Riser Multiplexer

MC-V2PLUS

golmar

MC-V2PLUS **golmar**

MULTIPLEXOR DE COLUMNA
RISER MULTIPLEXER

input
+ - === 25,5Vdc

CE

+ -

L0 P1 Col1 Col2 Col3 Col4

PL1 PL2 PL3

L1 L2 L3 L4

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 <u>authorised personnel</u>.
- ☞ Install or modify the equipment <u>without the power connected</u>.
- ☞ Do not use excessive force when tightening the multiplexer connection block screws.
- ☞ The entire installation must be at least <u>40 cm.</u> away from any <u>other installation</u>.
- ☞ Before connecting the system, check the connections between door panel, multiplexer, monitors and 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.
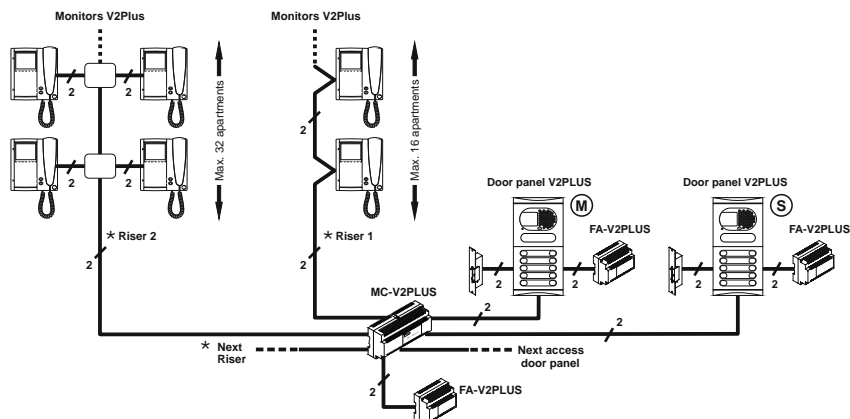
SAFETY PRECAUTIONS

- ☞ Install or modify the equipment <u>without the power connected</u>.
- ☞ The installation and handling of these equipments must be performed by <u>authorised personnel</u>.
- ☞ The entire installation must be at least <u>40 cm.</u> away from any <u>other installation</u>.
- ☞ 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 multiplexer has to be firmly fixed.

SYSTEM CHARACTERISTICS

- ☞ The characteristics described in this manual of the multiplexer *MC-V2Plus* are with code (11797191A).
- ☞ Riser multiplexer for the *V2Plus* system which permits the following functions:
    - ➲ Permits the installation of *V2Plus* access door panels.
    - ➲ Permits the installation of risers in the *V2Plus* backbone.
    - ➲ Permits to connect in the multiplexer backbone up to 4 multiplexers in daisy chain (max. 1 per riser).
- ☞ 1 multiplexer per backbone (possibility of installing up to 4 more multiplexers in daisy chain).
- ☞ In the multiplexer in daisy chain is not possible to connect other multiplexer.
- ☞ Up to 4 risers per multiplexer.
- ☞ Up to 16 risers per backbone in installations with multiplexers in daisy chain.
- ☞ Permits the "input/output" daisy chain installation by riser or installation with distributors.
- ☞ Does not permit mixed installations in the same riser.
- ☞ The risers are independent of each other, and a short-circuit in one does not affect the others.
- ☞ Up to 3 access doors panels (for installation with a *CD-V2Plus* converter the maximum number of access door panels will be 2).
- ☞ 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.
- ☞ Up to 32 elements (monitors, telephones or S-45 call repeaters) and apartments per riser.
- ☞ Up to 16 elements (monitors, telephones or S-45 call repeaters) and apartments per riser in daisy chain installations (without distributor).
- ☞ Up to 120 elements (monitors, telephones or call repeaters) and apartments per backbone with <u>4 risers</u>.
- ☞ Up to 480 elements (monitors, telephones or call repeaters) and 120 apartments with door panel push button or 250 apartments with coded panel (it needs *CD-V2Plus* converter) per backbone with <u>16 risers</u>.
- ☞ Up to 3 elements (monitors, telephones or S-45 call repeaters) per apartment.
- ☞ Max. distance between door panel and multiplexer: 200m. (multiplexers in daisy chain with monitors B/w:150m.).
- ☞ Maximum distance between the multiplexer and the last monitor/telephone: 150m.
- ☞ Maximum distance between the multiplexer in daisy chain and the last monitor B/w: 100m.
- ☞ Maximum distance between the multiplexer and the multiplexer in daisy chain: 3m. (install in the same cabinet).
- ☞ Maximum length of all the bus wiring for the riser: 450m.
- ☞ Max. length of all the bus wiring for the riser of the multiplexer daisy chain with monitors B/w: 400m.
- ☞ Maximum length of all the bus wiring for the backbone, <u>4 risers</u>: 2400m. and <u>16 risers</u>: 7800m.
- ☞ Maximum distance between the power supply and multiplexer: 3m, with a wire section of 1.5 mm^2 (install in the same cabinet)
- ☞ Autodiagnostic LEDS showing the status of each riser.
- ☞ LED showing the power supply status of the multiplexer.
- ☞ Use Golmar *RAP-2150* cable in the *V2Plus* system.

Access door panels and risers.

Permits the installation through the multiplexer *MC-V2Plus* up to three access door panels and structures of up to four risers (up to 16 risers with multiplexers in daisy chain) per *V2Plus* backbone. Installation diagram on page 53.

