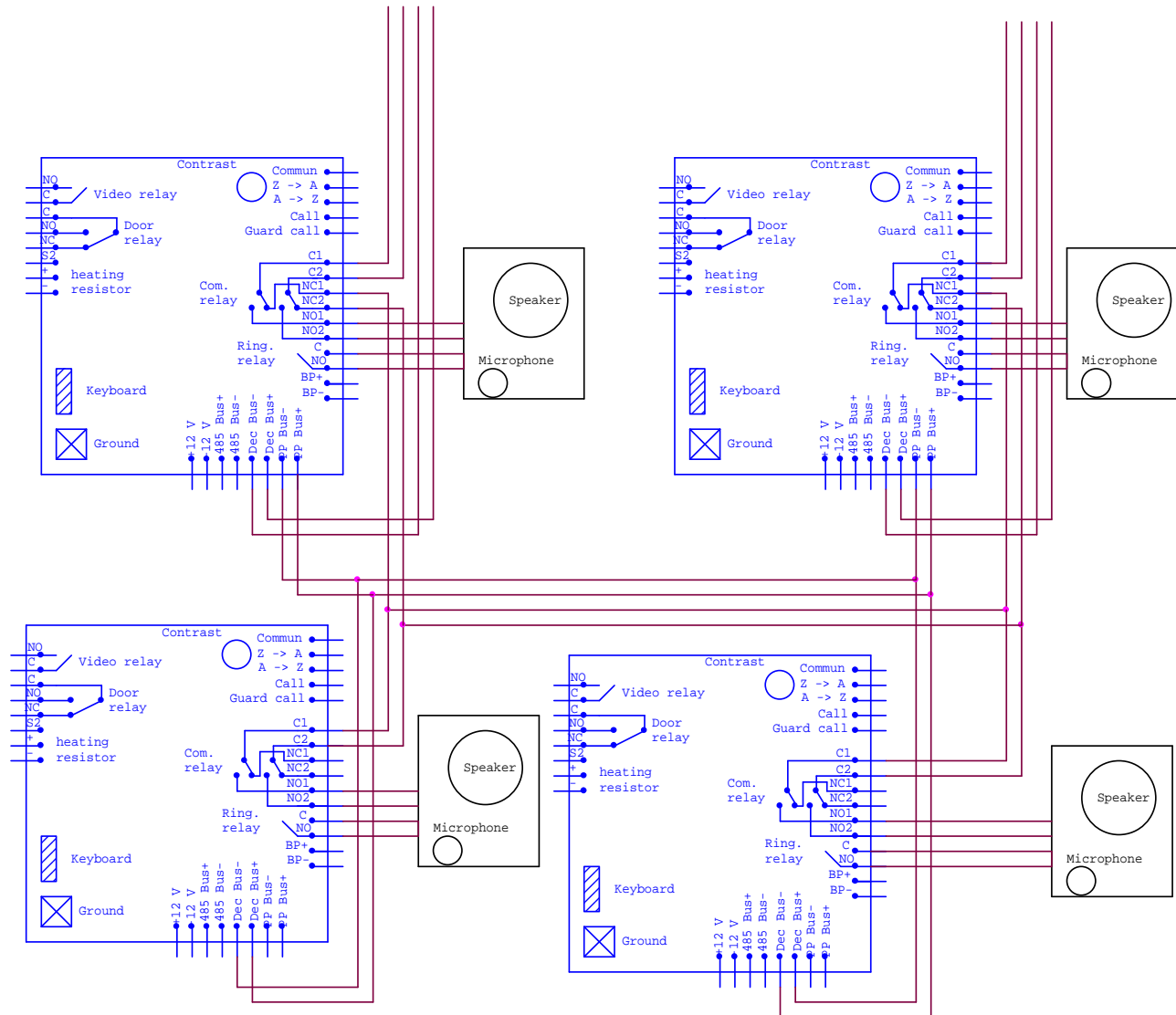
If you are using a VIGIK reader, you should think about a 6 wires cable and connect independently the Vigik Module



► Important ◀
 Do not connect the decoder wires near high voltage (220 Vac) cables or door lock.

