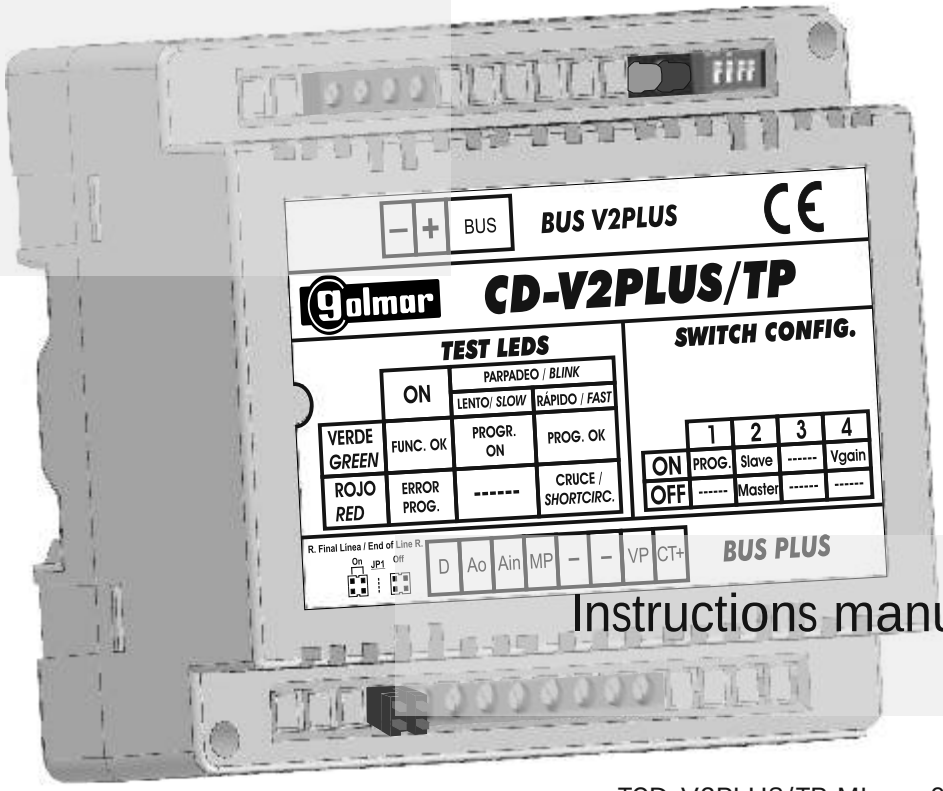
Cód. 50121239

Protocol converter

CD-V2PLUS/TP



Instructions manual

INTRODUCTION

First of all we would like to thank and congratulate you for the purchase of this product manufactured by Golmar.

The commitment to reach the satisfaction of our customers is stated through the ISO-9001 certification and for the manufacturing of products like this one.

Its advanced technology and exacting quality control will do that customers and users enjoy with the legion of features this system offers. To obtain the maximum profit of these features and a properly wired installation, we kindly recommend you to expend a few minutes of your time to read this manual.

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STARTING RECOMMENDATIONS

- The installation and handling of this equipment must be performed by authorised personnel.
- Install or modify the equipment without the power connected.
- Do not use excessive force when tightening the converter connection block screws.
- The entire installation must be at least 40 cm. away from any other installation.
- Before connecting the system, check the connections between door panel, converter, multiplexer, monitors, telephones and the power supply connection. Do always follow the enclosed information.
- When starting the equipment for the first time, or after a modification, the system will remain inactive for around 45 seconds due to the initial busy channel time.
- Use Golmar *RAP-2150* cable in the *V2Plus* system.
- Do always follow the enclosed information.

SAFETY PRECAUTIONS

- Install or modify the equipment without the power connected.
- The installation and handling of these equipments must be performed by authorised personnel.
- The entire installation must be at least 40 cm. away from any other installation.
- Do not use excessive force when tightening the connector screws.
- Install the unit in a dry and protected place without risk of drip or water projections.
- Avoid to place it near to heating sources, dusty locations or humid enviroments.
- Do not block ventilation holes of the unit so that air can circulate freely.
- To avoid damage, the converter has to be firmly fixed.

SYSTEM CHARACTERISTICS

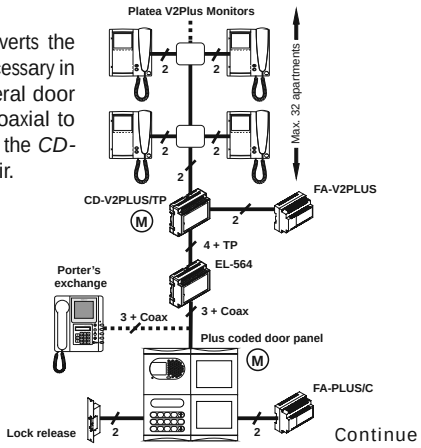
- Protocol converter for the V2Plus system which permits the following functions:
  - Permits the installation of Plus general door panels with the V2Plus system.
  - Permits the installation of a Plus coded door panel with V2Plus monitors.
- Up to 250 converters per installation.
- Up to 32 apartments and 32 elements (monitors, telephones or call repeaters) per backbone.
- Up to 120 elements (monitors, telephones or call repeaters) and 120 apartments per installation or backbone with 4 risers (being necessary the use of multiplexer *MC-V2Plus*).
- Up to 480 elements (monitors, telephones or call repeaters) and 120 apartments per installation or backbone with 16 risers (being necessary the use of multiplexers *MC-V2Plus* connected in daisy chain) or 250 apartments with coded panel (it also needs *CD-V2PLUS/TP* converter).
- Simple configuration through easy access dip switches.
- Autodiagnostic LEDS that allow detecting installation and/or programming errors.
- Connection block for the Plus system with 4 + TP installation.
- Transceiver module EL564 to convert the coaxial connection to twisted pair.
- A multiplexer is required to place the V2Plus door panel between the converter and the monitors/telephones.
- The V2Plus door panel must have the microprocessor circuit EL500/V2Plus installed, with version 2.00 or later, for its compatibility with the protocol converter and the MC-V2Plus multiplexer.
- Permits the installation of a porter's exchange only on the side of the installation with the Plus system.
- Maximum distance between the power supply and converter: 50m, with a wire section of 1.5mm^2.
- Use Golmar RAP-2150 cable in the V2Plus system.

