POWER SUPPLY UNITS AND VARIOUS DEVICES

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The power supply unit Ref. 1083/20 is dedicated to 2VOICE system. It provides power supply for system devices. According to system type, several power supply units are needed:

- In systems with only one riser column and only one call station, one power supply unit is enough.
- For each column interface Ref. 1083/50, one power supply unit must be added.
- For each door unit interface Ref. 1083/75, 2 power supply units must be added.

The following table contains the number of needed power supply units, according to the system type and the number of devices to be installed, following indications in chapters 1 and 2.

<table>
<thead>
<tr>
<th>Call stations</th>
<th>No. of column interfaces Ref. 1083/50</th>
<th>No. of door units interfaces Ref. 1083/75</th>
<th>No. of columns (K)</th>
<th>Max. No. of users</th>
<th>No. of power supply units</th>
</tr>
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<tbody>
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<td>Max 16</td>
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<td></td>
<td>K</td>
<td>1</td>
<td>Max 32</td>
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<td>1</td>
<td>128 x K</td>
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<td></td>
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<td>1</td>
<td>1</td>
<td>128</td>
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</tr>
<tr>
<td></td>
<td>Max 2 x K</td>
<td>K</td>
<td>1</td>
<td>Max 32</td>
<td>2 + K</td>
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</tr>
<tr>
<td></td>
<td>Max 2 x K</td>
<td>K</td>
<td>1</td>
<td>Max 32</td>
<td>2 + K</td>
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</tr>
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<td>Max 2 x K</td>
<td>K</td>
<td>1</td>
<td>Max 32</td>
<td>2 + K</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Max 2 x K</td>
<td>128 x K</td>
<td>128 + K</td>
<td></td>
</tr>
</tbody>
</table>

(†) on one riser only

The system power supply unit can power the backlight of all name holders for the button panel: present in the system on condition that each one has 32 name holders max. If in the push button panel there are more than 32 name holders, an additional suitable power transformer must be used.

**SYSTEM POWER SUPPLY**

Ref. 1083/20

[Diagram of the power supply unit]

**TECHNICAL CHARACTERISTICS**

- **Power supply:** 230Vac +/- 10% 50/60Hz
- **Power:** 80W
- **Output:** 48Vdc
- **Operating temperature range:** -10°C ÷ +35°C
- **Compliant with:**
  - EN 61000-6-3
  - EN 61000-6-1
  - EN60065
- **Weight:** about 1000g

**INSTALLATION**

The housing can be DIN bar or wall mounted with screws and screw anchors. However, the power supply must be kept in dry places, protected against bad weather, observing safety regulations.

**TERMINAL PINS DESCRIPTION**

- 0
- 230~
- LINE 1: 2 output pins for devices power supply
- LINE 2: 2 output pins for devices power supply

**Pins LINE 1 and LINE 2 are in parallel.**
This device allows to split the column video signal to 4 apartment stations and other distributors. The device is provided with an input, a passing output and 4 derived outputs. The distributor Ref. 1083/55 also includes a PTC protection to prevent damages caused by short circuits on derived lines.

TECHNICAL CHARACTERISTICS

Power supply voltage: 36 ÷ 48Vdc
Max. current consumption: 9.0mA max
Operating temperature range: - 5°C ÷ + 45°C
Compliant with: EN 61000-6-3
EN 61000-6-1

INSTALLATION

The device can be installed in junction boxes. Keep it in dry place, protected against bad weather.

In each column can be installed up to 32 distributors, but in case of connection of apartment stations on the passing output, the number of devices connected on the riser must be reduced to 16.

TERMINAL PINS DESCRIPTION

LINE IN  2 terminal pins for data line input
LINE OUT 2 terminal pins for data line output
LINE 1  2 terminal pins for apartment station derived number 1
LINE 2  2 terminal pins for apartment station derived number 2
LINE 3  2 terminal pins for apartment station derived number 3
LINE 4  2 terminal pins for apartment station derived number 4

LINE TERMINATION

On the device there is a jumper for line termination, that must be put in ON position only on the last distributor where the output line is not connected (LINE OUT).

OPERATION

In case of short circuit on a derived line, only devices on that line will not work (excluded); the other system devices will keep on operating properly.

After removing the cause of the short circuit, to restore PTC protection, disconnect the cable connected to LINE IN pins for about 60°.

It is not to suggested to connect in cascade the distributors.
COLUMN INTERFACE

Ref. 1083/50

COLUMNS INTERFACE

Ref. 1083/50 (C)

The column interface Ref. 1083/50 is dedicated to 2VOICE system. It is used to split a column into several risers or to connect up to 32 independent columns in the system.

Each interface can manage one column, with 128 apartment stations max, and 2 call stations max., directly connected to the interface.

The device is also equipped with a normally open relay contact, that switches for one second each time the door lock release button is pressed in an apartment station of that column.

The column interface must always be powered by a system power supply unit.