Monitors V2Plus

Monitors V2Plus

Max. 32 apartments

Max. 16 apartments

2 2

2 2

2

2

★ Riser 2

★ Riser 1

Door panel V2PLUS (M)

FA-V2PLUS

Door panel V2PLUS (S)

FA-V2PLUS

2 2

2 2

MC-V2PLUS

2

2

★ Next Riser

Next access door panel

2 FA-V2PLUS

General door panels with backbone encoder CD-V2Plus.

It permits the installation of coded general door panels with a *V2Plus* system of inner access door panels with an structure of up to 4 risers (up to 16 risers with multiplexers in daisy chain) for the same backbone. In this type of installation, the converter is connected to the multiplexer in the door panel connection block, which means that the maximum number of access door panels will be two. Installation diagrams on pages 55-58.

★ **BACKBONE 1**

Monitors V2Plus

Monitors V2Plus

Max. 32 apartments

Max. 32 apartments

★ Terms:
Backbone: Logical address.
Riser: Physical cabling of the installation in the same backbone (logical address).
(M) = Master.
(S) = Slave.

2 2

2 2

2 2

2 2

★ Riser 2

★ Riser 1

Door panel V2PLUS (M)

FA-V2PLUS

Door panel V2PLUS (S)

FA-V2PLUS

2

2

MC-V2PLUS

2 2

2 2

2 2

★ Next Riser

FA-V2PLUS

2 2

CD-V2PLUS (S)

Porter's exchange

1 + 2 + coax

1 + 2 + coax

To the rest of the backbones

FA-V2PLUS

2

1 + 3 + coax

General Plus door panel (M)

★ **BACKBONE 0**

General Plus door panel (S)

1 + 2 + coax

FA-PLUS/C

FA-PLUS/C

Lock release 2

2

Lock release 2

2

Multiplexers in daisy chain.

Permits the installation through the multiplexer *MC-V2Plus*, up to three access door panels and up to 4 multiplexers in daisy chain (max. 1 per riser) with structures of up to 16 risers per *V2Plus* backbone.

(∗) Important:In the multiplexer in daisy chain it is possible to connect neither access door panels nor protocol converters *CD-V2Plus*.

In the multiplexer in daisy chain is not possible to connect other multiplexer.

<u>Access door panels</u>

Installation with 1 multiplexer in daisy chain (maximum 7 risers):
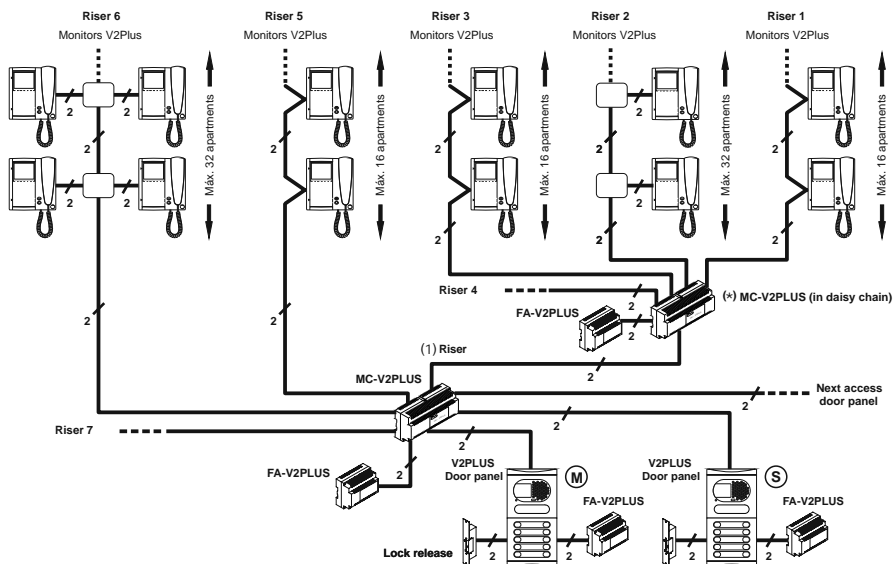
Installation of up to 4 multiplexers in daisy chain (maximum 16 risers):
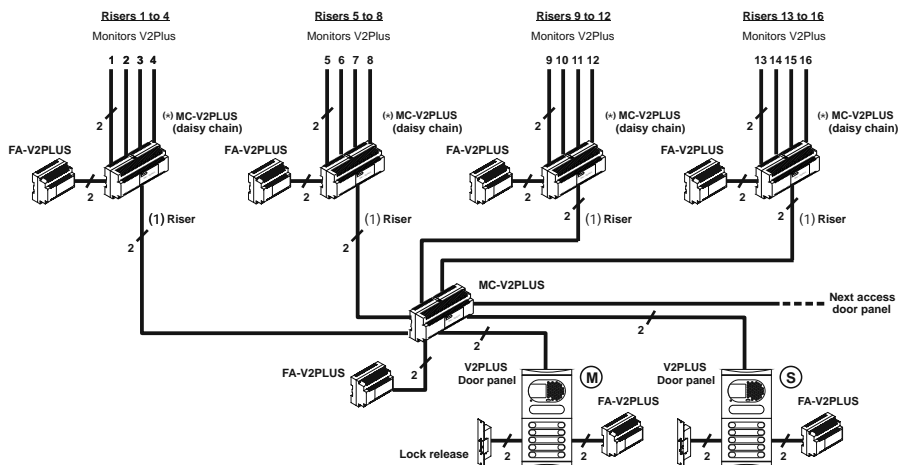
(1) Riser connected to the multiplexer in daisy chain (maximum 1 per riser).

