

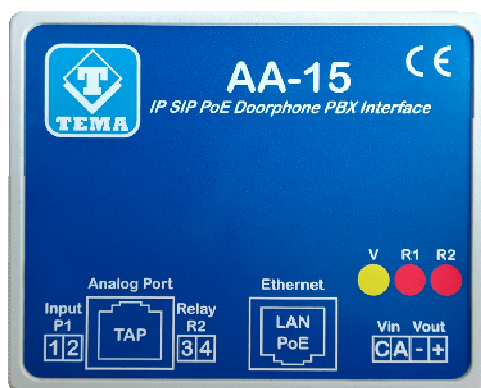


**TEMA TELECOMUNICAZIONI S.r.l.**  
Telecomunicazioni - Elettronica - Microapplicazioni Audiotelefoniche



# AA-15SIP

*VoIP SIP / PoE Doorphone interface*



## QUICK GUIDE PRELIMINARY DOCUMENTATION

HW Version 1.0 - SW Version 1.10

**NOTE: FOR THE PROGRAMMING OF THE DEVICE AND FURTHER DETAILS REFER TO THE COMPLETE PRODUCT MANUAL INSIDE THE SUPPLIED CD-ROM.**

### Recommendations

1. Use only original spare parts and consumables supplied by Tema Telecomunicazioni Srl for this equipment. The company shall not be held responsible for any damage caused by the use of materials that they have not supplied.
2. The device has been carefully manufactured and tested. In any case, the product is not recommended for use in situations in which incorrect operating may result in damage to persons and/or property.
3. We recommend that you carefully read all this manual before starting to use the device.
4. Do not expose the device to sunlight and protect it from sources of heat, dust, humidity and chemical agents.
5. This manual is the property of Tema Telecomunicazioni Srl and any duplication and reproduction, even partial, as well as storage on any type of media is forbidden without written permission from Tema Telecomunicazioni Srl.

Revision	Date	Revision reason	Prepared	Verified/Approved
1	30/11/21	First release	DP, FL	DP, FL



## DICHIARAZIONE DI CONFORMITÀ CE

### DECLARATION OF CONFORMITY CE

We, **TEMA TELECOMUNICAZIONI SRL** Via C. Girardengo, 1/4 - 20161 MILANO

***declare under our sole responsibility that the product:***

product name           **Modulo Intercom Audio e Video VoIP SIP / PoE**

trade name             **TEMA TELECOMUNICAZIONI Srl**

type or model          **AA-15SIP**

and accessories

***to which this declaration relates is in conformity with the essential requirements and other relevant requirements of the R&TTE Directive ( 1999/5/EC, 2006/95/EC, 2004/108/EC ).***

***The product is in conformity with the followings standards and/or other normative documents:***

HEALT & SAFETY           EN 60950-1:2006  
                                  +A11:2009  
                                  +A1:2010  
                                  +A12:2011

EMC                         EN 55022:2010  
                                  EN 55024:2010  
                                  EN 61000-3-2:2006  
                                  EN 61000-3-3 :2008

MILANO, 30 November 2021

TEMA TELECOMUNICAZIONI SRL  
D. Pontillo

### I. IMPORTANT INFORMATIONS REGARDING THE RECOVERY AND RECYCLING OF THIS ELECTRONIC DEVICE

The crossed-out wheeled bin symbol below indicates that this electronic equipment is intended to be disposed in a separate collection and not in an unsorted municipal waste, in order to provide for the treatment of WEEE (Waste Electrical and Electronic Equipment) using best available recovery and recycling techniques. Specific treatment for WEEE is indispensable in order to avoid the dispersion of pollutants and other hazardous substances into the waste stream, while recycling leads to reduction of disposal of waste and the negative impacts on environment and human health. That is, priority is given to reuse of WEEE in its components, subassemblies and consumables. As the final holder, the user has an important role in contributing to reuse, recycling and other forms of recovery of WEEE and is responsible to return this waste in the collection facilities set up by EC Member States and to fulfill other duties in compliance with Directive 2002/96/EC and local laws.

Note: the above information is drawn up in compliance with Directive 2002/96 / EC and Legislative Decree 25/7/2005, n.151, which provide for the mandatory of a separate waste collection system as well as particular methods of treatment and disposal of waste electrical and electronic equipment (WEEE).



**TEMA TELECOMUNICAZIONI**  
*è un'azienda certificata*



UNI EN ISO 9001:2015

## RECOMMENDATIONS

1. It is recommended to read this entire manual before proceeding to the installation of the device.
2. The installation and commissioning of the device can only be performed by specialized technicians.
3. The device is accurately manufactured and tested. In any case, the product is not recommended for use where an error of operations can cause property damage and/or injury to persons.
4. It is expressly not recommended maintenance inside the device which must be carried out by Tema Telecomunicazioni, the removal of the closures will invalidate the warranty and makes accessible internal parts with risk of electric shock.
5. Tema Telecomunicazioni accepts no responsibility for damage to property and/or persons resulting from incorrect use of the equipment or by procedures that do not comply with the instructions in this manual. Tema Telecomunicazioni reserves the right to make modification to the technical and functional specifications at any time and without any notice.
6. Products powered via PoE (Power over Ethernet) may only be connected with cables coming from the internal network company (inside the building), are not allowed connections LAN cables coming from outside the building.
7. Use for this device only and exclusively original spare parts and consumables supplied by Tema Telecomunicazioni. The company is not responsible for damage caused by the use of materials not supplied by the same.
8. Do not expose the unit to direct sunlight, protect from heat, dust, humidity and chemicals.
9. Tema Telecomunicazioni reserves the right to vary the product characteristics for improvement without prior notice. Check the [WWW.TEMATLC.IT](http://WWW.TEMATLC.IT) website for any updates to the latest firmware, manuals, and technical documentation.
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This symbol in the descriptions indicates a general warning or a damage danger to equipment or people.