OPERATION MODES

Transceiver module for video signal.

The transceiver module for video signal *EL-564* converts the coaxial to twisted pair and vice versa. This module is necessary in a *V2Plus* system with a Plus coded panel or Plus general door panels with a *3+Coax* installation and convert the coaxial to twisted pair, and therefore connect the video signal in the *CD-V2Plus/TP* protocol converter of the entrance twisted pair.

Installation diagram on pages 45-46.



Continue

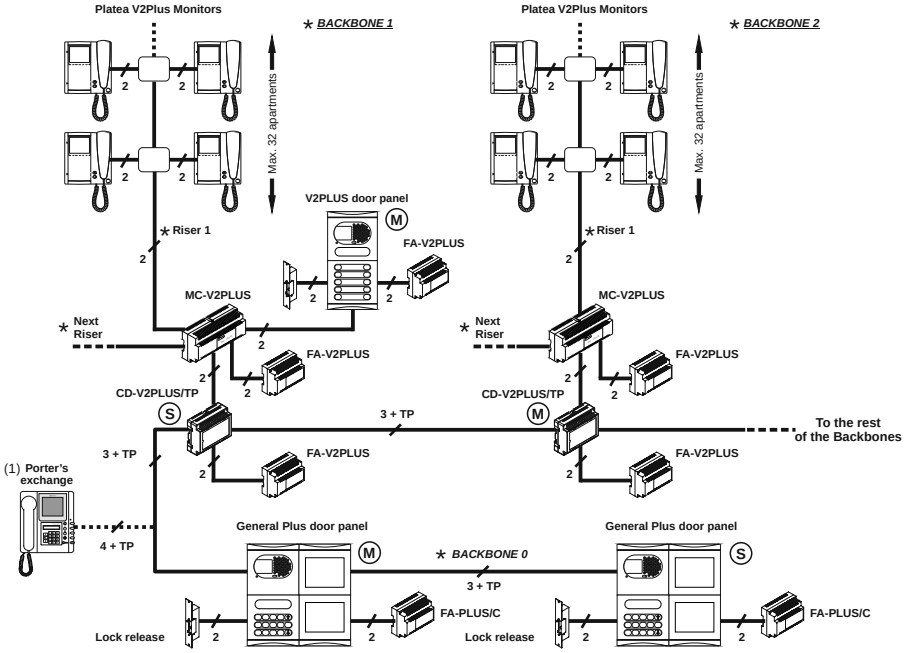
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Backbone encoder (general door panels).

Permits the installation of *Plus* general door panels with the *V2Plus* system, the *V2Plus* inner door panels will be connected through the *MC-V2Plus* multiplexer. There is an option to place a *CE-990 Plus* porter's exchange between the converter and the general door panel.

This type of installation requires a converter for each inner backbone.

Installation diagrams on pages 43 to 46.



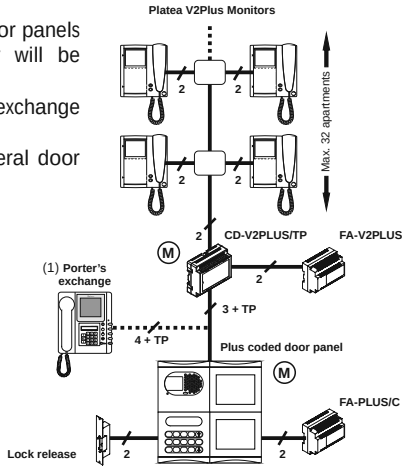
Backbone encoder (Coded door panel).

This option allows the installation of *Plus* coded door panels with *V2Plus* monitors/telephones. The converter will be connected to the output of the door panel.

Another option is for us to place a *Plus* porter's exchange between the *converter* and the coded door panel.

This variation can be applied with or without general door panels.

Installation diagram on page 42.



(1) Necessary the RCSH-562 connection block for 4 + TP installation.

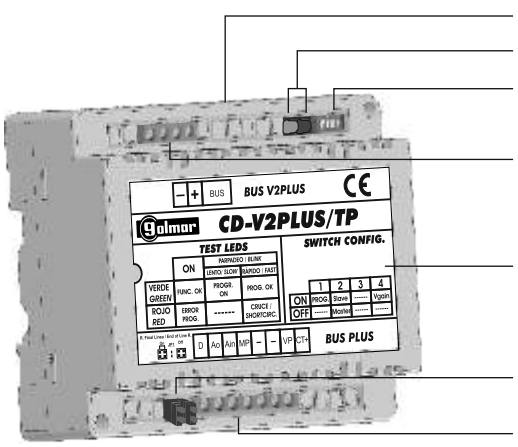
* Terms:
Backbone: Logical address.
Riser: Physical cabling of the installation in the same backbone (logical address).

(M) = Master.

(S) = Slave.

DESCRIPTION

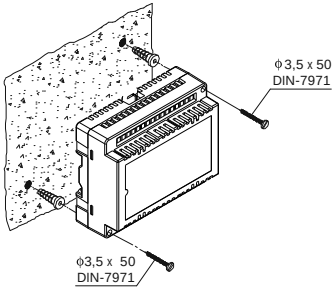
Description of the converter.



INSTALLATION

Detail of the converter installation.

Install the converter in a dry and protected place free from the risk of drip or water projections.
To avoid damage the converter must be firmly fixed.

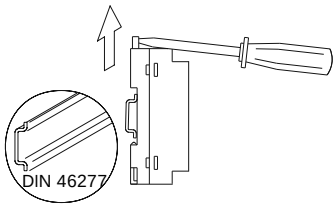


Install or modify the equipment without the power connected.

The installation and handling of this equipment must be performed by authorised personnel.

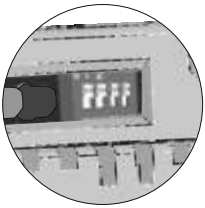
To install the converter directly on the wall, drill two holes of Ø6mm. and insert the wallplugs. Fix the converter with the specified screws.

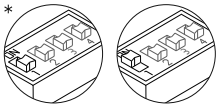
The converter can be installed on a DIN guide (6 elements), pressing it lightly.
To extract the converter from the DIN guide, use a plain screwdriver to lever the flange as shown in the picture.