TECHNICAL CHARACTERISTICS

Power supply voltage (LINE IN): 36 + 48Vdc
Power supply voltage (POWER): 36 + 48Vdc
Standby current consumption (LINE IN): 25mA max
Max. current consumption (LINE IN): 70mA max
Standby current consumption (POWER): 30mA max
Max. current consumption (POWER): 40mA max
Operating temperature range: -5°C ÷ +45°C
Compliant with: EN 61000-6-3 EN 61000-6-1
Max. AUX switched load: 100mA @ 60Vdc

DEFAULT PROGRAMMING

Column interfaces are factory preset as follows:

Incoming line (dip-switch 1): ON (not connected)
Column interface number: 0
Line termination: ON

INSTALLATION

The housing can be DIN bar or wall mounted with screws and screw anchors. However, the interface must be kept in dry places, protected against bad weather, observing safety regulations.

TERMINAL PINS DESCRIPTION

Z 2 terminal pins for line termination
LINE IN 2 terminal pins for data line input
LINE OUT 2 terminal pins for data line output
IN0 2 terminal pins for call station connection
IN1 2 terminal pins for call station connection
POWER 2 terminal pins for device power supply (with system power supply unit)
LINE 1 2 terminal pins for riser 1 of the apartment stations column
LINE 2 2 terminal pins for riser 2 of the door units column

The 128 apartment stations can be installed in any of the 4 risers that compose the column.

CONFIGURATION

On the device there are 6 configuration dip-switches with the following functions:

DIP 1: if there are devices connected to LINE IN, it must be set to OFF, otherwise it must be set to ON.

DIP 2 + 6: used to program the column unique code, with values between 0 and 31.

To set the desired code use the dip-switch from 2 to 6 (2 = more significant bit - 6 = less significant bit).

LINE TERMINATION

By opening the jumper between the pins Z, the line termination is removed. The termination must be active in all the devices cabled at the end of a line, i.e. when there is a line on the LINE IN input and there is no output line on the LINE OUT pins.
The door units interface Ref. 1083/75 is dedicated to 2VOICE system and is used to connect from 1 to 4 main call stations (IN0 ÷ IN3). It is equipped with 4 output lines (LINE1 ÷ LINE4) for columns connection.

On the output lines can be directly connected up to 128 apartment stations. To connect more than 128 apartment stations and for secondary call stations connection, column interfaces must be used. The output lines must be homogeneous: it is not allowed to connect a column interface to one riser and apartment stations directly to other risers.

The door units interface always needs 2 system power supply units Ref. 1083/20, one for call stations and the other for output lines.

**TECHNICAL CHARACTERISTICS**

- **Power supply voltage (POWER IN):** 36 ÷ 48Vdc
- **Power supply voltage (POWER LINE):** 36 ÷ 48Vdc
- **Max. current consumption (POWER IN):** 30mA max
- **Max. current consumption (POWER LINE):** 70mA max
- **Max. current consumption (POWER LINE):** 70mA max
- **Operating temperature range:** -5°C ÷ +45°C
- **Compliant with:** EN 6000-6-3
- **Compliant with:** EN 61000-6-3
- **Compliant with:** EN 61000-6-1

**INSTALLATION**

The housing can be DIN bar or wall mounted with screws and screw anchors. However, the power supply must be kept in dry places, protected against bad weather, observing safety regulations.

**TERMINAL PINS DESCRIPTION**

- **POWER IN**
  - 2 terminal pins for call stations power supply (with system power supply unit)
- **IN0**
  - 2 terminal pins for main call station 0 connection
- **IN1**
  - 2 terminal pins for main call station 1 connection
- **IN2**
  - 2 terminal pins for main call station 2 connection
- **IN3**
  - 2 terminal pins for main call station 3 connection
- **POWER LINE**
  - 2 terminal pins for riser power supply, street side (with system power supply unit)
- **LINE 1**
  - 2 terminal pins for riser 1 of apartment stations column or for street side riser
- **LINE 2**
  - 2 terminal pins for riser 2 of apartment stations or for street side riser
- **LINE 3**
  - 2 terminal pins for riser 3 of apartment stations or for street side riser
- **LINE 4**
  - 2 terminal pins for riser 4 of apartment stations or for street side riser

On the outputs lines can be connected up to 32 column interfaces.
SPECIAL DECODER Ref. 1083/80

The special decoder Ref. 1083/80 is dedicated to 2Voice system and allows to activate electric loads by means of a 230Vac 5A contact relay with commands sent by users with apartment stations, call stations or switchboard.

Device main features are:
- Monostable operating mode with activation time adjustable from 1 second to 16 minutes, or toggle mode.
- Activation with system events (4 max.) programmable by the installer.
- A remote button can be connected for activation.

Configuration

All decoders are configured in factory as follows:

- **SCQ** jumper = position Q (all devices can activate the decoder)
- **M/T** jumper = position M (monostable)
- **CODE** dip-switch = user 127 (dip1 OFF dip2÷8 ON)
- **timer** = 1 second
- **programmed event** = call to switchboard from user 0, column 0, apartment station

With the factory configuration, all system users (SCQ jumper = Q) can activate the decoder in monostable mode (M/T jumper = M) by pressing the 'call to switchboard' button.