This symbol in the descriptions indicates an electric shock hazard for damage to the equipment or people.



This symbol in the descriptions indicates useful information or a suggestion for the optimization of the device functionality.

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## 1. PRESENTATION

The AA-15SIP device allows to interface any traditional doorphone (4 or 5 wires) to an IP-PBX in order to manage the doorphone from any internal extension or, in the absence of an IP-PBX, it can also work with a common SIP phone in P2P (Peer-to-Peer) mode. When a visitor presses the call button of the existing doorphone, AA-15 generate a SIP call to a programmed extension number by putting the visitor in communication with the operator who answered, who has the possibility to operate, with a code from the phone, the relay for opening the entrance gate. A second relay can be activated, from the internal telephone as well, for other services.

When an IP-PBX is present, the calls from the intercom can be routed to an external telephone number, including mobile numbers.

The device has an external contact input that can be used as an alarm dialer: when closed, AA-15SIP calls a programmed number and alerts the event with a customizable voice message.

If there is no IP-PBX, the basic functions (communication and gate opening relay activation) are obtained by connecting a normal IP-SIP phone and programming AA-15SIP in P2P (Peer-to-Peer) mode.

It is possible to connect AA-15SIP both to the central unit of the doorphone system or **directly to the internal station (wall-mounted intercom) of the single user.**

AA-15SIP integrates a **PoE** power supply and can therefore be powered on the same cat5/6 LAN cable if coming from a PoE switch. Alternatively, an input for external 230Vac power supply is available (Optional).

The dimensions 76.5x62xH32.5mm (connectors excluded) are extremely compact and the system can be fixed to the wall with the included bracket or on a DIN bar with a special accessory (Optional).

### Main features

- ◆ Can be connected with all 4-5 wires doorphones models, DIN rail mounting
- ◆ 1 power open-door relay and 1 auxiliary relay
- ◆ Up to 2 configurable extension numbers (1 for Day Mode, 1 for Night Mode)
- ◆ Relay: configurable opening and closing contact
- ◆ Activity display LED
- ◆ Easy programming via Web browser
- ◆ Compatible with the most popular IP-PBX brands

### Total Management via LAN, integrated Web Server

Programming, configuration, loading and listening of audio files, firmware update, audio volume adjustment, backup, configuration reset, device reboot.

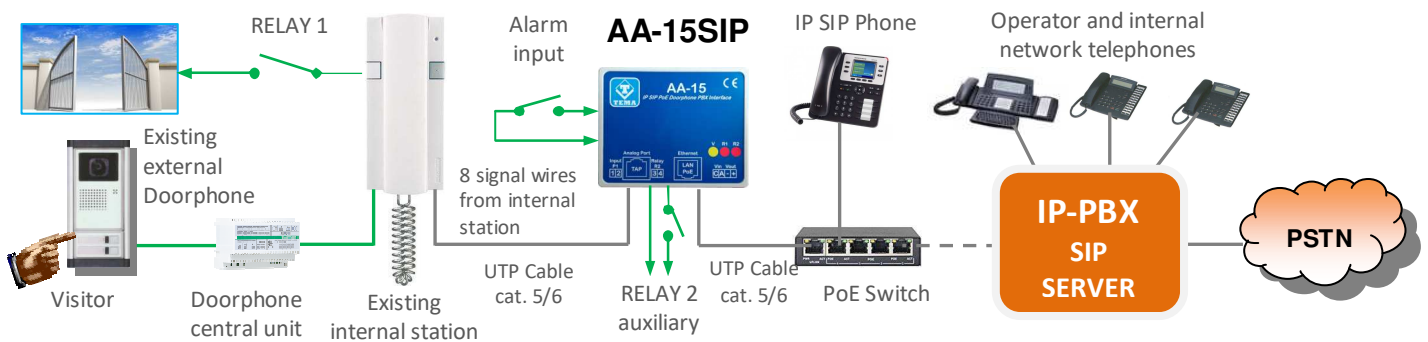
### Integration in telephone VoIP SIP and security systems

AA-15SIP integrates perfectly with VoIP telephony systems (IP-PBX) with SIP protocol that can be registered as a normal VoIP phone or in Peer-to-Peer (P2P) mode without a PBX.

### *Tested with the most popular PBX brands:*

SIEMENS/UNIFY - AVAYA - ALCATEL – PANASONIC – SAMSUNG – NEC  
LG ERICSSON - WILDIX - AASTRA - ASCOM - NITSUKO - SELTA – PHILIPS  
MITEL – YEASTAR – ZYCOO – CISCO – EPYGI ELASTICS – GRANDSTREAM  
SHORETEL – NORTEL – SWYX – XORCOM – INNOVAPHONE – NETHESYS  
3CX - KALLIOPE – ASTERISK BASED SYSTEMS AND SOFTPHONE APPS

## 2. TYPICAL OPERATING DIAGRAM



When the visitor presses the button, AA-15SIP generates a SIP call to an internal number, putting the visitor in communication with the operator, who has the possibility to operate the gate opening relay with a code from the phone. In any case, the internal doorphone station remains operational since AA-15SIP works in parallel.

The contacts of Relay 2 can also be brought to the internal station to allow the opening of a second gate or to switch on any lights.

Both relays can be activated not only following the call from the doorphone but also by calling AA-15SIP to the assigned number/IP address, wait for the answer and activate them with codes from the telephone keypad.

In the presence of the IP-PBX, calls from the doorphone can be routed to external phone numbers, including mobile.



**IMPORTANT NOTE:** the quality of the audio received and transmitted is strictly dependent on the quality of the intercom system, the device does NOT correct any disturbances or low audio quality of the existing intercom system but transfers the audio exactly as it receives it.