Items 3 - 4 and 9-10 of the Call Module interface are intended for the ordering of opening of the door through the apartment station. You just need a dry contact on these points to open the door. The difference with the pushbutton is that the dry contact cabled on the call module cannot open the corresponding door apart from a communication through the call module.


2.4.4 Decoder cabling to the apartment station



For the decoder cabling

 2 wires +audio

 200m

 0,6 mm

Very sensible cabling

Screen : optional

The Audio quality cable depends of your door phone system, you should read the documentation of your Door Phone equipment before cabling.

► Imperative ◀

After install is completed, the minimum voltage level on the decoder should not be less than 10 V, below this level the decoder will not work.

► Important ◀

Do not connect the decoder wires near high voltage (220 Vac) cables or door lock.

Example with 2 mains call modules and 2 secondary call modules.

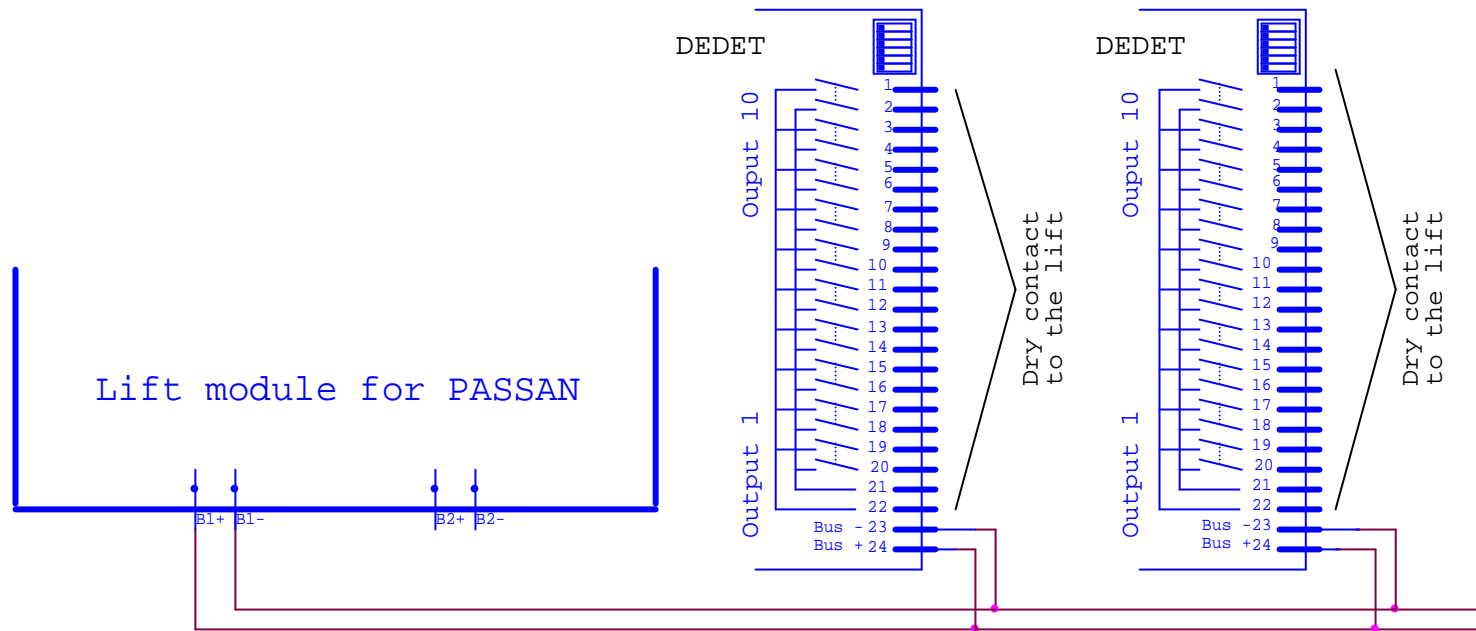
2.4.5 Lift wiring

The connection between Passan and the lift is of low-level. Data transaction between the control unit and the lift uses dry contacts.


The decoder outputs are activated depending on which floors the keyholder has been authorised to access. The electrical part of the lift will then authorise these floors.

In case several keys are read one after the other by the lift reader, the authorised floors will be added.


Note : the floors can also be given authorisation for the visitors through the call module managed by a control unit of the same network.