To restore default programmed events, press and keep the programming button pressed for 5 seconds. During this time the red led turns on and when it turns off the decoder will restore default configurations.

Installation

The special decoder can be installed in a service panel on DIN rail (6 18mm DIN modules) or wall mounted with screws and screw anchors (not provided).

For installation, follow general installation instructions of 2Voice system in the system booklet provided with the power supply ref. 1083/20.

Please observe also the following rules:
- The special decoder can be installed only using the 4-user distributor 2Voice ref. 1083/55; connect it to one of the 4 distributor outputs.
- **In-out connection is not allowed.** The decoder must always be connected as last device of a branch.
- Between the door units interface ref. 1083/75 and the column interface ref. 1083/50 only 2 special decoders can be connected.
- If connected to the column, the decoder must be counted within the max. number of apartment stations that can be connected, according to the different system types.

For panic alarm signal to the switchboard, the decoder must be installed in the column.

Switching Mode

The relay contact can be switched in two modes:
- **Monostable** – after a programmed event for activation or after the remote button connected to PC terminal pins is pressed, the relay contact switches for a variable time of 1 second to 16 minutes; this time can be programmed with the trimmer “timer”.
- **Toggle** – after an activation due to a programmed event or after the remote button connected to PC terminal pins has been pressed.
the relay contact switches and the trimmer position is irrelevant; the relay keeps this state until a new command is received. 

In case of no events reception for a time greater than 5 minutes, the special decoder automatically quits the programming mode and turns the led off (the events already acquired stay stored).

Programming details and behaviour of the special decoder for each single programmable event are described below.

**EVENT: PEDESTRIAN DOOR LOCK RELEASE BUTTON FROM APARTMENT STATION**

Program the event by pressing the pedestrian door lock release button of an apartment station, which must activate the special decoder relay (see paragraph about events programming). Assume that this apartment station is in the column number “Column ID” and has user code “CODE”.

When the programming procedure has been performed, the relay is activated according to the position of the jumper SCQ:
- Position Q: the pedestrian door lock release button of any system user activates the decoder.
- Position C: the pedestrian door lock release button of any user of the column “Column ID” activates the decoder.
- Position S: the pedestrian door lock release button of all apartment stations (also those in parallel) of the user in the column “Column ID” and user code “CODE” (the one used to acquire the event) activates the decoder.

The position of special decoder dip-switches CODE is irrelevant for the operation with pedestrian door lock release button.

**EVENT: DRIVEWAY DOOR LOCK RELEASE BUTTON FROM APARTMENT STATION**

Program the event by pressing the driveway door lock release button of an apartment station, which must activate the special decoder relay (see paragraph about events programming).

Assume that this apartment station is in the column number “Column ID” and has user code “CODE”.

When the programming procedure has been performed, the relay is activated according to the position of the jumper SCQ:
- Position Q: the driveway door lock release button of any system user activates the decoder.
- Position C: the driveway door lock release button of any system user in the column “Column ID” activates the decoder.
- Position S: the driveway door lock release button of all apartment stations (also those in parallel) of the user in the column “Column ID” and user code “CODE” (the one used to acquire the event) activates the decoder.

The position of special decoder dip-switches CODE is irrelevant for the operation with driveway door lock release button.

**EVENT: ‘CALL TO SWITCHBOARD’ BUTTON FROM APARTMENT STATION**

Program the event by pressing the ‘call to switchboard’ button of an apartment station, which must activate the special decoder relay (see paragraph about events programming).

Assume that this apartment station is in the column number “Column ID” and has user code “CODE”.

When the programming procedure has been performed, the relay is activated according to the position of the jumper SCQ:
- Position Q: the ‘call to switchboard’ button of any system user activates the decoder.
- Position C: the ‘call to switchboard’ button of any system user in the column “Column ID” activates the decoder.
- Position S: the ‘call to switchboard’ button of all apartment stations (also those in parallel) of the user in the column “Column ID” and user code “CODE” (the one used to acquire the event) activates the decoder.

The position of special decoder dip-switches CODE is irrelevant for the operation with ‘call to switchboard’ button.

**EVENT: ‘SPECIAL FUNCTIONS’ BUTTON FROM APARTMENT STATION**

Program the event by pressing a ‘special function’ button of an apartment station, which must activate the special decoder relay (see paragraph about events programming).

Assume that this apartment station is in the column number “Column ID” and has user code “CODE”.

When the programming procedure has been performed, the relay is activated according to the position of the jumper SCQ:
- Position Q: the special function button of any system user activates the decoder.
- Position C: the special function button of any system user in the column “Column ID” activates the decoder.
- Position S: the special function button of all apartment stations (also those in parallel) of the user in the column “Column ID” and user code “CODE” (the one used to acquire the event) activates the decoder.

The position of special decoder dip-switches CODE is irrelevant for the operation with ‘special function’ button.
ID", has user code "CODE" and the number of the special function associated to that button is "SPEC".

