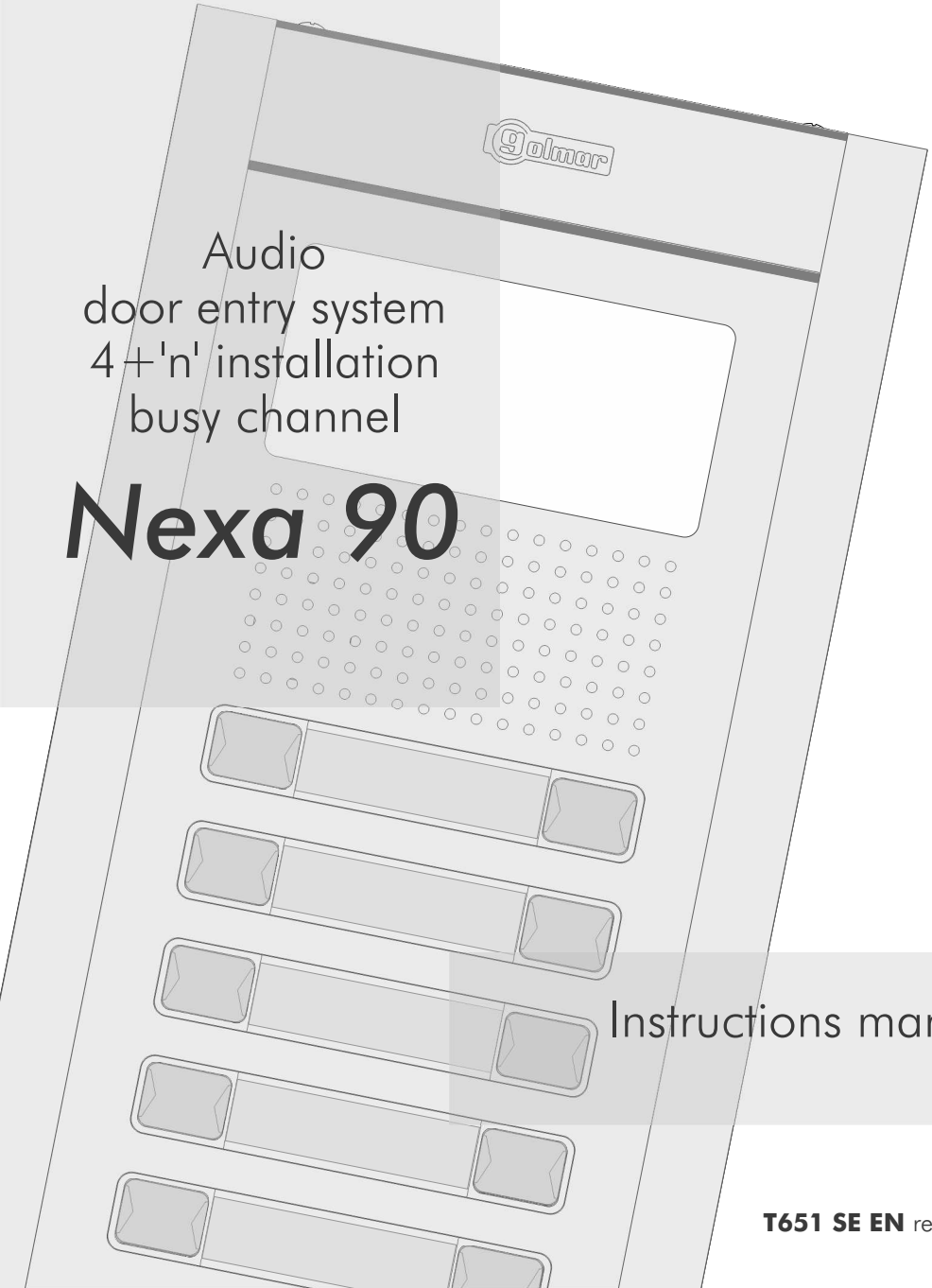
Cód. 50124534

Audio
door entry system
4+'n' installation
busy channel

Nexa 90



Instructions manual

T651 SE EN rev.0121

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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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**.
- With power supply:
  - Do not use excessive force when tightening the connector screws.
  - Install the power supply in a dry and protected place without risk of drip or water projections.
  - Avoid to place it near to heating sources, in dusty locations or smoky enviroments.
  - Do not block ventilation holes of the unit so that air can circulate freely.
  - To avoid damage, the power supply has to be firmly fixed.
  - To avoid an electrical shock, neither remove the protection cover nor handle the connected wire in the terminals.
  - Check the proper specified input voltage to "PRI" terminals of the transformer.
- With telephones:
  - Do not use excessive force when tightening the connector screws.
  - Install the telephones in a dry and protected place without risk of drip or water projections.
  - Avoid to place it near to heating sources, in dusty locations or smoky enviroments.
  - Do not block ventilation holes of the equipments so that air can circulate freely.
- Before to connect the system, check the connections between door panel, telephones and transformer connection.
- Do always follow the enclosed information.