Continue

Coming from previous page

(∗) Important: In the multiplexer in daisy chain it is possible to connect neither access door panels nor protocol converters *CD-V2Plus*.
In the multiplexer in daisy chain is not possible to connect other multiplexer.

<u>General door panels</u>

<u>Backbone of up to 4 multiplexers in daisy chain (maximum 16 risers):</u>

BACKBONE 1

Risers 1 to 4
Monitors V2Plus

1 2 3 4

2

(∗) **MC-V2PLUS**
(daisy chain)

FA-V2PLUS

2

(1) Riser

2

Risers 5 to 8
Monitors V2Plus

5 6 7 8

2

(∗) **MC-V2PLUS**
(daisy chain)

FA-V2PLUS

2

(1) **Riser**

2

Risers 9 to 12
Monitors V2Plus

9 10 11 12

2

(∗) **MC-V2PLUS**
(daisy chain)

FA-V2PLUS

2

2

(1) **Riser**

Risers 13 to 16
Monitors V2Plus

13 14 15 16

2

(∗) **MC-V2PLUS**
(daisy chain)

FA-V2PLUS

2

2

(1) **Riser**

MC-V2PLUS

2

2

FA-V2PLUS

2

2

V2PLUS
Door panel

Ⓜ

FA-V2PLUS

2

2

V2PLUS
Door panel

Ⓢ

FA-V2PLUS

2

2

Ⓢ **CD-V2PLUS**

1 + 2 + coax

1 + 2 + coax

To the rest of
the Backbones

FA-V2PLUS

2

Porter´s
exchange

1 + 3 + coax

General Plus door panel

Ⓜ

BACKBONE 0

1 + 2 + coax

General Plus door panel

Ⓢ

Lock release

2

FA-PLUS/C

2

Lock release

2

FA-PLUS/C

2

(1) Riser connected to the multiplexer in daisy chain (maximum 1 per riser).

D escription of the multiplexer.

Power supply input

Power supply LED

Reset button

Riser connection block

DIN rail latch release

Connection block for access door panels / CD-V2Plus converter

Autodiagnostic LEDs
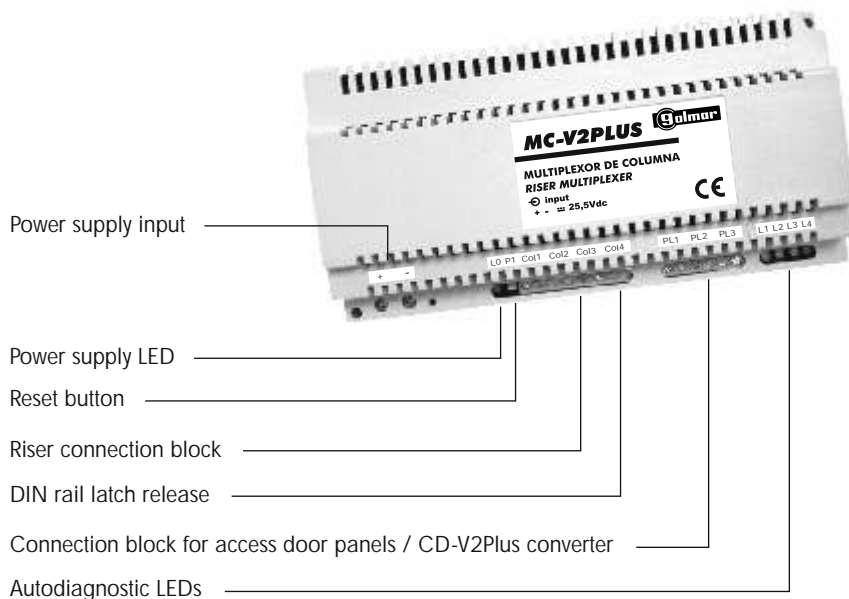
+ / -   Power supply input multiplexer of 25,5 Vdc (with FA-V2Plus power supply).
L0   LED of power supply connected.
P1   Reset button (for short-circuit) in the risers.
Col1   Riser 1 installation of monitors/telephones.
Col2   Riser 2 installation of monitors/telephones.
Col3   Riser 3 installation of monitors/telephones.
Col4   Riser 4 installation of monitors/telephones.
PL1   Installation of access door panel or CD-V2Plus converter.
PL2   Installation of access door panel or CD-V2Plus converter.
PL3   Installation of access door panel or CD-V2Plus converter.
L1   Status LED for riser 1.
L2   Status LED for riser 2.
L3   Status LED for riser 3.
L4   Status LED for riser 4.

D etail of the multiplexer installation.

Install the multiplexer in a dry and protected place free from the risk of drip or water projections. To avoid damage the multiplexer 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 multiplexer directly on the wall, drill two holes of Ø6mm. and insert the wallplugs. Fix the multiplexer with the specified screws.

f3,5 x 45

f3,5 x 45
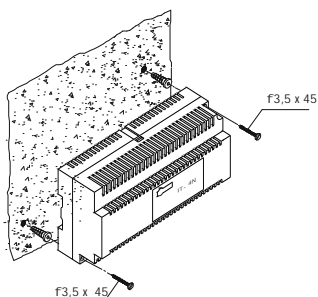
The multiplexer can be installed on a DIN guide (10 elements), pressing it lightly.
To extract the multiplexer from the DIN guide, use a plain screwdriver to lever the flange as shown in the picture.