Description of the configuration dip switch.

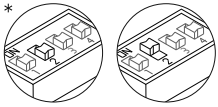
The SW1 configuration dip switch is located on the upper right part of the module.





*

Set to ON to programme the backbone (see page 35).
Once the programming has finished, return the switch to the OFF position.

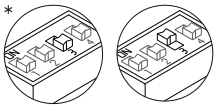


*

Set to OFF in installations backbone encoder type (coded door panel) or (general door panels without V2Plus inner door panel), to configure the converter as Master, (see page 35).

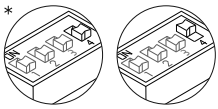
Set to ON in installations backbone encoder type (general door panels with V2Plus inner door panels), to configure the converter as Slave, (see page 35).

Important: *In a backbone or building with a backbone encoder and access door panels, the converter must be configured as Slave.*
In each backbone there must be only one door panel or converter configured as Master, the rest must be configured as Slaves.



*

To reset the converter, switch to ON and then set to OFF, after a Short-circuit or programming error.



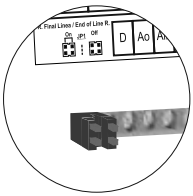
*

Set to ON if there are distributors in the backbone (single-user or multi-user) or the converter is connected to the riser multiplexer *MC-V2Plus* with daisy chain multiplexers.

Set to OFF if the backbone is daisy chain (without distributors) or the converter is connected to the riser multiplexer *MC-V2Plus* without daisy chain multiplexers.

*Factory default

Description of the configuration jumper.



The JP1 configuration jumper is located at the left side of the *Plus Bus* connection block.

JP1 *



On

End of line resistor.
Switch to ON if the converter is connected to the Plus system through distributors or only in the last converter if the connection to the Plus system of the converters does not contain distributors (input/output mode).

JP1

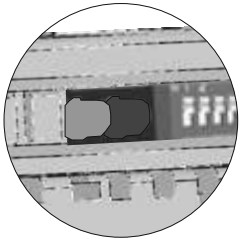


Off

End of line resistor.
Switch to OFF in all the converters except the last one if the connection to the Plus system of the converters does not contain distributors (input/output mode).

*Factory default

AUTODIAGNOSTIC LEDS



Description of autodiagnostic LEDs.

The autodiagnostic LEDs are placed next to the configuration dip switch.

Green Led

Fixed: Correct operation.

Slow blinking: Programming active (SW1-1 to ON).
Quick blinking: Programming finished.

Red Led

Fixed: Programming error.

Blinking: There is a short circuit in the installation* between the bus wires.

* If the short circuit is eliminated before 2 minutes (approx.), the converter will automatically reset. Past this time it will be necessary to reset the converter using dip switch No. 3 (see page 37).

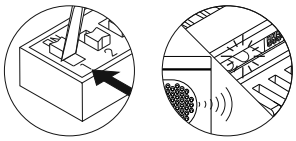
PROGRAMMING

Programming the converter.

The converter must be programmed with a backbone code (see page 35), which must be different for each converter, following the steps set out below.

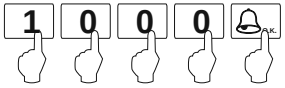


To access the door panel programming mode, press the key button followed by the secret installer code (factory default 1315), just as indicated in the door panel manual.

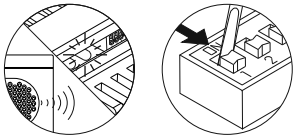


Activate the converter programming by setting dip switch number 1 to ON.

The door panel will emit a tone and the green LED on the converter will begin to blink slowly, indicating that programming has begun.



Introduce the backbone code to program, followed by three zeros, then press the bell button.



To indicate that the equipment has been correctly programmed, the door panel will emit a tone and the green LED on the converter will begin to quick blinking.

Exit programming by setting dip switch number 1 to OFF and pressing the C "Cancel" button on the door panel.

If there are more converters, repeat the previous steps introducing a different backbone code for each of them.

If during one of these processes the red LED on the converter switches on, restart programming from the beginning.

REPLACEMENT

The Golmar *V2PLUS* video door entry system is a digital system with simplified installation (2 wire bus without polarity), designed to new installations and to replace existing audio door entry systems in both apartment blocks and villas.
In installation for replacement it is necessary a detailed study of the existing installation before installing the system. To check that your installation complies with the system's minimum recommended requirements, please read carefully the following chapters, which provide details of the checks to be done.

MINIMUM REQUIREMENTS

Before installing this system, we must ensure that the existing installation complies with the following requirements:

- -The installation must be realized by multipaired cable, (not to use single-wire cables).
- -The wires must not be spliced, frayed, nor touch metal parts, and must not vary in cross section throughout the entire installation.
- -The entire installation must be at least 40cm away from any other installation otherwise there is a risk that the audio and video signal be exposed to interference, or that the system does not work correctly.
- -All branch connections must be made using D4L-V2PLUS or D1L-V2PLUS distributors.
- -Each floor must have physical space to situate the distributor/s, in case they are necessary.
- -Each apartment must have sufficient space to install the video system monitor.
- -Maximum installation distance it will depend on the section and the installed cable (see page 40 & 41).
- -Installations with independent more common wires, only use the common wires (separate and do not connect the independent ones).
- -1 access door panel, (up to 3 access door panel with *MC-V2PLUS* multiplexer).
- -Up to 32 (monitors, telephones or call repeaters) and apartments without using converters or multiplexers.
- -Up to 16 (monitors, telephones or call repeaters) and apartments in daisy chain installations without distributor, per installation without using converters or multiplexers.
- -Up to 3 elements (monitors, telephones or call repeaters S-45) per apartment.
- -Installations with more than 32 elements or 1 riser (it needs the use of the multiplexer *MC-V2PLUS*).
- -Installations with general door panels (it needs the use of the *CD-V2PLUS/TP* converters).
- -Before connecting the system's power supply, we must ensure that there are NO old parallel units, relays or call repeaters in the apartments. If so, we must disconnect them or replace them with units that are compatible with the new system, otherwise the installation could be seriously damaged or burnt.

If any of the first three requirements are not met, it will be necessary to replace the installation riser.

