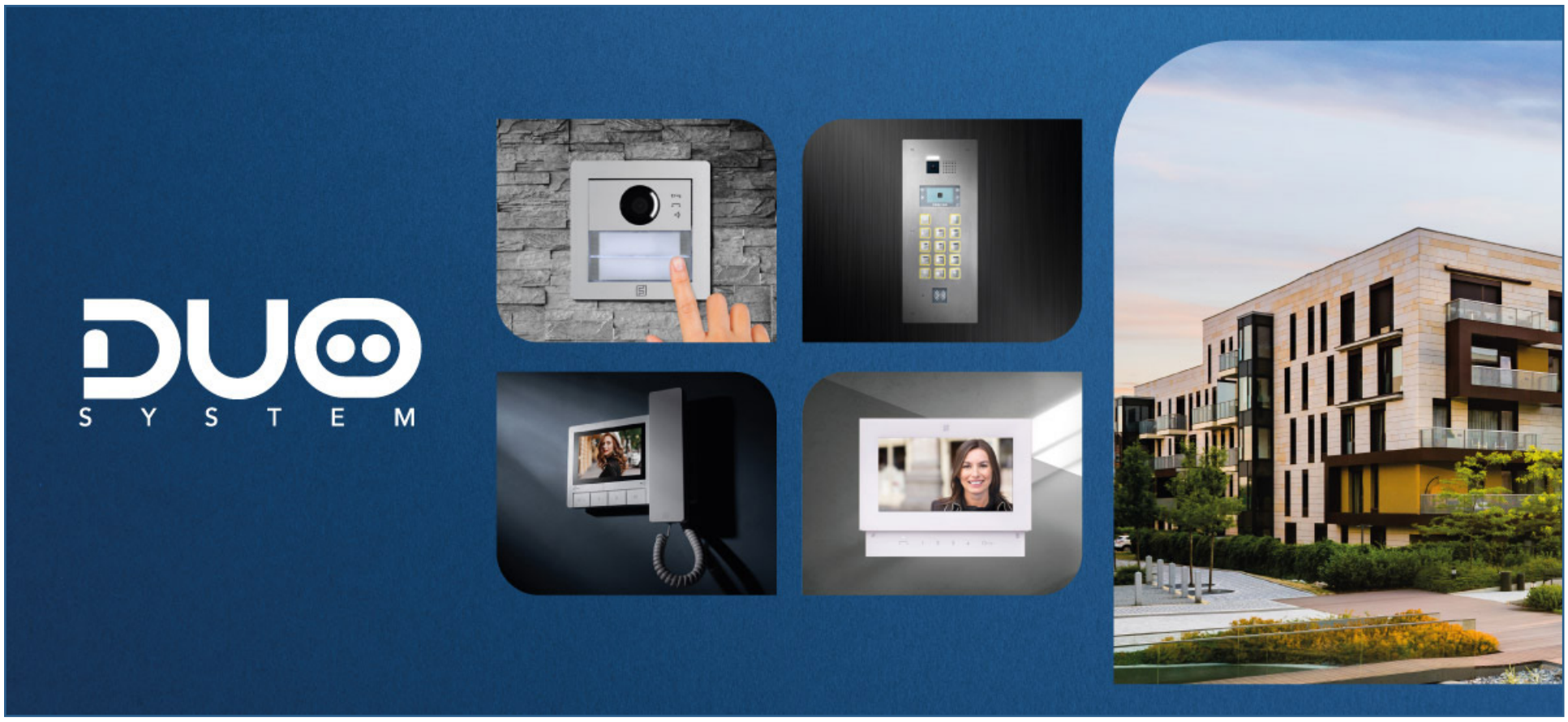

5

Chapter 5

ACCESSORIES

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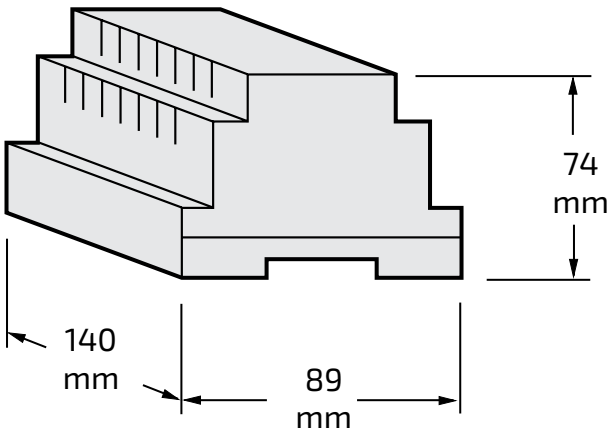
Art. 2221MQ



Power supply for DUO system

The power supply can power all devices with a proper audio, video and data impedance for the correct operation of the DUO home automation system.

Technical data

Mains voltage: (0 / 127)	127VAC
(0 / 230)	220-230VAC
Frequency:	50 ÷ 60 Hz
Power:	38VA
Maximum load:	0.5A
Output protection:	PTC
Safety:	compliant EN62368-1
Operating temperature:	0° ÷+40°C
Maximum admissible humidity:	90% RH
Housing:	8 module A DIN
Fits	on DIN bar

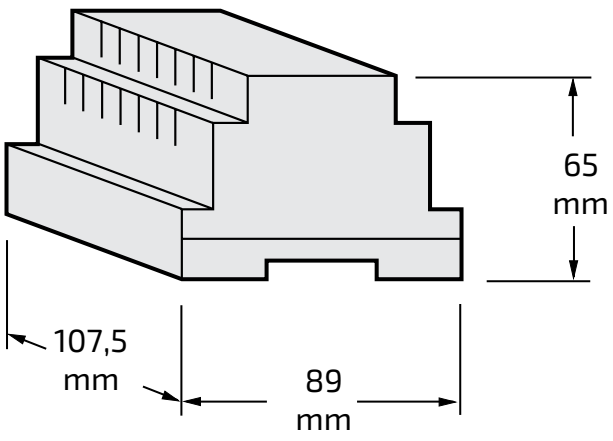
Output terminals

LP/LP Line output

Jumper for closing or opening the line

J1 jumper inserted = closing line on 100Ω
jumper removed = open line

Art. 2221S



Switching power supply for DUO system

The power supply can power all devices with a proper audio, video and data impedance for the correct operation of the DUO home automation system.

Technical data

Mains voltage:	110-240VAC
Frequency:	50 ÷ 60 Hz
Power:	60VA
Output protection:	PTC
Operating temperature:	0° ÷+40°C
Maximum admissible humidity:	90% RH
Housing:	6 module A DIN
Fits	on DIN bar

Terminals

PRI Mains power input
LP/LP Line output

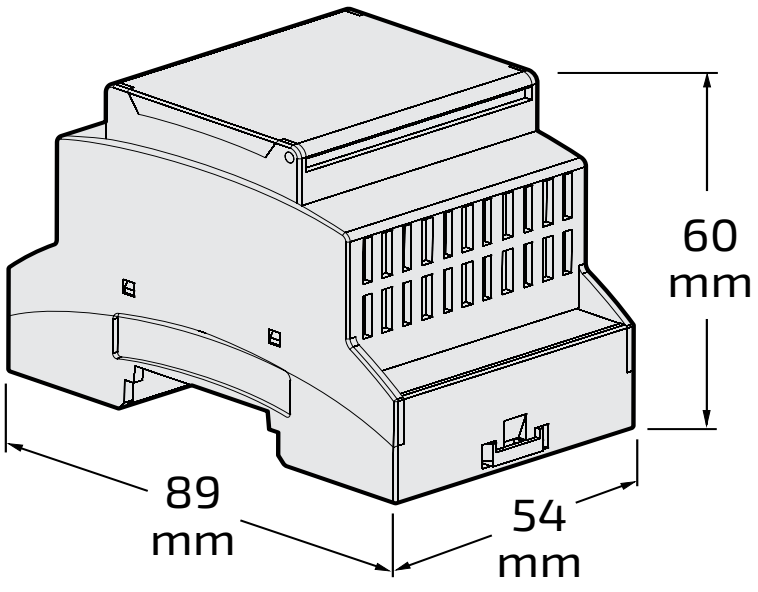
Jumper for closing or opening the line

J1 jumper inserted = closing line on 100Ω
jumper removed = open line

Important safety instructions

-This device is intended for use only for Farfisa videointercom or intercom. Installation and maintenance must only be carried out by qualified personnel in accordance with the regulations in force.
-The device is not suitable for installation in places where the presence of children is probable.
-The device must be installed in an switch box.
-Do not obstruct the heat dissipation openings and do not expose the unit to dripping or splashing. No object full of water, such as a vase, is to be placed on the device.
-The building electrical installation must incorporate a circuit breaker, with a separation between the contacts of at least 3 mm at each pole, a 16 A automatic circuit breaker, and a 0.03 A differential switch.
-Connection to the mains must be carried out only using a cable type H03VVH2-F(300/300V) 2x0,75mm^2. After connection, insert the plastic protection and strain release on the terminals and screw it up.
-Power supplies are protected by a temperature sensor. For resetting, disconnect the device from the main for 1 minute and reconnect it after eliminating the defect.
-Disconnect the device from the main before carrying out any maintenance or service actions.

Art. 2223Q



Programmable via DUO System app

Video amplifier for DUO system

Video Amplifier Art. 2223Q restores the video signal in Duo installations allowing to increase the max distance between door station and internal monitors. The device has been designed to match the video distributors DV242xQ. The amplifier can be powered either by the DUO line or locally.

Technical features

Power supply:	from DUO line
Local Power supply:	12Vca±10%
Power consumption: - stand-by	6mA
- operating	110mA
Housing:	DIN 3 A modules
Operating temperature:	0° ÷ +50°C
Max Humidity:	90% RH

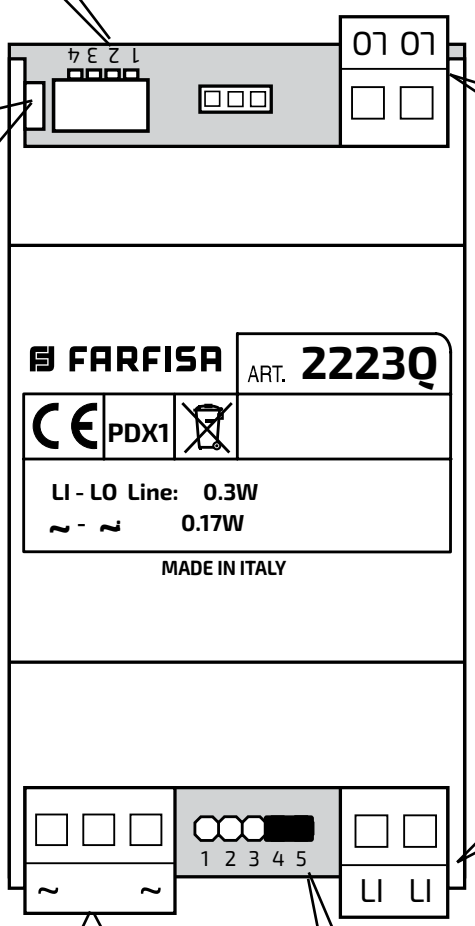
Terminals

~ - ~	Local power supply input
LI - LI	DUO line input
LO - LO	Amplified output of DUO line

Position of connectors and their function

SW1
Dip-switches for programming.

LED1
Operating mode indication:
- slow flashing: stand-by;
- steady on (amplification active): call/automatic switch-on between devices with addresses within the ranges F1-F10;
- OFF (amplification not active): addresses not included in F1-F10 or missing power supply;
- fast flashing: programming.

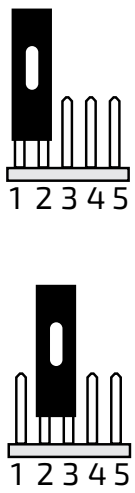


Terminal board for LO-LO

Terminal board for LI-LI

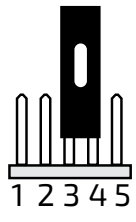
Voltage input (12Vac-0.110mA)

Jumper to adjust the impedance of the video signal.

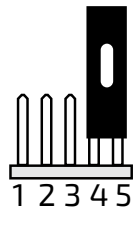


1-2 termination **47** ohm

2-3 open line



3-4 termination **70** ohm



4-5 termination **100** ohm

PROGRAMMING

Preliminary notes

The video amplifier should be connected along a DUO line and it restores the video signal.

⚠ **Attention**: 2223Q must be installed on a DIN rail and in a dry place protected from possible lightning.

The device is powered by the line unless a voltage of 12Vca±10%, it is present to its terminals ~/~, in this case the device automatically gets power from the local power supply. The amplifier doesn't require any programming, but in installations with more risers or if some video instability should occur, it would be advisable to store in the device the addresses of the door stations connected to its LI line and those of the videointercoms connected to its LO line.

- To manage the addresses of the door stations connected to the line LI the ranges F1÷F5 are available; to manage the addresses of the videointercoms connected to the line LO the ranges F6÷F10 are available. In each range can be stored the address of a single device or the first and the last address of a group of devices with sequential addresses, connected to the same line.
  For example if in the range F1 is stored only the address 231, on the line LO will be amplified the video signal coming only from the door station 231; if in the same range F1 are stored the addresses 231 and 234, on the LO line will be amplified the video signal coming from all the door stations whose address is among 231 and 234. In the same way if in the range F6 is stored only the address 100, on the line LO will be amplified the video signal only for the calls addressed to the videointercom 100; if in the same range F6 are stored the addresses 100 and 120, on the LO line will be amplified the video signal for all the calls addressed to the videointercoms whose addresses are among 100 and 120.

⚠ **Attention:**

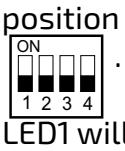
- in the ranges F1÷F5 must be stored only the addresses of door stations connected to the LI line and not those of the eventual videointercoms connected to the same line; in the ranges F6÷F10 must be stored only the addresses of the videointercoms connected to the LO line and not those of the eventual door stations connected to the same line.
- if during the programming some errors are made or if later it is necessary to modify some addresses already stored in the memory of the device, it is necessary to erase the whole memory of the device executing the "memory erasing" procedure and than reprogramming completely the device.

Programming with the DUO System app

The device can be fully programmed via Bluetooth by downloading the "DUO System" app (available for iOS and Android) into your smartphone or tablet. It is necessary to:

- connect a Bluetooth programmer item PGR2991BT or XE2921 to the system;
- set all the dipswitches of SW1 to ON:

  LED1 will flash quickly;
- open the "DUO System" app and, after connecting to the Bluetooth programmer, go to the local programming section and choose 2223Q;
- do the programming,
- turn all the dip-switches of SW1 to OFF position



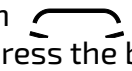
.
  LED1 will flash slowly again.

⚠ **If a Bluetooth programmer cannot be used, an "emergency" programming procedure is available, described in the following paragraphs.**

Manual programming the ranges.

To program the ranges F1÷F10 it is necessary:

1) select the range to be programmed, positioning the dip-switches of SW1 according to the instructions provided in table 1 on page 10; red LED flashes quickly.
2) Store the address of the devices by following the procedure described here below:

- to store the address of a door station, make a call from it to any videointercom;
- to store the address of a videointercom from Astro and Exhito videointercoms, press the button  , from Sette videointercom, press the button  and from Zhero videointercom, press the button  .

Notes.

- Correct storage is indicated by the LED which turns OFF for one second and then turns back ON in flashing mode.

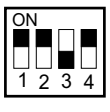
If in the range it is requested to program a group of addresses and then it is requested to program the last address of the group, proceed with the point 3); if, instead, it is requested to program only one address go to point 4).

3) From the door station (ranges F1÷F5) or from the videointercom (ranges F6÷F10) having the higher address, execute the storing procedure as indicated on point 2); the amplifier acquires the address of the last door station or videointercoms belonging to the group.
4) If required, proceed in a similar way to program the other 9 ranges repeating the instructions reported on points from 1) to 4) and paying attention to set properly the dip-switches of SW1 according to the range to be programmed (see table on the next page).
5) To exit the programming mode, set OFF all the dip-switches of SW1; red LED comes back flashing slowly.
6) Verify the correct operations of door stations and of videointercoms connected to LI and LO lines of the art.2223Q.

Erasing the stored data (code 11).

To delete the data stored in the device memory:

- position dip-switch SW1 to compose the code 11:

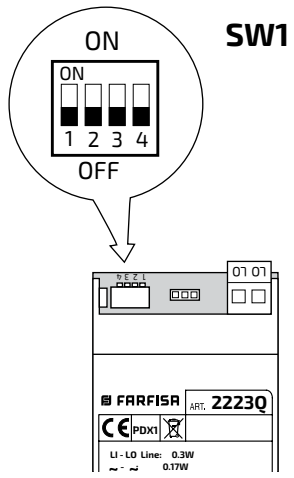


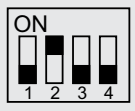
  LED1 will flash quickly.
- wait for about 4 seconds; LED1 will remain ON continuously.
- at this point, within 4 seconds move dip-switch 3 in the ON position:

  LED1 will turn OFF for about 2 seconds, then it will start flashing quickly again. All the data stored in the device has been erased;
- return all the dip-switches of SW1 to the OFF position. LED1 will flash slowly again.

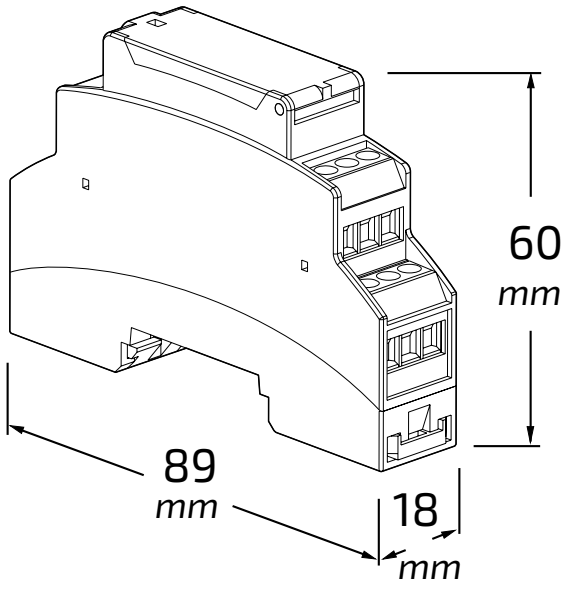
⚠ **Warning**: to exit from the programming mode move all dip-switches of SW1 in OFF position:

Position of SW1's dip-switches and related ranges



Range	LI					LO				
	Door stations					Videointercoms				
	F1	**F2**	**F3**	**F4**	**F5**	**F6**	**F7**	**F8**	**F9**	**F10**
Position of SW1's dip-switches										

Art. 22810



Actuator for DUO system

Programmable via DUO System app

5

It is a device equipped with a relay output for activating services (lock opening, staircase light control, call relay...) and an input (usable for signalling door open, sending remote lock opening command...)