## 3. PACKING LIST

The system consists of the parts included in the following list:

- 1 AA-15SIP interface module
- 1 CD with system documentation
- 1 Quick guide
- 1 ABS bracket for wall mounting + 2 screws
- 1 RJ45 1.5mt LAN cable
- 1 RJ45 cable for TAP socket



NOTE: an optional kit is available for fixing the AA-15S module on a DIN bar, code AA-697/DIN

**4. GENERAL FEATURES**

- Sending a telephone call upon detection of an intercom call
- Programming via Web interface with password protection
- Day/Night/Interval manual or automatic mode for different call destination numbers
- 2 door opener relays for the possibility of activating a second electric lock
- Setting of the Day/Night/Interval operating mode can be performed by telephone or automatically with time slots, the settings will be retained even in the event of a power failure (requires Internet Time Server access)
- Great versatility coupled with ease of use and programming
- Possibility of software / firmware update via LAN
- Possibility of acquiring 1 external contact to the system and warning service with dedicated message
- Manual "Door opener" function from internal button, to be associated with the available input contact

**VoIP IP LAN section**

- Integration with the local LAN, LAN 100 BaseT Ethernet port with RJ45 connector
- VoIP connection with SIP protocol both in SIP Proxy Server mode (Registration on IP-PBX) and Peer-to-Peer, possibility of PoE (Power over Ethernet) power supply

**5. TECHNICAL FEATURES****Generals**

Insertion terminals for wiring	Possibility of using cables up to 1.5mm <sup>2</sup> or AWG16
Number of integrated relays	2
Max relay contact capacity	Up to 1A - 30V
Main unit power supply	12VDC / VAC, 900mA max of absorption
Container material	ABS Novodur®
Mounting type	Wall or DIN rail mounting (optional accessory)
Operating temperature	From -20°C to +50°C
Relative humidity	95% non condensing

**VoIP**

Power supply via PoE	According to IEEE 802.3af (only for system power supply, not for electric locks)
LAN	LAN 100 BaseT Ethernet Port
Supported VoIP protocols	SIP v2
Supported modes	SIP Server or Peer-to-Peer modes
Protocols	IP, TCP, UDP, HTTP, TELNET, SIP, RTP
Bandwidth	300 – 3400 Hz (7KHz with G722 codec)
Audio codec	G711μ, G711a, G722
Echo suppressor	Yes
Technology	MIPS 560MHz Processor, 128MB Ram, 32MB Flash

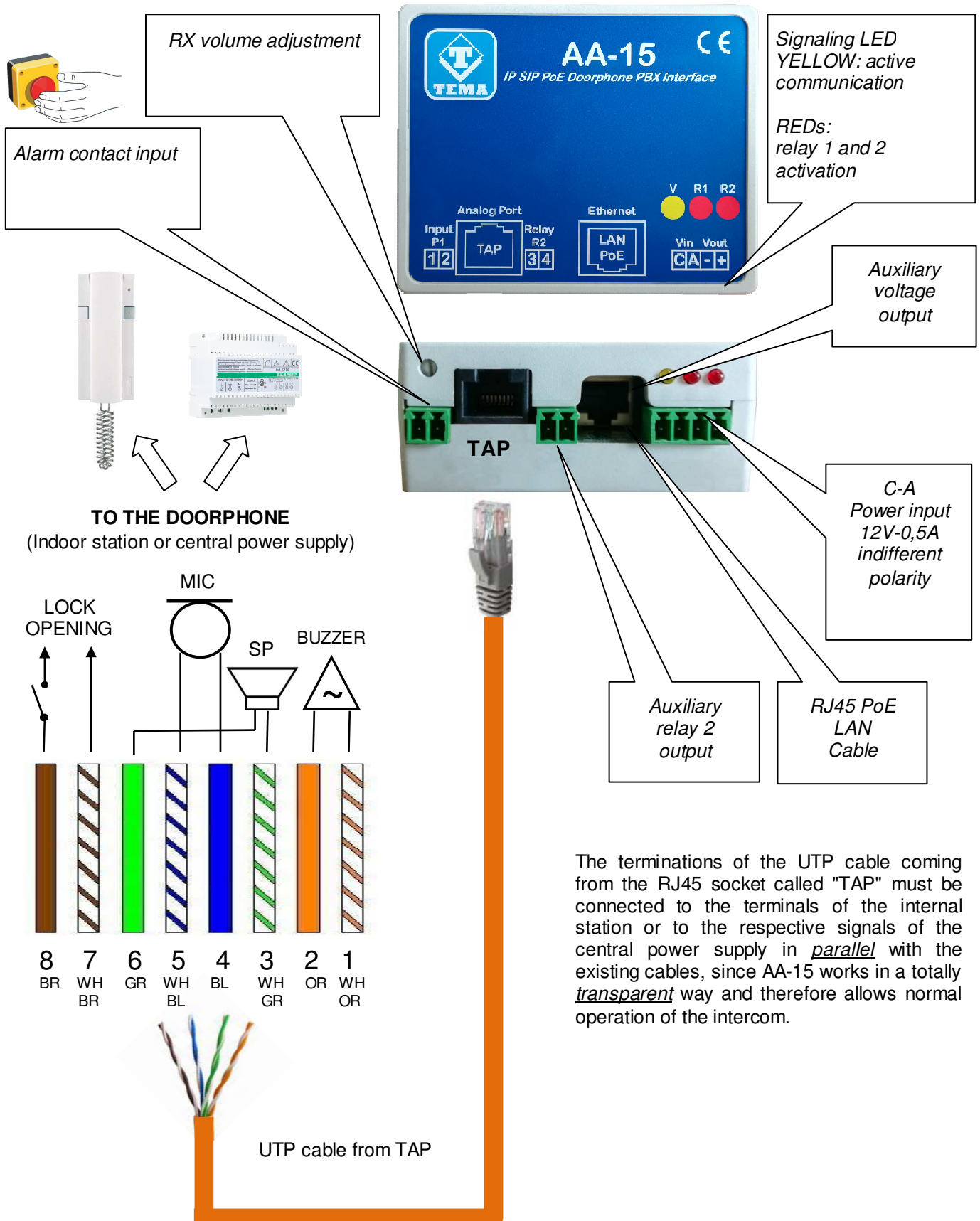
**Inputs**

Number of acquisition inputs	1 for alarm/call
------------------------------	------------------

## 6. INSTALLATION

### 6.1. CONNECTION

The connection of the device must only be carried out by qualified technical personnel.