For the decoder cabling

 2 wires

 200m

 0,6 mm

Very sensible cabling

Screen : optional

► Imperative ◀

After install is completed, the minimum voltage level on the decoder should not be less than 10 V, below this level the decoder will not work.

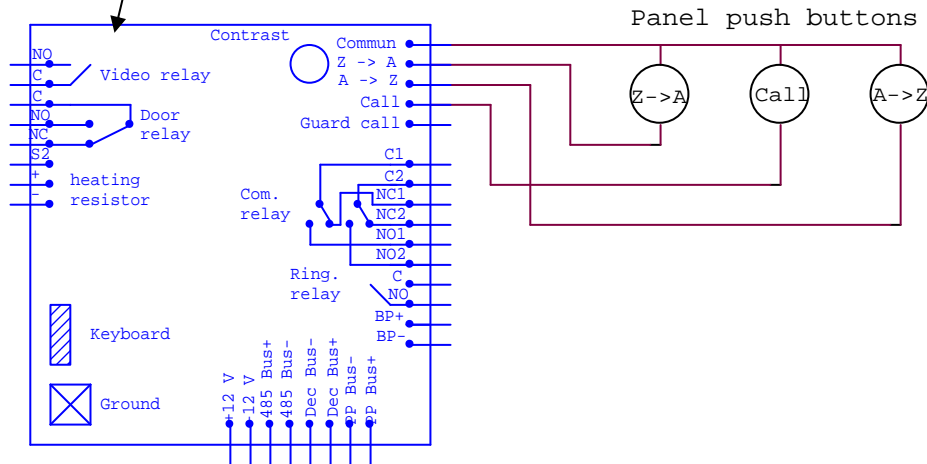
► Important ◀




Do not connect the decoder wires near high voltage (220 Vac) cables or door lock.

2.4.6 Call module, call push buttons, heating resistance, and video Command cabling instruction's.



Heating resistor, max : 200mA / 60 ohms
 Dry contact open all communication time.