Technical data	
Power supply	from DUO line
Stand-by absorption	0.01 A
Operating consumption	0.04 A
Relay contact rating	240 Vac-1 A
Relay activation time	0-99 sec
Operating temperature	0°÷+50°C
Maximum permissible humidity	90%RH
Housing:	DIN 1 module A

Terminals	
LM/LM	DUO line
IN	Input Port
GN	Ground
JP	Enabling programming
C	Common relay contact
NA	Normally open relay contact
NC	Normally closed relay contact

Red LED on Relay activated

PROGRAMMING

Factory settings

The values of the factory settings are listed below. If you need to change them, follow the instructions in the following paragraphs.

- Relay address=211
- Address (second) additional relay=empty
- Additional (third) address relay=empty
- Additional (fourth) address relay=empty
- Relay activation time=1 sec
- Relay operating mode=activation only from indoor unit
- Elevator mode=disabled
- As intervals=disabled
- Port address IN/GN=221
- Door operating mode=door open signal
- Command destination address=empty

Programming via Bluetooth

In order to carry out all the configurations allowed by the 2281Q, it is necessary to program the device via Bluetooth by downloading the "DUO System" app (available for iOS and Android) to your smartphone or tablet. Then:

- connect a Bluetooth programmer PGR2991BT or XE2921 to the system;
- launch the DUO System app, go to the DUO Bus section, press the "+" button, enter the address of the relay (factory 211) or the IN/GN port (factory 221);
- program and disconnect.

⚠ **If a Bluetooth programmer cannot be used, there is an "emergency" programming procedure, described later, with which only a limited number of parameters can be programmed.**

The following is a brief description of all the configurations that are available via Bluetooth.

Relay addresses.

(By default the relay address = 211).
Allowed values:
- 211 to 220: if used to manage services such as lock release, gate opening, staircase light switch-on;
- from 001 to 200: if used for additional ringer control.

In the "Relay" section of the App the first option is related to the four addresses that can be assigned to the relay (one main and three additional ones). Normally it is enought to configure only the first one and (in some cases such as additional ringer control) the second one, the other addresses are generally useful for managing the elevator function described below.

Addresses range.

(Factory disabled) In case the relay activation is required for a range of several addresses, the activation of the "As ranges" function in the "Misc relè" menu is required."

Relay timing.

(Factory setting 1 sec)
Allowed values: 1 - 99 sec.

Elevator mode

(Factory disabled) The elevator mode allows the possibility to activate the actuator relay when the "door open" button of video door phones or intercoms is pressed. The activation of the C/NA/NC contact, if connected to the control logic of a lift, can activate the command that brings the lift to the desired floor. For a correct configuration of the lift function it is necessary:

- once you have accessed the programming of the 2281Q via the app, go to the section "Relay" and then to the subsection "Misc relè";
- in the "Elevator mode" section the service must be enabled;
- at this point, returning to the section that allows the programming of relay addresses, in the first option (Relay address) the starting address of the range of users for which this function is required must be indicated. In the second option (Relay additional address) the final address of the users for whom the service is required, in the third option (Relay additional address) the address of the door whose opening of the lock gives the command to activate the lift function must be entered;
- if the elevator mode must be linked to the door lock release command for a range of door units, the fourth address of the relay section must be programmed with the highest address of the door unit range, otherwise the same value as the third address must be entered in the fourth address.

Relay operating mode

(By default, can be activated only from indoor stations and monostable) In the section "Misc relè" there are three entries for the operating mode of the relay to be set according to the type of service that is requested to the 2281Q.

- Bistable: (factory set = NO) must be configured on YES only if an ON/OFF type behaviour is requested. Application example: garden light management.
- Activation of services only from door phone/video door phone (factory configuration), Application example: driveway gate opening. For this use set:
  - Operated from door station: NO (factory default)
  - Disable ACK: NO (factory default)
- Service activation from door phone/video door phone and from door unit. Application example: relay remotely controlled by PD2100AB/FP51SAB. Set for this use:
  - Operated from door station: YES
  - Disable ACK: NO (factory default)
- Additional ringer control (with acoustic and/or visual signaller) to the door phone/video door phone. It is necessary to configure in the first of the additional addresses of the relay the same address of the user whose call must be repeated and to set it in the "Misc relè":
  - Operated from door station: YES
  - Disable ACK: YES

INPUT port addresses.

(Factory default port address = 221).
Allowed values:
- 211 to 220: If the port is used to activate the C/NC contact of another 2281Q;
- 221 to 230: address identifying the port within the system;
- 001 to 200: if used to send a floor call to a user;
- 231 to 253: if used to send a lock opening command to an outdoor unit.

Values 001-200 and 231-253 are to be set in the "INPUT port additional address" and are to be considered as the destination addresses of the command sent by the port.

INPUT port operating mode

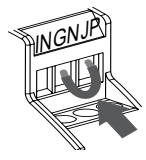
(By default, it sends door open signalling) In the section "Misc port IN", three options are available for the operating mode of the door to be set according to the type of service requested from the 2281Q.

- Door open signalling (factory setting): the device reads the status of its input: OFF if IN and GN are open and ON if there is a short circuit between IN and GN. This status is sent to all door phones/video door phones that are able to manage this signalling with a LED or icon that is activated in the ON case and deactivated with the door in OFF. The settings to be made are:
  - Lock Release: NO (factory default);
  - Sending Set EC: NO (factory);
  - A1 sending: NO (factory default);
- It sends lock opening command when closing IN on GN of door unit whose address is contained in the additional address of the port. For this use set:
  - Lock Release: YES;
  - Sending Set EC: NO (factory);
  - A1 sending: NO (factory default);
- It sends floor call, when closing IN on GN, to the apartment station whose address is contained in the additional door address. For this use set:
  - Lock Release: NO (factory setting);
  - Sending Set EC: NO (factory);
  - A1 sending: YES;
- It sends door unit auxiliary relay activation command (in TD2000.. and C.2124AB, set as auxiliary relay address the same address of the door unit). Assign to IN/GN port the door unit address and set:
  - Lock Release: NO (factory setting);
  - Sending Set EC: YES
  - A1 sending: NO (factory default).
- In case the door operation criterion is required to be reversed (the commands listed above are sent when the IN-GN contact is open), set:
  - Inversion: YES (factory default: NO).

Enter manual relay programming

Entry into manual relay programming must only take place in the off state. To enter the programming mode you must:

- Jumper the JP terminal with GN; (the red LED flashes fast).

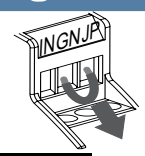


⚠ **To carry out programming, directly connect the door unit or apartment station with which the actuator is to be programmed to its terminals and disconnect the rest of the riser.**

Exit manual relay programming

To exit programming, you must:

- To exit "relay" programming, remove the jumper between



the JP and GN terminals;
(the red LED returns to flash slowly)

Perform manual programming relay.

Manual programming must be performed by changing the following parameters in sequence:

1. Address with which the relay is identified within a DUO installation (factory setting 211, permitted values 211-220).
2. Activation time (in seconds) for which the relay is activated (factory setting 001 s, permitted times 000-099). The value 000 corresponds to bistable operation.
3. Operating mode (factory setting 000, permissible values 000, 002, 006). Determines how the C/NO contact is activated (Table 1).
4. Additional address with which the actuator can be identified. (Factory setting empty, permitted addresses 001-200 and 211-220).

It is not possible to skip steps in the sequence. It is not possible to change the activation time without first setting the relay address (even if the address, already stored in the memory,
is already the desired one). On the other hand, it is possible to leave the programming mode before completing the sequence if you are not interested in the subsequent steps.
For example, it is possible to change only the relay address, leaving the rest unchanged. At this point, once the value has been entered (e.g. 211), you can exit programming. The values of the parameters to be set in the relay must be previously stored (for example) in the buttons of a video door phone/intercom (it is possible to store in button 1 the address 211, in button 2 the time 005 seconds, in button 3 the operating mode 006 and in button 4 the additional address 100).
Once into the programming:

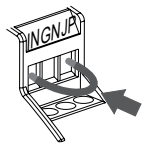
- The device is ready to receive the relay address; then press button 1 on the intercom in which the value 211 of the above example is stored. A confirmation tone will be heard;
- the device is ready for programming the activation time; if no further programming is required, exit, otherwise press button 2. A confirmation tone will be heard;
- the device is ready for the programming of the operating mode; if no further programming is required exit, otherwise press button 3. A confirmation tone will be heard;
- the device is ready for the programming of the additional address; if no further programming is required, exit, otherwise press button 4. A confirmation tone will be heard.

Exit programming. If you made a mistake, repeat the procedure from the beginning. As an alternative to the video door phone/intercom, the digital keypad of an external door station can be used to enter the values of the relay parameters.

Enter manual IN/GN port programming.

To enter the "input port" programming mode,

- the JP terminal must be jumpered with IN;



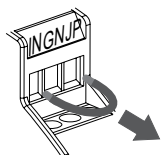
(the red LED flashes quickly).

To carry out programming, directly connect the door unit or apartment station with which the actuator is to be programmed to its terminals and disconnect the rest of the riser.

Exit manual IN/GN port programming.

To exit the "input port" programming:

- you must remove the jumper between the JP and IN terminals;;



red LED will return to flash slowly).

Perform manual programming of the IN/GN port.

The sequence of parameters to be changed is as follows:

1. Address which identifies the input port within a DUO installation; (factory 221, permitted values 221-230. Or 211-220 only if IN/GN is used to activate C/NA/NC of another 2281Q).
2. Command sent by the device when closing/opening the IN-GN contacts as shown in Table 2; (factory setting 000, permitted values 000-001-004-128-129-132).
3. Destination address of the command; when the IN/GN contacts are closed (factory setting no value, permitted values 001-253).

As the relay, it is not possible to skip steps in the sequence. It is not possible to change the command to execute without first setting the door address (even if the address already stored is the desired one). On the contrary, it is possible to exit the programming in advance, if you want to modify only the first parameters of the sequence. The values of the parameters to be set in the input port must be previously stored (for example) in the buttons of a video door phone/intercom (it is possible to store in button 1 the address 221, in button 2 the command 001 and in button 3 the destination address 231).
Once we get into the programming:

- The device prepares to receive the port address; then press button 1 of the door phone in which the value 221 of the above example is stored. A confirmation tone will be heard; if the relay address of another 2281Q has been stored (actuator activation from another actuator), exit programming;
- the device is ready for programming the type of command sent; if no further programming is required, exit, otherwise press button 2. A confirmation tone will be heard;
- the device is ready for the programming of the destination address of the command; if no further programming is required exit, otherwise press button 3. A confirmation tone will be heard;

Exit programming. If you made a mistake, repeat the procedure from the beginning. As an alternative to the video door phone/intercom, the digital keypad of an external station can be used to enter door parameter values.

Manual return to factory programming (default).

To restore factory programming and therefore cancel all the changes made during the programming phase, you can proceed via Bluetooth or manually. In the latter case it is necessary to:

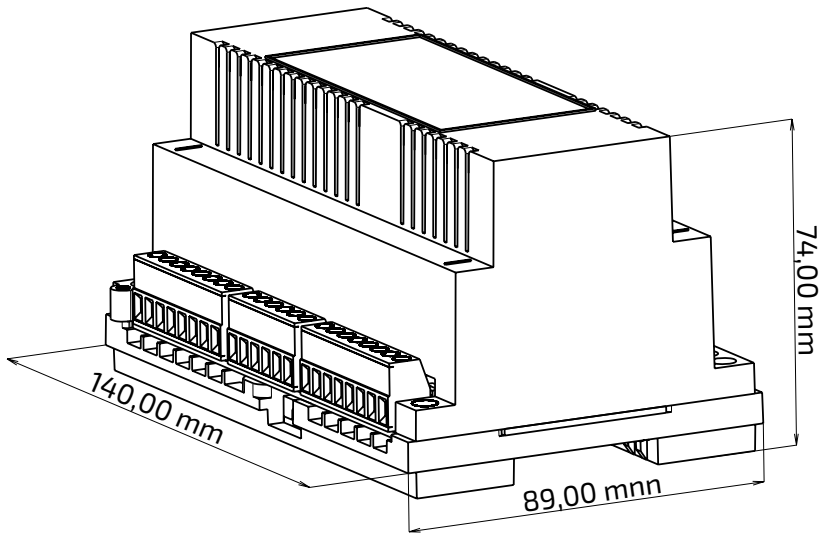
- enter relay or input port programming as described in the "enter manual programming" paragraphs;
- To reset all relay parameters to the factory defaults, program the value 211 into the relay address;
- To reset all input port parameters to the factory default value, program the value 221 into the input port address;
- Exit programming.

Table 1. Relay operating mode	**Code**
Activation of services from internal stations only	000
Activation of services also from external stations	002
call forwarding	006

(*)The command is sent to all devices for which the destination address does not need to be programmed.
Note: To display the door open message on EX3262C/EX362, it is necessary to enable mode 7 of system programming.

Table 2. Codes for command selection sent by IN-GN on	**contact closing**	**contact opening**
Door open/closed warning*	000	128
Door lock activation (set destination address)	001	129
Floor call to internal station (set destination address)	004	132

Art. DM2444



Programmable via DUO System app

Concentrator for DUO system

Distribute the video signal coming from several external door stations to the videointercoms connected to the output lines according to the addresses programmed; audio and calling signals are on the contrary distributed to all the devices without taking care of their addresses. Warning. The device do not allows multiple calls and conversations.

Technical features	
Power supply from the line	
Stand-by current:	15 mA
Operating current:	40 mA
Housing:	8 module A DIN
Operating temperature:	0° ÷ +50°C
Maximum humidity acceptable:	90% RH

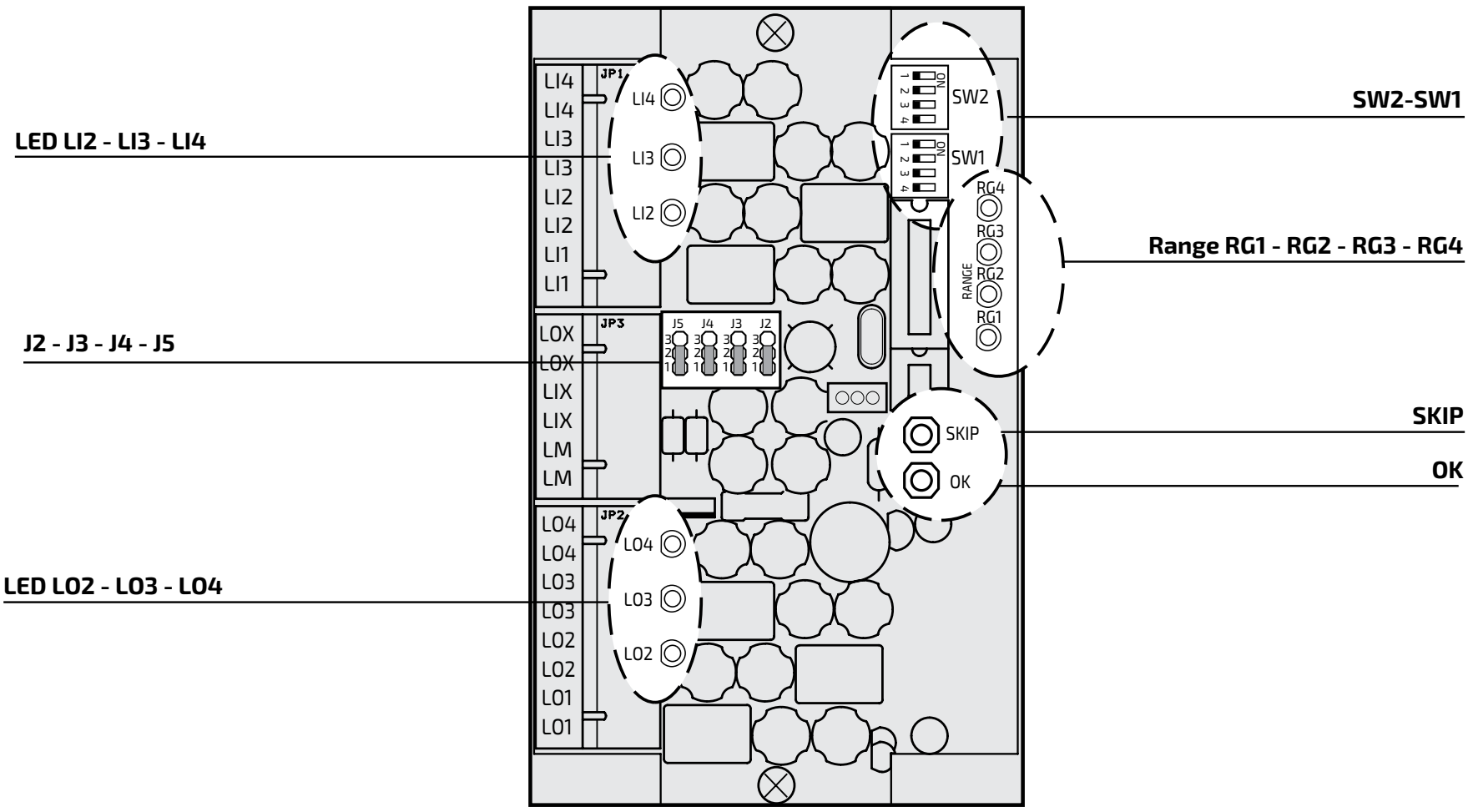
Terminals	
LM	Power supply input
LI1 ÷ LI4	Line inputs
LO1 ÷ LO4	Line outputs
LOX (*)	To LO1 of a previous DM2444
LIX (*)	To LI1 of a previous DM2444

(*) Connection to be made only if there are more than one DM2444 in the system.

Interior view

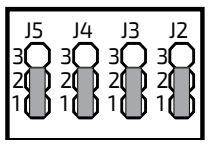
Remove the cover of the device to access to the programming buttons.

- **LED's LI2-LI3-LI4**. They point out which input line is active.
- **LED's LO2-LO3-LO4**. They point out which output line is active.
- **J2-J3-J4-J5**. Jumpers to be set only on the second and additional line distributors DM2444 (if present in the installation).
- **SW1 - SW2.** Micro-switches which allow setting the first and last address of each address interval.
- **Range**. Led's which point out which address interval, among the 4 available for each line, are going to be programmed.
- **SKIP Button.** Allows to:
  - enter the programming mode;
  - select the programming type;
  exit the programming mode.
- **OK Button**. Allows to confirm and store programmed codes.