* If the branch connections to the apartments are in good condition, their replacement will not be necessary.
* If replacing the installation riser, use the Golmar cable *RAP-2150* and the next sections:

One access and one riser

SECTIONS CHART	Door panel-Monitor	P.S.- Door panel	Door panel - CV
Terminal	150m.	50m.	50m.
BUS, D	(1) RAP-2150		
+, -		1,5mm²	
(d.c lock release) CV1,CV2			0,5mm²
(a.c lock release) CV1,CV2, ~, ~		1mm²	1mm²

* Do not use different types of cable in the same installation (contact with our technical support department).

Continue

MINIMUM REQUIREMENTS

Coming from previous page

Several accesses and risers

SECTIONS CHART	Door panel-Multiplexer	Multiplexer-Monitor	P.S.- Door panel	Door panel-CV
Terminal	200m.	150m.	50m.	50m.
BUS, D	(1) RAP-2150	(1) RAP-2150		
+, -			1,5mm²	
(d.c lock release) CV1,CV2				0,5mm²
(a.c lock release) CV1,CV2, ~, ~			1mm²	1mm²

IMPORTANT:
if the installation includes multiplexers in daisy chain with monitors B/W:
- Maximum distance between door panel/converter and multiplexer:150m.
- Maximum distance between multiplexer in daisy chain and the last monitor B/W:100m.

(1) Golmar has a special cable for this system, its reference number is RAP-2150. The use of this cable ensures the correct functioning of the system and simplifies the riser replacement given that it contains all the necessary wires for the installation.

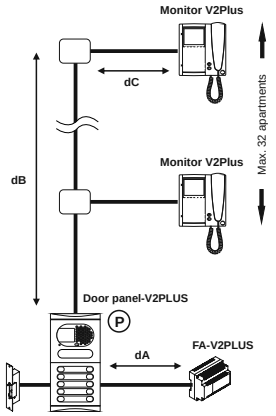
INSTALLATION OF REPLACEMENT

Compatibility of cables and sections.

One access and one riser (without multiplexer)

Cables and distances chart

Cables and sections	dA	dB+dC	dC
0,25mm² (twisted).	10m.	40m.	15m.
0,5mm² (twisted).	20m.	70m.	15m.
1mm² (twisted).	40m.	100m.	15m.
1,5mm² (twisted).	50m.	100m.	15m.
0,18mm² (multipaired).	5m.	25m.	15m.
0,18x2= 0,36mm² (multipaired).	10m.	50m.	15m.
0,18x4= 0,72mm² (multipaired).	25m.	100m.	15m.
*Rap-2150 1mm² (twisted).	40m.	150m.	15m.
1 par UTP Cat 5 0,18mm².	5m.	25m.	15m.
2 par UTP Cat 5 0,18x2= 0,36mm².	10m.	50m.	15m.
4 par UTP Cat 5 0,18x4= 0,72mm².	25m.	100m.	15m.



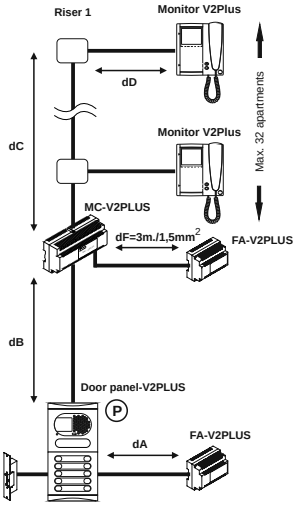
See the installation diagrams in the TV2PLUSML instructions manual.
* Use Golmar RAP-2150 cable, for new installations.

Continue

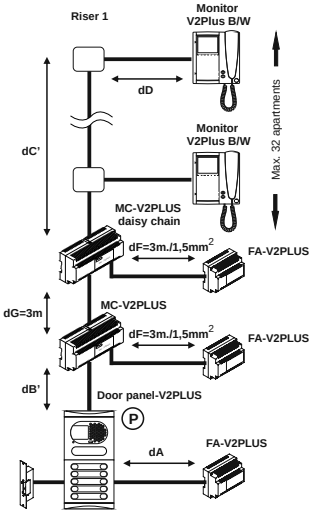
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Several accesses and risers (with multiplexers)

Installation with multiplexer



Installation with multiplexers in daisy chain and monitors B/W



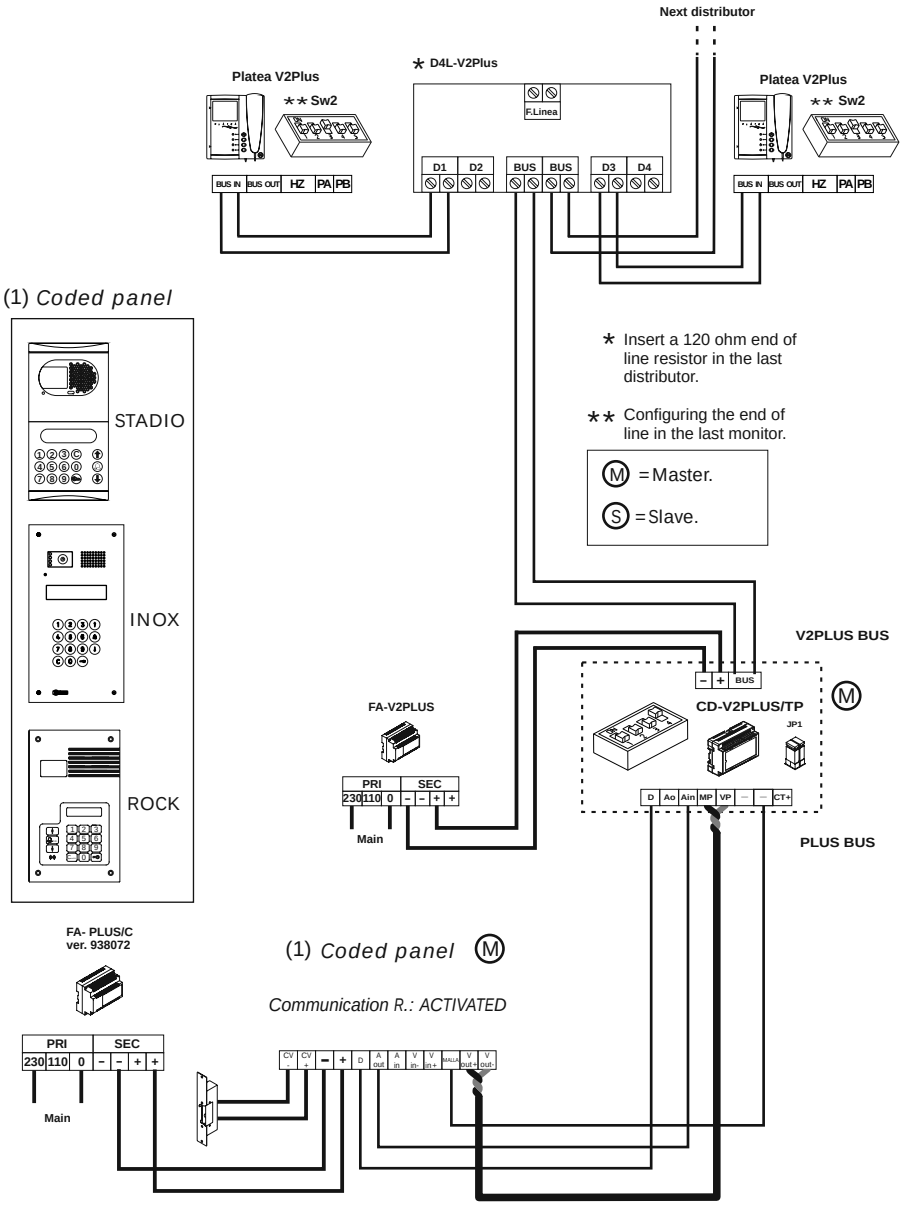
See operation modes, configuration, programming and installation in the TMC-V2PLUSML instructions manual.

