

CONTENTS

MY HOME – Project guidelines

General features 14

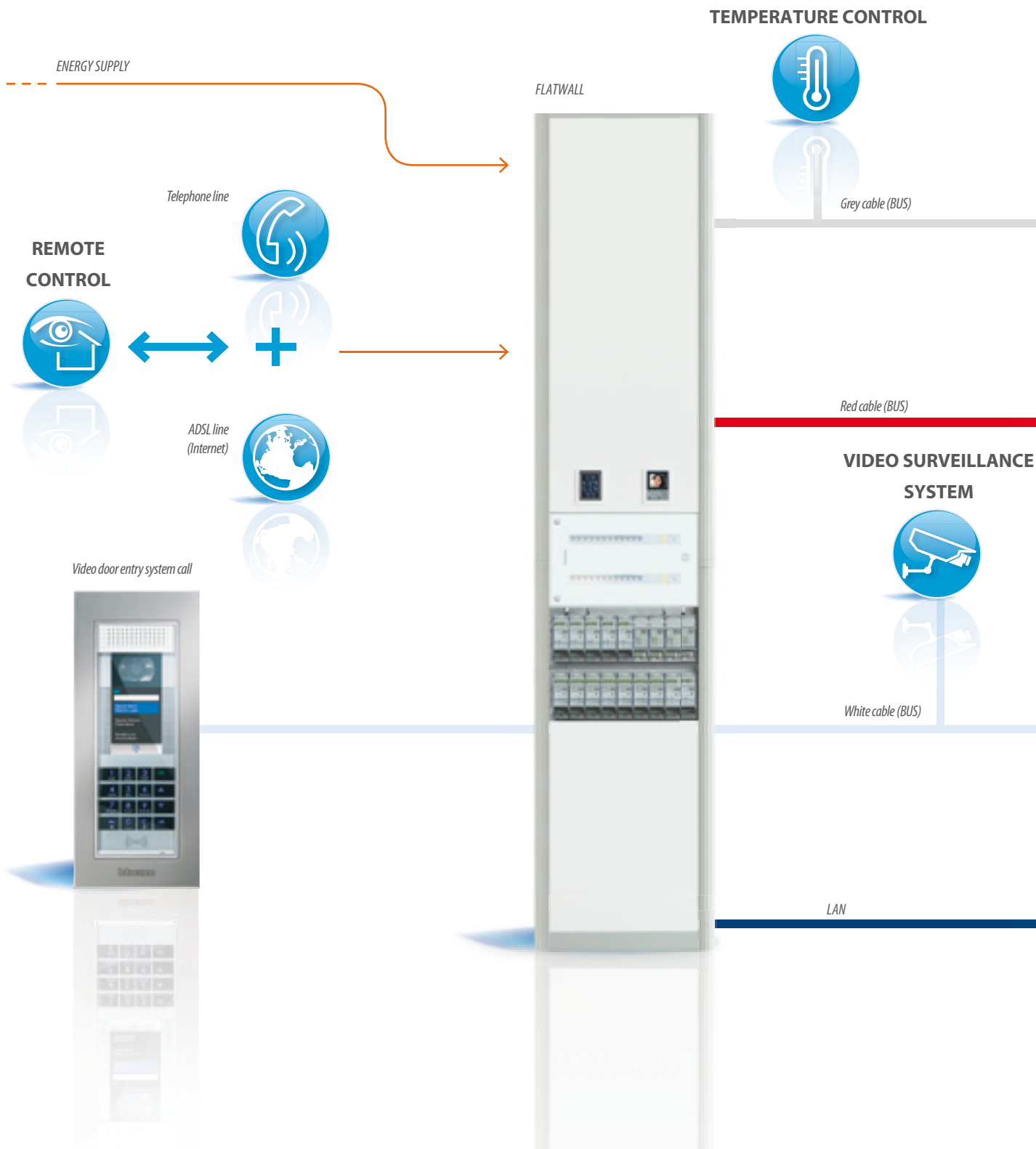
System layout 32

Functional diagram of a MY HOME system

The creation of a MY HOME automation system does not entail many changes when compared with a traditional system. The energy, telephone/data line and Video door entry system sources that reach

the home converge in a general distribution board that contains the usual system sectioning devices, the BUS power supplies for the various systems, and all DIN modularity devices. The lights/shutter

automation BUS (grey cable) is the same as for the Energy management and Temperature control systems. the burglar-alarm BUS (Red cable), is the same as the one for the technical alarms.



The 2 wire video door entry system BUS (white cable) is the same as the one for the sound system, and offers the possibility of implementing the video surveillance system function. The systems can be set individually,

or can be integrated with each other using specific interfaces. LOCAL CONTROL devices enable centralising the supervision and the control of the systems from one single point of the home.