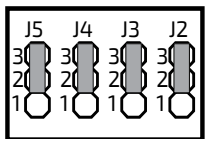


Addition of further DM2444

If more than 4 input/output lines are required, add one or more DM2444.
For correct operations, set the jumpers J2, J3, J4 and J5 in the following way:



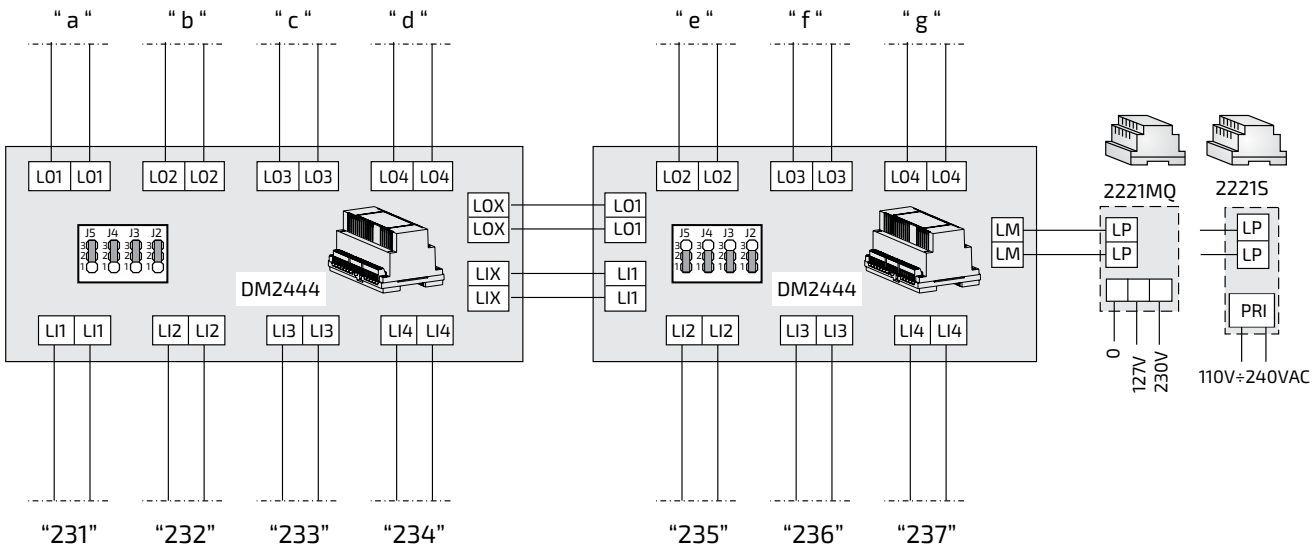
Position 1 - 2
On the first line DM2444 (factory setting)



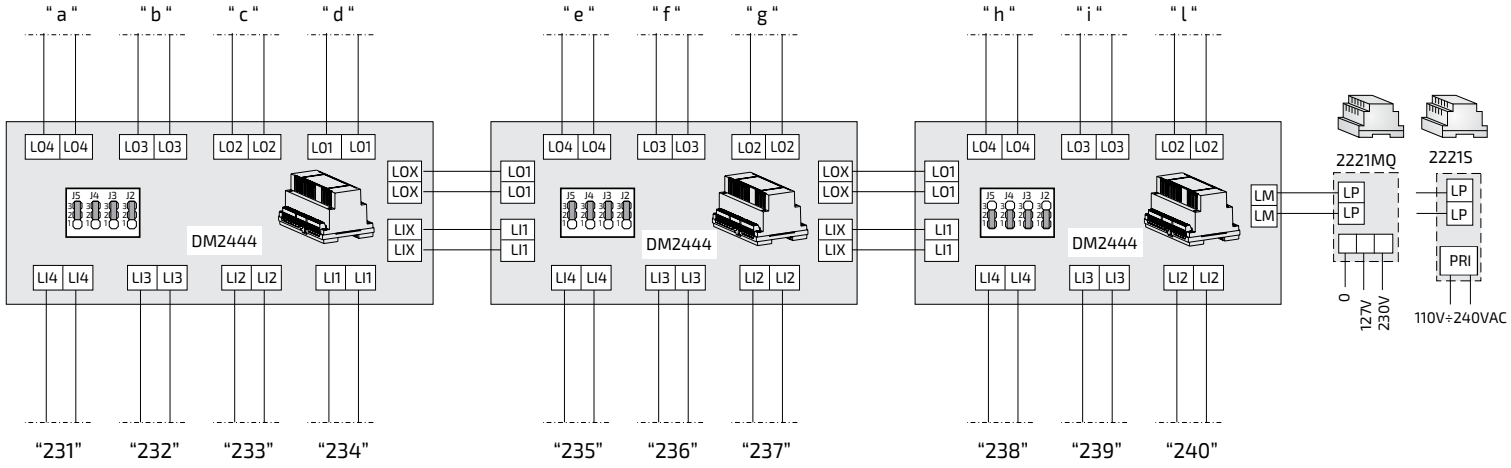
Position 2 – 3
On the second and additional DM2444.

Videointercom risers. The addresses of the internal stations belonging to a riser must be programmed in the output lines of the related DM2444 (except LO1).
External video door stations. The address of each external door station.must be programmed on the input line (except LI1) of the related DM2444.

7 external door wstations and 7 risers



10 external door wstations and 10 risers



PROGRAMMING

Preliminary notes

- If input lines LI2, LI3, LI4 and output lines LO2, LO3, LO4 are connected to the system, they must be programmed to allow the management of the related addresses.
- Lines LI1 and LO1 must not be programmed; line distributor will send automatically on LI1 and LO1 all the addresses of the system which are not programmed in any address intervals of the other lines.
- For the management of the addresses of the devices connected to the lines LI2, LI3, LI4, LO2, LO3 and LO4, are available 4 address intervals (RG1÷RG4) for each line. In each address interval of an input or output line, can be stored the address of a single device or the first and last address of a group of devices (see example 1b). The addresses to be stored in the address intervals of the lines LI2, LI3, LI4 start from 231 up to 253 and must be equal to those stored in the devices (normally external door stations) connected to those lines. The addresses to be stored in the address intervals of the lines LO2, LO3, LO4 start from 001 up to 200 and must be equal to those stored in the devices (normally videointercoms) connected to those lines.

Examples.

1a -If in the address interval RG1 of the line LO2 is stored the address 100, on LO2 will be diverted the video signal for calls addressed only to the videointercom 100.

1b -If in the same RG1, on the contrary, are stored addresses 100 (the lowest address) and 120 (the highest address), on the LO2 line will be diverted the video signal for calls addressed to any videointercom whose address is between 100 and 120.

2 - If in the address interval RG1 of the line LI2 is stored the address 232, the external door station connected to the line LI2 must be programmed with the address 232 and would be able to send calls to any videointercom.

Entering the programming mode

- Remove the cover of the device to access to the programming buttons.
- Keep pressed the SKIP button as long as the Led LI2 will light-up and the Led RG1 starts flashing.

Exit the programming mode

It is possible to exit the programming mode by one of the following two procedures:

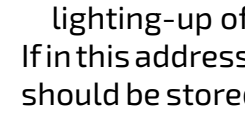
- keep pressed the SKIP button as long as all the led's RG1, RG2, RG3 and RG4 start flashing in a sequential way;
- disconnect and connect again the power supply of the device.

Warning. You will exit automatically the programming mode if for about 5 minutes no operations are made; all the data entered until that moment will be automatically stored.

Programming with the DUO System app

The device can be fully programmed via Bluetooth by downloading the "DUO System" app (available for iOS and Android) into your smartphone or tablet. It is necessary to:

- connect a Bluetooth programmer item PGR2991BT or XE2921 to the system;
- after having carried out all the operations described in paragraph Entering the programming mode, set all the dipswitches of SW1 and SW2 to ON:



- do the programming, turn all the dip-switches of SW1, SW2 to OFF position and exit the programming as indicated in the paragraph Exit the programming mode.

If a Bluetooth programmer cannot be used, an "emergency" programming procedure is available, described in the following paragraphs.

Manual programming the address intervals

To program the address intervals of the lines LI2÷LI4 and LO2÷LO4, it is necessary:

1) keep pressed the SKIP button as long as the Led LI2 will light-up and the Led RG1 starts flashing;
2) enter the address of the first device (the lowest address) you wish to assign to the address interval RG1 of the line LI2:
   - using dip-switches SW1 and SW2 set the address to be stored in the address interval RG1 (see table 1);
   - press the OK button; correct storing of data is confirmed by the simultaneous lighting-up of all the 4 RG led's;

   If in this address interval only one address should be stored proceed directly to point "4".
3) enter the address of the last device (the highest address) you wish to assign to the address interval RG1 of line LI2, as shown in the previous point;
4) press the SKIP button to move to the programming of address interval RG2 of the LI2 line; Led LI2 remains ON, Led RG1 turns OFF and Led RG2 starts flashing;
   - to program the address interval RG2 proceed as indicated at the points "2" and "3";

   if it is not necessary to program the address intervals RG2, RG3 and RG4, press several times the SKIP button until the Led LI3 lights-up and Led RG1 starts flashing;
5) proceed as indicated at the points "2", "3" and "4" to program the address intervals RG1, RG2, RG3 and RG4 of the lines LI3 and LI4;

   if it is not necessary to program the address intervals of those lines, press several times the SKIP button until the Led LO2 lights-up and Led RG1 starts flashing;
6) proceed as indicated at the points "2", "3", "4", and "5" to program the address intervals of output lines LO2, LO3 and LO4;
7) exit the programming mode as reported in the chapter "exit the programming mode" and set all the dip-switches of SW1 and SW2 in OFF position;
8) verify the correct operation of the system.

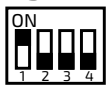
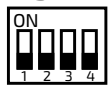
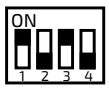
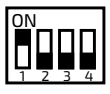
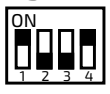
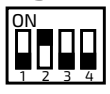
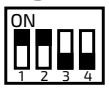
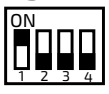
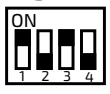
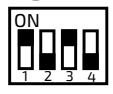
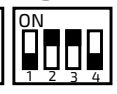
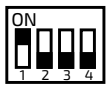
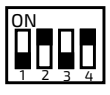
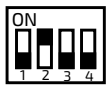
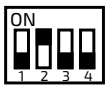
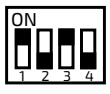
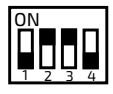
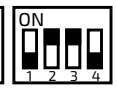
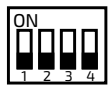
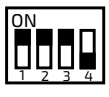
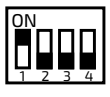
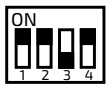
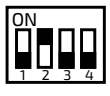
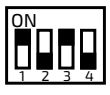
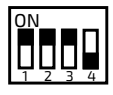
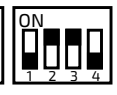
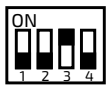
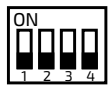
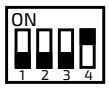
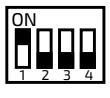
Clearing the memory of the device

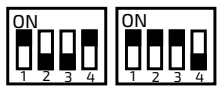
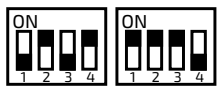
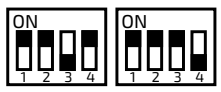
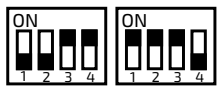
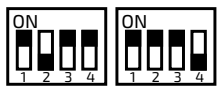
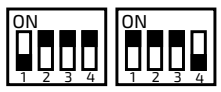
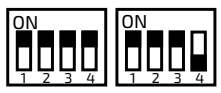
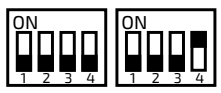
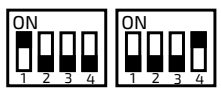
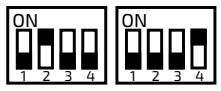
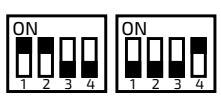
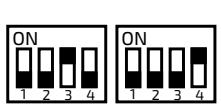
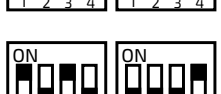
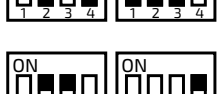
To erase completely the memory of the device, it is necessary:

- enter the programming mode by pressing the SKIP button; Led LI2 lights-up and Led RG1 starts flashing;
- set the dip-switches of SW1 and SW2 to the value 85 moving the switch 1 and 3 of both SW1 and SW2 to ON position (see table 1);
- keep pressed the OK button until all the 6 Led's LI2, LI3, LI4, LO2, LO3 and LO4 momentarily light-up; the device memory has been completely cleared;
- keep pressed the SKIP button to exit the programming mode.

Attention: whether in the line distributor DM2444 it is made an error during the programming phase or later it is requested to modify the already stored addresses, it is necessary to erase the whole memory of the device by executing the procedure "Clearing the memory of the device" and then program again completely the device to avoid undesired programming.

Table of correspondence between codes and position of DIP switches SW1 and SW2

	SW2	SW1		SW2	SW1		SW2	SW1		SW2	SW1		SW2	SW1		SW2	SW1
1			21			41			61			81			101		
2			22			42			62			82			102		
3			23			43			63			83			103		
4			24			44			64			84			104		
5			25			45			65			85			105		
6			26			46			66			86			106		
7			27			47			67			87			107		
8			28			48			68			88			108		
9			29			49			69			89			109		
10			30			50			70			90			110		
11			31			51			71			91			111		
12			32			52			72			92			112		
13			33			53			73			93			113		
14			34			54			74			94			114		
15			35			55			75			95			115		
16			36			56			76			96			116		
17			37			57			77			97			117		
18			38			58			78			98			118		
19			39			59			79			99			119		
20			40			60			80			100			120		

	SW2	SW1
121		
122		
123		
124		
125		
126		
127		
128		
129		
130		
131		
132		
133		
134		
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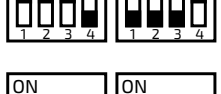
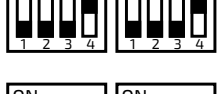
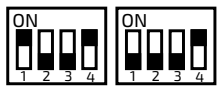
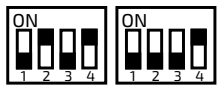
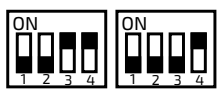
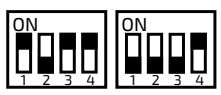
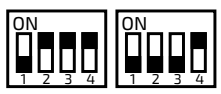
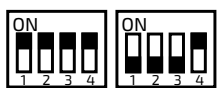
136		
137		
138		
139		
140		
141		
142		
143		

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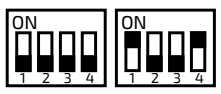
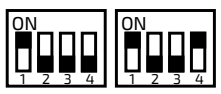
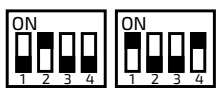
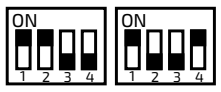
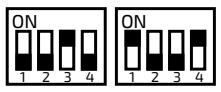
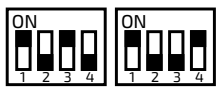
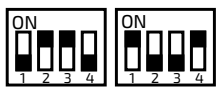
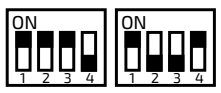
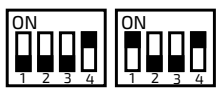
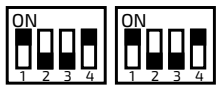
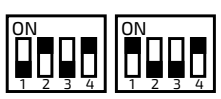
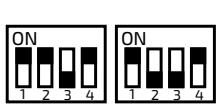
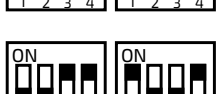
144		
145		
146		
147		
148		
149		
150		
151		
152		
153		
154		
155		
156		
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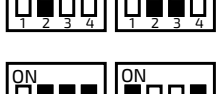
158		
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	SW2	SW1
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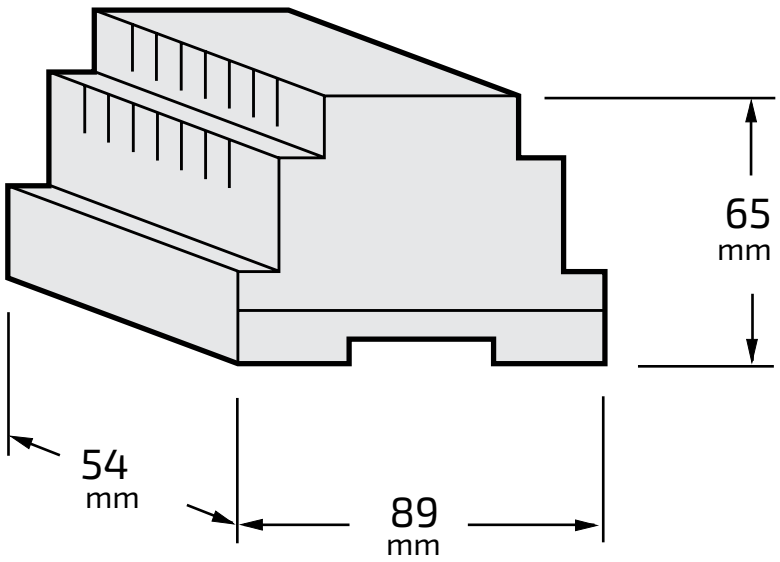
Art. XM2922



Line driver for DUO system

The item is able to couple any power supply to a DUO system.