DIN 46277
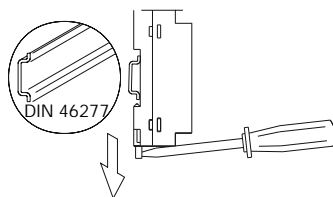
AUTODIAGNOSTIC LEDS

D escription of autodiagnostic LEDs.
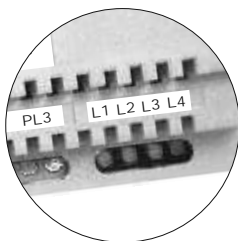
The autodiagnostic riser LEDS are placed on the bottom right of the module.

PL3   L1 L2 L3 L4

Riser LED

Fixed: Riser active and in standby mode.

Blinking: Riser communicating.

Blinking (all the LEDs): Multiplexer initialising.

Off: Riser not functioning due to a short-circuit in the riser * between the bus wires or riser card in fault.

* If the short circuit is eliminated before 2 minutes (approx.), the riser will automatically reset. Past this time it will be necessary to press button P1 to restart the multiplexer.

Special configuration for V2Plus equipment connected to the MC-V2Plus multiplexer.

Acces door panel:

EL500-V2Plus (Sw1-6):

* Set to ON only if there are multiplexers in daisy chain, if not placed to OFF.

Risers 1 to 4
Monitors V2Plus

1 2 3 4

FA-V2PLUS

MC-V2PLUS
(daisy chain)

(1) Riser

MC-V2PLUS

V2PLUS
Door panel (M)

FA-V2PLUS

V2PLUS
Door panel (S)

FA-V2PLUS

Riser 5

Riser 6

Riser 7

FA-V2PLUS

Next access
door panel
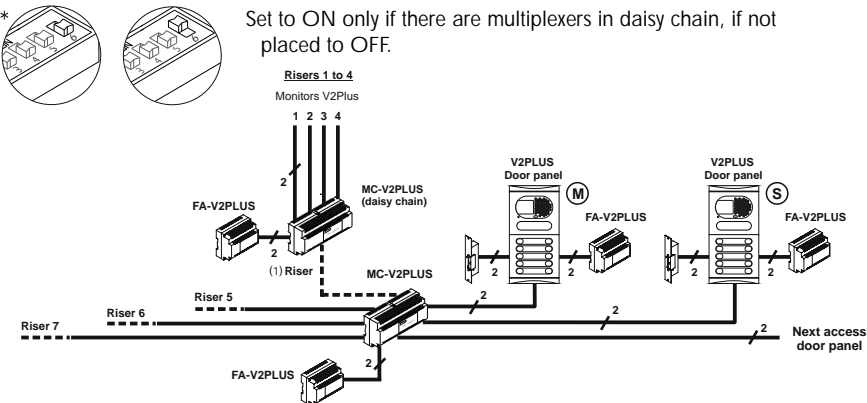
(1) Riser connected to the multiplexer in daisy chain (maximum 1 per riser).
* **Factory default**

Protocol converter:

CD-V2Plus (Sw1-4):

* Set to ON only if there are multiplexers in daisy chain, if not placed to OFF.

Risers 1 to 4
Monitors V2Plus

1 2 3 4

BACKBONE 1

FA-V2PLUS

MC-V2PLUS
(daisy chain)

(1) Riser

MC-V2PLUS

V2PLUS
Door panel (M)

FA-V2PLUS

V2PLUS
Door panel (S)

FA-V2PLUS

Riser 5

Riser 6

Riser 7

FA-V2PLUS

To Plus
General door panel

BACKBONE 0

(S)

CD-V2PLUS

1 + 2 + coax

FA-V2PLUS

**To the rest of
the backbones**
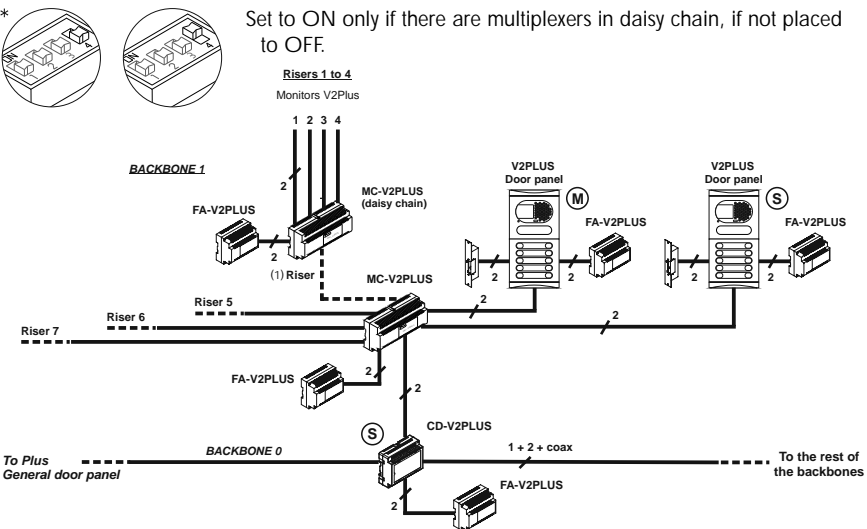
(1) Riser connected to the multiplexer in daisy chain (maximum 1 per riser).
* **Factory default**