SYSTEM CHARACTERISTICS

- Audio system with 4 + N wires installation.
- For installations with several access doors.
- Up to three telephones in the same apartment.
- Up to 20 push buttons modules EL610.
- Electronic call type with selectable call tone on EL651 SE sound module.
- Acoustic call acknowledgement signal.
- Acoustic busy channel acknowledgement signal.
- Maximum distance between transformer and door panel: 300m. / 2,5mm ^{2}section.
- Maximum distance between lock release and door panel: 300m. / 2,5mm ^{2}section.
- Maximum distance between door panel and last telephone: 300m.
- Just 1 TF-104 transformer (12Va.c., 1.5A) will be required for each door panel.
- Door opening timed at 3 seconds.
- A.c lock release operated by relay.

SYSTEM OPERATION

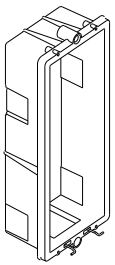
- To make a call the visitor should press the push button corresponding to the apartment he wishes to contact. An acoustic tone will be heard confirming the call as the push button is pressed. At this moment the call will be received at the telephone in the dwelling.
- With several access doors, the other(s) door panel(s) will be automatically disconnected: if a visitor tries to call from other panel an acoustic tone will be heard confirming the system is busy. If the call is not answered in 30 seconds, the system will be freed.
- To establish communication pick up the telephone handset. The communication will last for 3 minutes or until the handset is replaced. Once the communication has finished the system will be freed.
- To open the door, press the door release push button at any moment during call and communication progresses: with one press, the door release operates during 3 seconds.

DOOR PANEL DESCRIPTION

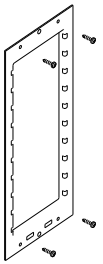
Door panel description.

General detail of parts, for assembly the door panel.

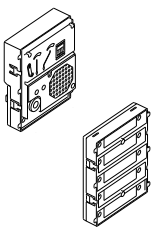
Embedding boxes



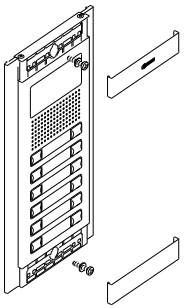
Frame modules



Electronic modules

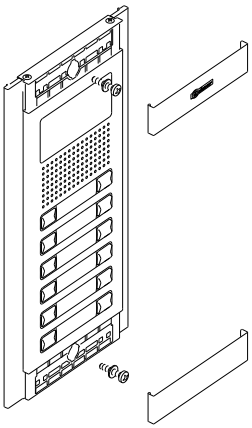


Aluminium modules

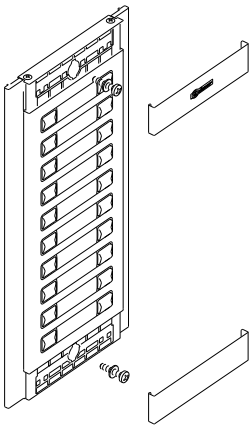


Door panel description.

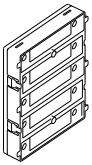
Main module



Push button module



Sound module
EL651 SE , sound module with busy channel (electronic call).

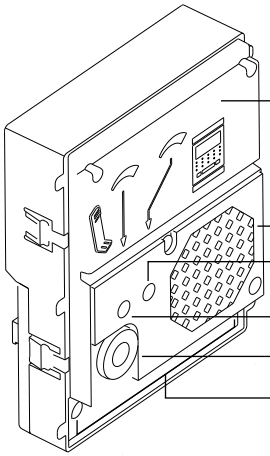


Push buttons electronic module
EL610A , for 5 single push buttons or 10 double push buttons.

Short connection cable, it is supplied with EL610A module (8 cm length).
For the connection of the push buttons between the sound module EL651 SE and the push buttons module EL610A and between push buttons modules EL610A of the same embedding box.

Connection cable RAP-610A (55 cm length).
For the connection between push buttons module EL610A the different embedding boxes.

Sound module EL651 SE description.



Front side.

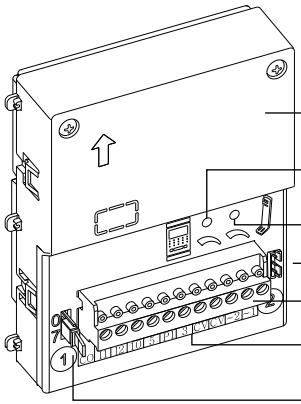
Speaker.

Door panel audio adjustment.

Telephone audio adjustment.

Microphone.

Sound module push buttons (x2).



Back side.

Door panel audio adjustment.

Telephone audio adjustment.

Push buttons connector.