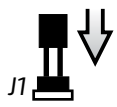
Technical data

Power supply:	36Vdc±1
Maximum load:	1 A
Operating temperature:	0 ÷ + 40 °C
Maximum humidity:	90% RH
Housing:	3 module A DIN

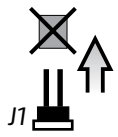
Terminals

IN/IN Power supply input +36Vdc+/-1
LP/LP Line output

Jumper for close or open line impedance

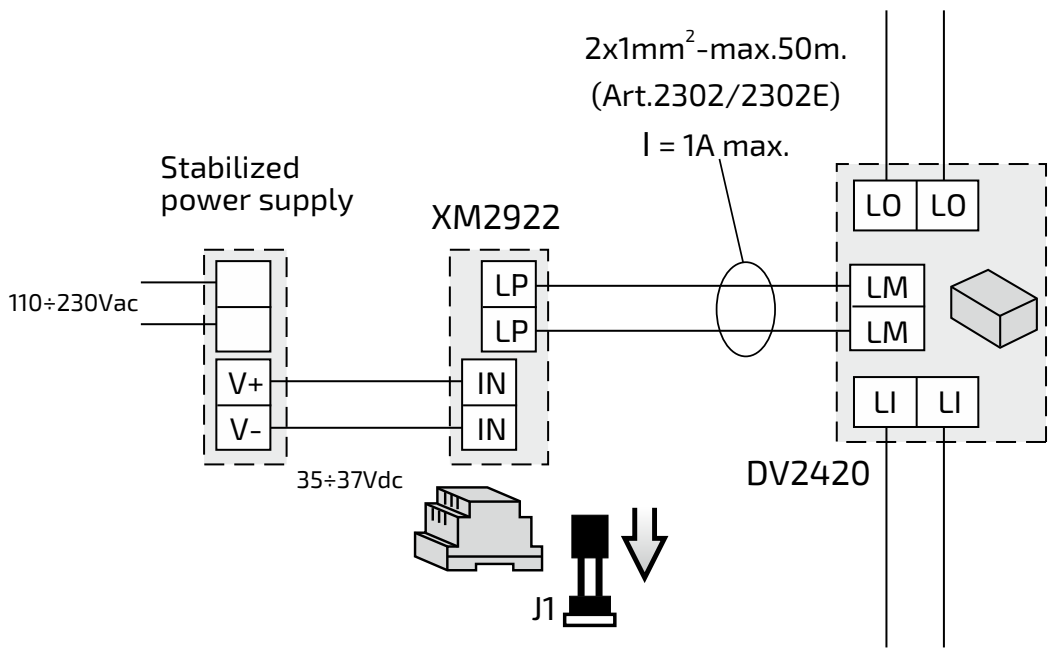


J1 jumper inserted = closing on 100Ω line impedance

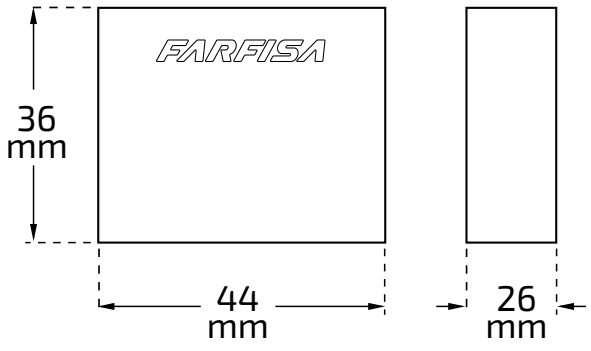


J1 jumper removed = open line

Connecting the XM2922 module to the DV2420 line distributor



Art. DV2420

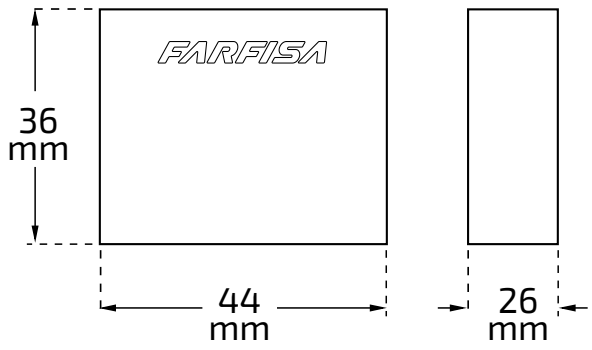


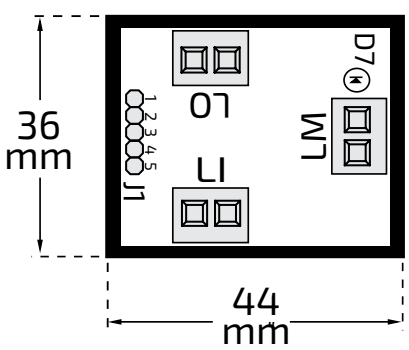
Line distributor for DUO system

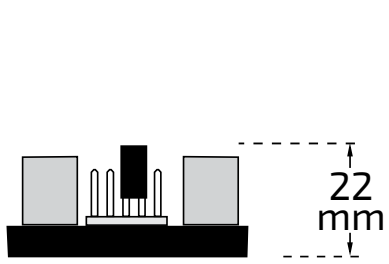
Terminals

LM Power supply input
LI Line input
LO Line output
LD Input/output uncoupled line

Art. DV2421Q





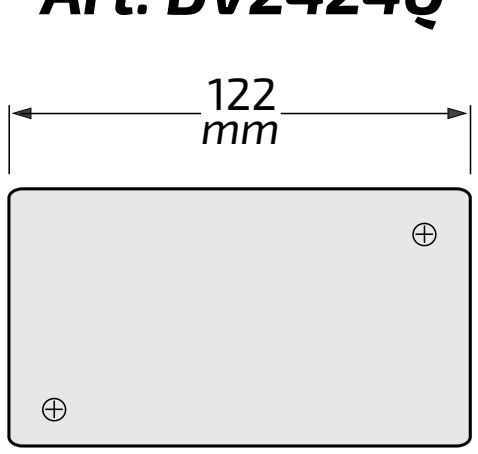


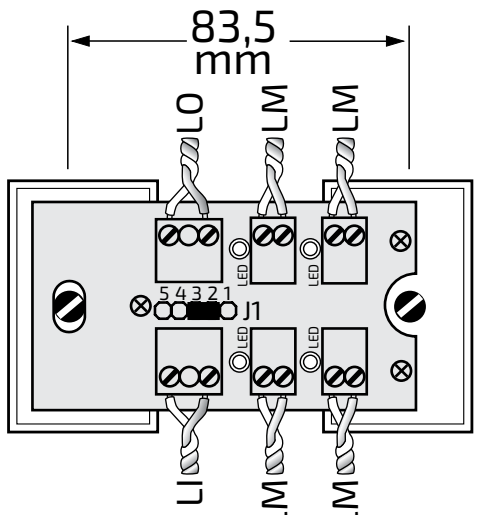
Terminals

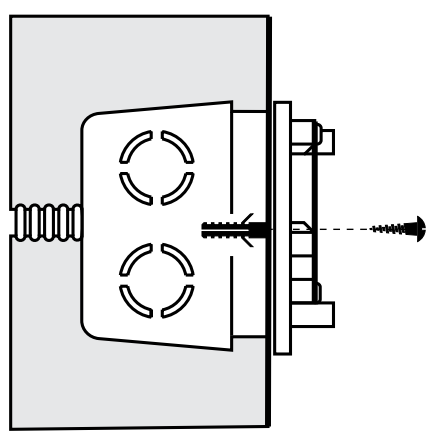
LM User outputs
LI Line input
LO Line output

Single-out floor distributor for DUO system

Art. DV2424Q





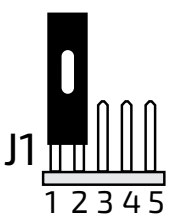


Terminals

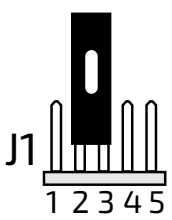
LM User outputs
LI Line input
LO Line output

4-output floor distributor for DUO system

Jumper J1 for selecting the impedance on which the LI/LI line of the DV2420/DV2421Q/DV2424Q is terminated

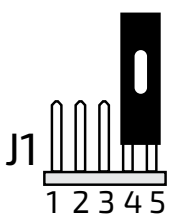


termination **47Ω**



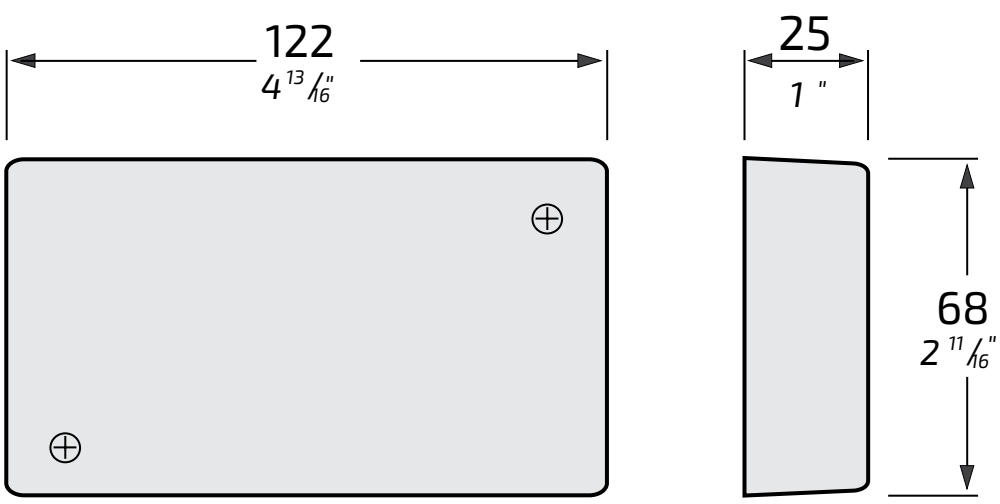
open line (by factory default)

termination **70Ω**



termination **100Ω**

Art.DM2421



Programmable via DUO System app

Distributor for DUO system

In digital DUO systems, the DM2421 distributor can be used as a video switcher with two inputs and one output or one input and two outputs, then to connect:

- two external door stations to one riser
- one external door station to two risers.

Technical features

Power supply	from the line
Stand-by current:	8mA
Operating current:	50mA
Housing:	122x68x25mm
Operating temperature:	0° ÷ +50°C
Maximum humidity acceptable:	90% RH
Fixable on built-in box of 83 mm	

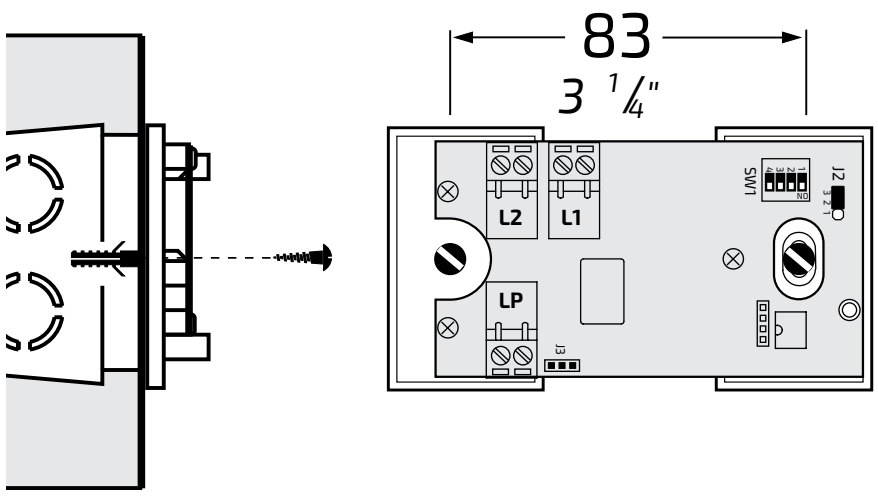
Terminals

LP - LP	Switched line
L1 - L1	Line 1
L2 - L2	Line 2

Signalling LEDs

D3 on	switched to L2
D3 off	switched to L1

INSTALLATION

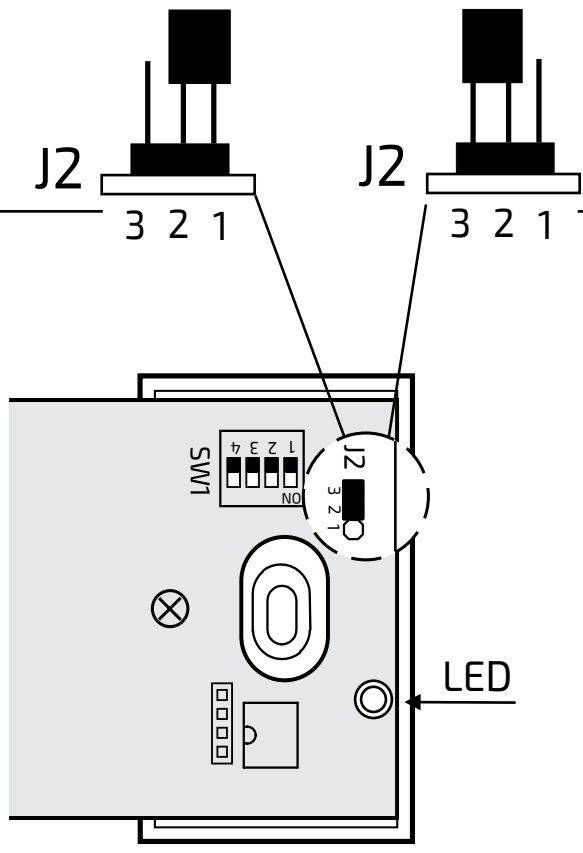


OPERATION

Power, data and audio signals are always distributed between LP, L1 and L2 while the video signal is switched between LP and **L1 (stand-by position)** or between LP and L2, according to the programming of the device. -The programming only requires the addresses of devices connected to line L2 to be indicated; it is consequently assumed that all other addresses belong to line L1.
When a door station connected to L2 calls or an apartment station belonging to line L2 is called, the DM2421 switches the video signal to line L2 by disconnecting line L1.

Position of movable jumper J2 and its function

Stand-by mode
Position **1-2**
(Red LED flashes slowly)



Programming mode
Position **2-3**
(Red LED flashing quickly)

PROGRAMMING

Preliminary notes

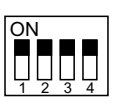
10 ranges (F1-F10) are available to store the addresses of the devices connected to the line L2.
In each range can be stored the address of a single device or the first and the last address of a group of devices with sequential addresses. For example, if in the range F1 is stored the address 100, on the line L2 only the video signal of the call addressed to the videointercom 100 is delivered. Vice-versa if on the same range F1 are stored the addresses 100 and 120, on the line L2 are delivered the video signals of the calls addressed to all the videointercoms whose address is between 100 and 120. If the address 232 is stored in the range F1, the video signal of the call coming from the external door station 232, connected to L2, will be forwarded on LP. The addresses not included in ranges F1÷F10 are forwarded to line L1.

Attention: if during the programming any error is made or if later it is necessary to modify some addresses already stored in the memory, it is necessary to erase the whole memory of the device executing the "memory erasing" procedure and then reprogramming completely the device.

Programming with the DUO System app

The device can be fully programmed via Bluetooth by downloading the "DUO System" app (available for iOS and Android) into your smartphone or tablet. It is necessary to:

- connect a Bluetooth programmer item PGR2991BT or XE2921 to the system;
- move the mobile jumper J2 from position 1-2 to 2-3;
- set all the dipswitches of SW1 to ON



- do the programming;
- move SW1 and J2 to their original position.

Alternatively, you can proceed manually as described in the following paragraphs.

Programming the ranges

To program the numerical ranges F1÷F10 it is necessary:

1) enter the programming mode moving the jumper J2 from position 1-2 to 2-3; the red LED flashes quickly;
2) select the range to be programmed, positioning the dipswitches of SW1 according to the table 1 on page 10. For example, to program the range F1, set to ON micro switch 1 of SW1 leaving OFF dipswitches 2, 3 and 4;
3) store the address of the external door station or internal station (in the case of a group of addresses, store the one with the lowest value first) following the procedure described here below:
   - from the external door station make a call to any extension without answering;
   - from videointercom Sette press the button ;
   - from videointercom Zhero press the button ;
   - from videointercom Exhito press the button .

   Notes.
   - Proper storage is indicated by the red LED turning off for one second and then turning back on in flashing mode.
   - Possible audio noise signals in this phase don't notice any anomaly in the programming.

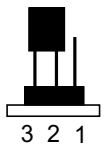
If the last address of a group must be also programmed in the range continue with step 4; on the other hand, if only one address must be programmed, jump to step 5;

4) store the address of the external door station or internal station with higher value following the procedure described above;
5) set OFF the dipswitch 1 of SW1. This operation ends the programming phase of the range F1;
6) if required, proceed in a similar way to program the other 9 ranges repeating the points from 2 to 5 and paying attention to set properly the dipswitches of SW1 according to the ranges to be programmed (see table 1 on page 10);
7) set OFF all the dipswitches of SW1 and exit the programming mode moving jumper J2 from position 2-3 to 1-2; red LED comes back flashing slowly;
8) verify the correct operations of the system. The displaying of a disturbed or missing video signal is an indication of incorrect programming. During operation, when the device switches to L2, the LED remains permanently ON.

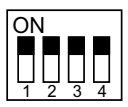
Memory erasing (default)

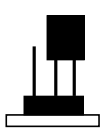
To erase all the data stored in the memory of the device it is necessary:

- move the jumper J2 from position 1-2 to 2-3; red LED starts flashing quickly;
- set the dipswitches 1,2 and 4 of SW1 ON and leave OFF the dipswitch 3 of SW1;
- wait about 4 seconds; red LED lights up continuously;
- within 4 seconds set ON the dipswitch 3; red LED turns OFF for about 2 seconds and then starts again flashing quickly;

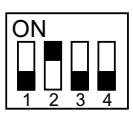
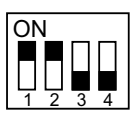
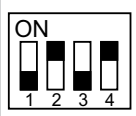
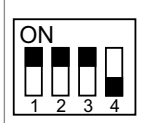
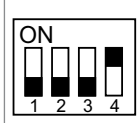
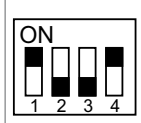
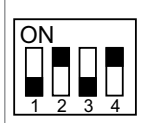


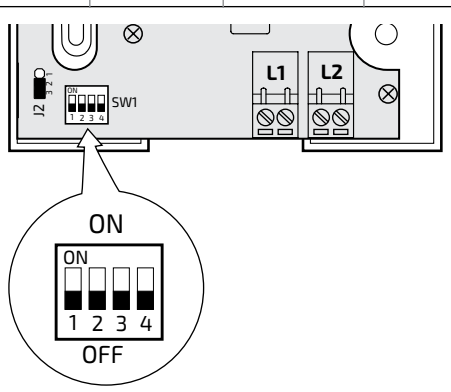
- at this stage all the data have been erased;
- set OFF all the SW1 dipswitches;
- move the jumper J1 from position 2-3 to 1-2; red LED comes back flashing slowly.