**Removable screw terminal blocks**

**1-2 Input P1** Terminal for detecting the alarm contact (1 = contact, 2 = GND)

**3-4 Relay R2** Auxiliary relay, range 30V-1Amp, normally open contact

**C, A** Terminal for powering the system, irrelevant polarity

**+ Vout** Terminal from which it is possible to draw power, POSITIVE

**- GND** Terminal from which it is possible to draw power, NEGATIVE



To the terminals 1 and 2 must only be connected to a relay or button contact that is free of any voltage to avoid permanent damage to the device.



At the "+Vout" output there is a + 12Vdc voltage when the device is powered via PoE, otherwise, at this output the voltage will be the same as at the terminals A-C. The use of "+Vout" is permitted as long as it is not exceeded a maximum 200mA current consumption and the load has a protection on the input current. Improper use of this output will permanently damage the unit.

**LAN RJ45 port**

The module requires a cable for connection to the LAN. If the cable also carries PoE power supply, it will not be necessary to supply the module with other power sources. PoE power supply can coexist with any power supply from an external power supply.



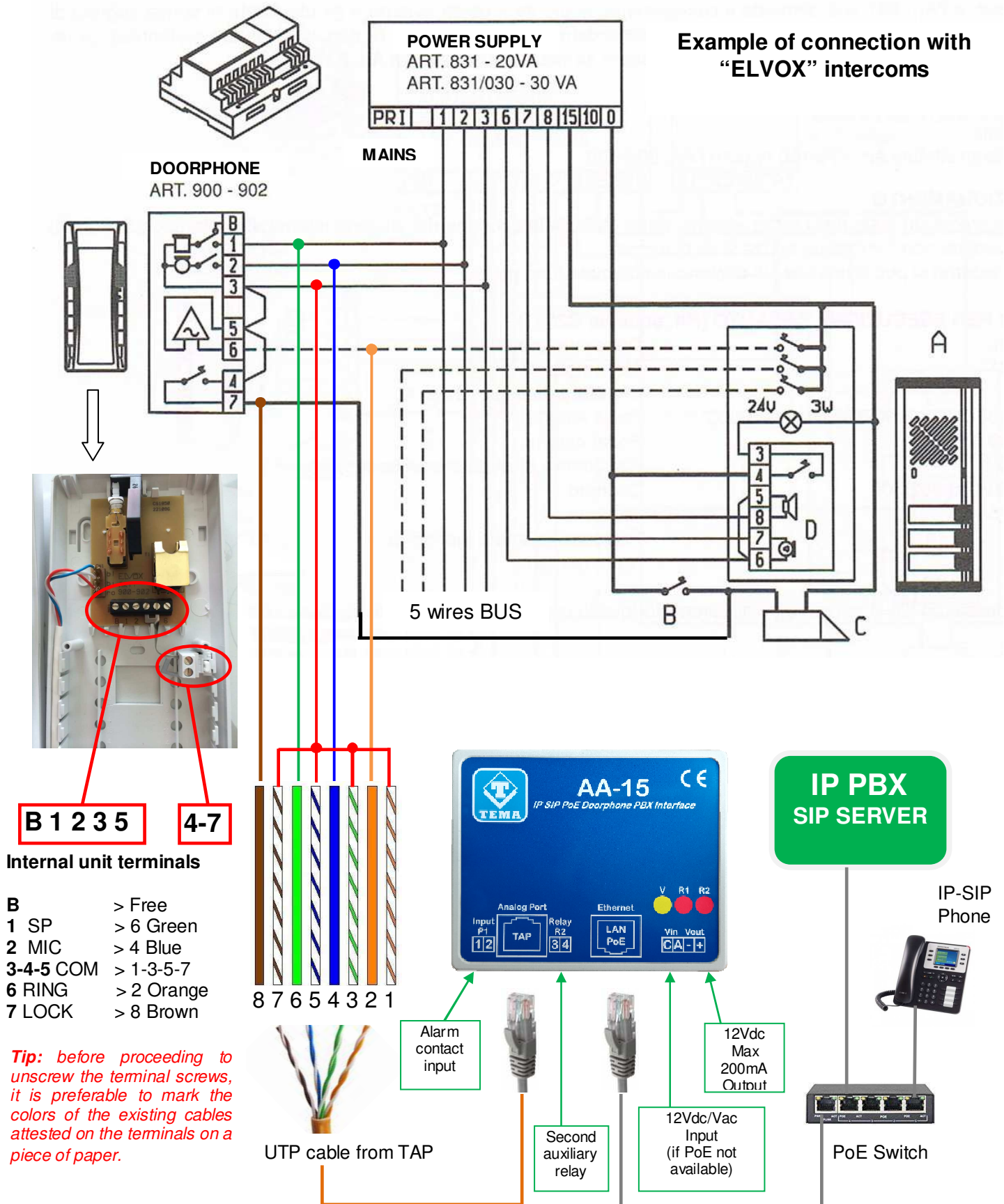
Devices powered via PoE (Power over Ethernet) may only be connected with cables coming from inside the building, they are not allowed connections to LAN cables coming from outside the building.

**TAP Analog Port RJ45**

All the signals connected to the traditional intercom are brought to this input to be processed by the internal electronics and converted into VoIP-SIP protocols.