Cables and distances chart

Cables and sections	dA	dB	dD	dC + dD	dB'	dC' + dD
0,25mm² (twisted).	10m.	50m.	15m.	40m.	37m.	26m.
0,5mm² (twisted).	20m.	100m.	15m.	70m.	75m.	46m.
1mm² (twisted).	40m.	100m.	15m.	100m.	75m.	67m.
1,5mm² (twisted).	50m.	150m.	15m.	100m.	112m.	67m.
0,18mm² (multipaired).	5m.	35m.	15m.	25m.	26m.	16m.
0,18x2 = 0,36mm² (multipaired).	10m.	70m.	15m.	50m.	52m.	33m.
0,18x4 = 0,72mm² (multipaired).	25m.	100m.	15m.	100m.	75m.	67m.
*Rap-2150 1mm² (twisted).	40m.	200m.	15m.	150m.	150m.	100m.
1 par UTP Cat 5 0,18mm².	5m.	35m.	15m.	25m.	26m.	16m.
2 par UTP Cat 5 0,18x2 = 0,36mm².	10m.	70m.	15m.	50m.	52m.	33m.
4 par UTP Cat 5 0,18x4 = 0,72mm².	25m.	100m.	15m.	100m.	75m.	67m.

*Use Golmar RAP-2150 cable, for new installations.

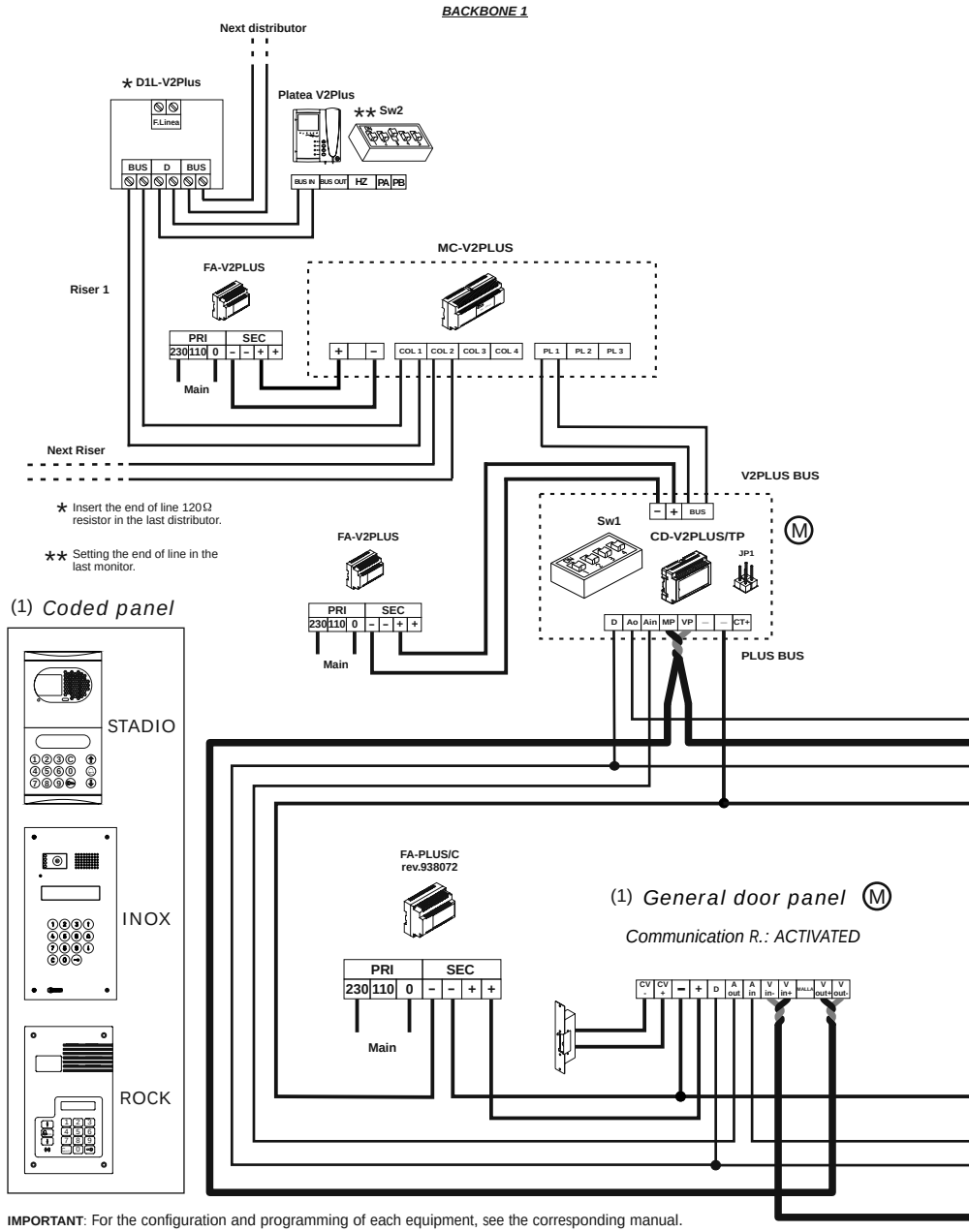
Backbone encoder mode (coded panel).