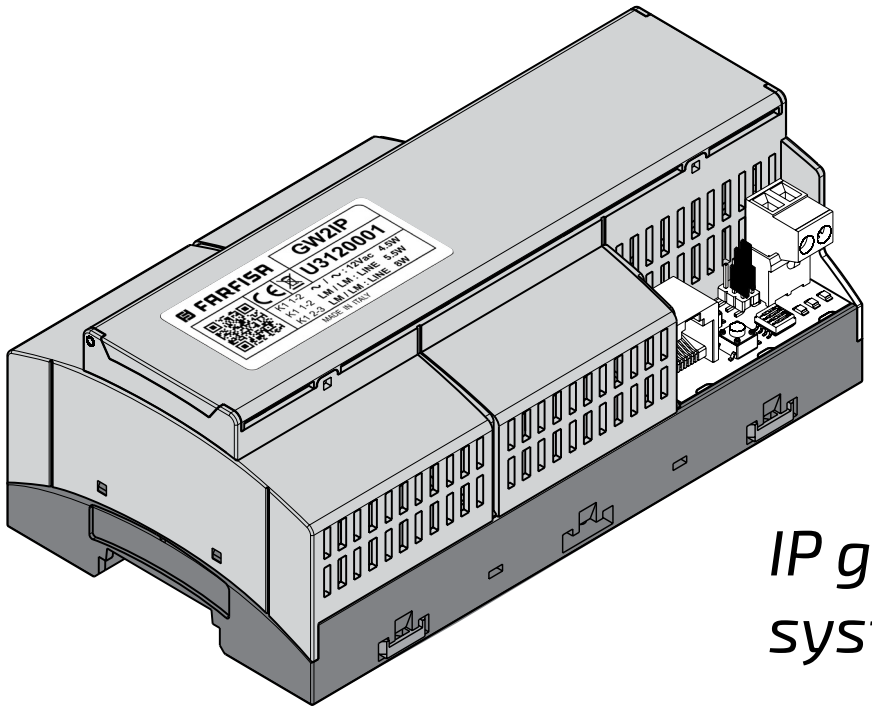


Position table of the DIP switches of SW1 and their number range

Range	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10
Position of the DIP-switches of SW1										



Art. GW2IP



IP gateway for DUO system

Compatible with IP-way cloud app

The GW2IP gateway has been designed to integrate FARFISA DUO System video entry with Internet network, expanding functions and allowing the end user to receive calls, talk with the visitor and control the access even remotely without distance's limitations.
The system is based on the Farfisa cloud service specifically developed to make the configuration, use and maintenance as easier as possible. The gateway can be connected not only on single way Farfisa systems, but also inside one or more apartments belonging a multi way system or even as shared device among apartments of the same large system; in all cases an Internet connection, cabled or wireless, is required. Each user can connect some devices (Smartphone or tablet) that will ring simultaneously in case of a call, only the first user which hangs up will be able to talk with the visitor and operate the door lock release. The system integrates also the video memory function. The IPWAY CLOUD app is available for both Android and iOS devices on related stores. The GW2IP gateway can be powered directly from the DUO Bus or separately with a local power supply. In the latter case, when making the system planning, it is required to keep in consideration a certain current consumption from the bus for the video section as showed on the technical specification below.

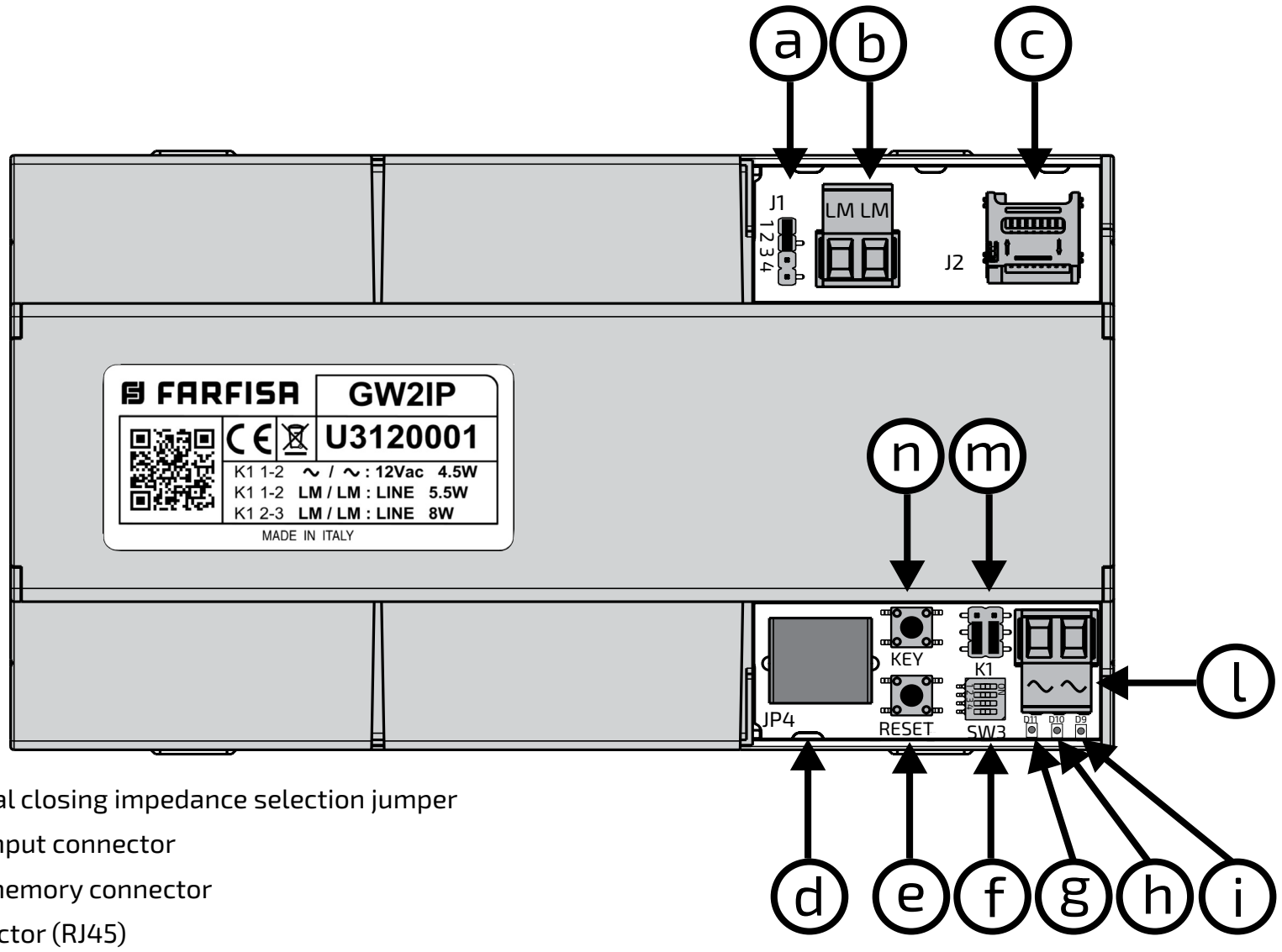
Technical Data

Power supply:	from DUO bus
Local power supply:	12Vac
Power consumption:	
-with 12Vac power supply:	
from 12 Vac	max 4,5W
from Duo bus (@30 Vdc)	max 5,5W
-with only DUO bus power supply:	
from Duo bus (@30 Vdc)	max 8W
Working temperature:	0÷ +40°C
Max permitted humidity:	90% RH
Housing:	9 module DIN

Terminals and Connectors

J1	Video signal closing impedance selection
LM/LM	DUO BUS input
J2	Micro SD connector
JP4	LAN input
K1	Power supply selection
SW3	Reserved for technical assistance
~/~	Local power supply input

Front view



Key

- **a)** Video signal closing impedance selection jumper
- **b)** BUS DUO input connector
- **c)** Micro SD memory connector
- **d)** LAN connector (RJ45)
- **e)** Reset button (when present)
- **f)** Micro-switches reserved for technical assistance
- **g)** D11 green LED indicating LAN activity
- **h)** D10 green LED indicating LAN connection
- **i)** D9 red LED indicating gateway status
- **l)** Separate power input connector (12Vac)
- **m)** Jumpers for separate input power selection
- **n)** KEY system button

Signalling

D9 — Red: Gateway status indication LED. During normal operation the red LED blinks every 4 seconds, for more details see the help section on the site: http://find.farfisa.com

D10 — Green: LAN connection signaling LED

D11 — Green: LAN activity signaling LED

J1 jumper: selection of closing impedance

J1 — **J1(1-2): 100 ohm video signal line termnation (factory setting)**

J1 — J1(2-3): 15 ohm video signal line termination.

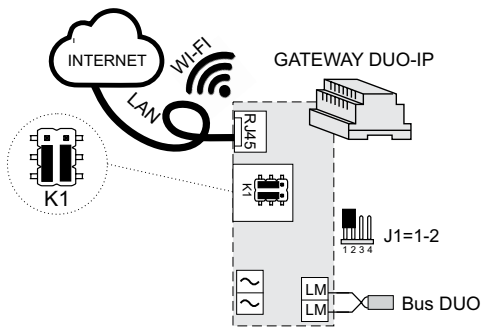
J1 — J1(3-4): video signal open line.

Jumpers K1: selection of power supply mode

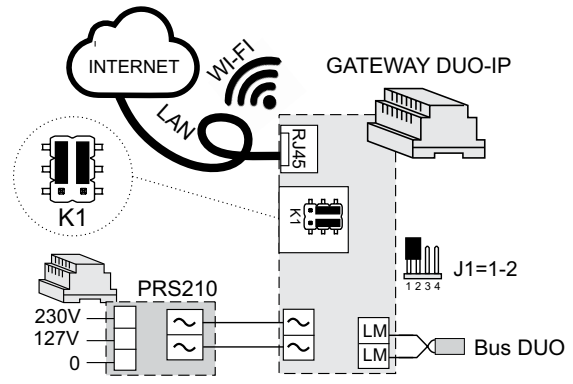
Low K1 jumpers: power supply from Farfisa DUO bus.

High K1 jumpers: supply from local power supply (factory setting)

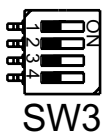
Example of power supply from Farfisa BUS DUO



Example of local power supply



Dip-Switches SW3 functions



SW3: reserved for technical assistance.

Warning: for a correct functioning of the Gateway all the dip-switches must be in the OFF position (factory setting).

INSTALLATION OF THE DEVICE

The GW2IP Gateway must be installed exclusively by personnel qualified technician, in vertical position (leaving space for ventilation). In a Farfisa DUO system allows interfacing the intercom system to the IP network, so users can be reached by a video door phone call even when they are away from their home.

Warning: service availability and image and audio quality depend heavily on the stability of the connection to the Internet; this aspect must be taken into account if continuous operation of the video door entry system is required.

The device can be installed in three different applications:

1. One-way videointercom system.
2. Individual apartments in a multi-family installation.
3. Centralized installation for all the apartments of a multi-family system.

The default IP network setting for the gateway is "DHCP" for connections to both wired and wireless networks and that the default username is "admin" while the password is 1234.

To operate on the video door entry system with your Smartphone or Tablet you must download the application IpWay Cloud from the Play Store or from the Apple Store:

https://farfisa.com/qr/and-ipway-cloud/ for ANDROID devices

https://farfisa.com/qr/ios-ipway-cloud/ for IOS devices

STARTING THE GATEWAY

There are 2 web-based applications to support the configuration and the use of the gateway:
http://find.farfisa.com: allows you to search for gateways within the LAN and connect for configuration. In "Help" pages there are instructions for connecting via WiFi, using the WPS function.
https://cloud.farfisa.com: user web application to check and receive calls from the external video doorphone station. Each user is required to create an account on this website to access to the Gateway.configured as described in the following paragraphs.

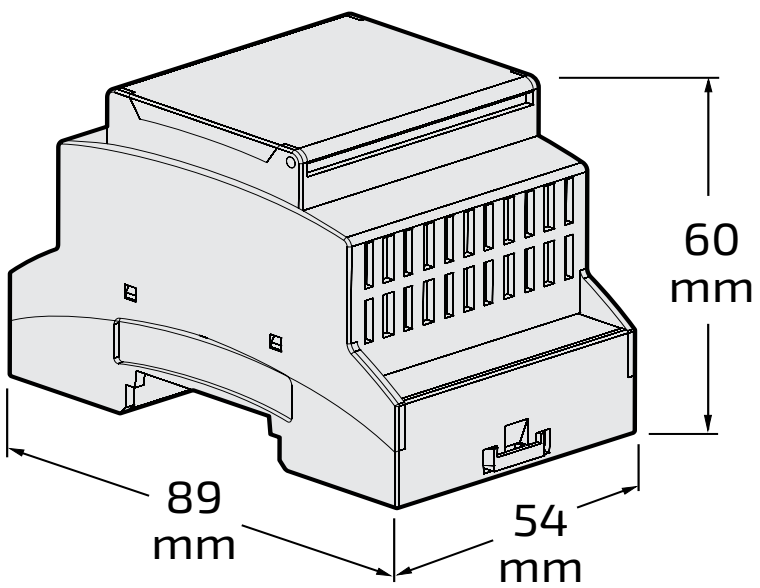
User creation

1. Connect the gateway to the network and switch it on.
2. Enter on your browser **http://find.farfisa.com**, this service will search gateway within the LAN.
3. The detected gateway will be displayed, showing the serial number (if there are more than one, you can click "identify" to allow to the red LED, D9, present on the gateway to stay on for approx 30 seconds, in order to identify it visually).
4. click on "Connect" to log in
5. Set the configuration of the intercom system in:
Duo System → "Resources" (address of external stations available in the system)
Duo System → "Housing units" (the addresses of internal users that you want to connect to the gateway)

- Click "+" in the upper right corner to add a new one "housing unit".
- Assign a "name" and a DUO address, "location" and "note" are optional.
- Click on "Add" to confirm.
- Once the living unit has been created, click on the icon with the envelope; for associate a new user type his e-mail address and do click on "Invite".
- The user will soon receive an e-mail invitation with a link to the website **https://cloud.farfisa.com.** It is necessary to type the user account details (if the account was previously created otherwise create a new one) and click "Login". In next window you need to assign an identifying name to the gateway so that it will be displayed at next access (for example: "Home", "My office" and so on).
- Once the user has been associated with the system it will also be connected to the DUO address assigned to the housing unit.
- Use the same account details to log in via app from smartphone, the user will be associated with the same gateway and will be able to view the images from the external station.

  Please refer to the product's web page available on **www.farfisa.com** for a detailed guide about web and smartphone Apps described here.

Art.VM2521



Programmable via DUO System app

Video modulator for DUO system

When one or two supplementary video cameras are connected to it (e.g. CCTV cameras), the VM2521 video modulator allows their PAL video signals to be sent on the Farfisa DUO bus.
The modulator connects directly to the DUO line without the need for a dedicated power supply.

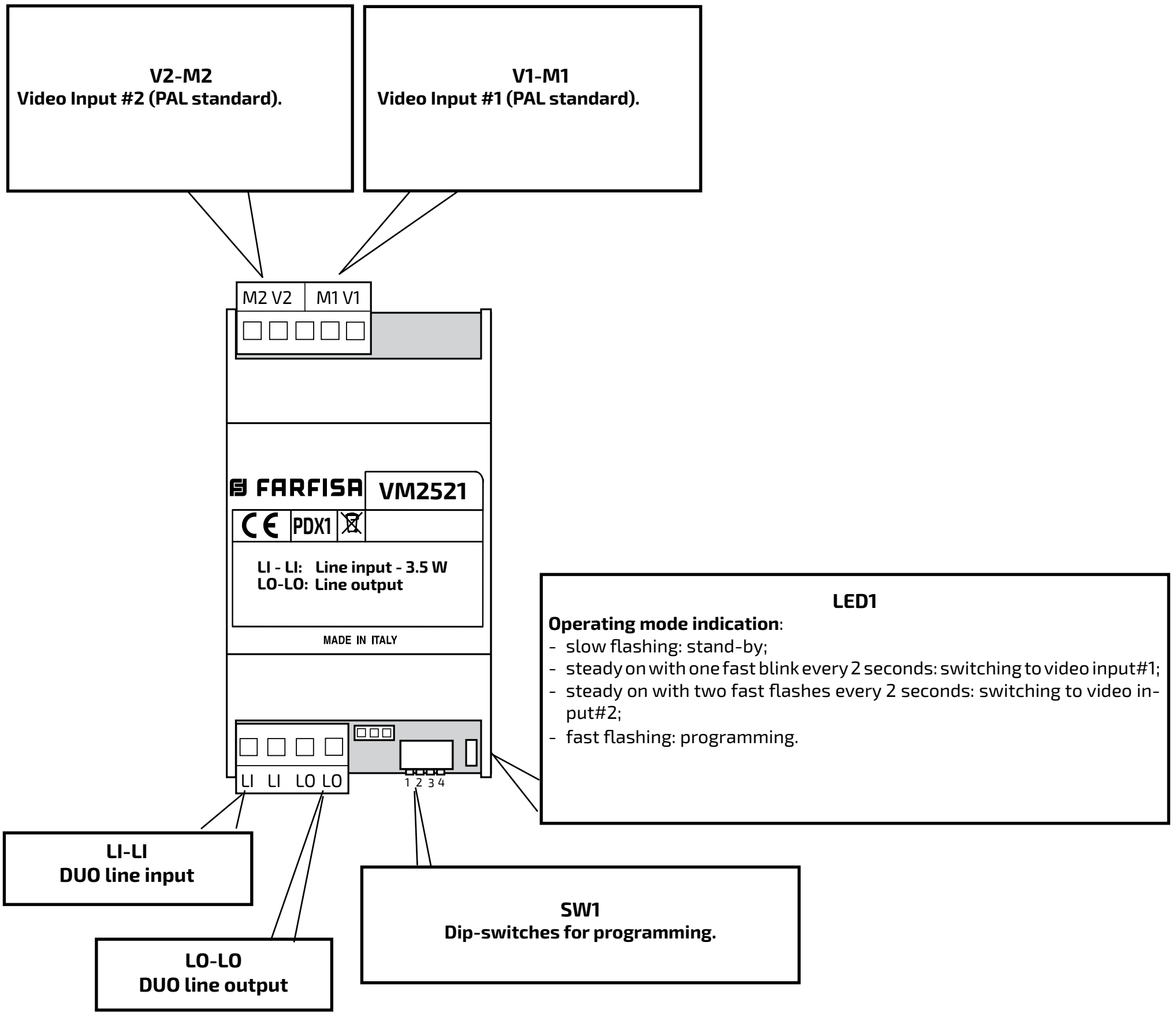
Technical features

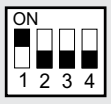
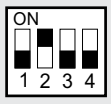
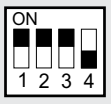
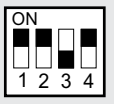
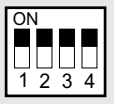
Power supply:		from DUO line
Power consumption:	- stand-by	10 mA
	- operating	100 mA
Enclosure:		DIN 3 A modules
Operating temperature:		0° ÷ +50°C
Max Humidity:		90% RH

Terminals

V1 - M1	Input video signal #1 (PAL)
V2 - M2	Input video signal #2 (PAL)
LI - LI	DUO line input
LO - LO	DUO line output

Position of connectors and their function



Programming	First address of video input #1	Second address of video input #1	First address of video input #2	Second address of video input #2	Erasing memory data	Programming via Bluetooth
Position of SW1's dip switches						

PROGRAMMING

Preliminary information

The VM2521 video modulator is necessary to connect to DUO Bus 1 or 2 PAL colour video cameras (V1-M1 and V2-M2 inputs, where V is the video signal and M is the video ground) to the system.