Monitor:

Platea-V2Plus (Sw2-5):
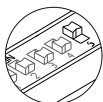
Set to ON the monitors which are:
- At a distance of more than 65m. from the multiplexer (riser with distributors).
- Connected from the output No. 20 of the distributors (riser with distributors).
- Connected in daisy chain at a distance of more than 80m. from the multiplexer (riser without distributors).
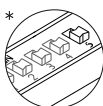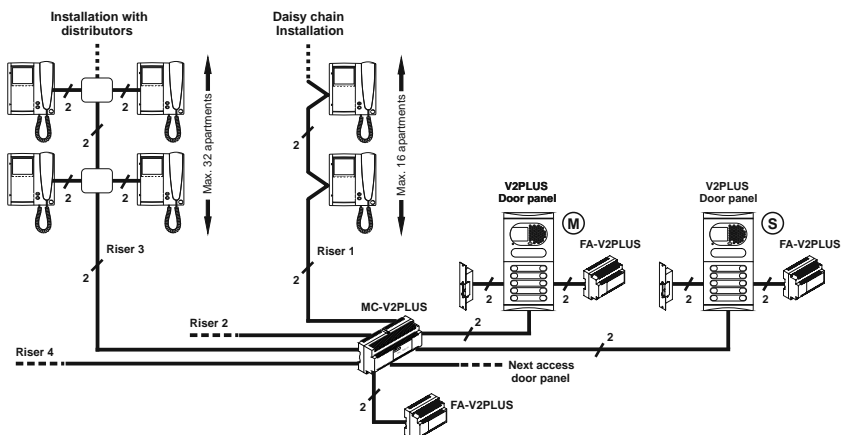
Set to OFF the monitors which are:
- At a distance of less than 65m. from the multiplexer (riser with distributors).
- Connected before the output No. 20 of the distributors (riser with distributors).
- Connected in daisy chain at a distance of less than 80m. from the multiplexer (riser without distributors).
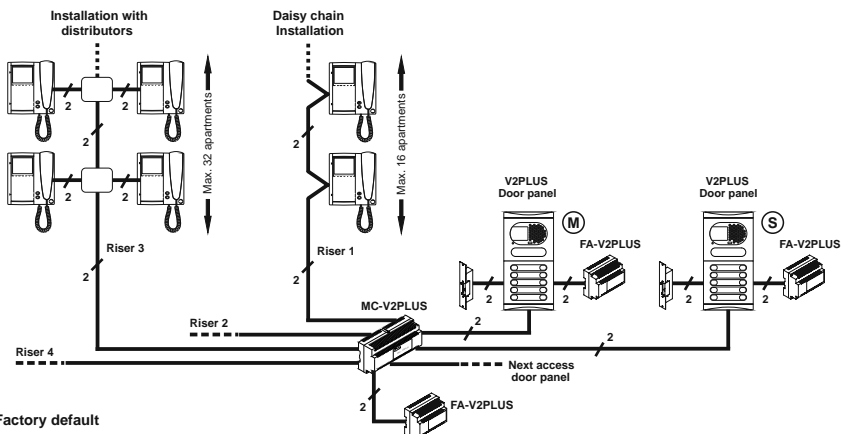
* **Factory default**

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:

- -All the wires of the installation must use the same conduit.
- -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 51 & 52).
- -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* 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	*RAP-2150		
+, -		1,5mm²	
(d.c lock release) CV1,CV2			0,5mm²
(a.c lock release) CV1,CV2, ~, ~		1mm²	1mm²

*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.

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	*RAP-2150	*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.
* 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.

Monitor V2Plus

dC

Max. 32 apartments

Monitor V2Plus

dB

Door panel-V2PLUS

P

FA-V2PLUS

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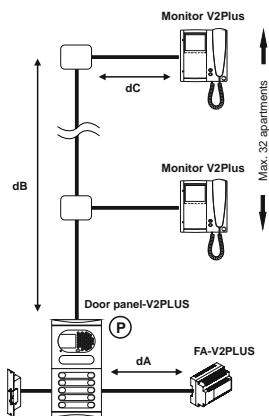
See the installation diagrams in the TV2PLUSML instructions manual.
* Use Golmar RAP-2150 cable, for new installations.

Coming from previous page

Several accesses and risers (with multiplexers)

Installation with multiplexer

Riser 1   Monitor V2Plus

dD

dC

Max. 32 apartments

Monitor V2Plus

MC-V2PLUS

dF=3m./1,5mm^2 FA-V2PLUS

dB

Door panel-V2PLUS
P

dA   FA-V2PLUS
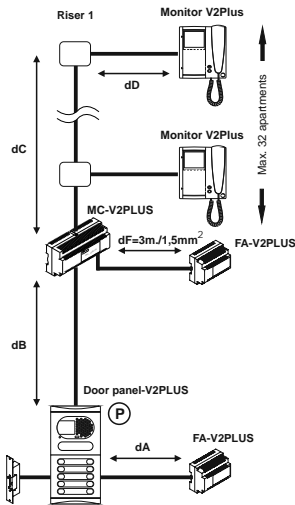
See operation modes page 43.