When the programming procedure has been performed, the relay is activated according to the position of the jumper SCQ:
- Position Q: the 'special function' button "SPEC" of any system user activates the decoder.
- Position C: the 'special function' button "SPEC" of any system user in the column "Column ID" activates the decoder.
- Position S: the 'special function' button "SPEC" of all apartment stations (also those in parallel) of the user in the column "Column ID" and user code "CODE" (the one used to acquire the event) activates the decoder.

The position of special decoder dip-switches CODE is irrelevant for the operation with 'special function' button.

EVENT: INTERCOM CALL FROM APARTMENT STATION
- Assign to the special decoder a user code from 0 to 127 using dip-switches CODE; in the system special decoders must not have the same user code as other devices (apartment stations or other decoders), even if belonging to different columns.
- To set the desired code use dip-switches CODE from 2 to 8 (2=most significant bit – 8=least significant bit); the dip-switch 1 must be OFF.
- Program the buttons of concerned apartment stations to perform a direct intercom call to the previously configured special decoder:
  - Go to the apartment station to be programmed.
  - Keep the door lock release button and pick the handset up.
  - Press the button to be programmed; the apartment station emits a confirmation tone.
  - Go to the special decoder and press the programming button until the red led turns on, then release the button.
  - The apartment station in programming mode emits a beep to confirm the programming.
  - Press again the programming button of the special decoder until the red led turns off.
  - Hang up the apartment station handset, that emits a confirmation tone.
  - Program the event by pressing the intercom call button of any system user activates the decoder.
  - Position Q: the intercom call button of any system user activates the decoder.
  - Position C: the intercom call button of any system user in the column "Column ID" activates the decoder.
  - Position S: the intercom call button of all apartment stations (also those in parallel) of the user in the column "Column ID" and user code "CODE" (the one used to acquire the event) activates the decoder.

When the programming procedure has been performed, the relay is activated according to the position of the jumper SCQ:
- Position Q: the intercom call button of any system user activates the decoder.
- Position C: the intercom call button of any system user in the column "Column ID" activates the decoder.
- Position S: the intercom call button of all apartment stations (also those in parallel) of the column "Column ID" and user code "CODE" (the one used to acquire the event) activates the decoder.

EVENT: PEDESTRIAN DOOR LOCK RELEASE COMMAND FROM SWITCHBOARD
Program the event by sending a pedestrian door lock release command from the switchboard (see paragraph about events programming).

When the programming has been performed, the relay is activated each time a pedestrian door lock release command is sent from the switchboard.

The position of dip-switches CODE and jumpers SCQ of special decoder is irrelevant for the operation with pedestrian door lock release command from switchboard.

EVENT: DRIvEWAY DOOR LOCK RELEASE COMMAND FROM SWITCHBOARD
Program the event by sending a driveway door lock release command from the switchboard (see paragraph about events programming).

When the programming has been performed, the relay is activated each time a driveway door lock release command is sent from the switchboard.

The position of dip-switches CODE and jumpers SCQ of special decoder is irrelevant for the operation with driveway door lock release command from switchboard.

EVENT: SPECIAL CODES COMMAND FROM CALL STATION OR SWITCHBOARD
Program the event by sending a special code "SPEC" from a call station or from the switchboard that must activate the special decoder relay (see paragraph about events programming). The device from which the special code is sent can be a secondary call station in the column number "Column ID", a main call station or a switchboard.

When the programming has been performed, the following events will occur:
- Sending of special code "SPEC" from the switchboard activates the decoder.
- Sending of special code "SPEC" from a main call station activates the decoder.
- Sending of special code "SPEC" from a secondary call station activates the decoder, according to the position of jumper SCQ:
  - Position Q: Sending of special code "SPEC" from any secondary call station activates the decoder.
  - Position C or S: Sending of special code "SPEC" from any secondary call stations in the column "Column ID" activates the decoder.

The position of special decoder dip-switches CODE is irrelevant for the operation with special functions buttons.
OPERATING MODE TO SIGNAL PANIC ALARM TO SWITCHBOARD (DIP1 = ON)

This function can be used in systems provided with concierge switchboard with software version 3.1 or higher.

In this operating mode the special decoder must be programmed as follows:
1 – Move the dip-switch 1 in position ON
2 – Assign to the special decoder a user code from 0 to 127 using dip-switches CODE

To set the desired code use dip-switches from 2 to 8 (2 = most significant bit – 8 = least significant bit). The user code can be the same used in apartment stations of the same apartment.

When the programming has been performed, by pressing the remote button (PC) a panic alarm is sent to the switchboard, with indication of the column where the decoder is installed and the programmed user code (CODE).

At the same time the relay is activated, according to the configurations of the toggling mode.

OPERATION EXAMPLES

Operation example if the following events are programmed:
- Pedestrian door lock release button pressed from an apartment station;
- Gate door lock release button pressed from an apartment station;
- “Call to switchboard” button pressed from an apartment station;
- “Special functions” buttons pressed from an apartment station;
- Intercom call from an apartment station (*).