⚠ **Caution**: for correct system operation, the supplementary video cameras must have a video ground that is isolated from the earth conductor.

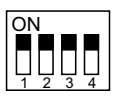
For each input (V1-M1 or V2-M2), two addresses can be stored, among those reserved for external stations (231 - 253). For example, video input #1 can be assigned address 232 and video input #2 can be assigned address 233, connecting with input 232 will receive the image of the first camera, connecting with input 233 will receive the image of the second camera.
Without further settings, beside the operation as an "independent device", in which it can be connected to from any internal station via the auto switch-on function (using the addresses of its two inputs), the modulator can be used also as a "device controlled by an external station already in the system". The cameras connected to it can be displayed, instead of the camera of the external door station, during the conversation (read the instruction manual of the door station for details of its operation and programming).

⚠ **Attention:** the door stations, ready for interfacing the VM2521 video modulator, are identified by revision PDX1.

Programming with the DUO System app

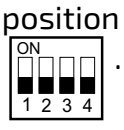
The device can be fully programmed via Bluetooth by downloading the "DUO System" app (available for iOS and Android) into your smartphone or tablet. It is necessary to:

- connect a Bluetooth programmer item PGR2991BT or XE2921 to the system;
- set all the dipswitches of SW1 to ON:



LED1 will flash quickly;

- open the "DUO System" app and, after connecting to the Bluetooth programmer, go to the local programming section and choose VM2521;
- do the programming,
- turn all the dip-switches of SW1 to OFF position



.

LED1 will flash slowly again.

⚠ **If a Bluetooth programmer cannot be used, an "emergency" programming procedure is available, described in the following paragraphs.**

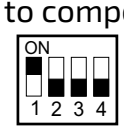
Manual programming.

The possible configurations for using the modulator and the relevant programming steps are shown below:
- connection of only one camera to the modulator (video input #1);
- connection of two cameras to the modulator (video input #1 and #2);
- cyclic display of two cameras connected to the modulator (video input #1 and #2).

Programming for connecting of only one camera (video input #1 - code 01).

It is necessary to use any internal station that can be connected to the video modulator and proceed as described below:

- store in a button of the internal station the address that you want to assign to video input #1 of the modulator.
- on the modulator, position DIP switch SW1 to compose the code 01



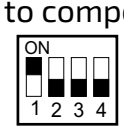
LED1 will flash quickly;

- on the internal station, press the button previously programmed with the address to be assigned to the input. LED1 will turn OFF for about 1 second and then it will start flashing quickly again to indicate that the programming has been carried out;
- return all the DIP switches of SW1 to the OFF position. LED1 will flash slowly again.

Programming for connecting of two cameras (video input #1 - code 01 and video input #2 - code 06).

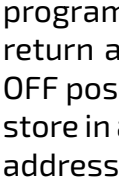
It is necessary to use any internal station that can be connected to the video modulator and proceed as described below:

- store in a button of the internal station the address that you want to assign to video input #1 of the modulator.
- on the modulator, position DIP switch SW1 to compose the code 01



LED1 will flash quickly;

- on the internal station, press the button previously programmed with the address to be assigned to the input. LED1 will turn OFF for about 1 second and then it will start flashing quickly again to indicate that the programming has been carried out;
- return all the DIP switches of SW1 to the OFF position. LED1 will flash slowly again.
- store in a button of the internal station the address that you want to assign to video input #2 of the modulator.
- on the modulator, position DIP switch SW1 to compose the code 06



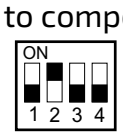
LED1 will flash quickly;

- on the internal station, press the button previously programmed with the address to be assigned to the input. LED1 will turn OFF for about 1 second and then it will start flashing quickly again to indicate that the programming has been carried out;
- return all the DIP switches of SW1 to the OFF position. LED1 will flash slowly again.

Programming for cyclic display of two cameras (video input #1 - code 02 and video input #2 - code 07).

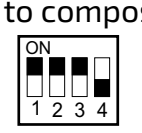
It is necessary to use any internal station that can be connected to the video modulator and proceed as described below:

- store in a button of the internal station an address to be used for cyclical display of the modulator inputs.
- on the modulator, position DIP switch SW1 to compose the code 02



LED1 will flash quickly;

- on the internal station, press the button previously programmed with the address to be assigned to the cyclical display. LED1 will turn OFF for about 1 second and then it will start flashing quickly again to indicate that the programming has been carried out;
- return all the DIP switches of SW1 to the OFF position. LED1 will flash slowly again.
- on the modulator, position DIP switch SW1 to compose the code 07:



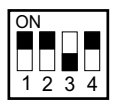
LED1 will flash quickly;

- on the internal station, press the button previously programmed with the address to be assigned to the cyclical display. LED1 will turn OFF for about 1 second and then it will start flashing quickly again to indicate that the programming has been carried out;
- return all the DIP switches of SW1 to the OFF position. LED1 will flash slowly again.

Erasing the stored data (code 11).

To delete the date stored in the device memory:

- position DIP switch SW1 to compose the code 11:



LED1 will flash quickly.

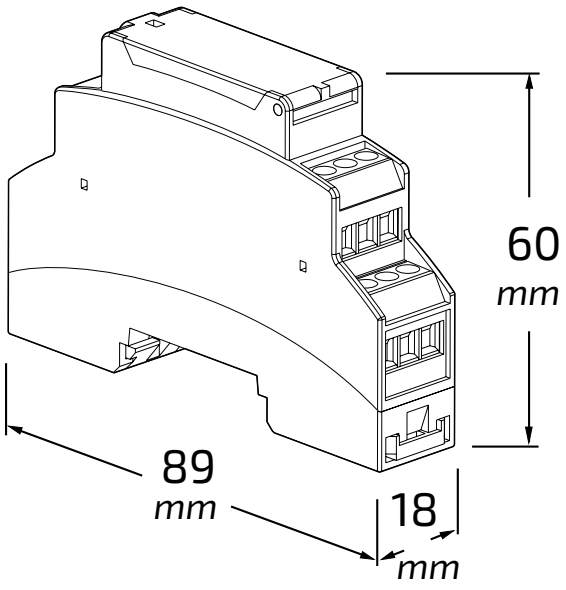
- wait for about 4 seconds; LED1 will remain ON continuously.
- at this point, within 4 seconds move DIP switch 3 in the ON position:

LED1 will turn OFF for about 2 seconds, then it will start flashing quickly again. All the data stored in the device has been erased;

- return all the DIP switches of SW1 to the OFF position. LED1 will flash slowly again.

⚠ **Warning:** exit from the programming mode is done when all DIP switches of SW1 are in the OFF position:

Art. PGR2991BT



Bluetooth programmer 1 module in DIN rail for DUO system

Compatible with DUO SystemP app

PGR2921BT programmer, equipped with the Bluetooth module BTF01 (Bluetooth® 4.1 low energy interface for Farfisa Intercom Systems), allows to program a Farfisa DUO system using a Smatphone or a Tablet through a Bluetooth connection and the "DUO System" application. In large installations or installations devided into blocks (extended range DUO systems) it is possible to install more than one PGR2991BT device, each devoted to manage a single block or a section of the installation.

Technical data

Power supply:	from DUO line
Current	
stand-by:	0.01A
operating:	0,04A Max
Operating temperature:	0° ÷ +50°C
Max humidity:	90% RH (no condensation)
Housing:	1 DIN module A

Terminals

LM/LM	DUO Line
IN	Bluetooth ON
GN	Ground
JP	Factory setting

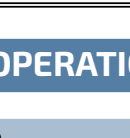
OPERATION

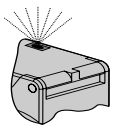
Programming

For programming the system it is necessary:
- on a Smartphone or a Tablet run the "DUO System" Application. Application is available for iOS and Android™ devices;
- on application start-up, the list of compatible Bluetooth devices will be shown. Click on the detected PGR2991BT programmer module to establish a connection (the default password for the connection is 1234);
- program the devices according to the instructions given in the application.

Powering ON the Bluetooth module

Whether Bluetooth module (BTF01) is configurated for "automatic power OFF" once the session is ended, the device closes the connection and automatically powers OFF; the device is not more detected by a Smatrphone or a Tablet. To power the device ON again and start a new bluetooth connection with the PGR2991 programmer it is necessary:

- shortly close IN terminal with GN terminal 

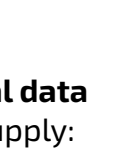
- red LED  starts flashing quickly:

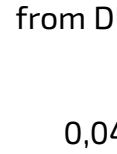
Bluetooth connection is ready;

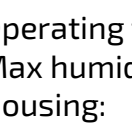
Restoring factory settings

To move back to the factory settings it is necessary:

- close JP terminal with GN terminal

- red LED  starts flashing slowly:

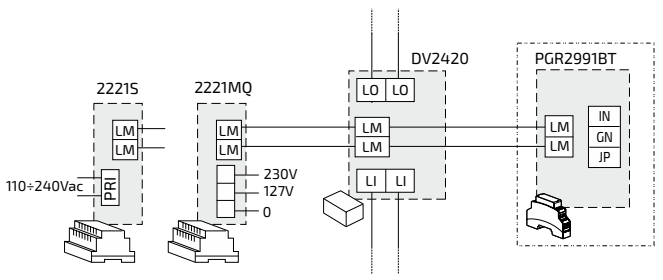
- after 10 seconds the red LED  starts flashing quickly:

- 

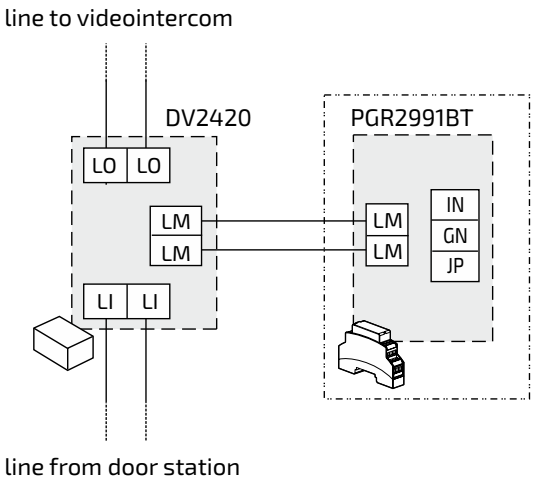
remove the connection between JP and GN terminals;

- red LED powers OFF for 1 second and then emits 3 flashes to indicate that parameters have been restored to the factory settings.

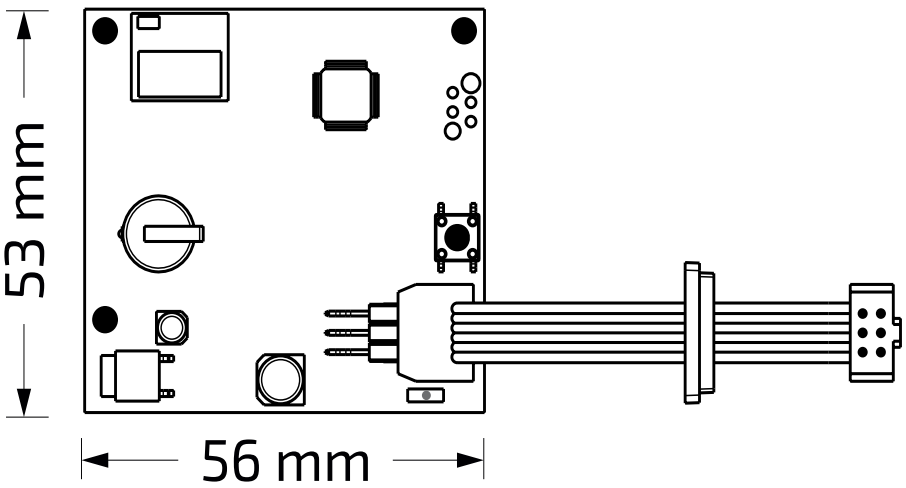
Connecting the programmer to the distributor DV2420 of the installation.



PGR2991BT connection with additional DV2420 along the riser



Art. XE2921



Compatible with DUO System app

Data interface for DUO system with system clock

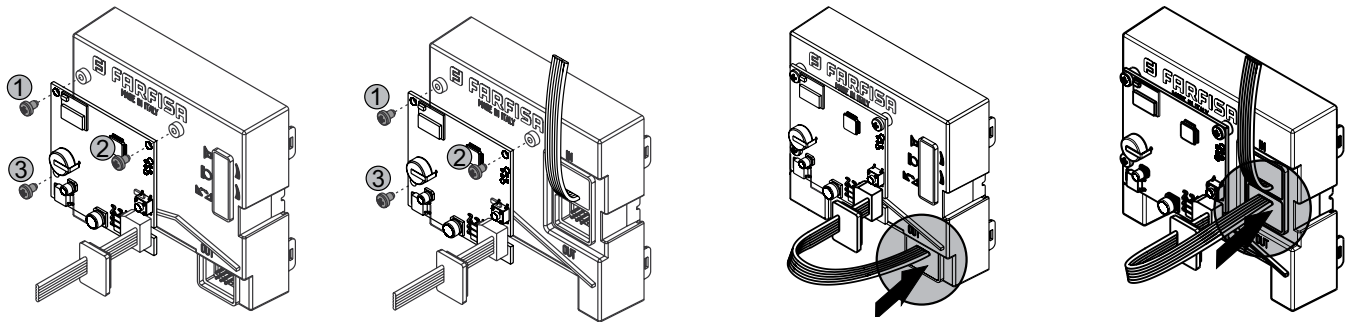
Data interface board for ALBA/HERO push-button panels, equipped with module BTF01 (Bluetooth® low energy 4.1 Module for Farfisa Intercom Systems); the board has a clock on board so connecting it to a Farfisa Duo system acts as a "System Clock" for all the devices that manage this feature.
Simply connecting the XE2921 board to an ALBA/HERO push-button panel and running on your Mobile or Tablet the Farfisa App "DUO System", it is possible to manage via Bluetooth all the DUO devices in the installation.

Technical data

Power Supply:	from DUO line
Power Consumption	
-stand-by:	2mA
- in operations:	10mA
Operating temperature:	-25 ÷ 50°C
Maximum humidity:	90% RH (no condensation)

IInstallation and connections

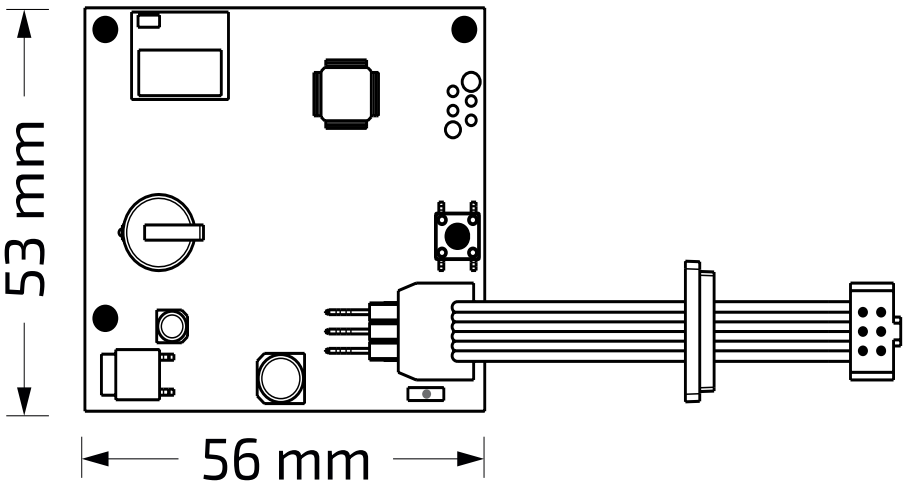
- Screw the board XE2921 to the back of last module of the ALBA panel (only with SC1, SC2, SC3) as shown in figures beside; plug the flat cable into the OUT connector of the last module as shown in figures;
- for HERO refer to the mi2565 manual
- run on your Mobile or Tablet the Application "**DUO System**".
- default password to start a Bluetooth connection with the Data Interface Board XE2921 is 1234.



Restoring factory settings

To restore factory settings:
- Keep pressed button P1, Led D2 starts flashing slowly;
- after 10 seconds Led D2 starts flashing quickly;
- release button P1;
- Led D2 lights-up continuously for about 3 seconds and then switches OFF to indicate that factory settings have been restored.

Art. XE2922



Compatible with app DUO System

Compatible with app Smart Access

DatainterfaceforDUO system for access control via smartphone

Data interface board for Alba and Hero push-button panels, equipped with module BTF01 (Bluetooth® low energy 4.1 Module for Farfisa Intercom Systems); allows the integration of Bluetooth technology in the push button panel. Equipped with a built-in real time clock that acts as a "system clock" for all the devices that manage this functionality; by connecting XE2922 to an ALBA or HERO series push-button panel, it is possible to:
- implement access control via smartphone with a dedicated "**FARFISA SMART ACCESS**" app, available for free on the App Store and Play Store;
- program all the devices in the system, using the Farfisa "**DUO System**" mobile application or tablet, available for free on the App Store and Play Store.

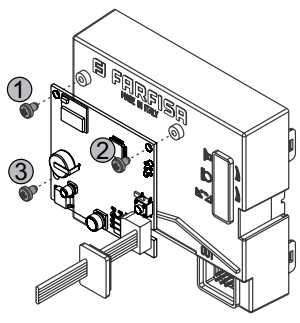
Technical data

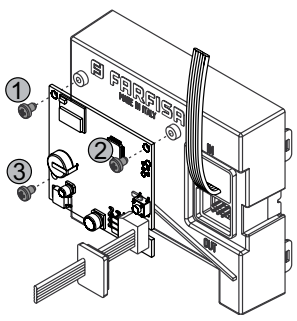
Power Supply:	from DUO line
Power Consumption	
- stand-by:	2mA
- in operations:	10mA
Operating temperature:	-25 ÷ 50°C
Maximum humidity:	90% RH (no condensation)

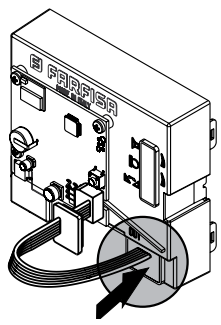
Installation and connections on ALBA (only with SC1, SC, SC3)
- Fasten the XE2922 board on the back of the last module of the push-button panel as shown in figures beside
- insert the flat cable in the OUT connector of the last module as shown in figures.