Installation with multiplexers in daisy chain and monitors B/W

Riser 1   Monitor V2Plus B/W

dD

dC'

Max. 32 apartments

Monitor V2Plus B/W

MC-V2PLUS daisy chain

dF=3m./1,5mm^2 FA-V2PLUS

dG=3m   MC-V2PLUS

dF=3m./1,5mm^2 FA-V2PLUS

dB'

Door panel-V2PLUS
P

dA   FA-V2PLUS
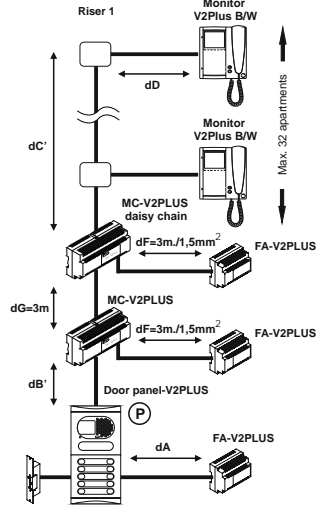
See operation modes page 44-45.

Cables and distances chart

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

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

A ccess door panels and risers.
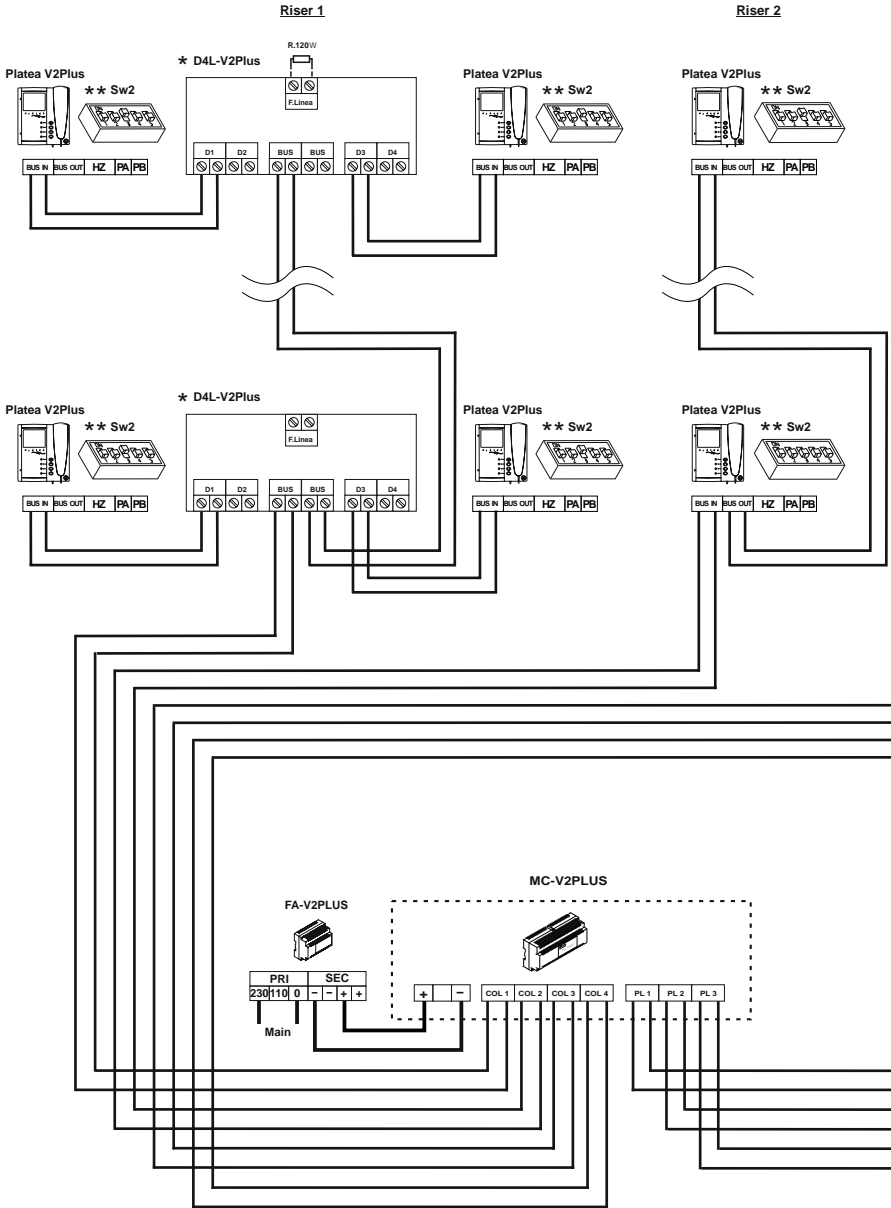
Riser 1

Riser 2

R.120W

Platea V2Plus   ★ **D4L-V2Plus**   F.Linea

★★ **Sw2**

BUS IN BUS OUT HZ PA PB

D1   D2   BUS BUS   D3   D4

Platea V2Plus   ★★ **Sw2**

BUS IN BUS OUT HZ PA PB

Platea V2Plus   ★★ **Sw2**

BUS IN BUS OUT HZ PA PB

Platea V2Plus   ★ **D4L-V2Plus**

★★ **Sw2**   F.Linea

BUS IN BUS OUT HZ PA PB

D1   D2   BUS BUS   D3   D4

Platea V2Plus   ★★ **Sw2**

BUS IN BUS OUT HZ PA PB

Platea V2Plus   ★★ **Sw2**

BUS IN BUS OUT HZ PA PB

MC-V2PLUS

FA-V2PLUS

PRI   SEC
230 110 0 − − + +

Main

+   −   COL 1 COL 2 COL 3 COL 4   PL 1 PL 2 PL 3

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

Riser 3

★ **D1L-V2Plus**

R.120W

F.Linea

BUS	D	BUS

Platea V2Plus

★★ **Sw2**

BUS IN | BUS OUT | **HZ** | **PA** | **PB**

Riser 4

★ **D1L-V2Plus**

R.120W

F.Linea

BUS	D	BUS

Platea V2Plus

★★ **Sw2**

BUS IN | BUS OUT | **HZ** | **PA** | **PB**

★ **D1L-V2Plus**

F.Linea

BUS	D	BUS

Platea V2Plus

★★ **Sw2**

BUS IN | BUS OUT | **HZ** | **PA** | **PB**

★ **D1L-V2Plus**

F.Linea

BUS	D	BUS

T-7822VD

★★★

S+	S-	BUS	HZ	HZ	PA	PB	BUS	F.linea

R.120W
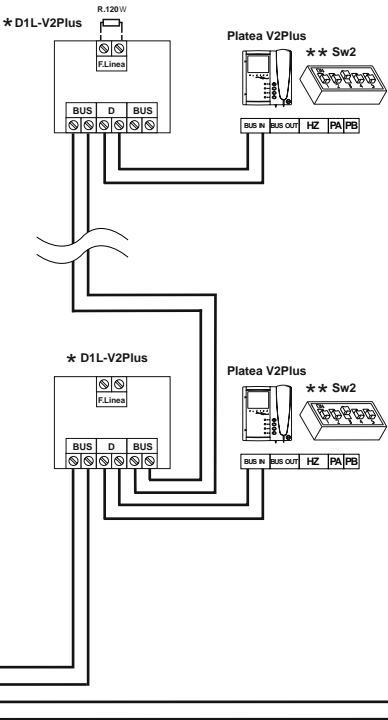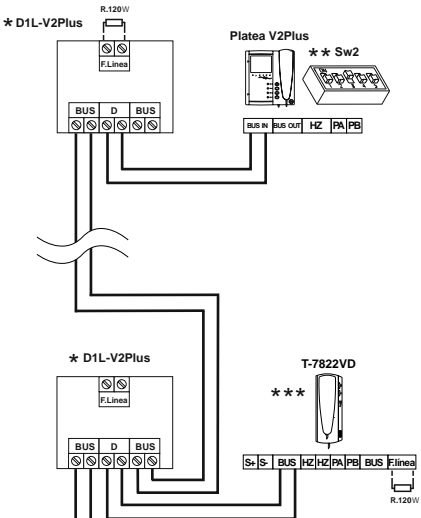
★ Insert a 120 ohm end of line resistor in the last distributor.

★★ Configuring the end of line in the last monitor.