ENERGY MANAGEMENT



LIGHT/SHUTTER AUTOMATION



LOCAL CONTROL



BURGLAR ALARM



TECHNICAL ALARMS



VIDEO DOOR ENTRY SYSTEM



SOUND SYSTEM



LOCAL CONTROL



DATA NETWORK



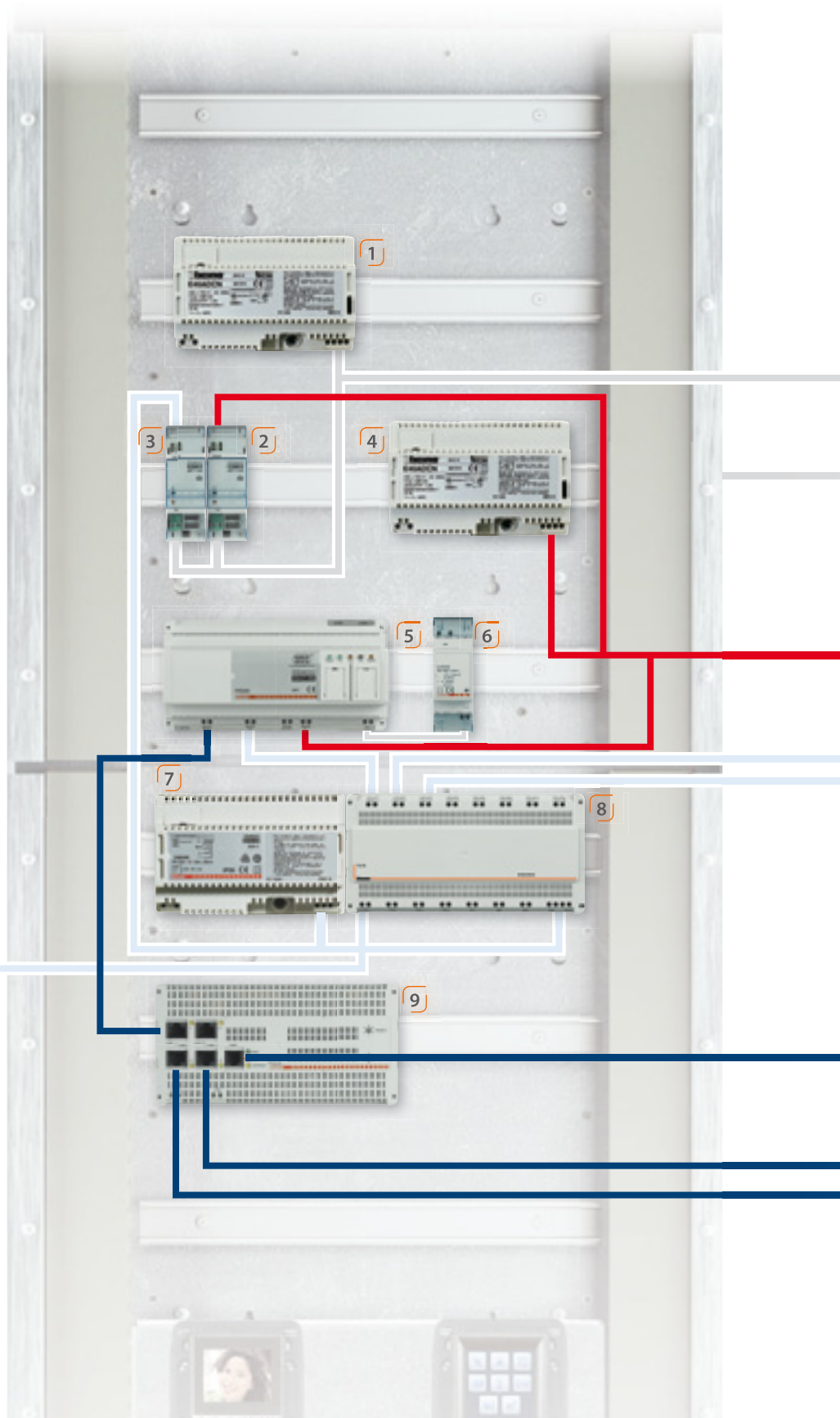
LOCAL CONTROL



System integration

In order to ensure advanced home automation functions and enable the central management of the MY HOME system, the BUS of the various systems are integrated with each other using particular interfaces that can be installed inside the FLATWALL distribution board, near other DIN modularity devices (power supplies, actuators, etc.). The following image shows the main devices for the above setup.

Video door entry system entrance panel

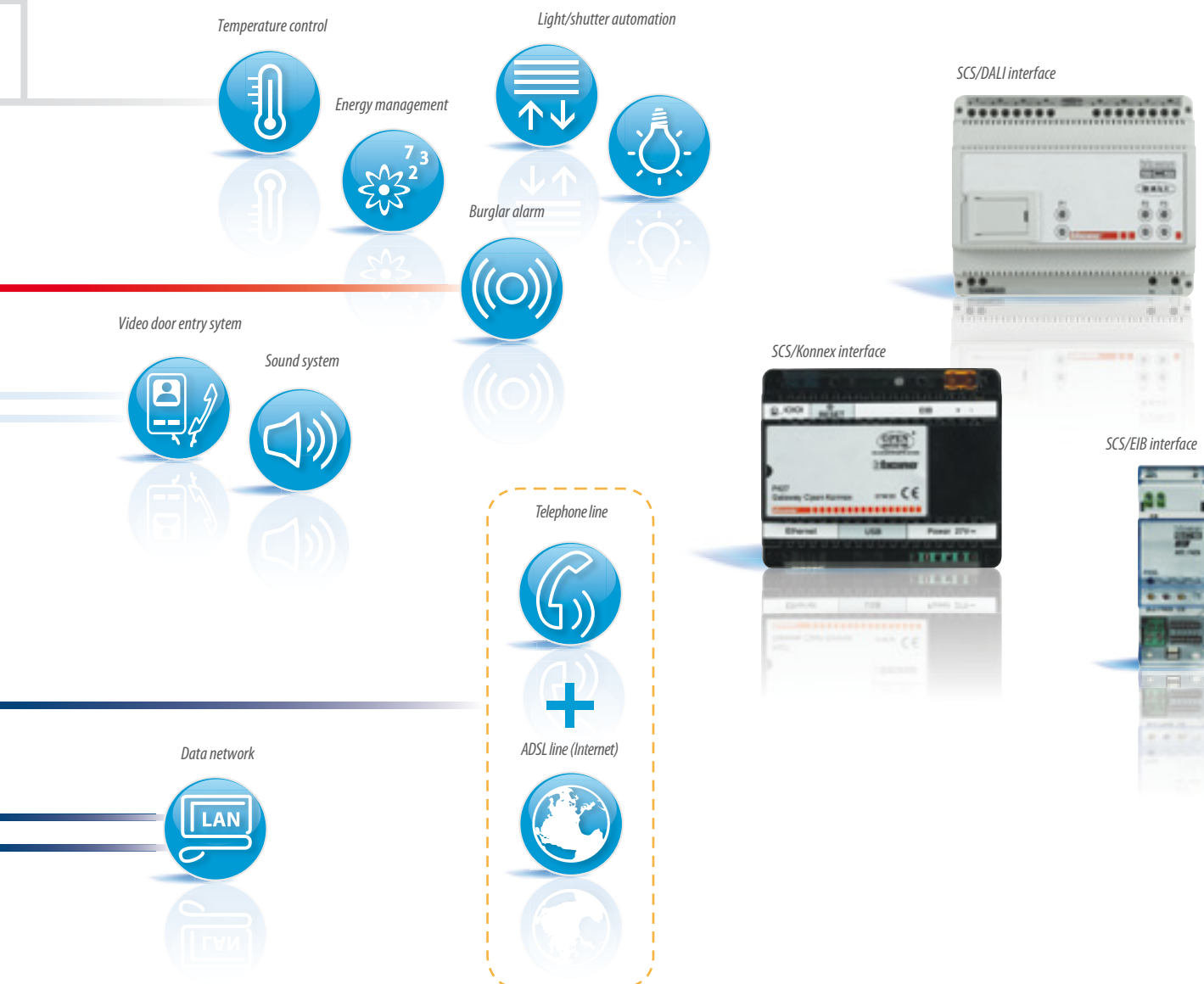


LEGEND

1. E46ADCN power supply for the powering of the Automation, Temperature control and Energy management systems
2. F422 interface for the integration of the burglar-alarm and automation systems
3. F422 interface for the integration of the video door entry system and the automation system
4. E46ADCN power supply for the powering of the burglar-alarm system

5. F453AV web server for local and remote control using the internet and the LAN network of the home automation functions
6. 346020 power supply for the Web server
7. 346000 power supply for the powering of the video door entry system and the sound system
8. F441M audio/video multichannel matrix for the distribution of the signals of the video door entry system and the sound system

9. F444U4 ADSL modem/router for the connection to the internet network of the MY HOME system using the web server item F453AV. In addition to the devices described, the MY HOME system can also be integrated with systems of a different technology and COMMUNICATION protocol, such as Konnex and EIB, using the devices shown. For more details refer to the section "SYSTEM INTEGRATION AND CONTROL" of this guide.



Creation of the home automation system

The creation of the MY HOME automation system follows the following stages:

1. 1. DEFINITION OF THE REQUIREMENTS

Definition of the home automation functions to implement inside the home, based on the requirements of the user.

2. PROJECT

selection of the types of devices needed, configuration, operation mode, and development of the electric diagram.

3. INSTALLATION

wiring of the devices inside their conduits and the distribution board, with operational test.

SYSTEM DESIGN AND CONFIGURATION OF THE DEVICES:

For this operation BTicino provides two tools:

- This Technical Guide with technical sheets and the CD supplied with the product, where the designer can find all the useful technical information for selecting the devices, for their configuration, and their wiring.

The technical sheets can also be displayed while viewing the guide that can be found inside the CD in electronic format. All the devices for which a technical sheet is available, will have their item code no. shown in blue. Click on the relevant item with the mouse, to automatically open the corresponding technical sheet.

- The Youproject software for preparing the necessary estimates and designing the integrated home automation system. The application is preset to automatically perform all the size and electrical calculations, as well as the configuration of the products, giving the installer full freedom to make the necessary changes and customisations at the design stage. For more information see the section "Software and Services".



YouProject software for the sizing of MY HOME

WHEN AND WHY SHOULD YOU USE YOUPROJECT

YouProject is an extremely useful and versatile software that BTicino has designed to simplify and speed up the sizing of a MY HOME system in order to:

- Produce an estimate of the offer (General description and advantages, bill of quantities, list of items required);

- From the design to the installation of the system (system absorption check, number of DIN modules, dissipated power, map of physical and logic links for the installation, configuration, CAT service report).

The diagram below shows the range of information generated by YouProject during the three different stages required for the realisation of the system:

- DEFINITION OF REQUIREMENTS
- DESIGN
- INSTALLATION.