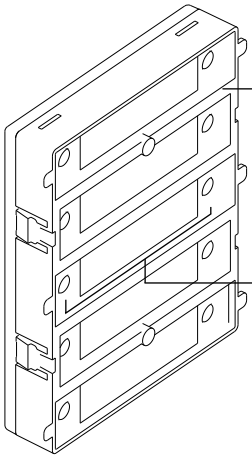
Installation terminals (4+N Bus and busy channel).

Label.

Call tone selection jumper:
(**0**: Call tone 1 / **7**: Call tone 2).

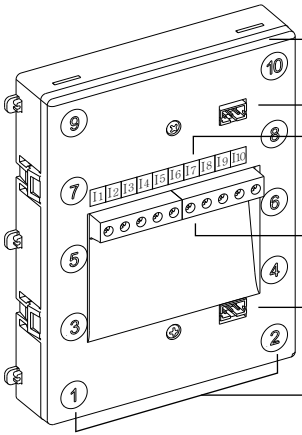
- CO : Busy channel.
- I1 : Call ind. to push button 1.
- I2 : Call ind. to push button 2.
- 10 : Audio output communication.
- 5 : Audio input communication.
- P1 : Input signal lock release.
- 3 : Ground.
- CV : "N.O" contact free for lock release.
- CV : "C" contact free for lock release.
- ~2 : Input power supply (TF104).
- ~1 : Input power supply (TF104).

Push buttons electronic module EL610A description.



Front side.

Push buttons module (x10).



Back side.

Input push buttons connector.

Label.

Installation terminals push buttons, (call Independent).

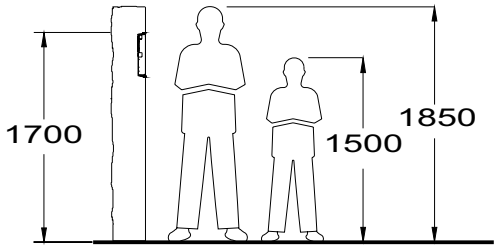
Output push buttons connector.

Push buttons number.

- I1 : Call ind. to push button 1.
- I2 : Call ind. to push button 2.
- I3 : Call ind. to push button 3.
- I4 : Call ind. to push button 4.
- I5 : Call ind. to push button 5.
- I6 : Call ind. to push button 6.
- I7 : Call ind. to push button 7.
- I8 : Call ind. to push button 8.
- I9 : Call ind. to push button 9.
- I10 : Call ind. to push button 10.

DOOR PANEL INSTALLATION

Embedding box positioning.

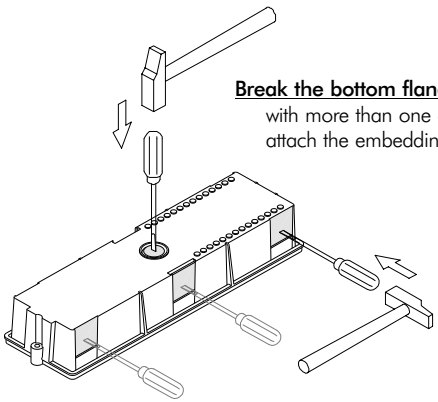


The upper part of the door panel should be placed at 1,65m. height roughly. The hole dimensions will depend on the type of door panel.

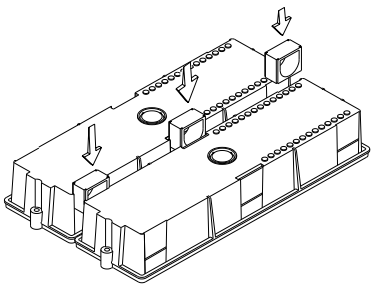
Door panel Model	90CS CEA90C	90C CEV90C	90 CEV90
An	99	99	99 mm.
Al	143	250	328 mm.
P	40	56	56 mm.

The door panel has been designed to be placed under most of the environmental conditions. However it's recommended to take additional cautions like rainproof covers.

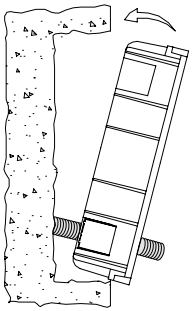
Preparing the cables entry.



Break the bottom flange to pass the cables through. In case of door panels with more than one embedding box, break the side flanges and attach the embedding boxes using UC junctions.



Place the embedding box.

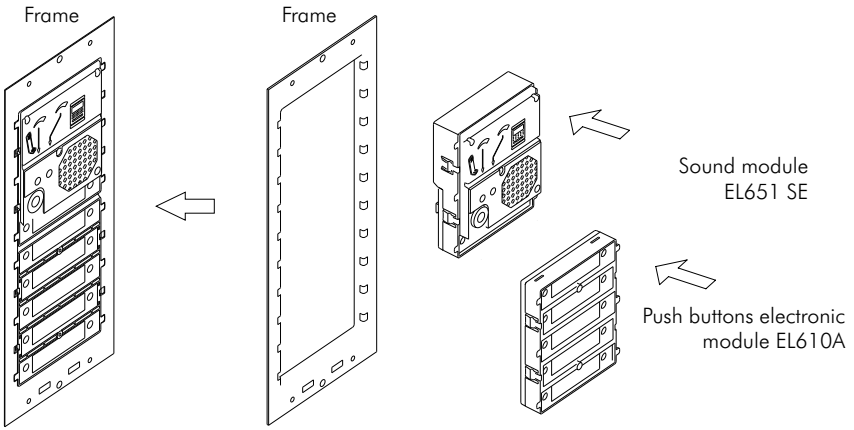


Pass the wiring through the hole made in the bottom part of the embedding box. Level and flush the embedding box. Once the embedding box is placed, remove the protective labels from the attaching door panel holes.