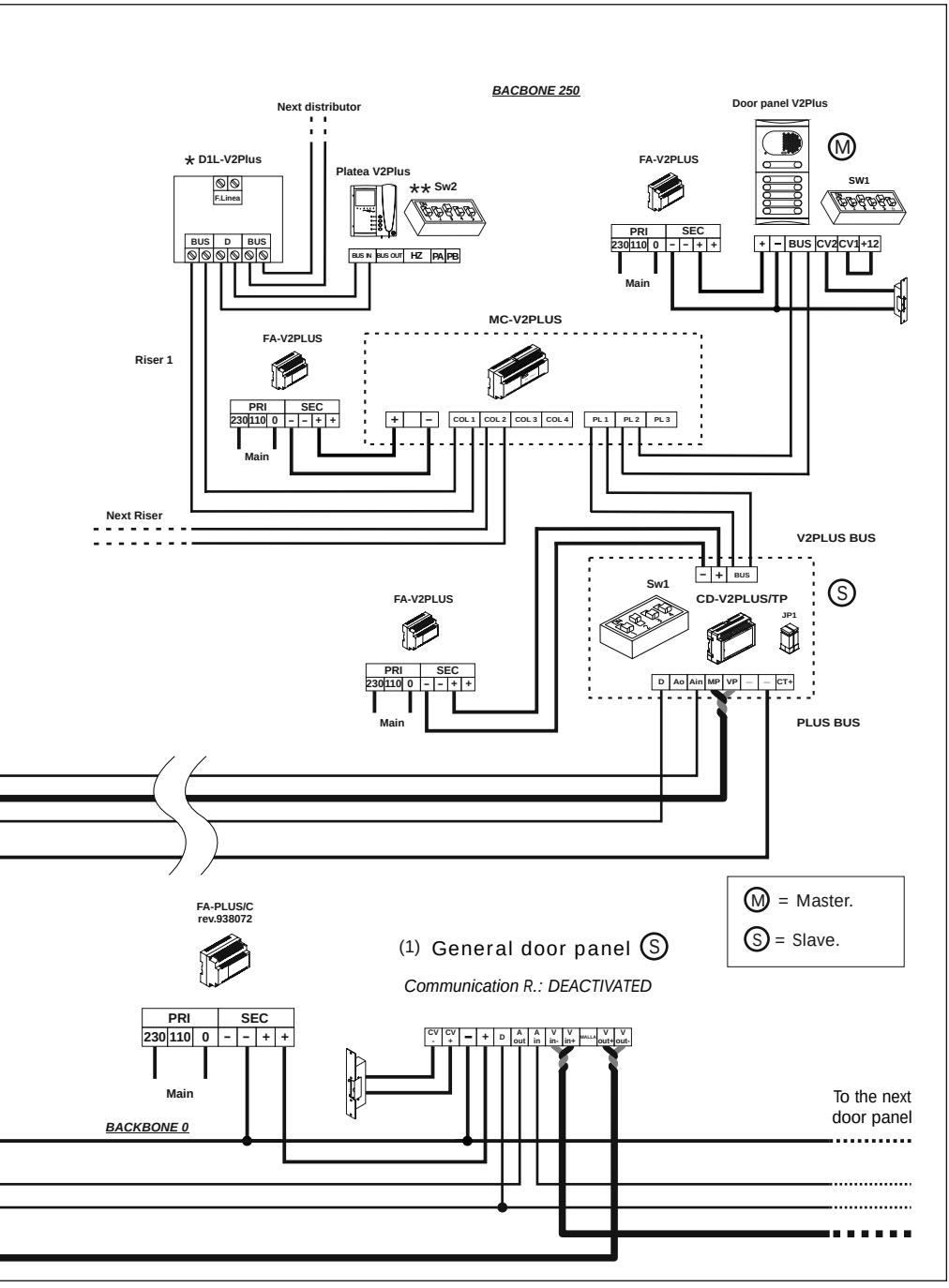
IMPORTANT: For the configuration and programming of each equipment, see the corresponding manual.