YouProject software for the sizing of MY HOME

If the MY HOME system is not designed using YouProject, it will be necessary to fill at least a system Booklet (1) in Excel format, with the description and configuration of the systems (automation, temperature control, burglar-alarm, etc.). The filled system booklet will then

become a useful and necessary document for the installer, as it represents the "ID card" of the system installed.

Having a booklet in Excel format will be useful to create the XML file to:

- Configure devices such as Touch Screen, Multimedia Touch Screen, MH200N scenario programmer, using the corresponding programming software etc.

- Activate the My Home Web services.

The file is created using the YouProject software, by importing the .xls file of the system booklet.



NOTE (1): the file in Excel format of the "System booklet" and the YouProject software are available with the CD supplied with the present guide, or by visiting the "Installers" area of the MY HOME section of the www.BTicino.it website.

Devices configuration

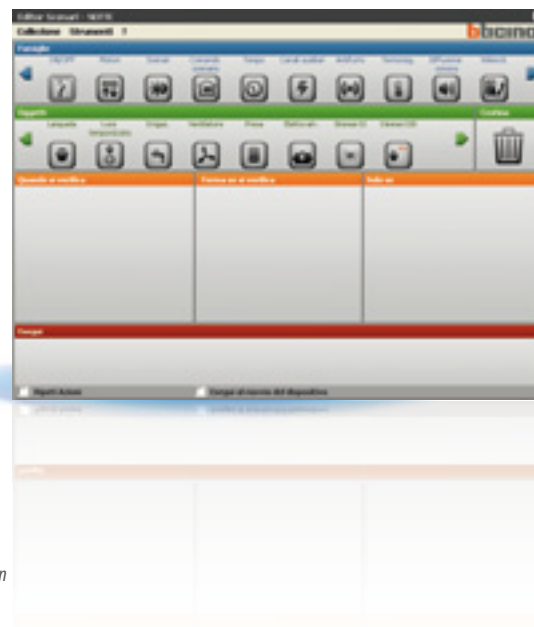
Based on the type of products, this operation may be performed in three different ways:

- Device configuration using the programming software: devices such as Wen server, Scenario programmer, Touch screen, Video station, Multimedia Touch screen etc., are supplied with appropriate software for the configuration of the operating parameters and the management of the web pages or graphic icons of the MY HOME functions.

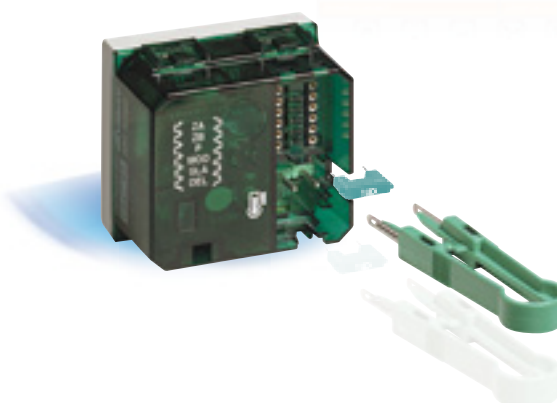
- Physical configuration: this is done by connecting to the appropriate socket of each device, using pliers, special activation components (3501/...) called configurators. Each configurator is identified with its number, letter, colour or graphic.

- Virtual configurator: In Automation and Temperature control systems with several devices, it is possible to greatly simplify the configuration operations using the virtual configuration, as an alternative to the physical configuration. The virtual configuration is performed using a PC connected

Example of main screen of the software for the definition of the scenarios using the TiMH200N program



Flush mounted device configuration



to the system through the Web server. Thanks to the virtual configuration, it is possible to configure each device without using the standard alphanumeric configurators.

The address and the operating mode of the device are set using

the VIRTUAL CONFIGURATOR software installed in the PC; this solution is particularly suited to large systems, where the configuration may be changed at any time without the need for manual intervention on each individual device.

Virtual configuration



PC with Virtual Configurator 2.1 software

Ethernet cable

Web Server



BUS



Virtual configuration

It is possible to greatly simplify the configuration operations using, as an alternative to the physical configuration, the Virtual Configuration software (Virtual Configurator), which manages the addresses and the operating modes of the devices.

The software installed in the PC communicates with the system through the new 3503N Kit, connected to the BUS, or using the web server; The Virtual configuration is therefore particularly useful as it offers new modes and gives the possibility of changing the configuration at any time, without using the normal alphanumeric

configurators. With the virtual configuration it is possible to:

1. Create a new device

configuration: to assign the address and the mode of operation of each system device.

2. Change the pre-existing

configuration: to change the address and the operating mode of each system device already virtually configured.

3. Test the actuators: it enables driving an already configured actuator directly from the PC to ensure that it is operating correctly (for example switching on a light point controlled by the actuator).

4. Obtain the diagnostics of the automation and temperature control systems:

in this way the PC interrogates all the devices of the system and supplies a summary of the status of each of them, using three different colours:

- green for correct operation
- yellow when the device is not present, or has not been detected by the system
- red for faulty device.

5. Knowing the status of a single device:

it is possible to individually interrogate all the system devices to check that they are working correctly.

PC with VIRTUAL CONFIGURATOR program



← Ethernet cable



There are two possible types of virtual configuration:

THE VIRTUAL CONFIGURATION

- That can be applied to all types of Automation and Temperature control systems, both in the case of individual systems or systems integrated with each other in "logical expansion" mode. This follows the addressing laws, with the corresponding limits as shown in the diagrams of the following sections.
- New virtual configuration procedures through extended description ⁽¹⁾ and extended addresses.
- New functions available: contacts and CEN PLUS

NotE 1): For more information of the extended descriptions, see the "Glossary" section of this Guide.

THE PROJECT&DOWNLOAD CONFIGURATION

- Dedicated for the Lighting Management system.
- New modes of configuration (ID CONFIGURATION + CONFIGURATION WITH XML). For more information see the Lighting Management System Technical guide for BUS systems.



Additional functions that can be performed with the virtual configuration

In some critical cases, the virtual configuration enables exceeding the existing addressing limits, thanks to the use of virtual addresses, which do not use any of the addresses of the automation system.

The functions enabling the use of virtual addresses are:

- **CONTACTS** (available for the contact interface, Item F428 and 3477): the function enables the transmission of information on the

status of a contact and has been conceived for the management of the integration among different systems (e.g. if a window is opened, the central heating goes off). Using the virtual configuration software, it is possible to configure the contact function with addresses from 1 to 201.

- **CEN PLUS**: the function enables configuring the device as CEN control, capable of managing

different types of pressures (short pressure, start of extended pressure, extended pressure, release after extended pressure). The devices can be configured with virtual address from 0 to 2047, an address from 0 to 31 can be associated to each device pushbutton.

- **PLUS SCENARIOS**: function only intended for the Lighting Management System.

LIST OF TEMPERATURE CONTROL DEVICES PRESET FOR VIRTUAL CONFIGURATION

ITEM	DESCRIPTION
F430/2	2 DIN relay actuator
F430/4	4 DIN relay actuator
HC/HS4695 – L/N/NT4695 – AM5874	4 zone temperature control central unit
HC/HS4692 L/N/NT4692 – AM5872	probe with selector
HC/HS4693 – L/N/NT4693	probe without selector
HC/HS4692FAN – L/N/NT4692FAN	probe with selector for Fan-Coil
3456 ¹⁾	splitter management interface

Note 1): the management of the device is only possible when using version 2.2 or later of Virtual Configurator.