Assembly the electronic modules.

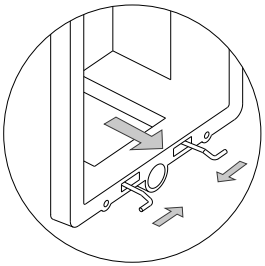
Insert the sound module in the top part of the frame module.
Align the tabs on the sound module in their respective housings of the frame module and later exercise a light pressure until correct placement.

If there is push buttons module repeat the above process, locating under the sound module, as shown in the drawing.

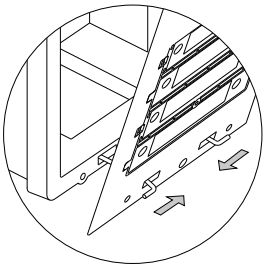


DOOR PANEL INSTALLATION

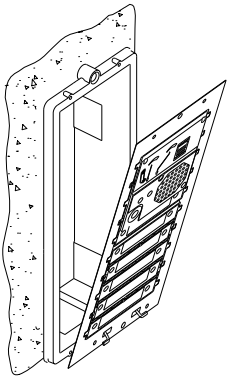
Hold the frame on the embedding box.



Insert the hinge that it is supplied with the product in the embedding box, as shown in the drawing.

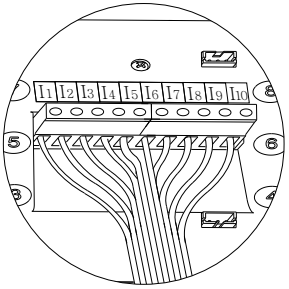


To hold the frame on the embedding box, insert the hinge in the housings arranged for this purpose in the frame, as shown in the drawing.



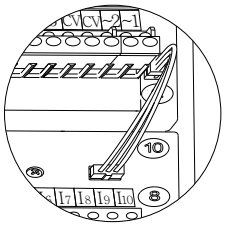
The frame can now be folded horizontally facilitating the connection and adjustments in the sound module and push buttons electronic module.

Push buttons wiring.



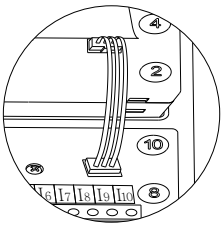
Insert the call independent wire in the corresponding terminal push button (module EL610A).
This wire should be connected to "0" telephone terminal of electronic call in the assigned dwelling.

Plug the Short connection cable.



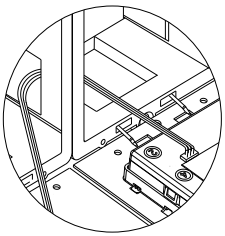
Insert the short connection cable that it is supplied with the product EL610A, in the push buttons connector of the sound module EL651 SE and the other end of the connection cable in the input connector placed in the top part of the push buttons EL610A module, as shown in the drawing.

Between push buttons modules EL610A of the same embedding box, insert the short connection cable of the output connector of the first push buttons module to the input connector of the second push buttons module, as shown in the drawing.

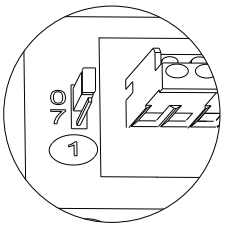


Plug the connection cable RAP-610A.

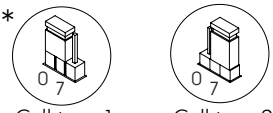
Use the connection cable RAP-610A, for the connection of 2 push buttons modules EL610A of different embedding boxes. Insert the connection cable in the output connector of the last module EL610A of the first embedding box and the other end of the connection cable in the input connector of the first push buttons module EL610A placed in the top part of the second embedding box, as shown in the drawing.



Call tone selection.



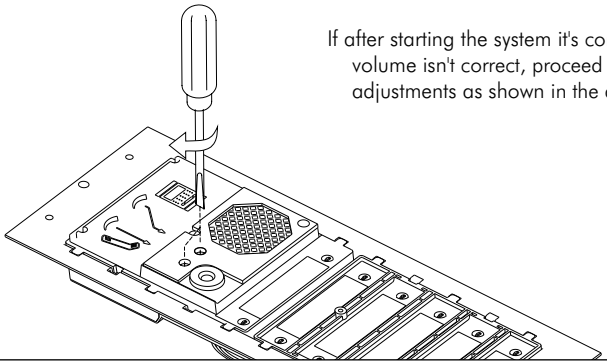
The sound module EL651 SE, have a jumper placed on the back side and on the left side of the terminal connector. This jumper allows to select between two different call tones:
"**0**" call tone 1 (factory default) or "**7**" call tone 2.
This allows the user to distinguish where the call is comming from.