★★★ Insert a 120 ohm end of line resistor in the last telephone.

Ⓜ =Master.

Ⓢ =Slave.

V2PLUS door panel

Ⓜ

FA-V2PLUS

SW1

PRI			SEC		
230	110	0	–	–	+	+

Main

+	–	BUS	CV2	CV1	+12

V2PLUS door panel

Ⓢ

FA-V2PLUS

SW1

PRI			SEC		
230	110	0	–	–	+	+

Main

+	–	BUS	CV2	CV1	+12

V2PLUS door panel

Ⓢ

FA-V2PLUS

SW1

PRI			SEC		
230	110	0	–	–	+	+

Main

+	–	BUS	CV2	CV1	+12

G eneral door panels (with coaxial cable) and backbone encoder CD-V2Plus.

BACKBONE 1

Next distributor

✱ D1L-V2Plus

F.Linea

Platea V2Plus

✱✱ Sw2

BUS | D | BUS

BUS IN | BUS OUT | HZ | PA | PB

Riser 1

FA-V2PLUS

MC-V2PLUS

PRI			SEC		
230	110	0	−	−	+	+

Main

| + | − | | COL 1 | COL 2 | COL 3 | COL 4 | | PL 1 | PL 2 | PL 3 |

Next Riser

✱ Insert the end of line 120Ω resistor in the last distributor.

✱✱ Setting the end of line in the last monitor.

BUS V2PLUS

− | + | BUS

Sw1

CD-V2PLUS

JP1

M

(1) *Coded panel*

FA-V2PLUS

PRI			SEC		
230	110	0	−	−	+	+

Main

D | Ao | Ain | Vo | Malla | Malla | Vi | CT+

BUS PLUS

STADIO

INOX

ROCK

**FA-PLUS/C
rev.938072**

(1) *General door panel* M

Communication R.: ACTIVATED

PRI			SEC		
230	110	0	−	−	+	+

Main

CV | CV = | − | + | D | A out | A in- | V in+ | MALLA | V out + | V out-

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

BACBONE 250

Next distributor

Door panel V2Plus

* **D1L-V2Plus**

F.Linea

Platea V2Plus

** **Sw2**

BUS IN   BUS OUT   HZ   PA   PB

BUS   D   BUS

FA-V2PLUS

PRI   SEC
230 110 0   −   +   +

Main

(M)

SW1

+   −   BUS   CV2 CV1 +12

Riser 1

FA-V2PLUS

PRI   SEC
230 110 0   −   +   +

Main

MC-V2PLUS

+   −   COL 1 COL 2 COL 3 COL 4   PL 1   PL 2   PL 3

Next Riser

BUS V2PLUS

−   +   BUS

FA-V2PLUS

PRI   SEC
230 110 0   −   +   +

Main

Sw1   **CD-V2PLUS**   (S)

JP1

D   Ao Ain   Vo Malla Malla Vi CT+

BUS PLUS

FA-PLUS/C
rev.938072

(1) General door panel (S)

Communication R.: DEACTIVATED

(M) = Master.