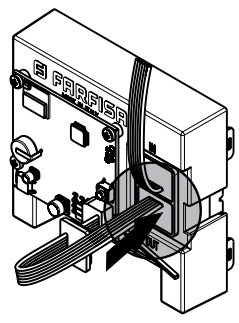
Installation and connections on HERO
- See instruction manual Mi 2565 of TD2000HE.

The XE2922 red LED flashes slowly when it is in stand-by conditions, waiting for connection. On the Mobile Phone or Tablet install the desired application.
The default password for **"DUO System" is: 1234.**
The login credentials for **"Farfisa Smart Access" are Username: admin and password: 1234.**





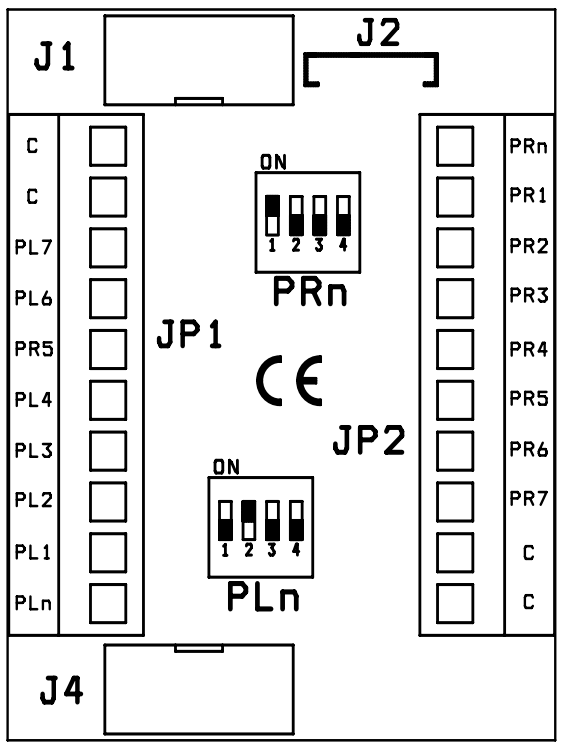




Restoring factory settings

To restore factory settings:
- Keep pressed button P1, Led D2 starts flashing slowly;
- after 10 seconds Led D2 starts flashing quickly;
- release button P1;
- Led D2 lights-up continuously for about 3 seconds and then switches OFF to indicate that factory settings have been restored.

Art. XT2928U



Call button coding card for customised door station

By connecting the calling buttons of a customised push-button panel (for example in brass) to the input terminals of the device, it is possible to send calls to Farfisa digital systems.

Terminals

C	common input of buttons.
PLn-PL7	input for left-side calling buttons.
PRn-PR7	input for right-side calling buttons.

Connectors

J1-J2-J4	connection to Farfisa digital encoders.

Installation and connections

- Connect calling buttons to the input terminals of the board XT2928U as shown in fig.3a - 3b.
- Using the supplied cables, connect the board XT2928U to a Farfisa digital encoding module (use J1 or J2 according to the connector of the Farfisa encoding module; fig.1a or fig.1b).
- Connect an eventual second board to the first using the connector J4 of the first board and J1 of the second one (fig.2), regardless of the encoder module chosen.
- Connect in a similar way the eventual other boards XT2928U if present in the system (fig.2).

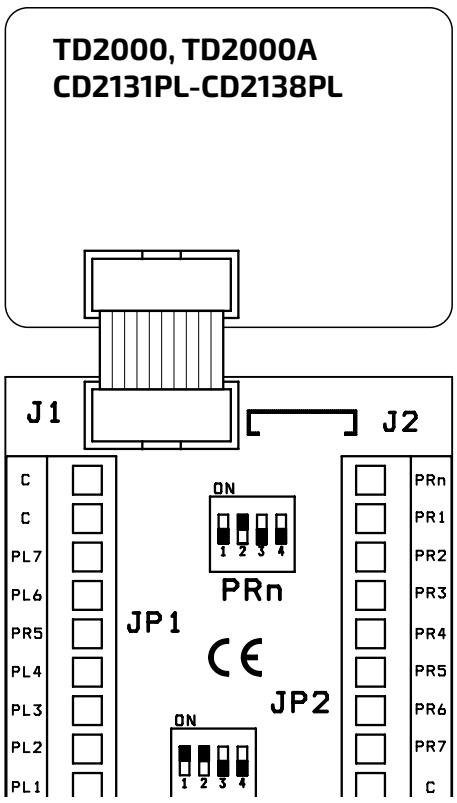


fig.1a

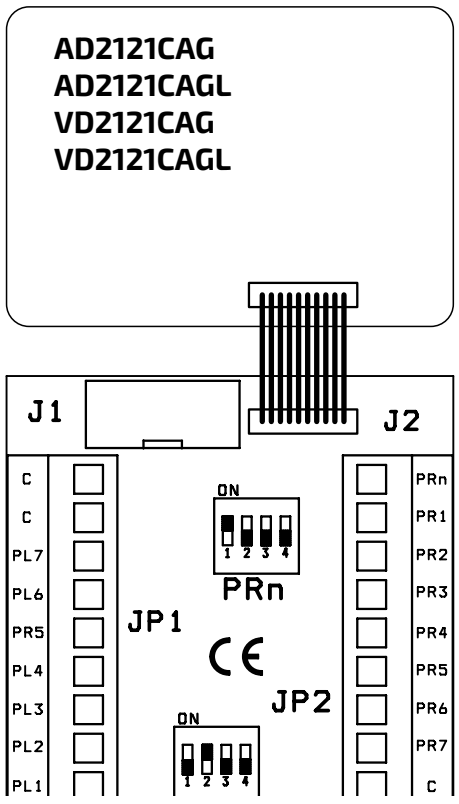


fig.1b

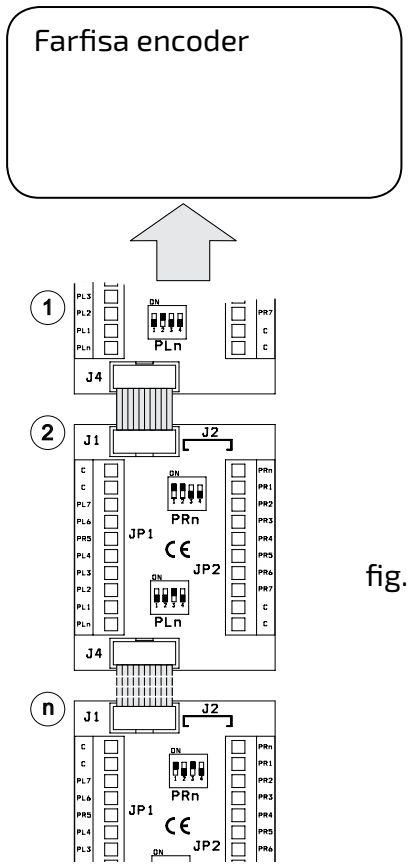


fig. 2

Programming

The setting of dip-switches PLn and PRn, allows to assign the call addresses respectively to the buttons connected to the left side connector (PLn-PL7) and to those connected to the right side connector (PRn-PR7). The value set on the dip-switches must be added to the value programmed as the address of the first button of the chosen encoder (in DUO digital systems, this value is 100 by default, except for SOLVO products). For AGORA' and to know the addresses associated with left and right inputs see Table 5.1.

Warning

- In presence of further XT2928U boards (customised push button panel with more than 16 calls) dip-switches PLn and PRn must be set according to Table 5.2, choosing different and subsequent values to those set in the XT2928U above.
- The programming of dip-switches PLn or PRn with code n=0 (button values 0-7), is only possible using PROFILO series in DUO digital systems.

Table 5.1. Call button connection and DIP switch position for left-side (PRn-PR7) and right-side (PLn-PL7) button coding. Farfisa coders with factory settings.

	PRn	PRn	PR1	PR2	PR3	PR4	PR5	PR6	PR7	PLn	PLn	PL1	PL2	PL3	PL4	PL5	PL6	PL7
AD2121CAG(L), VD2121CAG(L)		102	103	104	105	106	107	108	109		110	111	112	113	114	115	116	117
CD2131PL-CD2138PL		108	109	110	111	112	113	114	115		116	117	118	119	120	121	122	123
TD2000, TD2000A		8	9	10	11	12	13	14	15		16	17	18	19	20	21	22	23

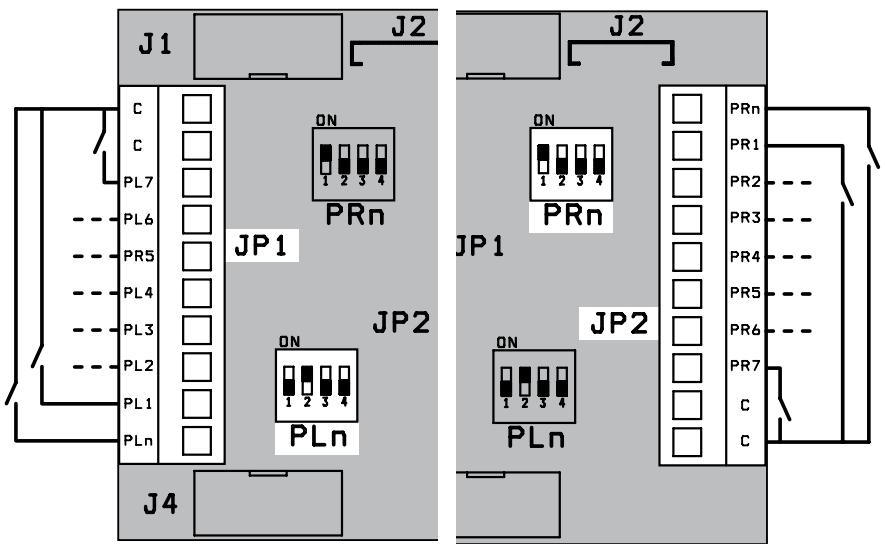
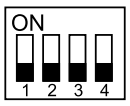
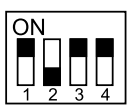
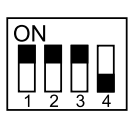
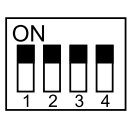
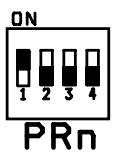


fig.3a fig.3b

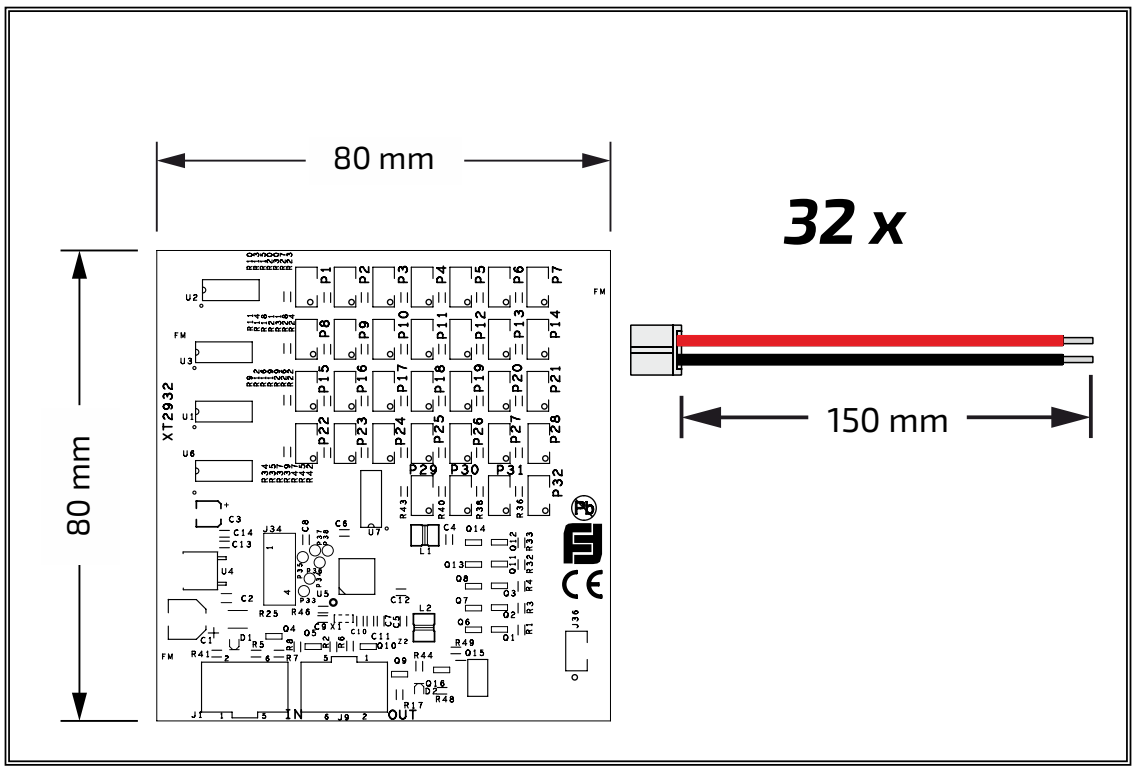
Tabla 5.2

PRn PLn	PRn ÷ PR7 PLn ÷ PL7	PRn PLn	PRn ÷ PR7 PLn ÷ PL7
	0 ÷ 7		64 ÷ 71
	8 ÷ 15		72 ÷ 79
	16 ÷ 23		80 ÷ 87
	24 ÷ 31		88 ÷ 95
	32 ÷ 39		96 ÷ 103
	40 ÷ 47		104 ÷ 111
	48 ÷ 55		112 ÷ 119
	56 ÷ 63		120 ÷ 127

Factory default



Art. XT2932U



Compatible with app DUO System

Call button encoding card for customised door station for DUO system

By connecting the call buttons of a customised external door station (e.g. brass) using the supplied cables, calls can be sent to the DUO digital system.

Connectors

J1	IN - ALBA bus input connector from previous module;
J9	OUT - connector for connecting the ALBA bus to the next board;
P1-P32	Connectors for connecting the analogue pushbuttons (dry contact) of the custom external door station.

Installation and assembly

It is necessary to secure the board and isolate it from enclosures and metal parts to prevent short circuits and electrical discharges.

It is advisable to connect the buttons of the customised push-button panel only with the straps provided, and to avoid increasing the distance from the board.

The XT2932U adopts the data protocol called ALBA bus and can therefore be connected either to the ALBA CV2144AB (or CA2144AB) series audio/video module (or audio-only) or to the module group (the audio/video part) of the HERO TD2000HE digital keypad.

For connection to the previous module, a 6-way flat cable with two connectors and 130 mm in length is supplied. If this length is not enough, it is possible to purchase article EC733 (560 mm in length). The connection of the call buttons of the customi push button panel is made by the 32 2-way cables, pre-terminated on one side with the connector and with stripped wires on the other side for easy connection:

- each XT2932U card can be used to connect a maximum of 32 analogue pushbuttons (dry contact: open/closed) of the custom (or artistic, such as a brass) pushbutton panel
- If the number of buttons to be connected is greater than 32, a second card can be connected to the first card. This allows an additional 32 call buttons to be interfaced. The sum of the inputs provided by the two XT2932U boards offers the possibility of using customi analogue call buttons with a **maximum of 64 calls in** digital DUO System systems.

Addresses associated with buttons

No programming is required to be performed on the XT2932U board:

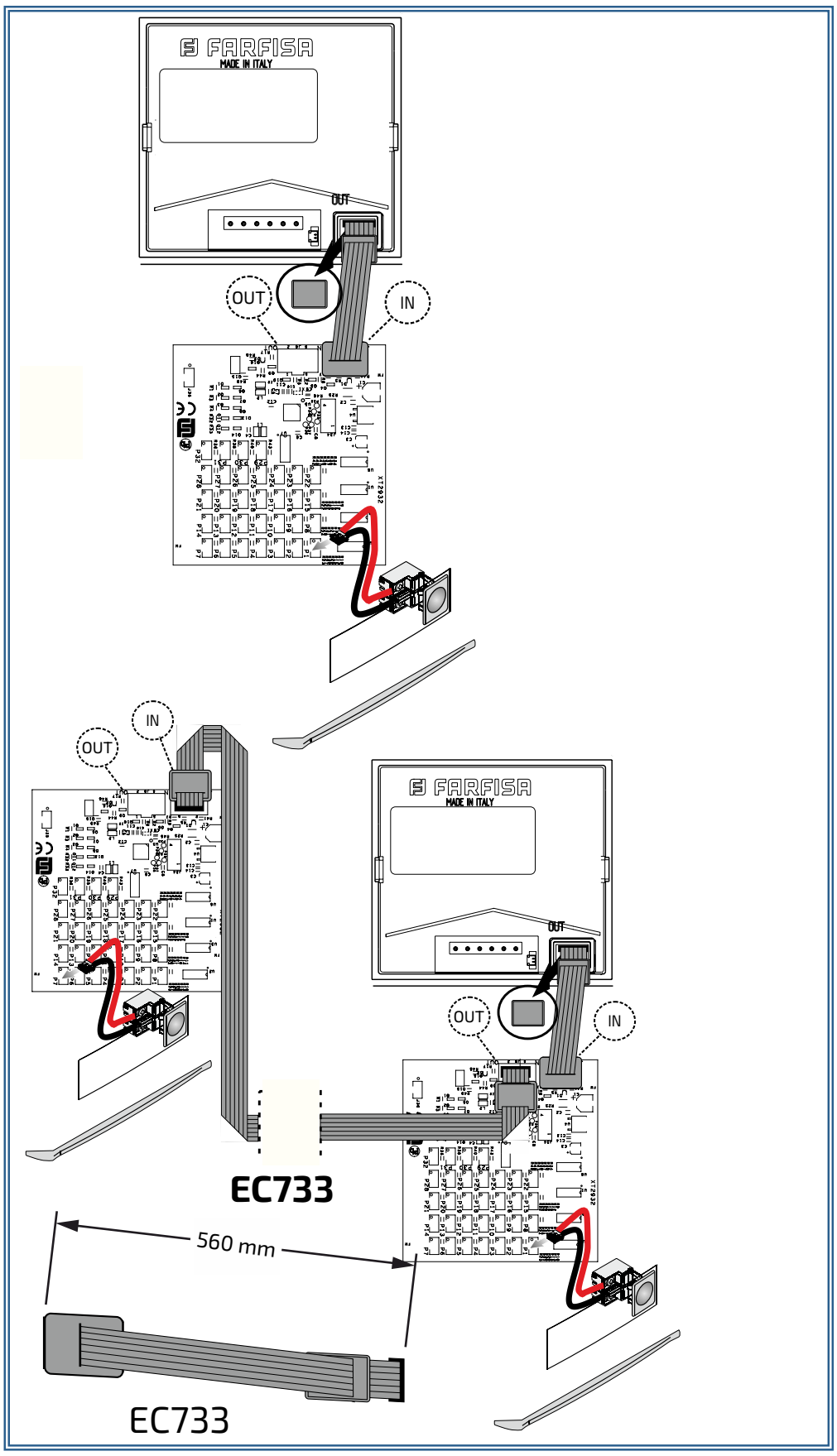
The address that is associated with the button connected to P1 of the first XT2932U (i.e. the card that is connected to the ALBA or HERO audio/video modules via the J1 (IN) connector) is a consequence of the settings of the audio/video module to which the XT2932U is connected. In particular:

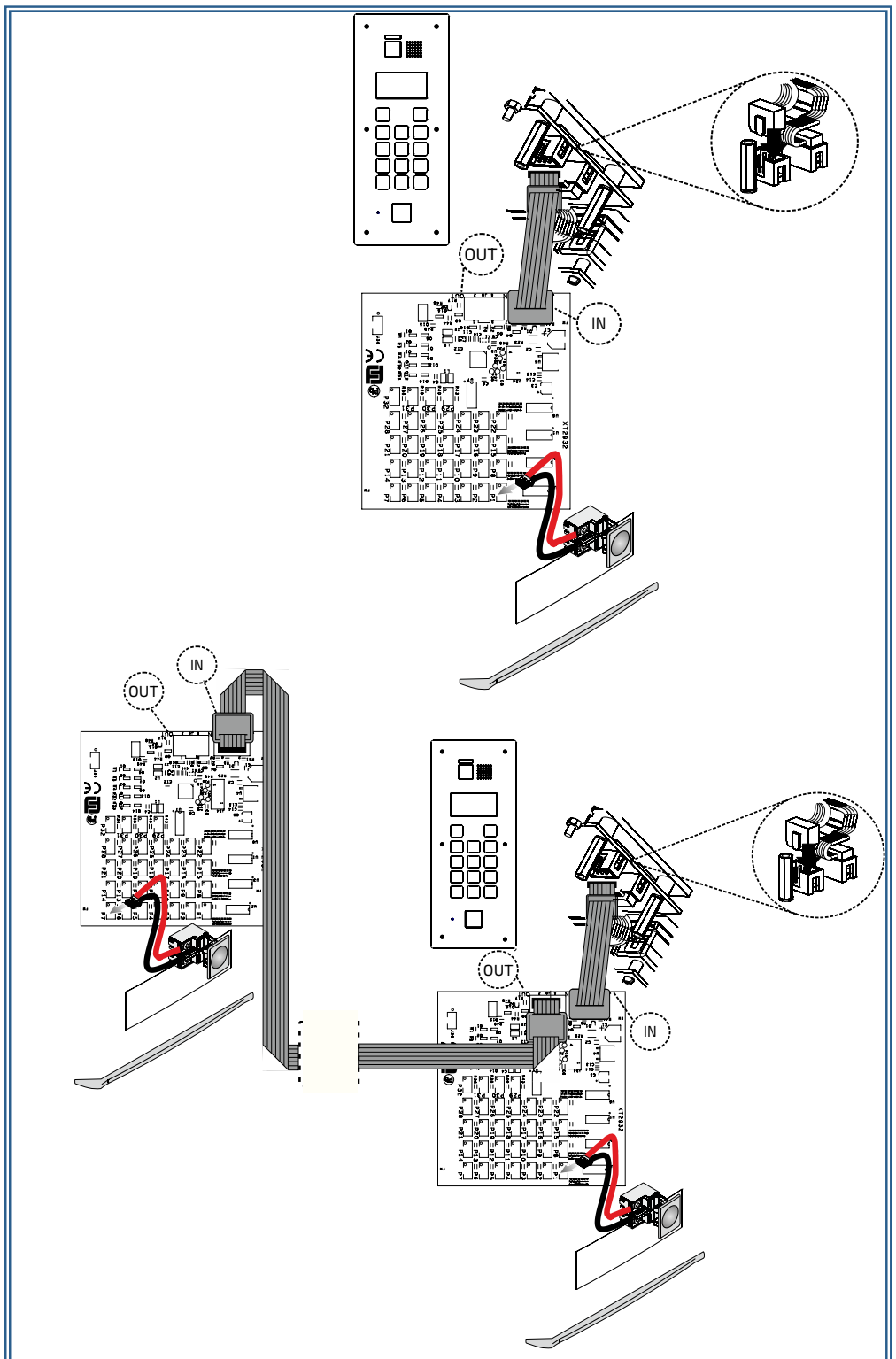
- in the case of CA2144AB/CV2144AB:

It is necessary to set the module to call in dual button mode.

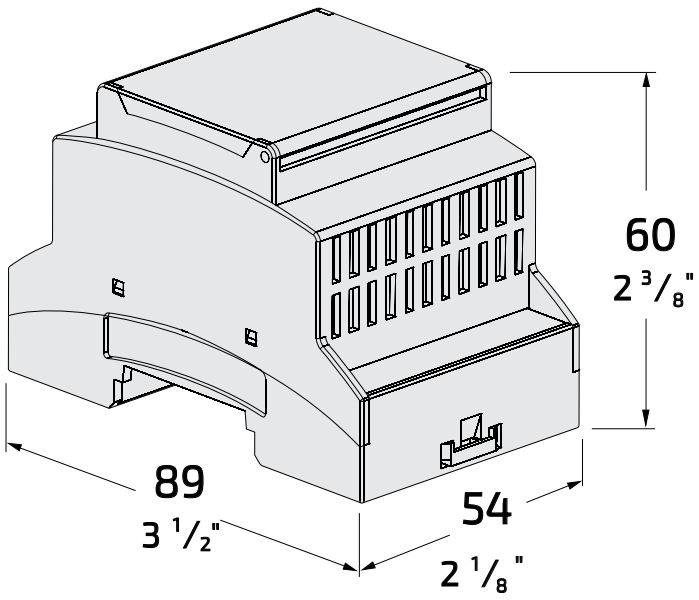
After this setting (leaving everything else as factory configured), the button connected to input P1 will be associated with address 103, followed by the button connected to P2 104, and finally, the button connected to P32 will be associated with address 135. If a second board is connected to the OUT port of the first, the addresses will continue the previous numbering. The button connected to P1 will be associated with address 136 and so on, until the button associated with input P32 will be assigned address 168. It is possible to change the sequence of addresses listed above by entering the Cx2144AB programming and modifying the address associated with button 1 (programming code 113). By default this address is set to 099. If the first Cx2144AB pushbutton, through the programming mentioned in the previous lines, is assigned address 001, the pushbutton connected to input P1 of the first XT2932U will be associated with address 005

- in case of the audio/video module of the HERO push button panel: the address associated with the push button connected to input P1 of the first XT2932U is 001, 002 for P2 and so on up to P32 to which 032 is associated. Connecting the second XT2932U board to the output (OUT - J9) of the first, address 033 is associated to input P1 while 065 to input P32.





Art. 2231Q



Programmable via DUO System app

Separator for DUO system

In digital DUO systems, the 2231Q buffer allows to create a portion of a secondary system that is completely independent from the main system, with its own power supply, internal units, external door stations and actuators. Only in case of a call originating in the main section (main external door station or PDX2000) to an internal station connected to the secondary line managed by the separator (or vice versa in case of contol switch-on), a video, voice and data connection is established with the main system.
Some examples of use are
- flat of a multi-family system with auxiliary services (actuators) that are not accessible from other flats, with or without a dedicated secondary external door station;
- connection of a building (with/without secondary external door station) to one or more main external door stations;
- large installations with a number of calls exceeding 200 (Extended Range DUO).

Technical features

Power supply	from the line
Current (LI-LO):	10mA
Current (LM-LM): - stand-by	40mA
- operating	70mA
Housing:	3 module A DIN
Operating temperature:	0° ÷ +50°C
Maximum humidity acceptable:	90% RH
Fits on DIN bar	

Terminals

LM - LM	Line power supply input
LI - LI	Main DUO line input
LO - LO	Main DUO line output
LP - LP	Input from secondary door station
LS – LS	Secondary DUO line output

Operation

The part of the system connected to the LS line of the 2231Q is completely independent by the rest of the system and it requires its own power supply. A conversation can take place between two internal stations connected to LS or between an internal station and a secondary door station connected to LP regardless of what happens in the rest of the system. If a call is made from the main system side connected to LI to one of the extensions whose address is between the addresses associated with LS, the buffer establishes a video, voice and data connection between the lines connected to LI and LS (**red LED steady on**). A connection between the secondary external door station (connected to LP) and line LI is not possible.

View from the top

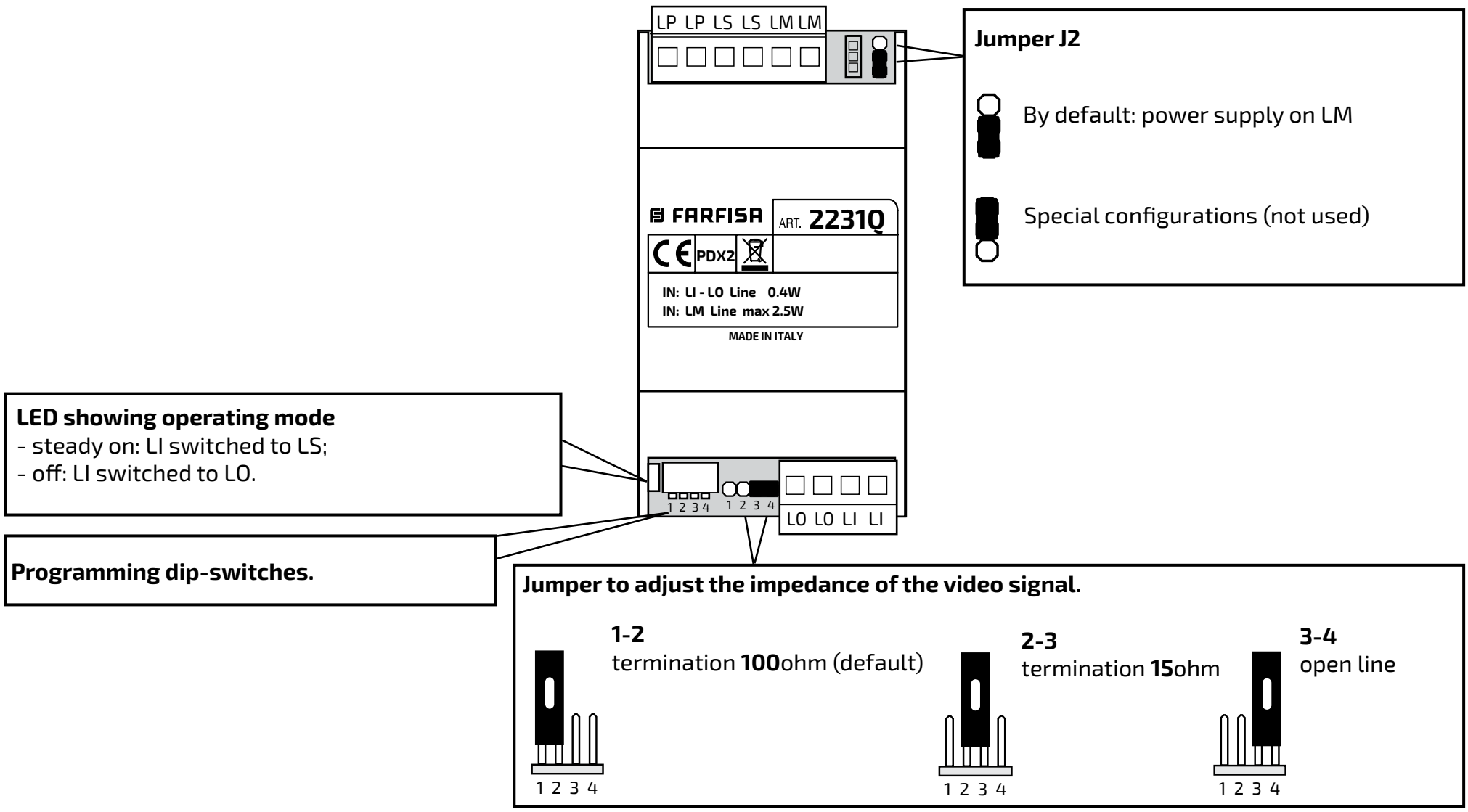
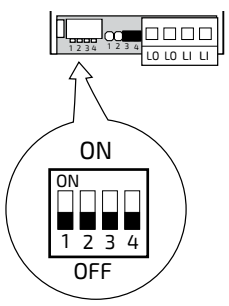
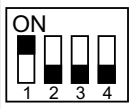
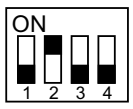
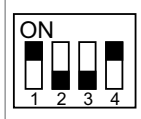
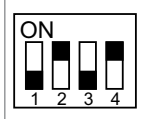


Table 5.3 - Position of the DIP-switches of SW1 and selection of the relevant number range



Range	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10
Position of the DIP-switches of SW1										

Preliminary notes

It is necessary to program 2231Q with the addresses of internal stations connected to the LS line and of external door stations connected to the LP line.

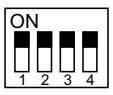
- To store videointercom or intercom addresses connected to the lines LS are available 10 ranges (F1÷F10). In each range it can be stored the address of a single device or the first and the last address of a group of intercoms/videointercoms, with sequential addresses, related to the same line.
  For example if in the range F1 is stored the address 100, on the line LS only the calls addressed to the intercom/videointercom 100 is delivered. Vice-versa if on the same range F1 are stored the addresses 100 and 120, on the line LS are delivered the call addressed to all the intercoms/videointercoms whose address is between 100 and 120.
- If available in the riser, it is required to store, in one of the 10 ranges, the address of the door station connected to terminals LP. Use the other ranges to store the addresses of any additional door stations connected to the LP terminals.
- Attention: if during the programming some errors are made or if later it is necessary to modify some addresses already stored in the memory of the buffer 2231Q, it is necessary to erase the whole memory of the device executing the "memory erasing" procedure and than reprogramming completely the device.

Programming can be carried out using one of the two solutions described below:

Programming with the DUO System app

The device can be fully programmed via Bluetooth by downloading the "**DUO System**" app (available for iOS and Android) into your smartphone or tablet. It is necessary to:

- connect a Bluetooth programmer item PGR2991BT or XE2921 to the system;
- set all the dipswitches of SW1 to ON



- do the programming;
- move SW1 to its original position.

Manual programming of the ranges

To program the ranges F1÷F10 it is necessary:

1) select the range to be programmed, positioning the dipswitches of SW1 according to the instructions provided in table 5.3; red LED flashes quickly.
   For example, to program the range F1, set to ON dipswitch 1 of SW1 leaving OFF dipswitches 2, 3 and 4;

2) store the address of the internal station or external door station by following the procedure described here below.
   - from videointercom Sette press the button ;
   - from videointercom Zhero press the button ;
   - from videointercom Exhito press the button ;
   - from intercom Exhito pick up the handset, press the button , hang up the handset;
   - make a call, without answering from secondary door stations.

   In case you wish to program a group of addresses, store the address with the lowest value first.
   If the final group address also has to be programmed in the range, continue with step 3; if, on the other hand, only one address needs to be programmed, move to step 4.

Notes.

- Proper storage is indicated by the buffer LED turning off for one second and then turning back on in flashing mode.
- Possible audio noise signals in this phase don't indicate any anomaly in the programming.

3) From the external door station or internal station, having the user address with the highest value, store the address following the procedure of the selected model. The device acquires the address of the last external door station or internal station belonging to the group;
4) set OFF the dipswitch 1 of SW1. This operation ends the programming phase of the range F1;
5) if required, proceed in a similar way to program the other 9 ranges repeating the instructions reported on points from 1 to 4 and paying attention to set properly the dipswitches of SW1 according to the range to be programmed (see table 5.3);
6) set OFF all the dipswitches of SW1 and exit the programming mode; red LED comes back flashing slowly;
7) verify the correct operations of door stations and of intercoms/video-intercoms connected to lines LP/LS of the art.2231Q. In particular, if the call is sent from an external door station connected to the LP line to an internal station connected to LS, the red LED must go off. If the call for the same internal station is sent from the portion of the system connected to LI (main external door stations or PDX2000), the red LED must be steady on.

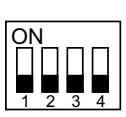
Memory erasing

To erase all the data stored in the memory of the device it is necessary:

- set ON dipswitches 1,2 and 4 of SW1 and leave OFF the dipswitch 3 of SW1; red LED flashes quickly;

- wait for about 4 seconds; red LED lights up continuously;
- within 4 seconds set ON the dipswitch 3; red LED turns OFF for about 2 seconds and than starts again flashing quickly;

- at this stage all data have been erased;
- set OFF all the SW1 dipswitches; red LED comes back flashing slowly.



DUO systems with more than 200 users

If systems with more than 200 calls are required, it is possible to proceed by splitting the system into blocks (Extended Range Duo System). Instead of an address range, the separator is assigned a block number (001 to 099). Within each block, addresses are available:

- 001 - 200 for apartment stations
- 207 - 210 for door-keeper exchanger
- 211 - 230 f or actuators
- 245 - 253 for secondary external door stations.

When the call is sent from the main entrance panels (for which extended range operation mode must be supported as for SOLVO, HERO and ALBA lines), the block address of the separator to which it is connected is placed before the apartment station address.

Warning: for correct operation of the system the main entrance units and devices connected to LI-LI or LO-LO lines must be set up for the DUO Extended Range, while the secondary door stations and devices connected to LP-LP or LS-LS lines may be of the traditional type (DUO). Secondary entrance door stations connected to the LP-LP line must have addresses between 245 and 253, addresses which cannot be set to the main entrance door stations, which can have addresses between 231 and 244.
Programming can be carried out using one of the two solutions described below:

Programming with the DUO System app

The device can be fully programmed via Bluetooth by downloading the "DUO System" app (available for iOS and Android) into your smartphone or tablet. It is necessary to:

- connect a Bluetooth programmer item PGR2991BT or XE2921 to the system;
- set all the dipswitches of SW1 to ON

- do the programming;
- move SW1 to its original position.

Line buffer manual programming
Tthe block address of the 2231Q Line Buffer must be programmed as follows:

1) position microswitches 2, 3 and 4 of SW1 to ON, leaving switch 1 OFF. The red LED should flash quickly.

2) From one of the secondary entrance door stations, connected to the LP-LP inputs of the device, make a call to the desired block number (without answering) and the device will automatically store the value. For example, if you want to programme the address of block 024 in the 2231Q Line Buffer, you must send a call, from the secondary door station, connected to it, to the number 024. This requires one of the external door station buttons to be programmed to send the call to extension 024.
3) Return all the microswitches of SW1 to

The red LED should return to blinking slowly.