Call tone 1 Call tone 2

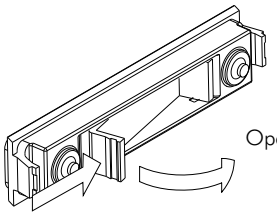
∗ Factory default

Final adjustments.

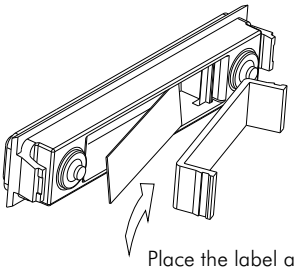


If after starting the system it's considered that the audio volume isn't correct, proceed with the necessary adjustments as shown in the drawing.

Place the nameplate labels.

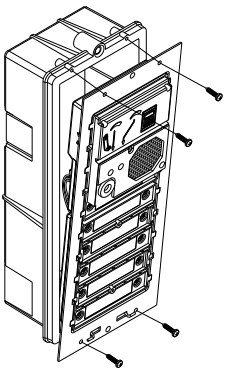


Open the label holder.



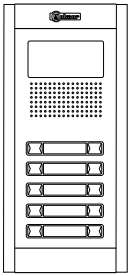
Place the label and close.

Close the frame.

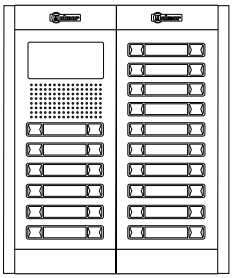


Once finished the works of wiring, configuration and final adjustments, fix the frame in the embedding box with the supplied screws.

Door panel assembly.



In assemblies of a single door panel, it is ready from factory to be mounted.

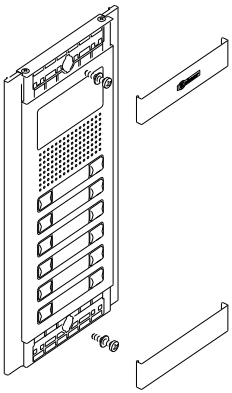


If the door panel to installing is of more than one module it will be necessary make some adjustments to join a door panel with other one.

IMPORTANT:

To make these adjustments of joining several door panels, see the document that is supplied with the door panel and follow the steps that are described in the section" Mechanical assembly for double door panel" and once finished the adjustments stick the adhesive gasket (that is supplied with the push buttons module) in the rod of joining modules.

Close the door panel.



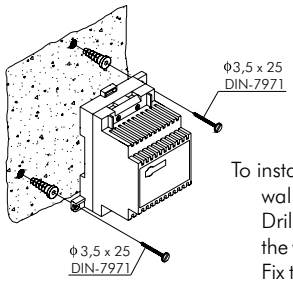
Fix the door panel by using the supplied screws.

Finish the door panel assembly by placing the closing heads, put the head on one side and then make a slight pressure on the other end, to its correct placement.

POWER SUPPLY INSTALLATION

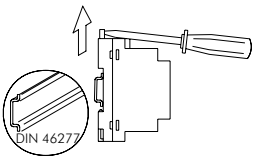
Installing the TF-104 transformer.

Install the transformer in a dry and protected place without risk of drip or water projections.
To avoid an electrical shock, neither remove the primary protection cover nor handle the connected wire in the terminals.
The installation and handling of these equipments must be performed by **authorised personnel** and **without the power connected**.
To avoid damage, the transformer has to be firmly fixed.



It's recommended to protect the transformer by using a thermo-magnetic circuit breaker.

To install the transformer directly on the wall, insert the fixing flanges.
Drill two holes of Ø6mm. and insert the wallplugs.
Fix the transformer with the specified screws.



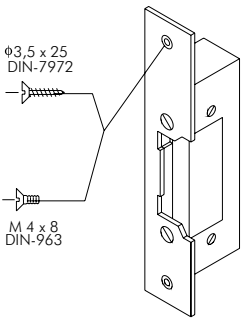
The transformer can be installed on a DIN guide (3 units) simply pressing it.
To disassemble the transformer from the DIN guide, use a plain screwdriver to lever the flange as shown on the picture.

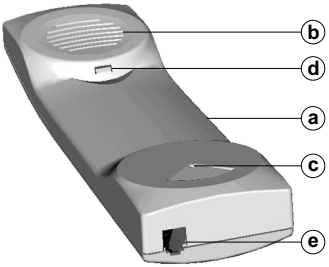
Replace the protection cover once the input terminals have been wired.