(*) the event will be active on all the devices where the intercom call to user 127 has been programmed.
Operation example if the following events are programmed:

- Pedestrian, door lock release command from concierge switchboard
- Gate lock release command from concierge switchboard

- Device used for event programming
- Device used to activate the decoder

Operation example if the following events are programmed:

- Sending of special codes from call station or switchboard
- Special signal from call station or switchboard

- Device used for event programming
- Device used to activate the decoder
The video switch Ref. 1038/69 is a device which can be used to perform the auto-on function on 4 control cameras connected to a call station.

Press several times the auto-on button on a video door phone apartment station; the display will show the images coming from the call station camera and those of the cameras directly connected to the call station, then the images coming from cameras connected to the switch, in cyclic mode.

If in the system there are other call stations, after the cameras connected to the switch, the image displayed will be the one coming from other stations.

Each time the auto-on function is performed, the cycle always starts from the main call station camera ID0.

The device can not only switch the video signal, but also cameras power supply, allowing to power one only camera at a time.

**ELECTRICAL SPECIFICATIONS**

- Power voltage (+V, 0V): 18 Vdc ± 20%
- Max. current consumption: 50 mA
- Power supply voltage (+12, 0V): 12 Vcc ± 10% (max. current 50 mA)
- Power supply voltage (R2, 0V): 12 Vcc ± 10% (max. current 2A)
- Working temperature range: from -5 to +50 °C
- Humidity: 90% UR @ 30 °C
- Maximum distance between button contacts and terminals (RES): 300m

**INSTALLATION**

The housing can be mounted on a DIN rail or wall mounted with screws and screw anchors; however, the device must be kept in dry places, protected against bad weather, observing safety regulations.

To power the video switch, it is suggested to use the power supply Ref. 789/2; its characteristics and installation modes are described in “Door phone – Video door phone products Technical Manual” in the section “Power supply, Relays, Various Devices”.

**TERMINAL PINS DESCRIPTION**

- RE: 0V input for camera 1 activation referred to 0V
- RF: 0V input for camera 2 activation referred to 0V
- RG: 0V input for camera 3 activation referred to 0V
- RH: 0V input for camera 4 activation referred to 0V
- R2: 0V power supply input for cameras
- +V: 0V power supply input for video switching 18Vcc
- +12: 0V power supply input for video switching 12Vcc
- AU: BU video signal output for the monitor with differential connection
- AU: V5 video signal output for the monitor with coaxial connection

**CONFIGURATION**

Set the jumper on the device to the position shown in the table according to the number of cameras used.

<table>
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<tbody>
<tr>
<td>2</td>
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<td>–</td>
<td>–</td>
<td>–</td>
<td>Video signal switch A1÷A2</td>
</tr>
<tr>
<td>3</td>
<td>–</td>
<td>ON</td>
<td>–</td>
<td>–</td>
<td>Video signal switch A1÷A2÷A3</td>
</tr>
<tr>
<td>4 (default)</td>
<td>–</td>
<td>–</td>
<td>ON</td>
<td>–</td>
<td>Video signal switch A1÷A2÷A3÷A4</td>
</tr>
<tr>
<td>5(**)</td>
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<td>–</td>
<td>–</td>
<td>ON</td>
<td>Video signal switch A1÷A2÷A3÷A4÷A5 (Pass through)</td>
</tr>
</tbody>
</table>

(**) The pass through camera (A5) must be directly powered.
The device Ref.1783/69 allows to connect up to 4 control cameras with balun impedance adapter to 2Voice systems. Cameras can be assigned to the single user number 0 or 1 or assigned to all the system users. This interface can be seen as a secondary call module. For this reason, in each riser the sum of secondary call stations and CCTV bus interfaces can not exceed 2.

It is possible to use Ref.1083/69 or Ref.1038/69 devices even if in the system is installed one or more Ref.1783/69.

### TECHNICAL CHARACTERISTICS

- Power supply voltage: 36-48Vcc
- Standby current consumption: 10 mA
- Maximum current consumption: 100 mA

### FACTORY SETTINGS

The device is factory configured with following defaults:

| ID | 1 |
| B/S | BROAD |
| SEL/AP TELECAMERE | 1 AP0 |
| 2 AP0 |
| 3 AP0 |
| 4 AP0 |
| ON/OFF TELECAMERE | 1 AP1 |
| 2 AP1 |
| 3 AP1 |
| 4 AP1 |

### INSTALLATION

The device is designed for DIN rail installation and also for wall mounting installation with screws and screw anchors.

To connect the interface Ref.1783/69 to the system, it is mandatory to use the 2Voice system cable Ref.1083/90 or Ref.1083/92 and to observe the regulations concerning secondary call stations that are shown in the system booklet.