 5 wires
 10 cm
 0,6 mm

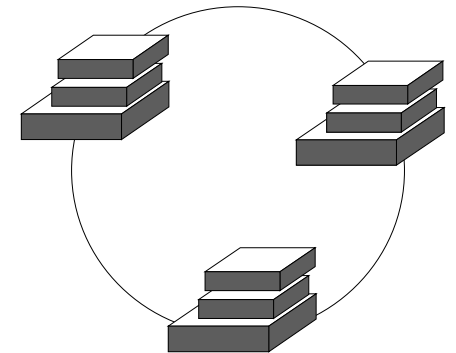
Sensible cabling

Display: Not required

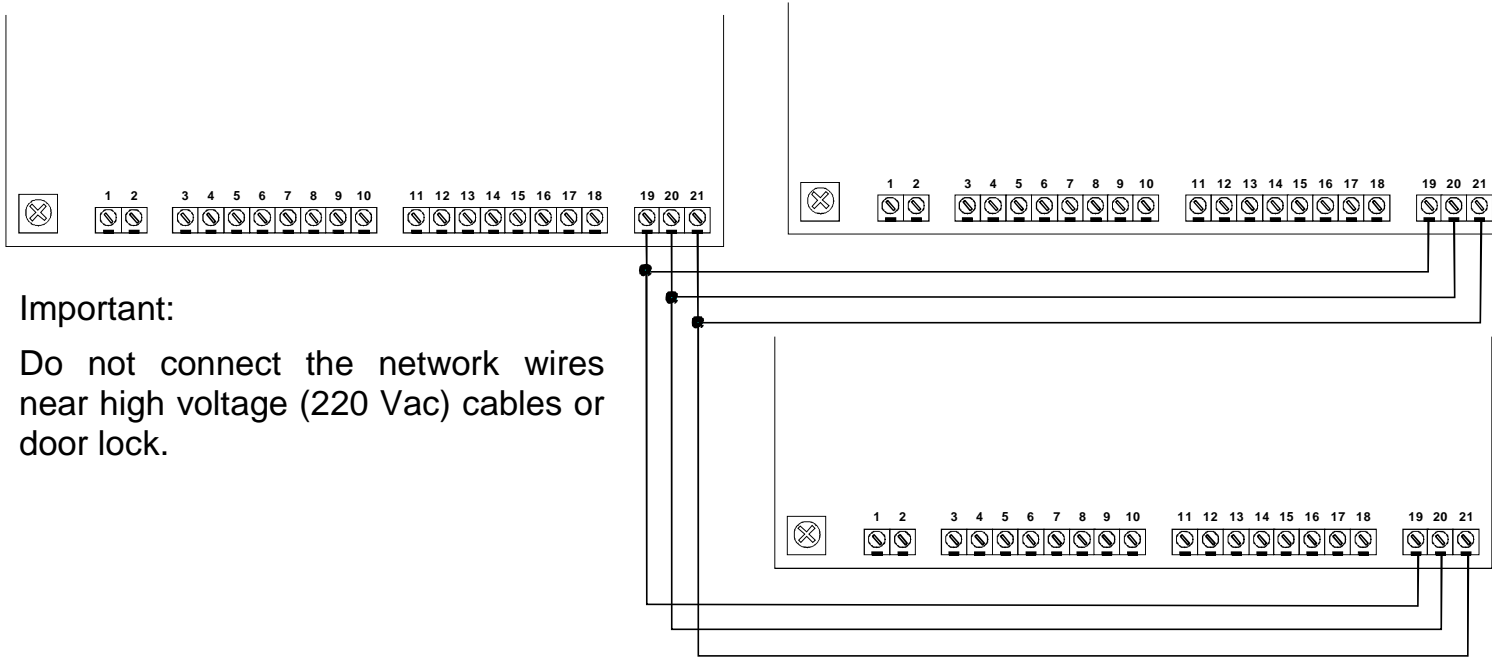
► Important ◀
 Buttons not to be installed over 10 cm far away.

≡ NOTICE ≡

► Keyboard cabling






3 Create a control units network



Important:

Do not connect the network wires near high voltage (220 Vac) cables or door lock.

-  **3 wires**
-  **1.200m**
-  **0,6 mm**

Sensible cabling




Screen: Yes

► Important ◀

Control units works in parallel mode with 3 wires cable, you can create a loop, please consider that the maximum length between the first and final control unit should not exceed 1200m

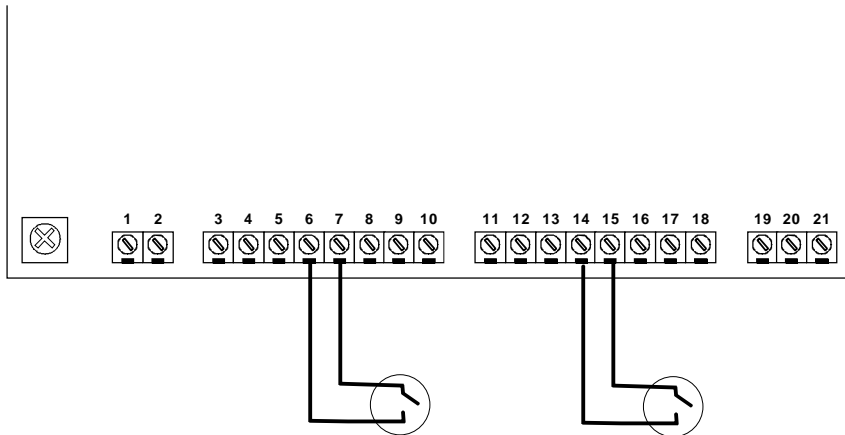
🔊 **STOP**

If your control unit contains some information's you should first contact your technical support before to create the network.