LOCK RELEASE INSTALLATION

Lock release installation.

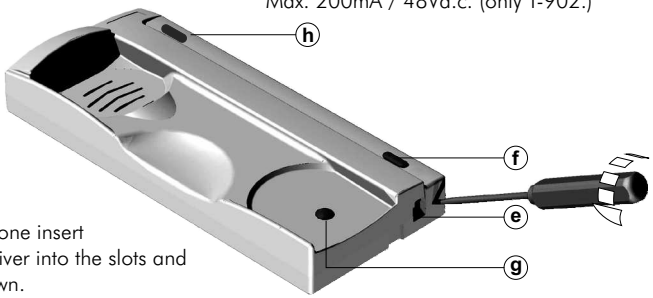
If the lock release will be installed in a metal door, use a Ø3,5mm. drill and tap the hole. In case of wood door, use a Ø3mm. drill.





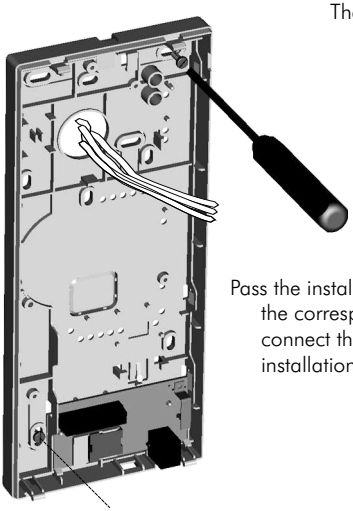
Description of the T-900, T-902, T-900VD, T-910 and T-910R telephones.

a. Telephone handset.
b. Speaker grille.
c. Microphone hole.
d. Subjection hole.
e. Telephone cord connectors.
f. Door release push button.
g. Hook switch.
h. Contact free additional push button. Max. 200mA / 48Vd.c. (only T-902.)



To open the telephone insert a plain screwdriver into the slots and rotate it as shown.

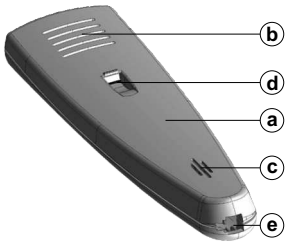
Avoid to place the telephone near to heating sources, in dusty locations or smoky environments.
The telephone can be fixed using an electrical embedding box or directly on the wall, as shown on the picture. If the telephone will be installed directly over the wall, drill two holes of Ø6mm. on the specified positions, using 6mm. wallplugs and Ø3,5 x 25mm. screws.



Pass the installation wires through the corresponding hole and connect them as shown on the installation diagrams.

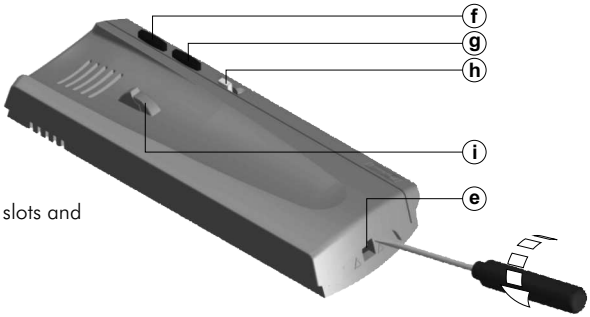
Close the telephone as shown on the picture. Once the telephone is closed, connect the handset using the telephone cord and put it on the craddle.

TELEPHONE INSTALLATION

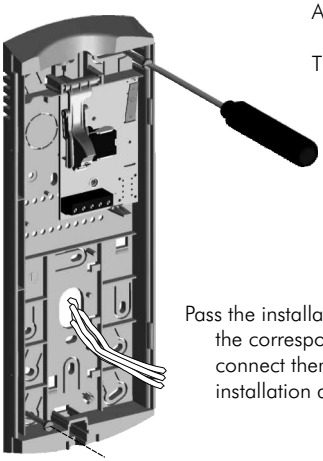


Description of the T-700, T-712VD and T-710R telephones.

a. Telephone handset.
b. Speaker grille.
c. Microphone hole.
d. Subjection hole.
e. Telephone cord connectors.
f. Door release push button.
g. Contact free additional push button.
Max. 200mA / 48Vd.c. (only T-712VD).
h. Call volume regulator.
(only T-712VD with electronic call).
i. Hook switch.



To open the telephone insert a plain screwdriver into the slots and rotate it as shown.