INSTALLATION DIAGRAMS

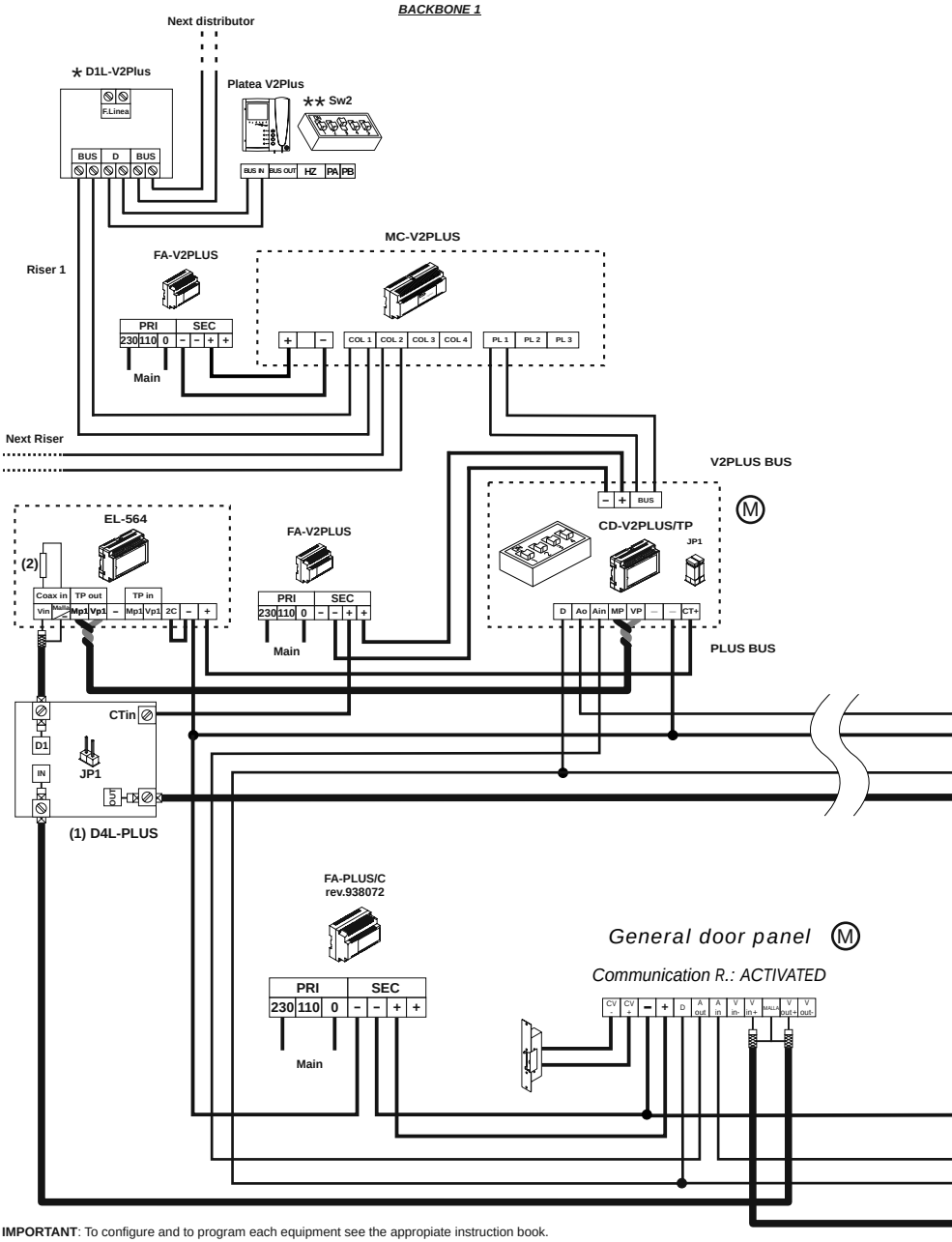
Backbone encoder mode (general door panels without coaxial cable).



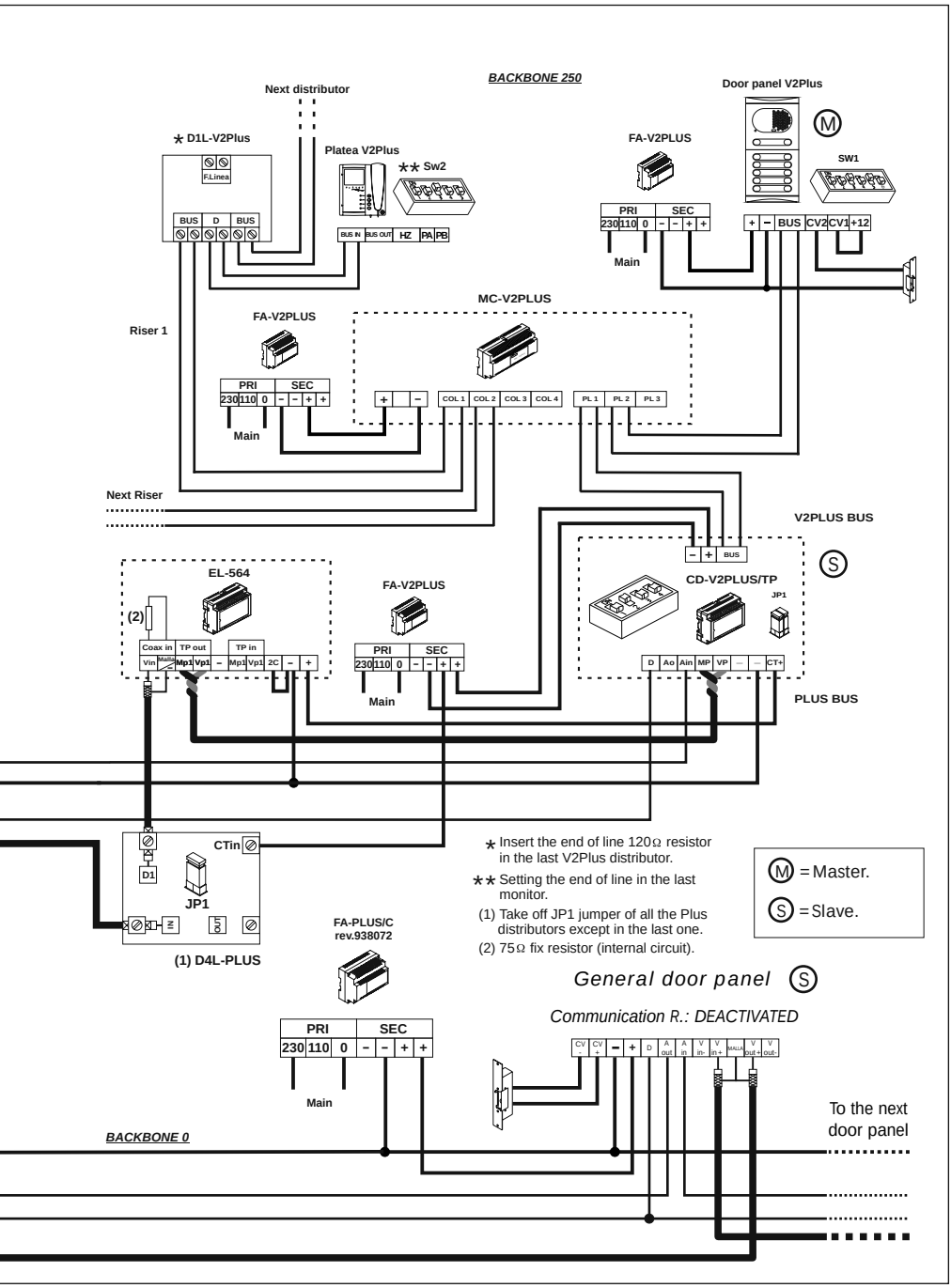
IMPORTANT: For the configuration and programming of each equipment, see the corresponding manual.