(S) = Slave.

PRI   SEC
230 110 0   −   −   +   +

Main

BACKBONE 0

CV CV
o u   −   +   D   A   A   V   V MALLA V   V
                     out in in+   out −

To the next
door panel

General door panels (without coaxial cable) and backbone encoder CD-V2Plus.

BACKBONE 1

Next distributor

* **D1L-V2Plus**

F.Linea

BUS | D | BUS

Platea V2Plus

* * **Sw2**

BUS IN | BUS OUT | HZ | PA | PB

Riser 1

FA-V2PLUS

MC-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

EL-564

JP1

(1)

IN

CT+ | − | − | Vp2 | Mp2 | Malla | Vout | Malla

FA-V2PLUS

PRI			SEC		
230	110	0	−	+	+

Main

CD-V2PLUS

JP1

D | Ao | Ain | Vo | Malla | Malla | Vi | CT+

PLUS BUS

FA-PLUS/C
rev.938072

PRI			SEC		
230	110	0	−	+	+

Main

General door panel Ⓜ

Communication R.: ACTIVATED

CV | CV | − | + | D | A out | A in | V in+ | MALLA | V out+ | V out

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

Next distributor

BACKBONE 250

Door panel V2Plus

(M)

✱ **D1L-V2Plus**

F.Linea

Platea V2Plus

✱✱ **Sw2**

FA-V2PLUS

SW1

| BUS | D | BUS |

BUS IN BUS OUT **HZ** **PA** **PB**

| PRI | SEC |
| 230 | 110 | 0 | − | − | + | + |

Main

| + | − | BUS | CV2 | CV1 | +12 |

Riser 1

FA-V2PLUS

MC-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)

EL-564

JP1

(1)

FA-V2PLUS

CD-V2PLUS

JP1

IN

| CT+ | − | − | Vp2 | Mp2 | Malla | Vout | Malla |

| PRI | SEC |
| 230 | 110 | 0 | − | − | + | + |

Main

| D | Ao | Ain | Vo | Malla | Malla | Vi | CT+ |

PLUS BUS

✱ Insert the end of line 120 Ω
resistor in the last distributor.

✱✱ Setting the end of line in the last
monitor.

(1) Set to On the jumper JP1 "end on line
resistor" if the video cable (twisted pair)
ends at the converter EL564.

| (M) | =Master. |
| (S) | =Slave. |

FA-PLUS/C
rev.938072

General door panel (S)

Communication R.: DEACTIVATED

| PRI | SEC |
| 230 | 110 | 0 | − | − | + | + |

Main

BACKBONE 0

| CV − | CV + | − | + | D | A out | A in | V in | Malla | V out |

To the next
door panel

Access door panels and risers.

☞ Incorrect functioning of the inner door panels.
- ☜ Check that the *EL500/V2Plus* microprocessor circuit installed in the inner door panels is "Version 2.00" or later and if it is not, replace it with one with this version.

☞ Calls cannot be made.
- ☜ Ensure that the monitors/telephones have been correctly programmed and the door panel correctly configured. (See the TV2PlusML product manual).
- ☜ Check that there are no short-circuits in the riser's multiplexer terminals or in the terminals of the monitor/telephone bus wires. (See autodiagnostic LEDS on page 47).
- ☜ Check that the voltage in the terminals "Col" of the riser and "PL" of the door panel in the multiplexer is 23 to 25,5Vdc 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 if this is not the case, check the power supplies and their connections.

☞ The monitors cannot be programmed.
- ☜ Check that the dip switch SW1-2 of the master access door panel is in the ON position. (See the TV2PlusML product manual).
- ☜ Check that there are no short-circuits in the riser's multiplexer terminals or in the terminals of the monitor/telephone bus wires. (See autodiagnostic LEDS on page 47).
- ☜ Check that the voltage in the terminals "Col" of the riser and "PL" of the door panel 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 if this is not the case, check the power supplies and their connections.

General door panels with backbone encoder CD-V2Plus.

☞ The converter cannot be programmed.
- ☜ See the converter manual TCD-V2PlusML.

☞ Incorrect functioning of the inner door panels (if these exist).
- ☜ Check that the *EL500/V2Plus* microprocessor circuit installed in the inner door panels is "Version 2.00" or later 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 encoder CD-V2Plus have been programmed correctly and check their connection and configuration (see the converter manual TCD-V2PlusML).
- ☜ Check the programming of the monitors/telephones (see door panel manual TV2PlusML) and program again if it is necessary.
- ☜ Check that the voltage in the terminals "Col" of the riser and "PL" of the door 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 18.5 Vdc in the FA-Plus/C power supply. If this is not the case, check the power supplies and their connections.

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