LIST OF AUTOMATION DEVICES PRESET FOR VIRTUAL CONFIGURATION

ITEM	DESCRIPTION
3476	basic actuator
3477	basic contact interface ¹⁾
BMSE1001	passive IR ceiling sensor ¹⁾
BMSE2001	wide band wall/ceiling sensor ¹⁾
BMSE2002	narrow band wall/ceiling sensor ¹⁾
BMSE2003	sbidirectional narrow band wall/ceiling sensor ¹⁾
BMSE2004	one-way narrow band wall/ceiling sensor ¹⁾
BMSE2005	double technology wall/ceiling sensor ¹⁾
BMSW1001	230 Vac 1 DIN relay actuator ¹⁾
BMSW1002	230 Vac 2 DIN relay actuator ¹⁾
BMSW1003	230 Vac 4 DIN relay actuator ¹⁾
F411/1N	1 DIN relay actuator ¹⁾

LIST OF AUTOMATION DEVICES PRESET FOR VIRTUAL CONFIGURATION

ITEM	DESCRIPTION
F411/1NC	1 DIN NC relay actuator ¹⁾
F411/2NC	2 DIN NC relay actuator ¹⁾
F411/2	2 DIN relay actuator ¹⁾
F411/4	4 DIN relay actuator ¹⁾
F413N	DIN ballast dimmer ¹⁾
F414	1000 VA DIN dimmer ¹⁾
F415	DIN electronic transformer dimmer ¹⁾
F416U1	DIN multi load 1000 W dimmer ¹⁾
F417U2	DIN multi load 2x400 W dimmer ¹⁾
F429	DIN SCS/DALI interface ¹⁾
HD/HC/HS4563 – L/N/NT4563	Knob control
HD/HC/HS4575 – L/N/NT4575N	Receiving radio interface
F420	DIN scenario module
F422	SCS-SCS interface
F425	DIN memory module ¹⁾
HD/HC/HS4657M3 – HC/HS4657M4	NIGHTER and WHICE control
HD/HC/HS4685 – L/N/NT4685	Local Display
HD/HC/HS4575SB – L/N/NT4575SB	Receiving radio interface
HD/HC/HS4576 – L/N/NT4576N	Receiving radio interface
HD/HC/HS4680 – L/N/NT 4680	Scenario control ¹⁾
H/L4651M2 – AM5831M2	2 module special control ¹⁾
H/L4652/2 – AM5832/2	2 module base control ¹⁾
H/L4652/3 – AM5831/3	3 module base control ¹⁾
H/L4671/1 – AM5851/1	2 module 1 relay actuator
H/L4671/2 – AM5851/2	2 module 2 relay actuator
H/L4678	ferromagnetic transformer dimmer
HC-HS4653/2 - HD4653M2	Soft Touch control
HC-HS4653/3-HD4653M3	Soft Touch control
HD/HC/HS4654 – L/N/NT4654N – AM5834	IR receiver
BMDI1001	Dimmer 1/10 V actuator ¹⁾
F428	DIN contact interface ¹⁾

Note 1): the devices show an extended description of the function and are identified in the software with the message "Virtual – Advanced".

These item also have extended addresses (A=0-10, PL=0-15), and ID solely intended for the Lighting Management System.

Virtual Configurator software

The Virtual Configurator Software had been designed to be used on a PC with Windows Xp 32 bit, Windows Vista 32 bit, and Windows 7 32 bit operating system.

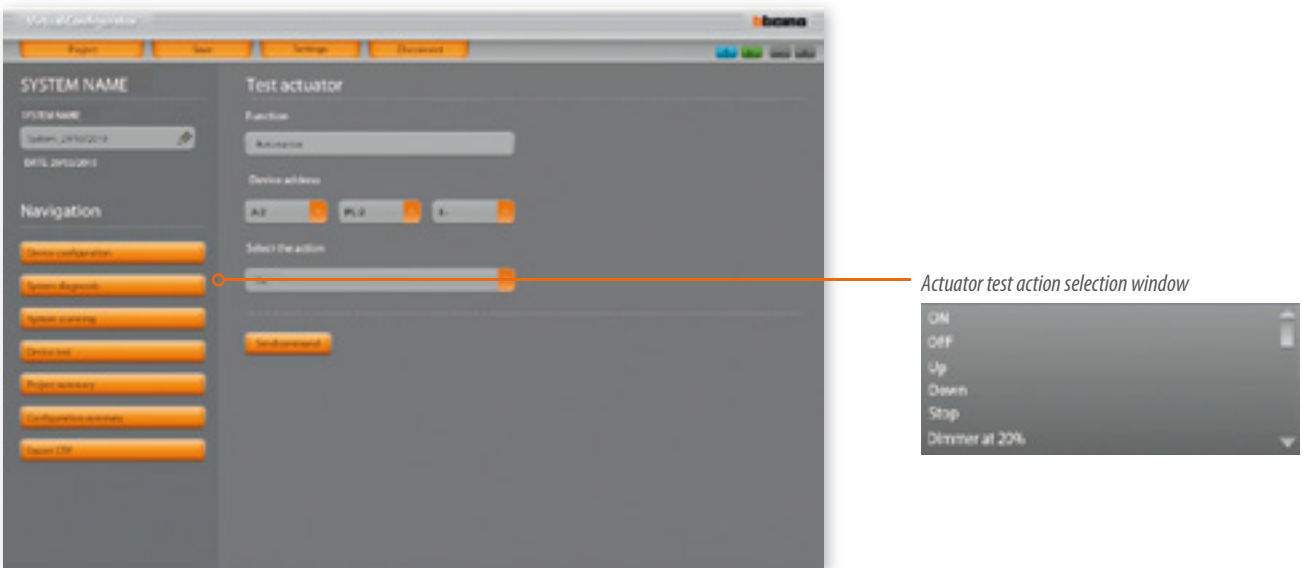
For more information refer to the software user manual.
Below are some screenshots of Virtual Configurator. Depending on the devices, it will be possible to

select the operating mode, using numbers and letters (following the logics of the physical configurators), or through an extended description of the function.

■ Single device configuration screen



■ Actuator test screen



- Summarisation screen listing the devices installed in the system



Below some screenshots relating to the Automation system, where it is possible to select the operating mode through an extended Description of the function.