-  **2 wires**
-  **100m**
-  **0,6 mm**

Not sensible cabling

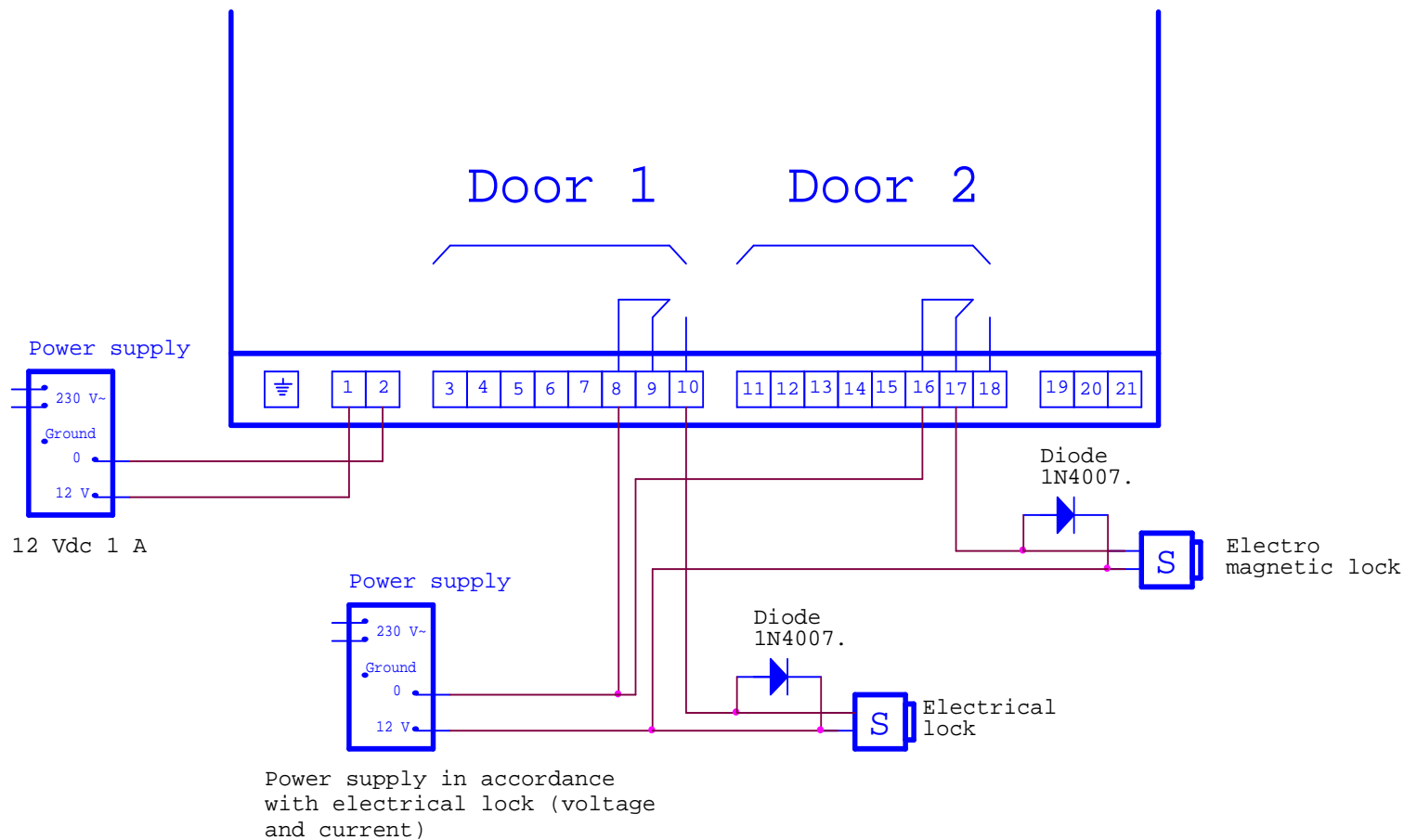
4 Exit push buttons cabling






► Important ◀

Do not connect the decoder wires near high voltage (220 Vac) cables or door lock.

5 Main power and door lock system



Power :

-  2 wires
-  5 m
-  0,9 mm

► Important ◀

Power supply must be in 12 V DC and should be able supporting 1 amp per control unit.

► Imperative ◀

Do not use the same power supply for control unit and door lock, you must use two separate devices

► Imperative ◀

In order to protect the circuitry, it's imperative placing a diode or a transil on the door lock connection, we recommend using 1N4004 or 1N4007.

≧ Notice ≦

► If you are using an AC power supply for the strike lock or EM lock, you should replace the protection diode with a bi-directional transil with an adequate voltage. For example, if you EM lock are powered in 24 Vac, you should use a 25 V bi-directional transil.