**IMPORTANT NOTE: the quality of the audio received and transmitted is strictly dependent on the quality of the intercom system, the device does NOT correct any disturbances or low audio quality of the existing intercom system but transfers the audio exactly as it receives it.**



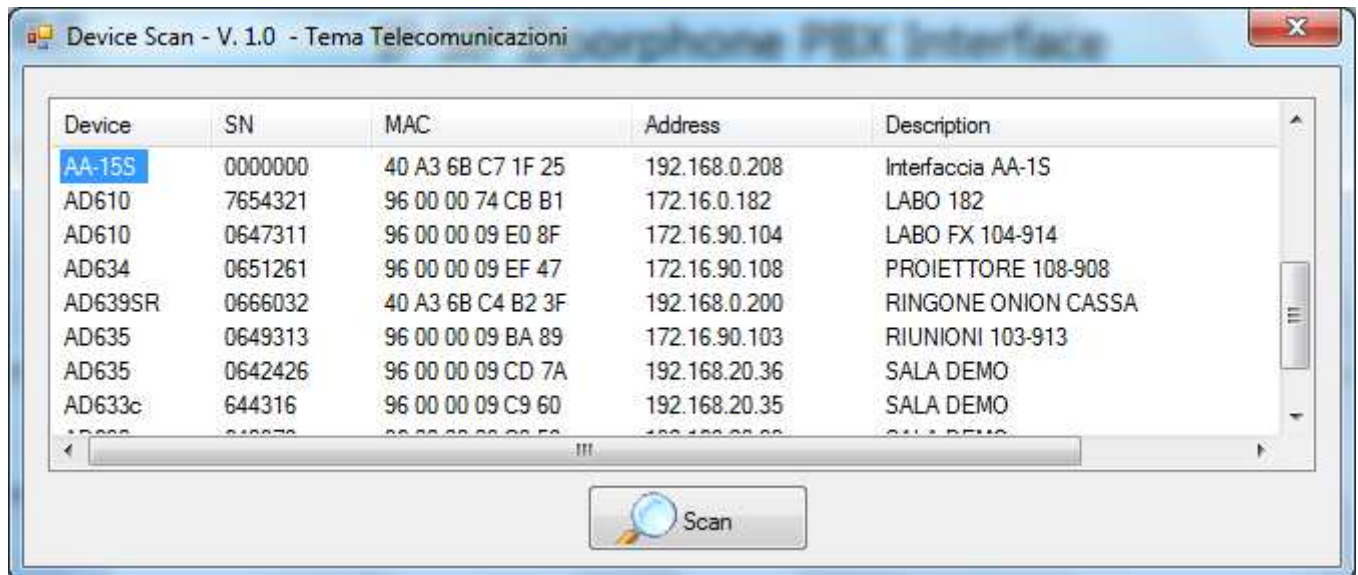
AA-15SIP is connected with a UTP cable from the RJ45 "TAP" socket on the terminals of the indoor station (in parallel with the wires already connected to the intercom system). The signals for the AA-15SIP interface are taken from the group of 6 terminals. Terminal 4-7 carries the first relay inside AA-15SIP which activates the lock following a code dialed on the internal telephone keypad. The device works transparently while maintaining the functionality of the indoor station which can continue to be used normally. A second relay is available for other functions. An alarm input is available which, if closed, makes a phone call and sends a message.

**NOTE:** see the wiring diagrams of other brands and models of interphones in the appendices at the bottom of the manual.

## 6.2. Preparation for programming

Programming is done via the WEB interface. To gain access, simply connect an Ethernet cable from a PC or from a switch to the LAN port of AA-15SIP.

The system is provided in DHCP (dynamic setting of the network address) for which the IP address is automatically assigned by the local DHCP server. To find out the assigned IP address, or, in the absence of a local DHCP server to be able to program one, use the appropriate TEMA network device scan program supplied with it called **"devicescan-tema.exe"**.



This software will show all the TEMA devices present in the LAN with their respective serial numbers, MAC address, IP address, description of the devices. By double clicking on the device name it will be possible to manually change the IP address and Netmask.