- Single device configuration screen

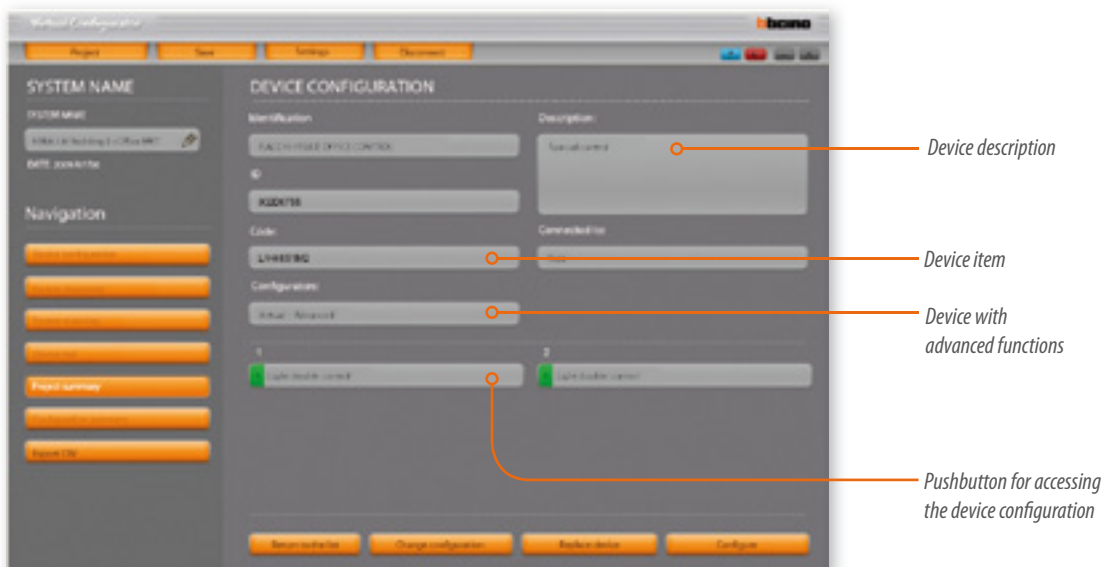


Virtual Configurator software

- Screen for the identification of the devices in the system



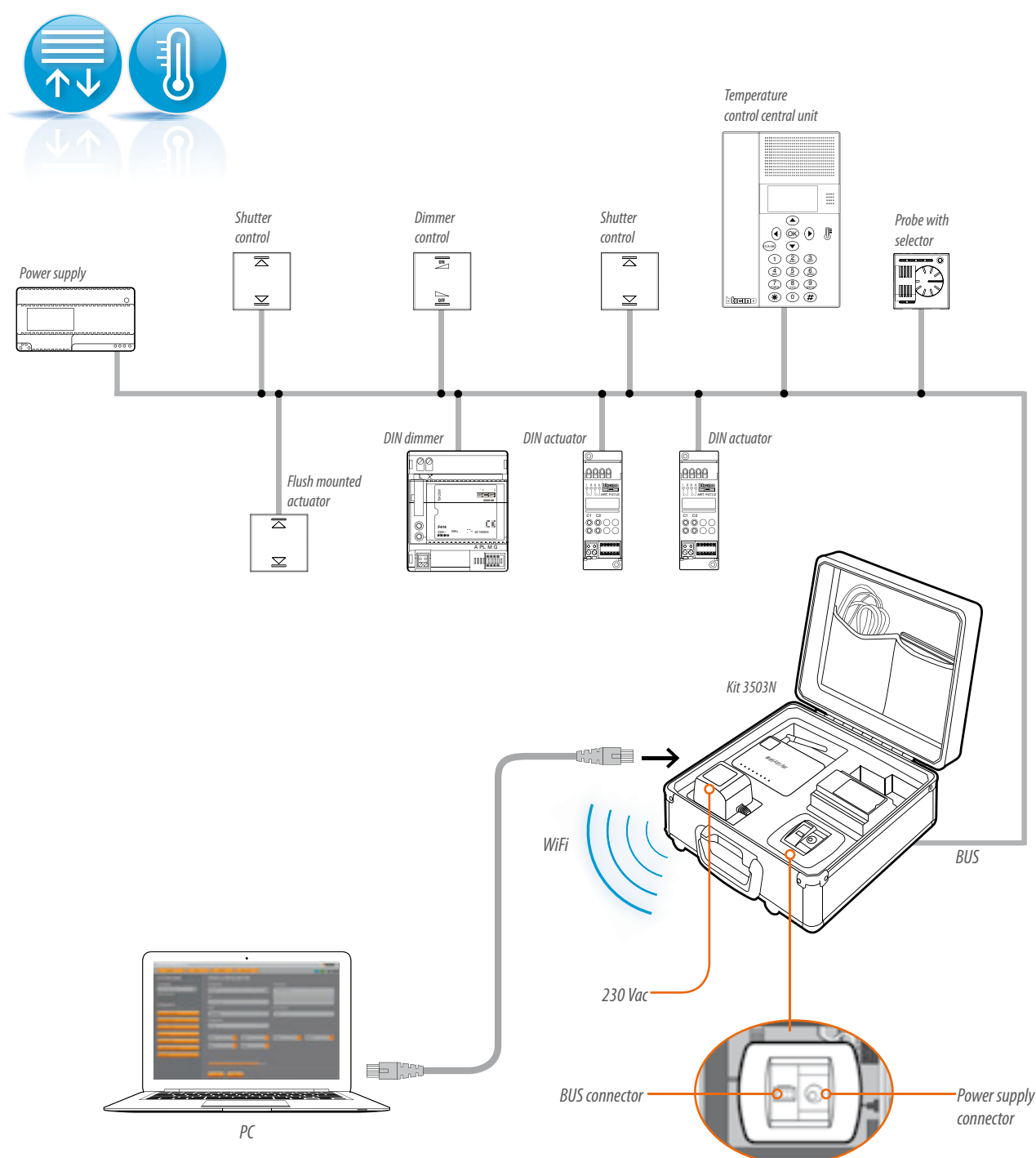
- Single device screen



Below are some examples of connections between the PC and the system to be configured using the 3503N kit.

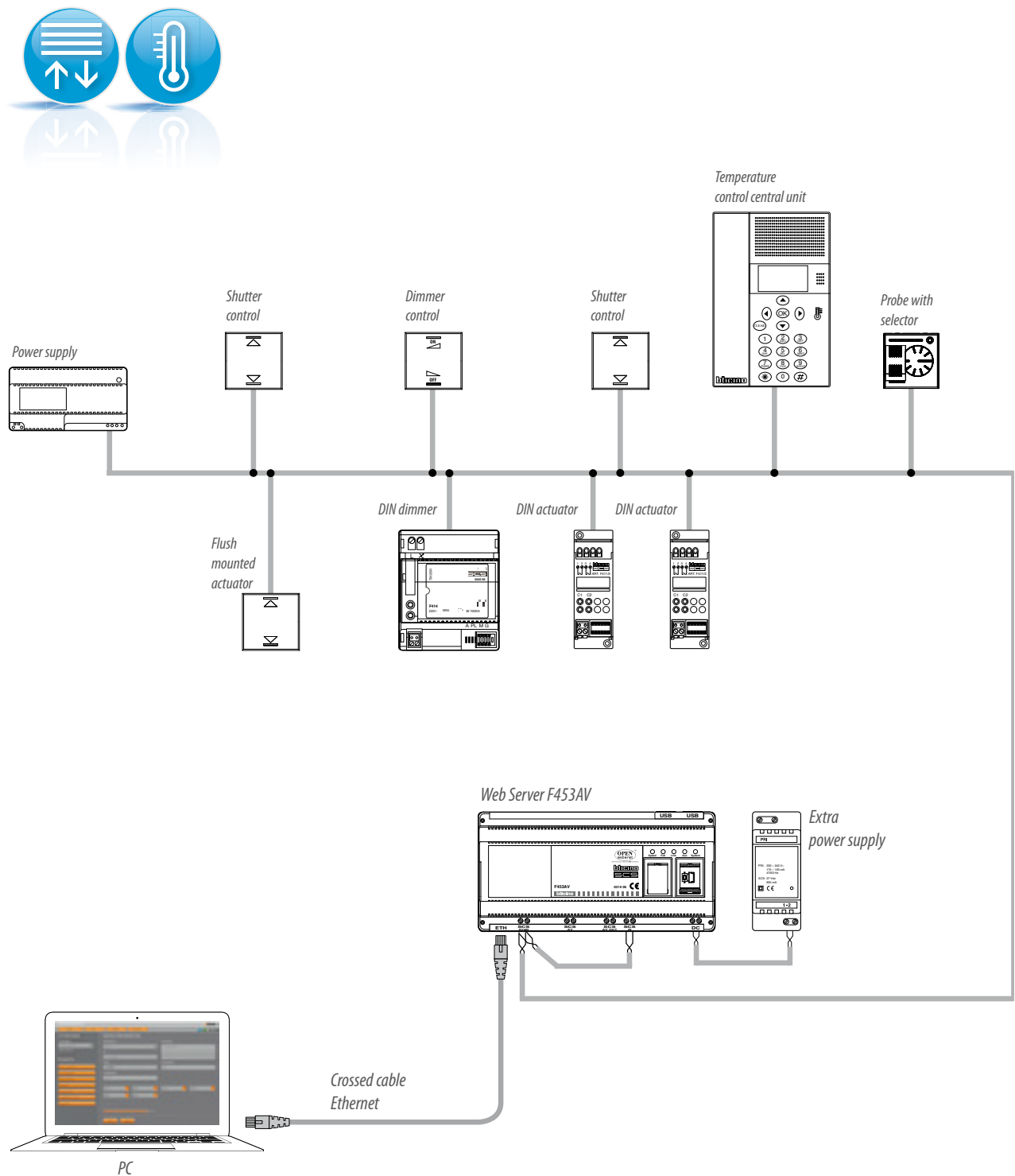
The connection may also be completed without using the configuration kit, provided that the Web Server, item F453 or F453AV, is installed in the system.