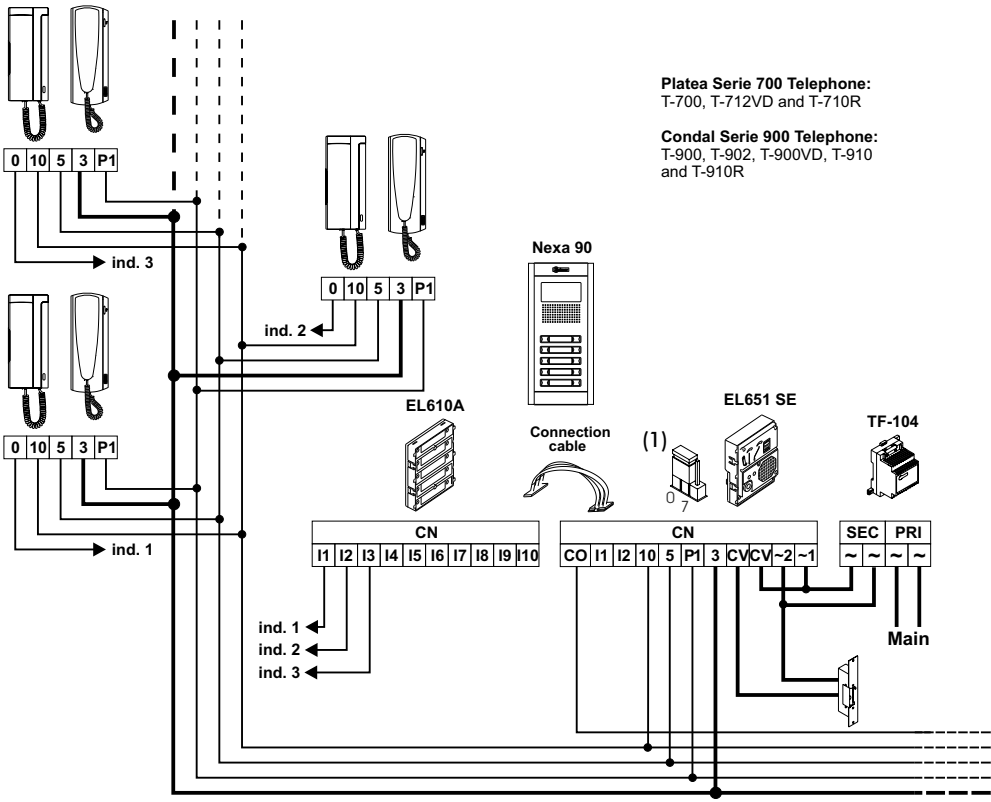


Avoid to place the telephone near to heating sources, in dusty locations or smoky environments.

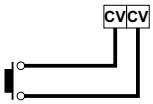
The telephone can be fixed using an electrical embedding box or directly on the wall, as shown on the picture. If the telephone will be installed directly over the wall, drill two holes of Ø6mm. on the specified positions, using 6mm. wallplugs and Ø3,5 x 25mm. screws.

Pass the installation wires through the corresponding hole and connect them as shown on the installation diagrams.

Close the telephone as shown on the picture. Once the telephone is closed, connect the handset using the telephone cord and put it on the craddle.



The lock release can be activated at any moment by using an external push button, that must be connected between 'CV' and 'CV' terminals of the sound module. This function will allows to exit from the building being not necessary the use of a key.

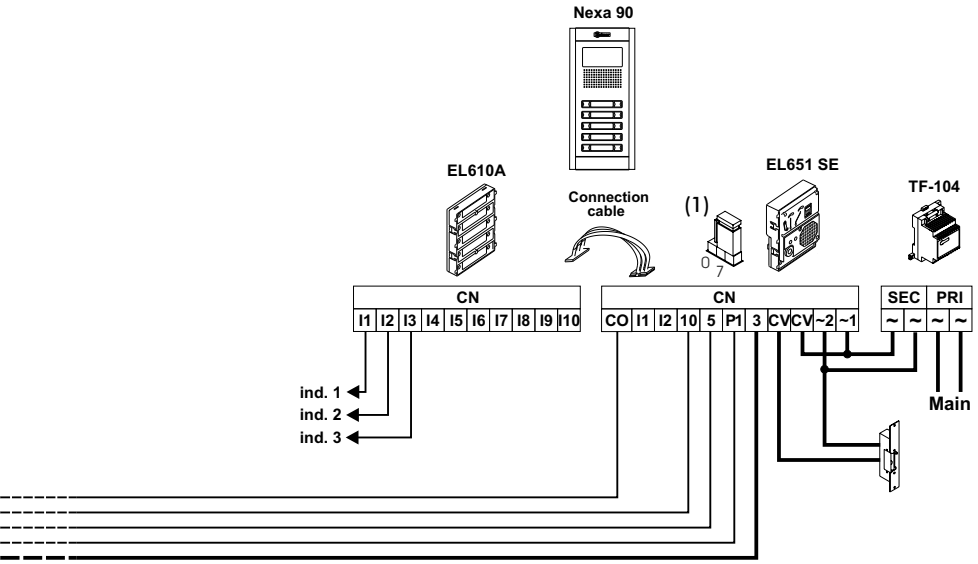


(1) Call tone selection:

The sound module EL651 SE, have a jumper placed on the back side and on the left side of the terminal connector. This jumper allows to select between two different call tones:
"**0**" Call tone 1 (factory default) or "**7**" Call tone 2.
This allows the user to distinguish where the call is comming from.