RESET  
HARDWARE

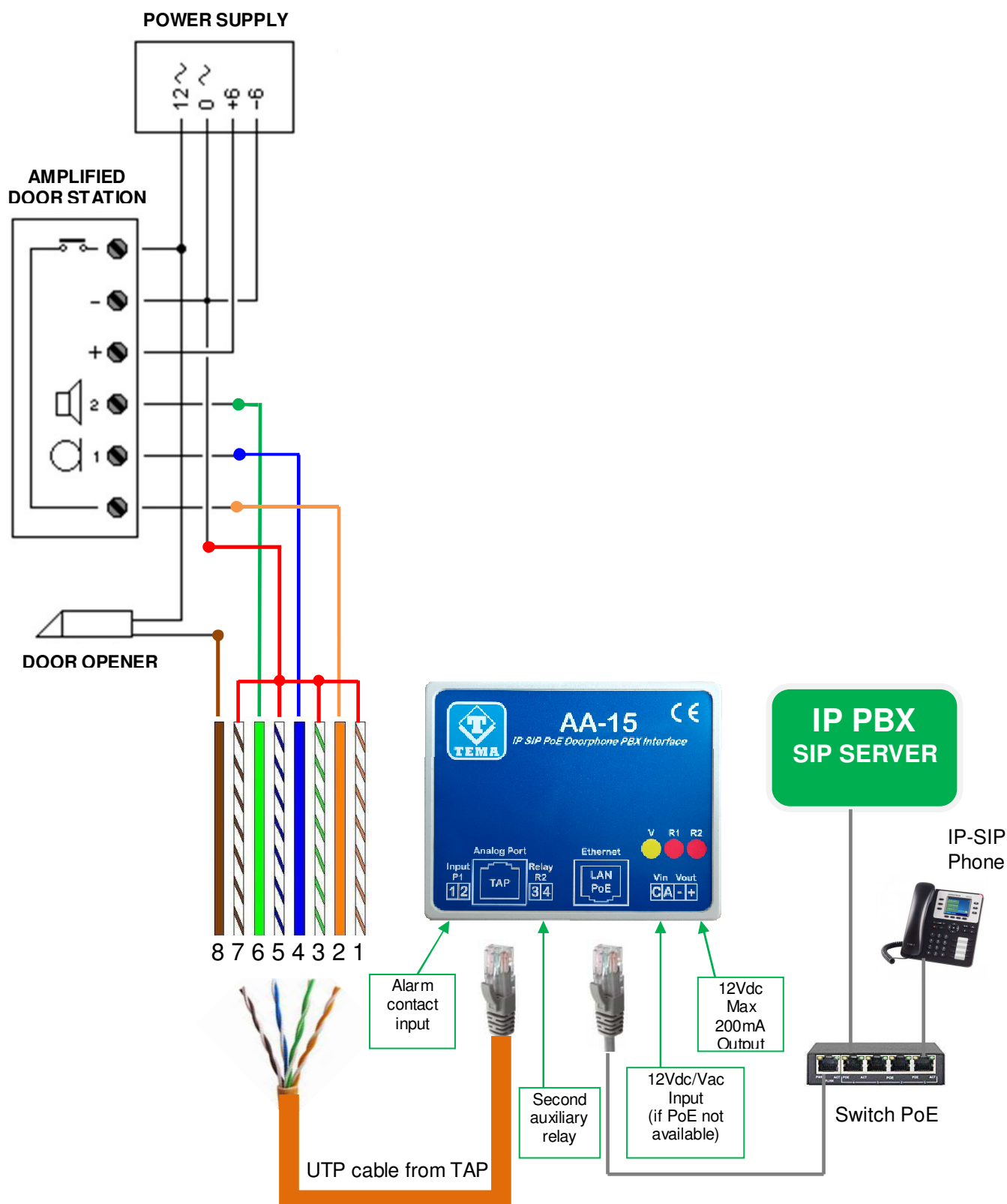


Please note that if the network setting is changed from Dynamic to Static, you will need to make sure you are using the same subnet configured on your computer.

If, by mistake, an invalid address has been entered with the result of no longer being able to reach the device, it will be necessary to restart AA-15S 2 times, the second time AA-15SIP notices the invalid address and sets itself to DHCP to receive a dynamic address from the server. At the end you can set a static IP address again.

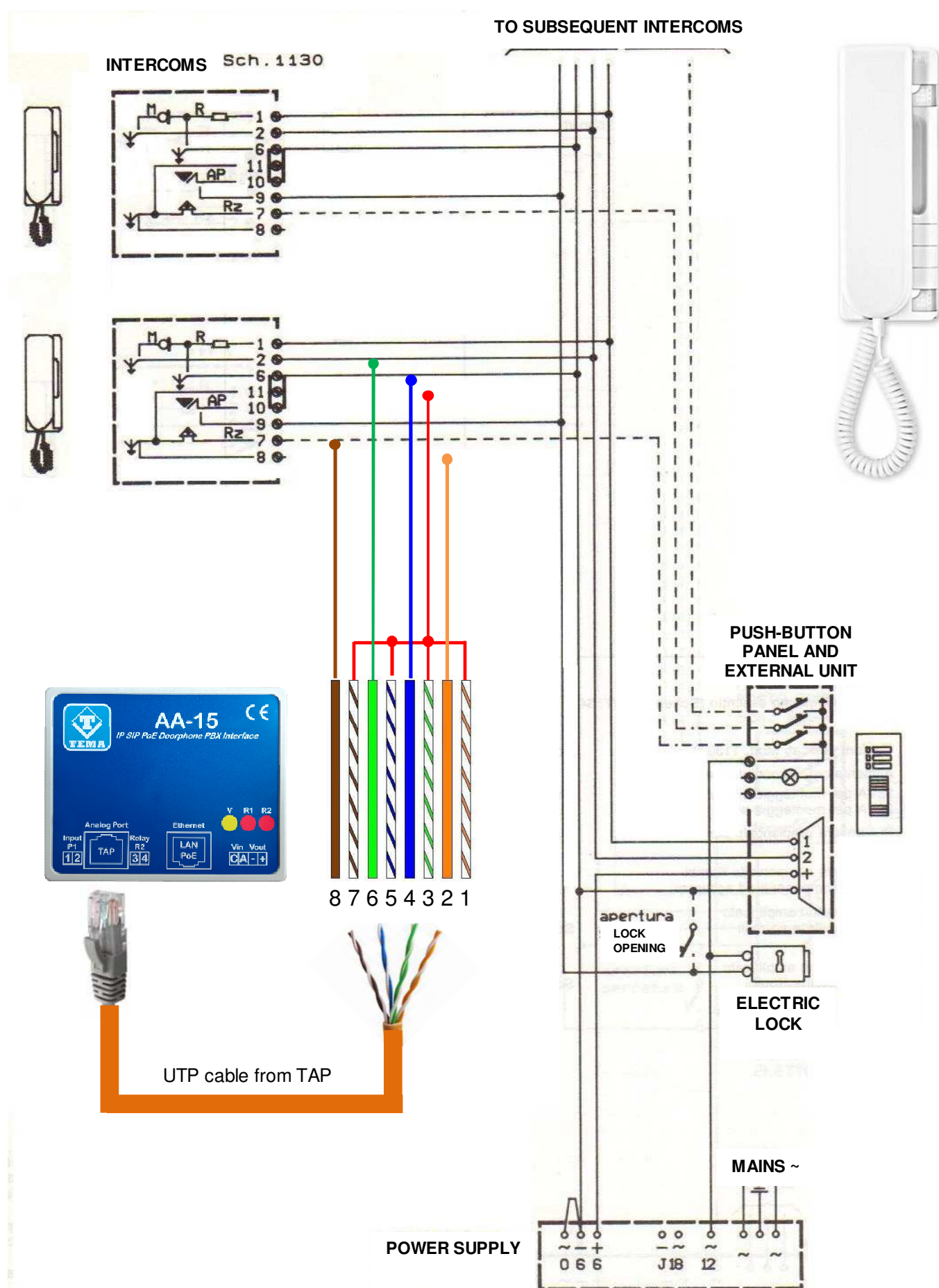
It is possible to reset the device to factory settings with a **HARDWARE RESET** by using a small screwdriver or a clip in the side hole and holding down the internal button for at least 7 seconds.