AUTOMATION/TEMPERATURE CONTROL SYSTEM WITH KIT 3503N



Virtual Configurator software

AUTOMATION/TEMPERATURE CONTROL SYSTEM WITH WEB SERVER

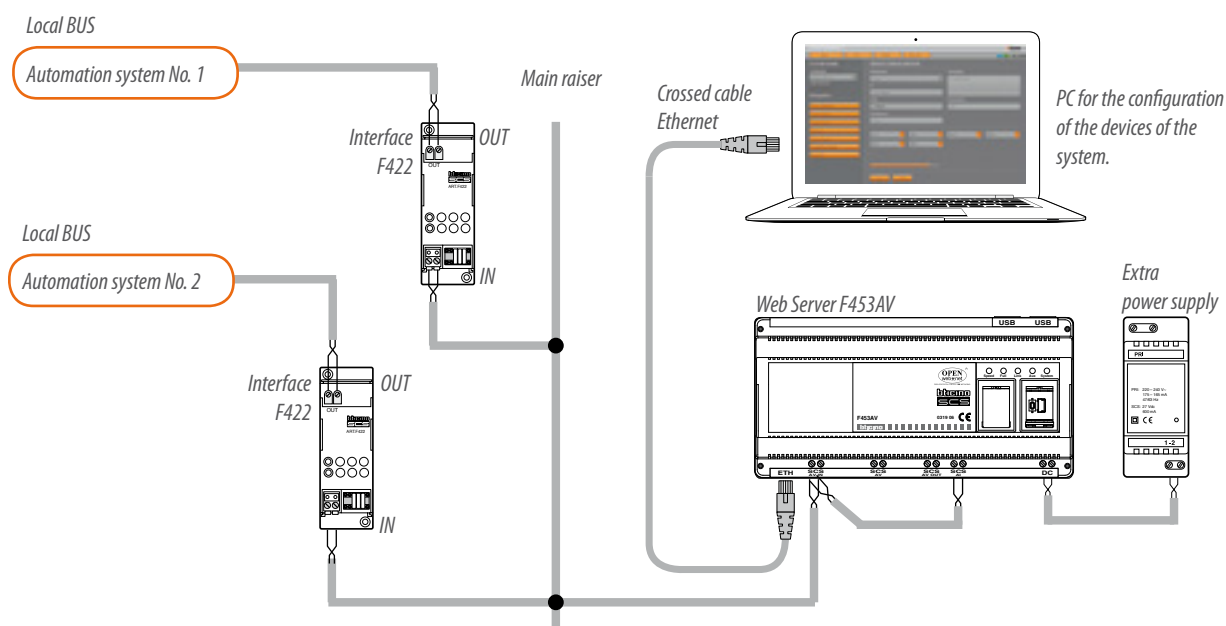


INTEGRATED SYSTEMS

Configuration of the devices of **all the systems belonging both to the Local BUS and the Main riser**. This can be ensured by connecting the Kit or the Web Server to the main riser.

*Warning: remember that in order to configure all the devices of the system it is **necessary to configure the F422 interfaces for "logic expansion" operating mode, connecting configurator no. 2 to the***

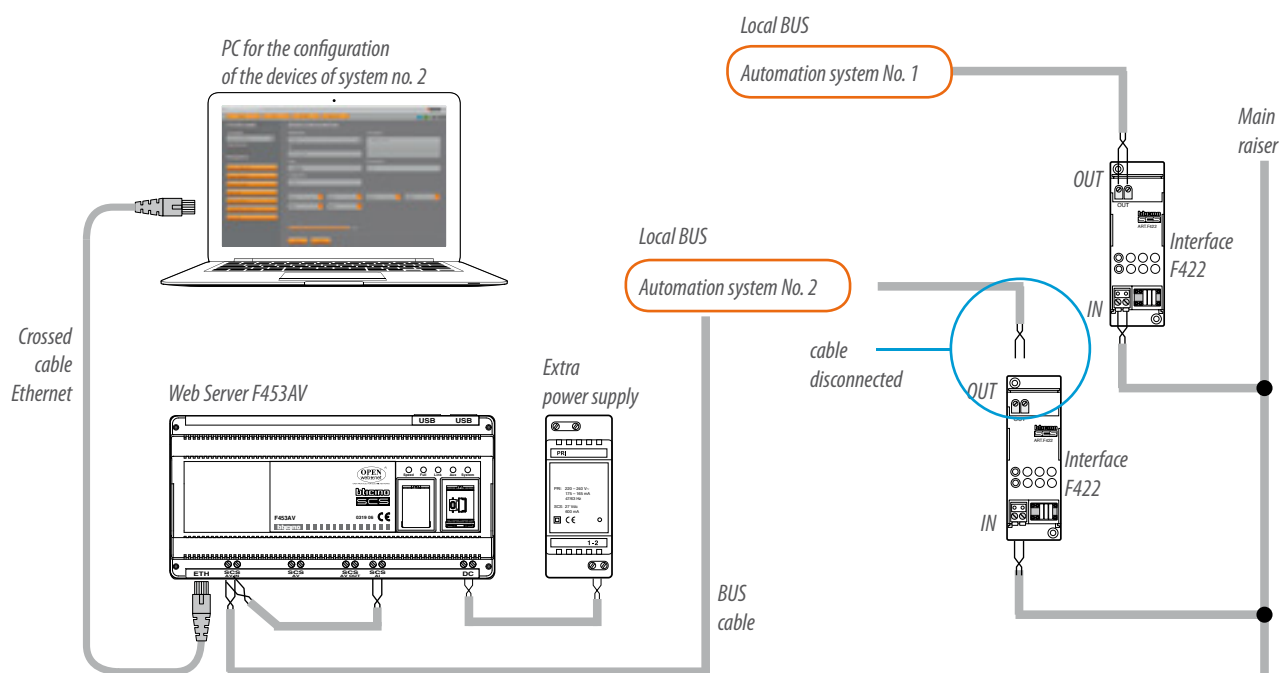
M position and configuring the address of position I4 using configurators from 1 to 9.



If on the other hand, the configuration kit or the Web Server are connected to one of the two

local BUS, only the devices of that system can be configured. In this case the system to be configured

must be disconnected from the riser by removing the connection to the corresponding F422 interface.



Installation of a BUS system

WARNING:

The design and installation of the MY HOME system must only be performed by qualified personnel, in accordance with current local regulations. BTicino SPA rejects all responsibility for any consequence resulting from the non-compliance with such regulations.

The first step towards the installation of a home automation system is to design and ensure a good basic installation setup.

In fact, an accurate setup of cables, trunking, boxes, equipment rooms and control points, enables to follow in a much simpler way the evolution of the devices already installed inside the home and include new ones in the future.

Irrespective of the type of system and the required home automation applications, it is necessary that the **layout of the house** and a **general furniture plan**, are made available to the installer.

It is also important that a check is carried out, to ensure that the initial estimate is in line with the actual site: number of rooms and their use (living room, bedroom, bathroom etc.)

On a design and installation point of view, the installation of a home automation system is not much

different from that of a traditional electric power system, particularly in terms of:

- The selection and position of the distribution boards;
- The position of the junction boxes;
- The position of plug-in boxes;
- The definition and position of loads/users.