BACBONE 250
Next distributor
D1L-V2Plus
F.Linea
BUS
D
BUS
Platea V2Plus
Sw2
BUS IN
BUS OUT
HZ
PA
PB
Door panel V2Plus
M
SW1
FA-V2PLUS
PRI
SEC
230
110
0
Main
+
–
BUS
CV2
CV1
+12
MC-V2PLUS
Riser 1
COL 1
COL 2
COL 3
COL 4
PL 1
PL 2
PL 3
Next Riser
V2PLUS BUS
Sw1
CD-V2PLUS/TP
JP1
S
D
Ao
Ain
MP
VP
CT+
PLUS BUS
FA-PLUS/C
rev.938072
(1) General door panel S
Communication R.: DEACTIVATED
M = Master.
S = Slave.
CV
D
A out
A in
V in-
V in+
V out+
V out-
To the next
door panel
BACKBONE 0

Backbone encoder mode (general door panel with coaxial cable).



IMPORTANT: To configure and to program each equipment see the appropiate instruction book.


BACKBONE 250
Next distributor
* D1L-V2Plus
F.Linea
BUS D BUS
Platea V2Plus
** Sw2
BUS IN BUS OUT HZ PA PB
Door panel V2Plus
M
SW1
FA-V2PLUS
PRI SEC
230 110 0 - - + +
Main
+ - BUS CV2 CV1 +12
MC-V2PLUS
Riser 1
FA-V2PLUS
PRI SEC
230 110 0 - + +
Main
+ -
COL 1 COL 2 COL 3 COL 4
PL 1 PL 2 PL 3
Next Riser
V2PLUS BUS
- + BUS
S
CD-V2PLUS/TP
JP1
D Ao Ain MP VP - - CT+
EL-564
(2)
Coax in TP out TP in
Vin Mp1 Vp1 Mp1 Vp1 2C - +
FA-V2PLUS
PRI SEC
230 110 0 - - + +
Main
PLUS BUS
CTin
D1
JP1
IN
OUT
(1) D4L-PLUS
FA-PLUS/C
rev.938072
PRI SEC
230 110 0 - - + +
Main
BACKBONE 0
CV - CV + - + D A out A in V in- V in+ MAUX V out+ V out-
To the next door panel
* Insert the end of line 120Ω resistor in the last V2Plus distributor.
** Setting the end of line in the last monitor.
(1) Take off JP1 jumper of all the Plus distributors except in the last one.
(2) 75Ω fix resistor (internal circuit).
M = Master.
S = Slave.
General door panel S
Communication R.: DEACTIVATED

Backbone encoder mode (General door panels)

- Incorrect functioning of the inner door panels (if these exist).
  - Check that the *EL500/V2Plus* microprocessor circuit installed in the inner doors panels is "Version 2.00", and if it is not, replace it with one with this version.
- Calls cannot be made from the general door panels.
  - Check if calls can be made from the inner door panels (if these exist).
  - Ensure that the backbone for the converters has been correctly programmed (page 38) and check their connection (page 43-46) and their configuration (page 37).
  - Check the programming of the monitors/telephones (see V2Plus door panel manual) and program again if it is necessary.
  - Check that there are no short-circuits in the multiplexer riser terminals or in the terminals of the monitor/telephone bus wires. (See autodiagnostic LEDs in the MC-V2PLUS multiplexer manual).
  - Check that the voltage in the terminals "Col" of the riser and "PL" of the panel/converter in the multiplexer is 23 to 25,5 Vdc in standby mode. If this is not the case, disconnect the affected terminal wires and check that there are no short-circuits or anomalies anywhere in the installation.
  - Also check that the voltage between the "-" and "+" terminals of the FA-V2Plus power supply is 25.5 Vdc and 17.5 to 18.5Vdc in the FA-Plus/C power supply. If this is not the case, check the power supplies and their connections.
- The converter cannot be programmed.
  - Check that the general door panel is in configuration mode before setting the number 1 dip switch to ON (see page 37) and the programming steps are correctly followed (see page 38).
  - Check that the voltage in the "BUS" terminal of the converter is 23 to 25,5 Vdc. If that is not the case, disconnect the affected terminal wires and check that there are no short-circuits or anomalies anywhere in the installation. (See autodiagnostic LEDs, page 38).

Backbone encoder mode (Coded panel)

- Calls cannot be made.
  - Remember that the system remains inactive for 45 seconds after connecting the power supply, and the same occurs upon connecting any unit to the installation.
  - Ensure that the backbone for the converter has been correctly programmed (page 38).
  - Check the connection of the converter (page 42) and its configuration (page 37).
  - Check that the voltage in the terminals "Col" of the column and "PL" of the panel/converter in the multiplexer is 23 to 25,5 Vdc in standby mode. If this is not the case, disconnect the affected terminal wires and check that there are no short-circuits or anomalies anywhere in the installation.
  - If there is not multiplexer, check that the voltage in the converter "BUS" terminals is 23 to 25.5 Vdc in standby mode. If that is not the case, disconnect the affected terminal wires and check that there are no short-circuits or anomalies anywhere in the installation.
  - Also check that the voltage between the "-" and "+" terminals of the FA-V2Plus power supply is 25.5 Vdc and 17.5 to 18.5 Vdc in the FA-Plus/C power supply. If this is not the case, check the power supplies and their connections.

NOTAS/NOTES

NOTAS/NOTES

Este producto es conforme con las disposiciones de las Directivas Europeas aplicables respecto a la Seguridad Eléctrica *2006/95/CEE* y la Compatibilidad Electromagnética *2004/108/CEE*, así como con la ampliación en la Directiva del Marcado CE *93/68/CEE*.

This product meets the essentials requirements of applicable European Directives regarding Electrical Safety 2006/95/CEE, Electromagnetic Compatibility 2004/108/ECC, and as amended for CE Marking 93/68/ECC.



NOTA: El funcionamiento de este equipo está sujeto a las siguientes condiciones:
(1) Este dispositivo no puede provocar interferencias dañinas, y (2) debe aceptar cualquier interferencia recibida, incluyendo las que pueden provocar un funcionamiento no deseado.

NOTE: Operation is subject to the following conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any received interference, including the ones that may cause undesired operation.

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