### 6.3. Connection with URMET intercom

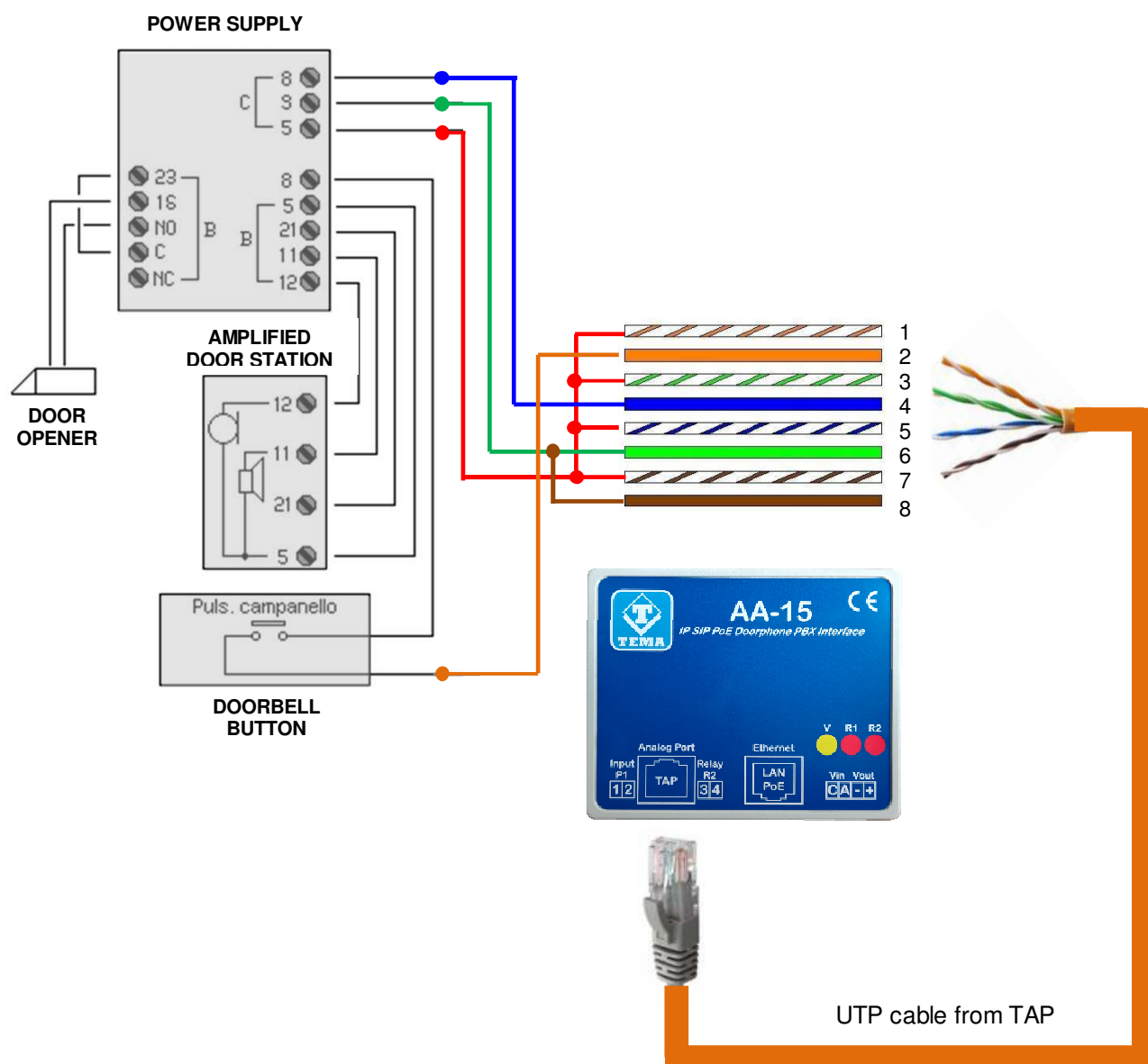




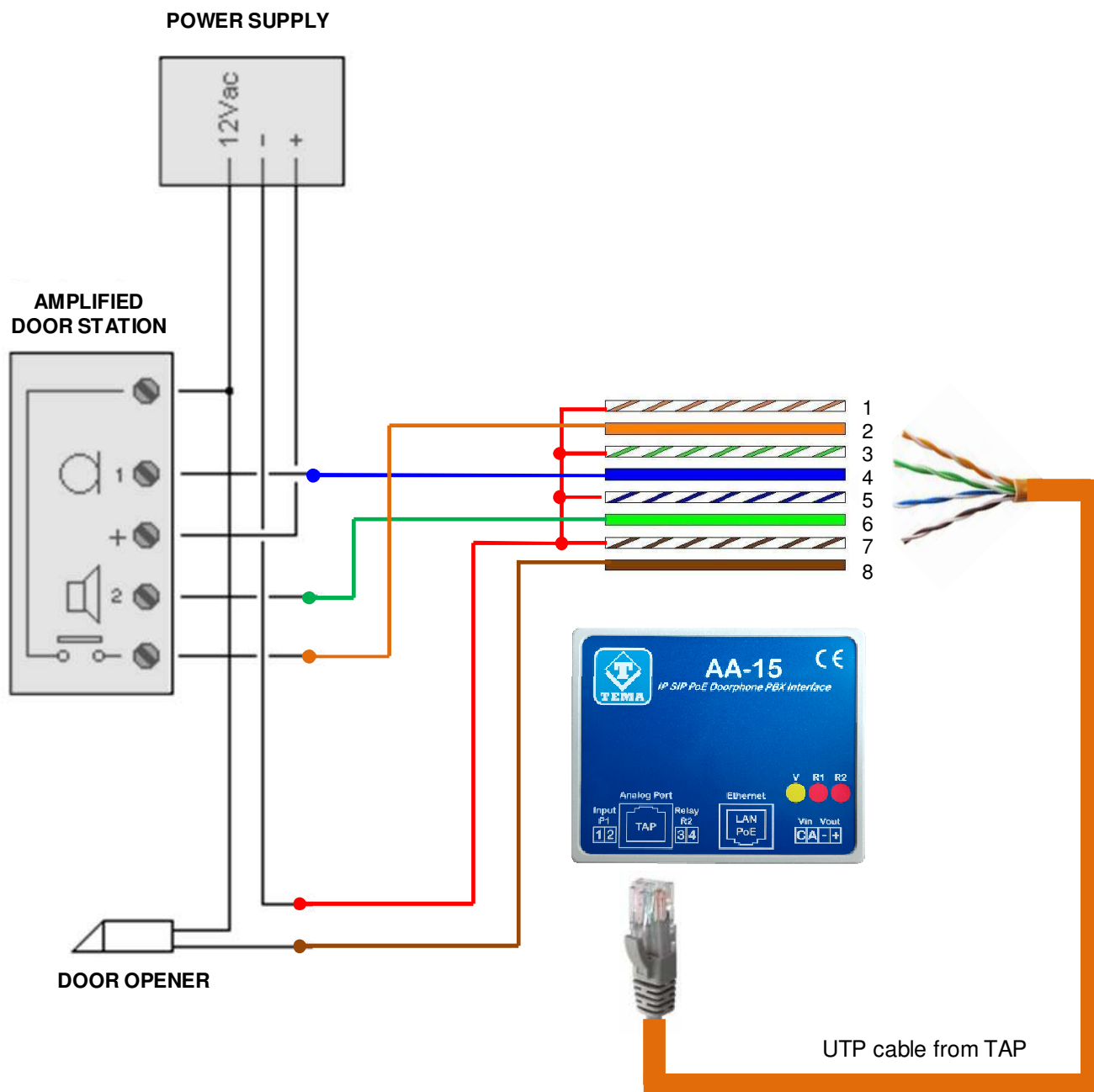
## 6.4. Connection with URMET mod. 1130 intercom



## 6.5. Connection with BPT intercom



## 6.6. Connection with TERRANEIO intercom



## **6.7. FAQ Frequently Asked Questions**

### **How is AA-15SIP powered?**

AA-15SIP can be powered directly from the UTP LAN cable through a PoE switch, if not, it can be powered with a PoE injector or with an external power supply 230Vac/12Vdc, both in the Tema catalog.

### **Does AA-15SIP work with an Asterisk VoIP PBX?**

Yes. AA-15SIP has also been tested with all the PBXs of the most prestigious brands such as: SIEMENS - AVAYA - ALCATEL – PANASONIC – SAMSUNG - NEC - 3CX - LG - WILDIX - AASTRA - ASCOM - NITSUKO - SELTA – PHILIPS - MITEL E SISTEMI BASATI SU ASTERISK, ... see list on p.5

### **How it can be installed and put into service?**

Few steps:

1) Connect AA-15SIP in a LAN socket to a PoE switch with standard cat. 5/6 cable, or to a generic switch by powering it with the external power supply.

2) Connect with a browser and assign an IP address and LAN credentials.

3) Register the number assigned to AA-15SIP in the IP-PBX switchboard in the space reserved for your SIP account or, in the absence of the IP-PBX, arrange for the doorphone call to be sent to a SIP phone in P2P mode (Peer-to-Peer).

4) Connect the UTP cable coming from the "TAP" socket of AA-15SIP to the points indicated in the connection diagrams provided for the various traditional intercoms on the market in a "parallel" way on the necessary signals.

When a visitor presses the button, AA-15SIP generates a SIP call to an internal number, communicating the visitor with the answering operator, who has the possibility of operating the relay for opening with a code from the telephone of the gate. In any case, the internal intercom station remains operational since AA-15SIP is transparent and works in parallel.