For cameras connections, use the cables described below, observing the maximum extension indications:

<table>
<thead>
<tr>
<th>Cable type</th>
<th>Maximum length</th>
<th>Video balun</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAT5</td>
<td>200m</td>
<td>Ref.1093/300A (*)</td>
</tr>
<tr>
<td>Coax RG59</td>
<td>50m</td>
<td>NO</td>
</tr>
</tbody>
</table>

(*) between the video balun Ref.1093/300A impedance adapter and the camera, a RG59 coax cable with a maximum length of 50m can be used.

### TERMINAL PINS DESCRIPTION

A1 negative input (or coax cable shield) camera number 1
B1 positive input (or coax cable central conductor) camera number 1
A2 negative input (or coax cable shield) camera number 2
B2 positive input (or coax cable central conductor) camera number 2
A3 negative input (or coax cable shield) camera number 3
B3 positive input (or coax cable central conductor) camera number 3
A4 negative input (or coax cable shield) camera number 4
B4 positive input (or coax cable central conductor) camera number 4

LINE IN \{ incoming BUS line
LINE OUT \{ outgoing BUS line
ID: In a riser column it is possible to install 2 CCTV bus interfaces or one secondary call station and one CCTV bus interface; the two devices must have different addresses (0 or 1).

Address 0

- ID/B/S: The images coming from cameras connected to the interface can be seen by all the users (BROAD) or assigned to users 0 and 1 of the column (SEL/AP) by means of the dip switch “SEL/AP TELECAMERA”.

- B/S: The images coming from cameras connected to the interface can be seen by all the users (BROAD) or assigned to users 0 and 1 of the column (SEL/AP) by means of the dip switch “SEL/AP TELECAMERA”.

SEL/AP CAMERAS: by setting the “B/S” dip-switch to SEL/AP, it is possible to assign all the cameras to the user 0 (AP0) or to the user 1 (AP1). The dip-switch number corresponds to the camera number (dip number 1 = camera connected to A1, B1 terminal pins).

ON/OFF CAMERAS: if no camera is connected to an input or if it is needed to exclude temporarily the selected camera from those displayed, put the respective dip-switch in OFF position. The dip-switch number corresponds to the camera number (dip number 1 = camera connected to A1, B1 terminal pins).

Cameras can be associated only to users with CODE 0 and 1; the other users can see cameras images only if the “Broadcasting” function is enabled.

For example, if it is requested to assign the cameras number 1 (A1,B1) and 4 (A4,B4) to the user 0 and the other cameras to the user 1, set the dip-switch in the following way:

RESET: If the CCTV Bus interface is removed from the system in order to be used in another system, it is necessary to reset it. To do this and erase all the active settings, open and close again the jumper “RESET”.

For instance, if no camera is connected to A3, B3 terminal pins, set the dip-switch as follows:
### CONNECTION IN 2VOICE SYSTEMS

In-out connection in a one-riser system with one main call station

![Connection diagram for one-riser system with one main call station](image1)

Connection in a system with one main call station and one secondary call station

![Connection diagram for a system with one main and one secondary call station](image2)

Connection of 8 control cameras derived from a column interface Ref.1083/50

![Connection diagram for 8 control cameras](image3)

During auto-on, cameras connected to the Bus interface Ref.1783/69 are shown after the sequence described in the system booklet at the paragraph “Auto-on function on control cameras.”
The transformer Ref.9000/230 is used to power the buttons modules name holders when it is not possible to power them directly from the Bus. It has been designed following the regulations in force about insulating and security transformers. In this way it is compliant with requirements about protection against direct and indirect contacts, as requested by regulations concerning electric systems. It is also provided with IMQ mark approval.

**TECHNICAL CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Power supply:</th>
<th>230Vac 50/60Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power:</td>
<td>18VA</td>
</tr>
<tr>
<td>Secondary:</td>
<td>12Vac</td>
</tr>
<tr>
<td>Max. load:</td>
<td>1,1A</td>
</tr>
<tr>
<td>Protections:</td>
<td>with PTC</td>
</tr>
<tr>
<td>Power dissipation after 1 hour standard work:</td>
<td>1,8W</td>
</tr>
</tbody>
</table>

(*) After removing the cause of the short circuit, to restore PTC protection, unpower for about 60”.

**INSTALLATION**

The housing can be DIN bar or wall mounted with screws and screw anchors, using suitable adapters.

However, it must be kept in dry places, protected against bad weather, observing safety regulations.

**TERMINAL PINS DESCRIPTION**

230~ 2 terminal pins 230Vac power supply input
0 ~ 12  2 terminal pins 12Vac power supply output

This device can be used as call repeater, additional electric locks or electric loads activator like, for example, additional lamps for cameras installed far from the push button panel.

**TECHNICAL CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Power supply:</th>
<th>12Vac nominal</th>
</tr>
</thead>
<tbody>
<tr>
<td>12Vdc, 18Vac, 18Vdc</td>
<td>at 12Vcc 40mA</td>
</tr>
<tr>
<td>at 18Vcc 60mA</td>
<td></td>
</tr>
<tr>
<td>at 12Vac 100mA</td>
<td></td>
</tr>
<tr>
<td>at 18Vac 150mA</td>
<td></td>
</tr>
<tr>
<td>5A @ 100V</td>
<td></td>
</tr>
</tbody>
</table>

**INSTALLATION**

The housing can be DIN bar or wall mounted with screws and screw anchors. However, the relay must be kept in dry places, protected against bad weather, observing safety regulations.