In creating a home automation system it will be necessary to take into account other factors based on the installation features of a "BUS" system, such as the BTicino MY HOME system:

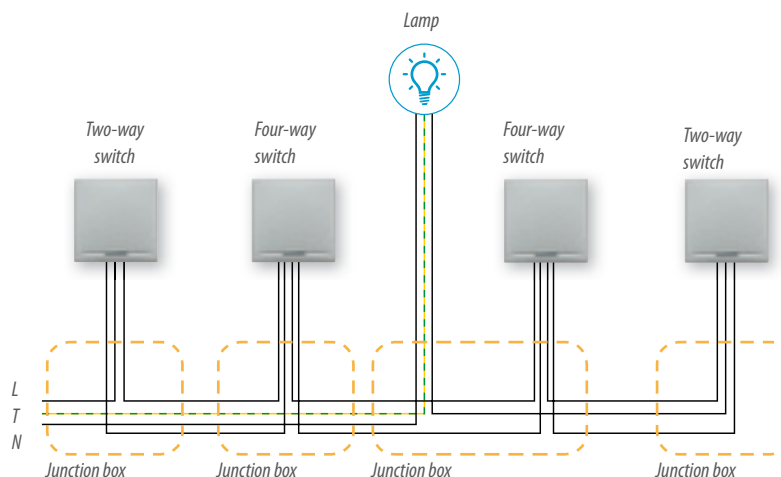
- The layout of the conduits;
- The type of wiring;
- The coexistence of cables inside the same conduit.

In order to understand these requirements, extensively outlined in the following pages, it is important to understand the difference between a traditional and a BUS type system.

In a **traditional system**, all the control devices are connected to the user load using a more or less complex wiring setup.

Each function therefore requires electric connection; the more functions are included in the system, the more the circuits and the complexity of the wiring.

As an example, shown here is the electric diagram of an electric circuit used for switching on a lamp using 4 control devices (two 4 way switches and two 2 way switches). As it can be seen, rather simple functions require a complex type of wiring, difficult to modify over the time without having to rewire most of the circuit (for example in order to reach a new control point).



In a **BUS system**, the power line for the powering of the load is separated from the control line, which is also independent from the functional wiring.

With reference to the diagram shown here, instead of traditional 2 way and 4 way switches, we have electronic devices connected to actuator devices for the control of the lamp through a Telephone pair (BUS line).

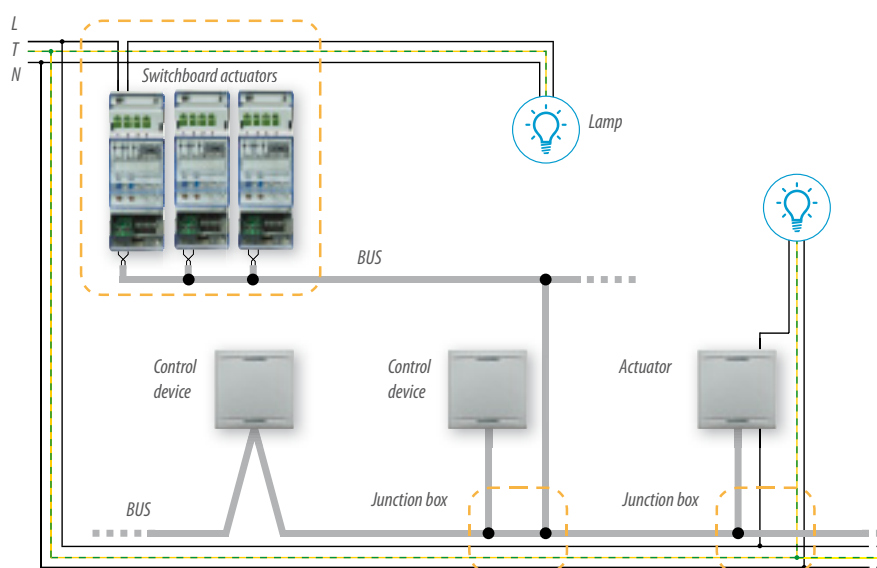
In the diagram the actuators are shown inside an electric distribution board of the apartment, although they can also be positioned inside junction boxes, or, for some types, can also be installed inside the device holder boxes, together with the control devices.

This system configuration offers clear advantages:

- An important simplification of the wiring of the various control points offered by the use of one single cable (pair);
- The possibility of adding or

changing the position of the control points through the connection of the device in any point of the BUS;

- A simplification of the installation of the conduits for the powering of the loads.

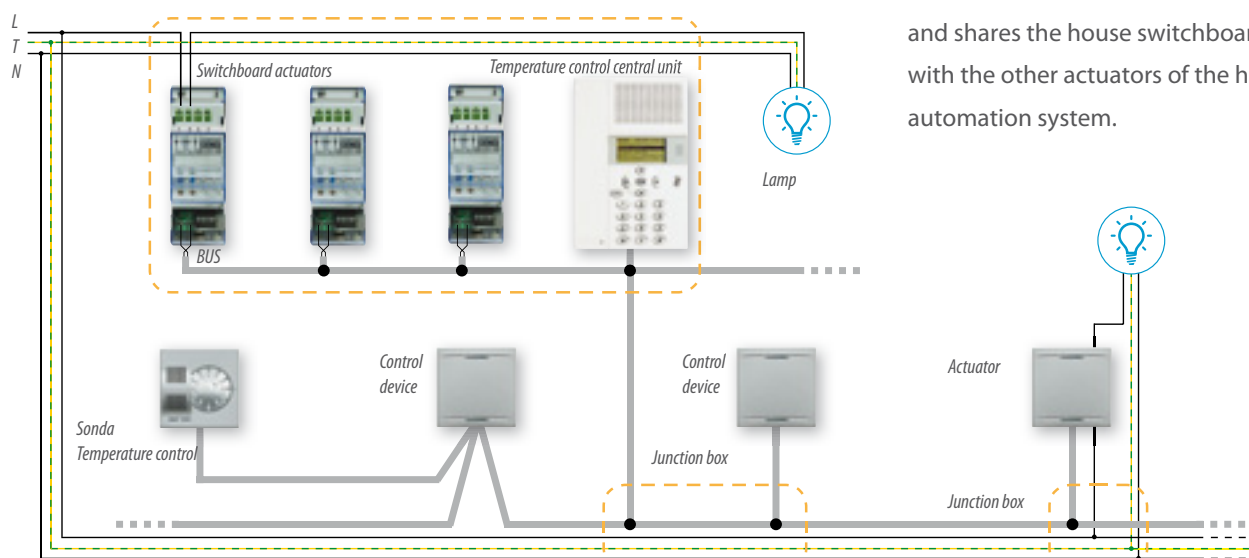


By sharing the same BUS pair, some MY HOME systems can perform different functions based on common wiring. This is the case, for example,

of the Temperature control system and the Automation system; the central unit and the probes connect to the BUS line of the Automation

system without requiring specific additional wiring.

Also the actuator for the control of the heating system solenoid valve is connected to the Automation BUS and shares the house switchboard with the other actuators of the home automation system.



Type of wiring

Systems may be installed using two different types of structures or modes of distribution:

- Free structure
- Star structure

The choice is based on installation needs, functions required (installation of the applications; Lighting, automation, burglar-alarm, video surveillance system, etc.), wall limitation, and whether we are talking of refurbishments or new buildings. With these modes it is possible to cover and create all the types of MY HOME systems.