### **I can't get to the place where I have to install AA-15SIP with a UTP cable, can I use a Wi-Fi link?**

Yes, AA-15SIP is a normal LAN network terminal, in this case you need a client access point with the RJ45 LAN output towards AA-15SIP and a power supply (for example the plug model T7012L or for DIN rail AA-39D1A) connected to a 230Vac mains socket in the immediate proximity.

### **Can I connect AA-15SIP on a 2-wire BUS intercom system?**

NO, AA-15SIP currently only works on traditional 4-5 wire intercom systems. If this need exists, contact TEMA by supplying the brand and model of the intercom with 2-wire BUS operation to check whether any operating compatibility has been released on the date.

### **I have to install AA-15SIP on a 4-5 wire intercom system but can't find the diagram in the manual?**

The compatibility of AA-15SIP with the various intercoms on the market is constantly evolving, contact TEMA providing the brand and model of the intercom to be adapted.

### **I installed AA-15SIP and everything works correctly, however there are some disturbances during communication**

The quality of the audio received and transmitted by AA-15SIP is strictly dependent on the quality of the intercom system, the device does **NOT correct** any disturbances or low audio quality of the existing intercom system but transfers the audio exactly as it receives it. As they are old intercom systems, it is possible that the quality of speech is already compromised, **therefore communication must be considered acceptable**, even with some disturbance, provided that it is intelligible even at a minimum level of understanding. After all, long conversations are not normally made at the intercom unit.