**TERMINAL PINS DESCRIPTION**

The relay is equipped with two poles, suitable to command circuits with voltage not higher than 100V and max. current of 5A.
The device Ref. 1032/81 allows to time the activation of an additional ringer or the activation of a driveway electric lock.

Timing can be performed as follows:

a. By putting the jumper AR in “NO” position, the timer will activate the relay output when the external command “SE2” is received, only for the time configured by the potentiometer (TIME), regardless if the input signal is still present or not.

b. With the jumper AR in “SI” position, the timer will activate the relay output at least for the preset time: if the input “SE2” signal lasts longer than the configured time, the output will be kept active.

The device is equipped with two leds that indicate if the SE2 (LI) input and the (LO) relay output are active.

**TECHNICAL CHARACTERISTICS**

- Power supply voltage on +24: 22 ÷ 27Vdc
- Power supply voltage on +12/~: 10 ÷ 15Vdc/ca
- Continuous current from AP: 125 ÷ 170mA
- Timing range: 1 ÷ 30Sec ±20%
- Operating temperature range: -1 ÷ +45°C
- Max. switching capacity (resistive load): 10A at 24Vdc
  - 10A at 120Vac
- Max. switching voltage: 240Vac/110Vdc
- Max. switching power (resistive load): 1400VA at 240Vac
  - 300W at 110Vdc
- Min. load: 10mA at 5Vdc
- Max. current consumption at 12Vdc: 200mA

**INSTALLATION**

The housing can be DIN bar or wall mounted with screws and screw anchors. However, the relay must be kept in dry places, protected against bad weather, observing safety regulations.

**TERMINAL PINS DESCRIPTION**

- +24: 22-27Vdc power supply input
- +12/~: 10-15Vdc or 10-15Vac power supply input
- ~/~: Common power supply contact
- SE2: Timer command input, activated by connecting it to the common power supply contact
- AP: Door lock release output
- NO: Normally open contact
- NC: Normally closed contact
- C: NO and NC contacts common, usually connected to power supply common signal with AMCR jumper.

**JUMPERS AND PRESETS**

- AR: Recycle enabled.
- AMCR: Relay common ground enabling.
- TIME: Potentiometer to set the delay for the output relay disabling; the max. delay is obtained by turning the potentiometer clockwise.

**SYSTEM CABLES**

In order to obtain the best system features, it is advisable to connect all the system devices with the dedicated cable, available in reels of two different lengths:

- 100 m Ref.083/90
- 200 m Ref.083/92

These cables have the following characteristics:

- Multipole cable, composed by 1 twisted pair with a PVC fire resistant external sheath.
- Excellent noise immunity.
- Cable section: 1mm².
- Pair impedance: 100Ohm ± 10% from 1MHz to 15MHz.
- 100m cable attenuation: <4,95dB at 10MHz.
- External diameter: 6.4mm.
- Colour: brown.
This is a voltage surge varistor power line protection device. With overvoltage caused by atmospheric events, the device immediately limits the mains voltage amplitude and preserves the devices installed downstream to the device. Install the power line filter 230V 4000VA Ref. 1332/85 downstream to the power protection device to ensure better system operation.

Protection level: compliant with standard IEC 61643-1 and A1: class III with Uoc 6 kV

TECHNICAL CHARACTERISTICS

- Power supply protection threshold voltage ≥ 300 V eff.
- Made of self-extinguishing material
- Nominal voltage: 230Vac
- Max. voltage: 255Vac
- Max. current: 20A
- Operating frequency: 50Hz
- Power: 4000VA
- Temperature range: -25°C + 40°C

INSTALLATION

The device must be mounted on a DIN bar in a closed electrical panel. Check electrical connections before powering the circuit. Locate the phase wire with a phase detector and connect it to the terminal pin “1”, IN side.

IMPORTANT

The device must be protected by a 18 A differential magnetothermic earth-fault protection and differential switch with threshold current equal to 30mA. The protection device must be connected to mains ground conductors.

Device efficacy will be better at lower earth system resistance. For this reason, the system must comply with standards CEI 64-8/1 V1 edition 01/2001 booklet 5902. Please follow the specifications described in CEI 64-8/4 edition 01/1998 booklet 4134 concerning safety regulations.

CONNECTION EXAMPLE

This is a two-cell, high-attenuation, one-phase filter for frequencies > 0.1 MHz, active on common and differential mode interference. The device is intended to prevent the propagation of external radio-frequency interference on the power mains which could cause faults in the electrical and electronic devices connected to the mains. Install a power line protection device 230V 4000VA Ref. 1332/85 upstream to the power filter to ensure better system operation.