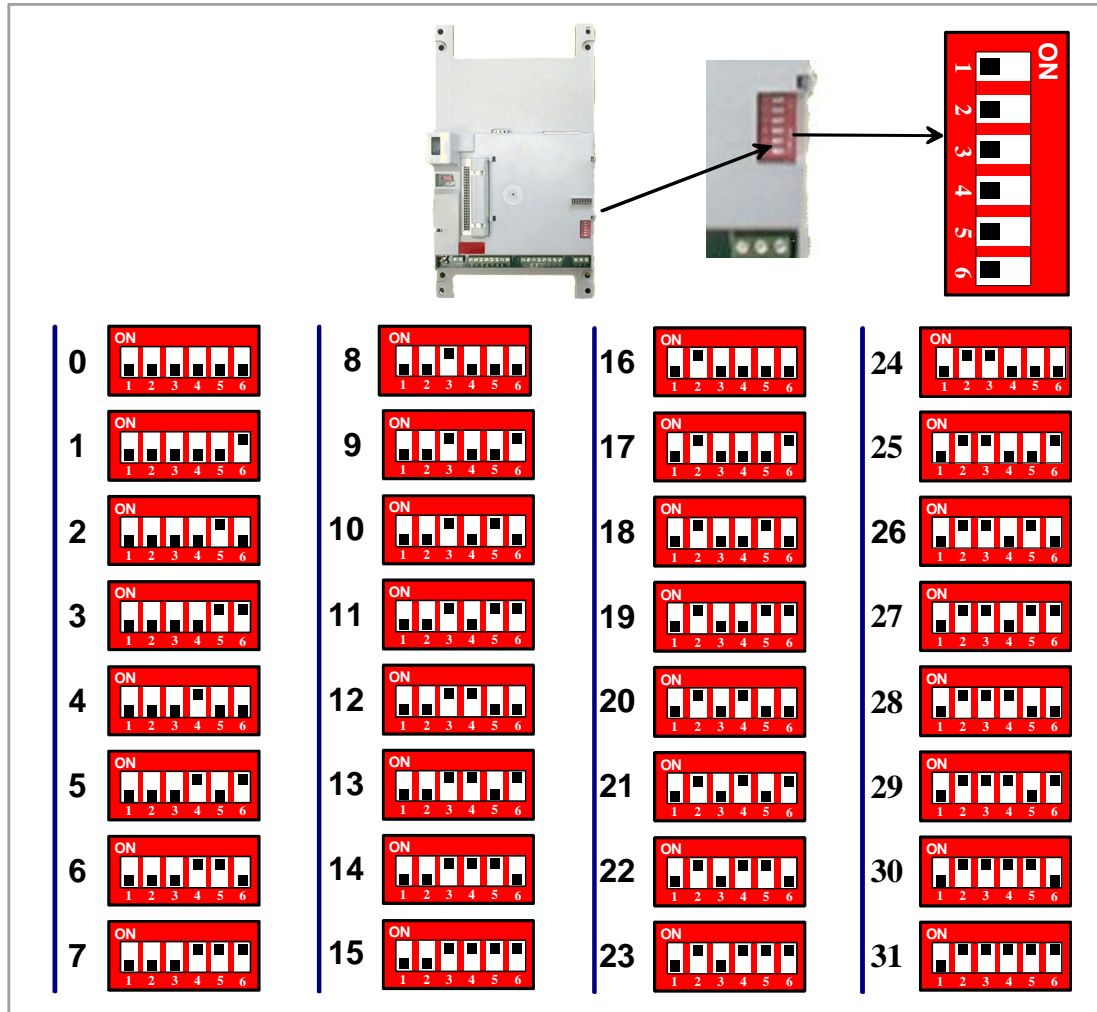
► Important ◀

Do not put the door lock cables near the readers or decoders cables etc.

6 Prepare your installation

6.1 Control unit address

On the right side of the control unit an opening gives you access to a series of small switches. These switches make it possible to give a number to each control unit. When you install a network, each control unit must have a different number from 0 to 31.



► Important ◀

Use sequential address, do not allocate a number according to block building number, stairs numbers etc...

This number is only dedicated to control unit designation.

► Imperative ◀

One control unit of the network should compulsory have number '0'.