

Protocol converter

CD-V2PLUS/TP



TCD-V2PLUS/TP ML rev.0112

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 without the power connected.
- ▷ Do not use excessive force when tightening the converter 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, 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.

- □ Install or modify the equipment without the power connected.
- ➡ 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>.
- \Rightarrow 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.
- \bowtie 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 <u>4 risers</u> (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 <u>16 risers</u> (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 1.5mm².
- ➡ 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.



Coming from previous page

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.



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.

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

M = Master.

S=Slave.



DESCRIPTION



INSTALLATION



CONFIGURATION



AUTODIAGNOSTIC LEDS



escription of autodiagnostic LEDs.

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

Green Led

Fixed: Correct operation.

<u>Slow blinking</u>: Programming active (SW1-1 to ON). <u>Quick blinking</u>: Programming finished.

Red Led

Fixed: Programming error.

<u>Blinking</u>: There is a short circuit in the installation* between the bus wires.

PROGRAMMING

Drogramming the converter.

* 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).

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.

GOLMAR



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.

department).

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								
-All bra -Each f -Each a	-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.							
-Maxin Installa-	 -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 acce -Up to -Up to	 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 							
-Up to -Install	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 <i>MC-V2PLUS</i>).							
-Install -Before	 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 							
ui da	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 replacir	ng the installation riser, use the Golmar of	able RAP-2150 ar	nd the next section	ns:				
	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			0,5mm ²				
	(a.c lock release) CV1,CV2, ~, ~		1mm ²	1mm ²				
*Do not use different types of cable in the same installation (contact with our technical support								

Continue

Coming from previous page <u>Several accesses and risers</u>						
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				
+,-			1,5mm ²			
(d.c lock release) CV1,CV2				0,5mm²		
(a.c lock release) CV1,CV2, ~, ~			1mm ²	1mm ²		

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

ompatibility of cables and sections.

One access and one riser (without multiplexer)

Cables and distances chart

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



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

Continue



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.
0,5mm 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.











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.
- - 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.