TECHNICAL CHARACTERISTICS

- One-phase, two-cell, high-attenuation filter active on common and differential interference f > 0.1Mhz.
- Contained in a 2 DIN modules, self-extinguishing enclosure
- Nominal voltage: 230Vac
- Max. voltage: 255Vac
- Operating frequency: 50Hz
- Attenuation: 60dB at a frequency of 2MHz
- Max. current: 20A
- Power: 4000VA
- Temperature range: -25°C + 40°C

INSTALLATION

The device must be fastened on a DIN bar in a closed electrical panel. Check electrical connections before powering the circuit. Locate the phase wire with a phase detector and connect it to the terminal pin “1”, IN side.

IMPORTANT

The device must be protected by a suitable restricted earth-fault protection with current flow equal to 18 A and differential switch with opening current equal to 30mA. The protection device must be connected to earth. Filter efficacy will be better at lower earth system resistance. For this reason, the system must comply with standards CEI 64-8/1 V1 edition 01/2001 booklet 5902. Implement specifications described in CEI 64-8/4 edition 01/1998 booklet 4134 concerning safety regulations.

Ref. 1332/85
Ref. 1332/86

1 = PHASE
2 = NEUTRAL

103 mm
90 mm
2 DIN modules

The video switch Ref. 1038/69 can be used to connect to a call station 4 surveillance cameras. Images coming from these cameras are displayed during auto-on function. By pressing repeatedly the auto-on button on a video door phone apartment station, the user will see first the images coming from the call station camera, then those coming from the camera connected to terminal pins V3A and V5A, and then, cyclically, the images coming from the cameras connected to the video switch. If in the system there are other call stations, after the images coming from the cameras connected to the switch, the user will see the video signal coming from the other stations.

Each time the auto-on function is activated, the cycle starts again from the main call station ID0 camera.

**TECHNICAL CHARACTERISTICS**

- Power supply voltage (+V, 0V): 16 ÷ 25Vdc
- Current consumption: 10mA
- Dimensions in mm: 118 (L) x 114 (L) x 52 (H)
- Max. distance from the call station: 300 m

**INSTALLATION**

The housing is suitable for wall mounting with screws and screw anchors in dry places, protected against bad weather.

**TERMINAL PINS DESCRIPTION**

<table>
<thead>
<tr>
<th>RH</th>
<th>RG</th>
<th>Inputs for single video relay driving - do not use in 2VOICE system</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF</td>
<td>RE</td>
<td>Device power supply input (ground)</td>
</tr>
<tr>
<td>0V</td>
<td>+V</td>
<td>Device power supply input (positive)</td>
</tr>
<tr>
<td>I1</td>
<td>V5</td>
<td>Coax video signal input for camera 1</td>
</tr>
<tr>
<td>I2</td>
<td>V5</td>
<td>Video signal ground input (shield) for camera 1</td>
</tr>
<tr>
<td>I3</td>
<td>V5</td>
<td>Coax video signal input for camera 2</td>
</tr>
<tr>
<td>I4</td>
<td>V5</td>
<td>Video signal ground input (shield) for camera 2</td>
</tr>
<tr>
<td>I5</td>
<td>V5</td>
<td>Video signal ground input (shield) for camera 3</td>
</tr>
<tr>
<td>I6</td>
<td>V5</td>
<td>Video signal ground input (shield) for camera 4</td>
</tr>
<tr>
<td>I7</td>
<td>V5</td>
<td>Video signal ground input (shield) for camera 4</td>
</tr>
<tr>
<td>I8</td>
<td>V5</td>
<td>Video signal ground output (shield)</td>
</tr>
<tr>
<td>TC1</td>
<td>TC2</td>
<td>Power supply output for camera 1 (optional)</td>
</tr>
<tr>
<td>TC3</td>
<td>TC4</td>
<td>Power supply output for camera 2 (optional)</td>
</tr>
<tr>
<td>TC5</td>
<td>TC6</td>
<td>Power supply output for camera 3 (optional)</td>
</tr>
<tr>
<td>TC7</td>
<td>TC8</td>
<td>Power supply output for camera 4 (optional)</td>
</tr>
<tr>
<td>R2</td>
<td>T</td>
<td>Power supply output for cameras (+) (optional)</td>
</tr>
<tr>
<td>0V</td>
<td>Cyclic switching input signal</td>
<td></td>
</tr>
<tr>
<td>RES</td>
<td>Reset signal input - do not use in 2VOICE system</td>
<td></td>
</tr>
</tbody>
</table>

To power the video switch, it is suggested to use the power supply unit Ref. 789/2, whose characteristics and installation modes are described in “Door Phone - Video Door Phone Products Technical Manual”, in the section “Power supply, Relays, Various Devices”.

**CONFIGURATION**

Set the jumper on the device to the position shown in the following table, according to the number of cameras connected to the switch.

<table>
<thead>
<tr>
<th>Number of cameras</th>
<th>JP1</th>
<th>JP2</th>
<th>JP3</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td></td>
<td>ON</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td>ON</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td>ON (*)</td>
</tr>
</tbody>
</table>

(*) default

Cameras must be connected in sequence, starting from input I1.