INSTALLATION DIAGRAM

Several access door.
Electronic call.



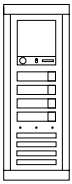
	Sections chart	
Terminal	100m.	300m.
0, ind, 5, 10, P1, CO	0,25mm²	0,50mm²
3	0,50mm²	1,00mm²
~1, ~2, CV	1,00mm²	2,50mm²

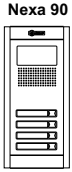
For longer distances than the specified, contact with your distributor.

Conversion table.

Replacement Serie 90 "4+N" to Nexa 90 "4+N" (conversion table):

Below the connection terminals are detailed to replace an installation of several access serie 90 "4+N" to several access Nexa 90 "4+N".

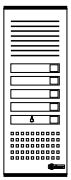


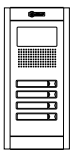


Connection		Connection
Terminal: **CO**	← Connect to →	Terminal: **CO**
Terminal: 🔊	← Connect to →	Terminal: **10**
Terminal: **–**	← Connect to →	Terminal: **3**
Terminal: 🎙	← Connect to →	Terminal: **5**
Terminal: **P**	← Connect to →	Terminal: **P1**
INDEP. N1,2,3...	← Connect to →	**I1,I2,I3...**

Replacement Serie 60 "4+N" to Nexa 60 "4+N" (conversion table):

Below the connection terminals are detailed to replace an installation of several access serie 60 "4+N" to several access Nexa 60 "4+N".





Connection		Connection
(Busy channel was done with relays)	← Connect to →	Terminal: **CO**
Terminal: **10**	← Connect to →	Terminal: **10**
Terminal: **5**	← Connect to →	Terminal: **5**
Terminal: **4**	← Connect to →	Terminal: **P1**
Terminal: **3**	← Connect to →	Terminal: **3**
INDEP. N1,2,3...	← Connect to →	**I1,I2,I3...**

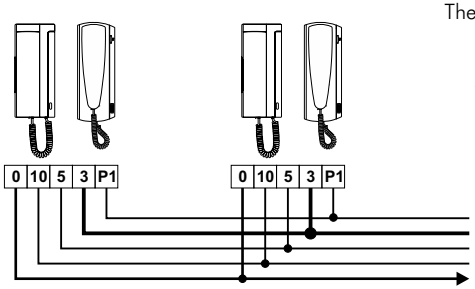
Note: To realize the Serie 60 door panel replacement to Nexa 60, follow the steps described in the manual '*Nexa 60 replacement*' that it is supplied with door panel (aluminium modules).

Note: Replace the installation of several access Serie 60 '4+n' to Nexa 60 '4+n'. If telephones are not compatible with electronic call they must be also replaced by Golmar electronic call-compatible telephones. For the connection of the Nexa 60 '4+n', (see pages 55-56).

Important: If the installation transformer is replaced (A-100, A-104, A-105, A-120 and A-124) with TF-104, the wire connected to terminal 3 must be annulled from replaced transformer.

OPTIONAL CONNECTIONS

Parallel telephones installation.



The maximum number of telephones placed in the same apartment is three.
For each telephone placed in parallel the section corresponding to the call wire must be doubled.

Electronic call.

TROUBLESHOOTING HINTS

- Nothing operates.
  - Check the output transformer voltage between 'SEC' terminals: it should have 12 to 17Va.c. If not, disconnect the transformer from the installation and measure again. If it's correct now, it means there is a short circuit in the installation. Disconnect the transformer from mains and check the installation.
- Inappropriate audio level.
  - Adjust the level volumes as shown on page 50. In case of feedback, reduce the audio levels until feedback fade out.
- Door open function no operates.
  - Remember: Door open function is only active during call and communication progresses.
  - Disconnect the lock release from the sound module EL651 SE and short-circuit terminals 'CV' and 'CV': at that moment the output voltage between terminals 'CV' and '~2' should be 12Va.c. If it's so check the lock release, its wiring and the wiring of the terminal 'P1' from the sound module to the telephones. If these tests don't solve the problem, replace the sound module.
- No telephones receive the call or acknowledgement call signal is not reproduced.
  - Check push buttons wiring (page 48) and the connection cable between modules are well connected in the push buttons connector (page 49).
- Busy channel no operates.
  - Check when a call is made on one of the door panels, the voltage between the terminals '-' and 'CO' of all door panels is less than 3Vd.c. If not, check the continuity of the 'CO' wire.

Este producto es conforme con las disposiciones de las Directivas Europeas aplicables respecto a la Seguridad eléctrica ***2014/35/CEE*** y la Compatibilidad Electromagnética ***2014/30/CEE***.

This product meets the essentials requirements of applicable European Directives regarding Electrical Safety ***2014/35/ECC,*** *Electromagnetic Compatibility* ***2014/30/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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