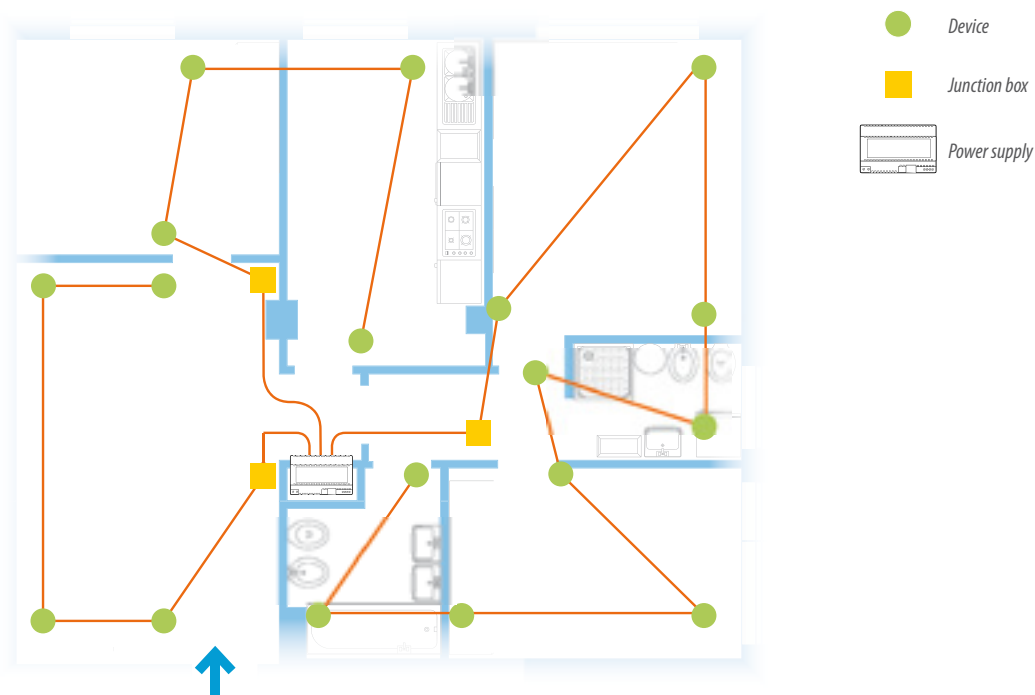
FREE STRUCTURE WIRING

This type of wiring is normally used in traditional distribution systems. However, in order to integrate MY HOME systems, it will be important to take into account the following indications during the design stage:

- The BUS path may be the same as the power line, using traditional covered trunking, surface mounted trunking, under floor systems, or trunking installed behind the false ceiling." This solution provides a reduction of both installation times and masonry works. If the building already has power system conduits with diameter of no less than 20 mm, it will be possible to use

these for the sheathed BUS pair supplied by BTicino, characterised by an insulation voltage of 300/500 V. In general, the conduits must be selected with a suitable diameter to meet any current and future system requirements.

- The indications also apply to the installation of junction boxes, which must be sized and placed in positions that facilitate "parallel" connection of the pair in more sections of the system. In case of motorised windows and shutters, ensure that the power services and the Automation BUS pair also reach the shutter boxes.



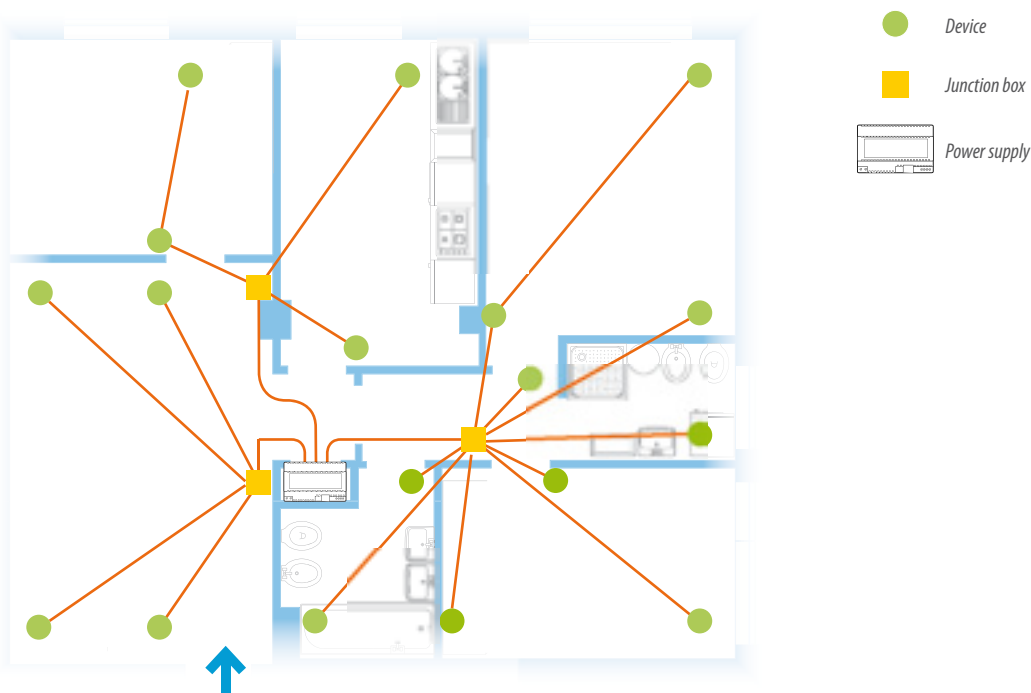
STAR STRUCTURE WIRING

This wiring is recommended when there is a requirement for integration of the data transmission system, video door entry system, video surveillance system, sound system, telephone system, and TV/SAT system inside one single conduit.

The structure of the star wiring consists of a central point called “star centre” to which all the peripheral branches of the various wiring systems converge. As a rule, the “star centre” is made using a switchboard, a flush or wall mounted distribution board that groups all the active and passive devices for the management of the services, which, from the urban and building networks are taken inside the apartment.

The sizing of the star wiring system must take into account the following:

- In accordance with the structure of the building, position the “star centre” in the barycentre position in relation to the system. If possible, install the switchboard in an appropriate service room or inside a storage, in order to avoid compromising the look of the room.
- Install the conduits with junction boxes every 10 metres, for pulling the cable or for installing any required signal amplifiers.
- For the power system use dedicated conduits, the EDP/ Telephone/TV services may share the same conduits, which must have a minimum internal diameter of 18 mm (recommended 20 mm).



Selection and positioning of the electric distribution board

The integration of the various MY HOME systems in the building entails the need for grouping in one central point all the active (power supplies, interfaces, telephone switchboards, etc.) or passive devices for the control and the management of all the functions.

This location is effectively the "brain" of the whole home automation system of the building. Its size shall be defined taking into account the following general requirements:

- allow for extra space for expansion using new devices that may be needed for future requirements.
- install the power supplies in the lower position of the switchboard in order to facilitate thermal dissipation;
- the switchboard must be capable of dissipating a power higher than the sum of the powers dissipated by all the devices it will house.

BTicino offers a wide range of switchboards suitable for types of needs, with different capacities and installation solutions (flush mounted, or wall mounted).

A useful selection criteria in terms of installation of the MY HOME system is the following:

- for **one-floor or multi-floor installations in new or existing (refurbished) buildings** where an equipment room will be installed for the electric distribution board of the home, it is possible to select among the various wall mounted or flush mounted distribution board or switchboard solutions belonging to the Multiboard and

Idroboard series for the integration of the MY HOME system. For the calculation of the dissipated power, all BTicino switchboards and distribution boards meet the requirements of CEI 23-51 standards.

- for **installation in one floor new buildings and apartments** where an equipment room for the integration of the MY HOME system is not available, BTicino offers MY HOME FLATWALL, an innovative solution for central installation of electric and electronic devices and user interfaces in full respect of the decor of the home. This type of unit can contain up to 288 DIN

modules, and features sections that can only be accessed by the installer (e.g. actuators and power supplies, for maintenance/ updating purposes), as well as sections that can be accessed by the final user (burglar-alarm central unit, flush mounted video handset, etc.).

MY HOME FLATWALL meets two types of installation requirements:

- inside the homes, as innovative centralised installation solution for all electric and multimedia services in harmony with the decor of the home.
- on the building riser, as a solution for the distribution of the main wiring of the whole building.

My Home Flatwall

Overview of wall mounted and flush mounted switchboards



MY HOME FLATWALL

Three solutions for perfect integration of home automation and electric devices within the residential environment

1. SWITCHBOARD TYPE SOLUTION

Configuration providing interaction with the MY HOME system through room control (Touch Screen) and video handset (Video Display). It also enables intervention on the earth leakage and thermal magnetic electrical safety and protection devices inside the corresponding switchboard.

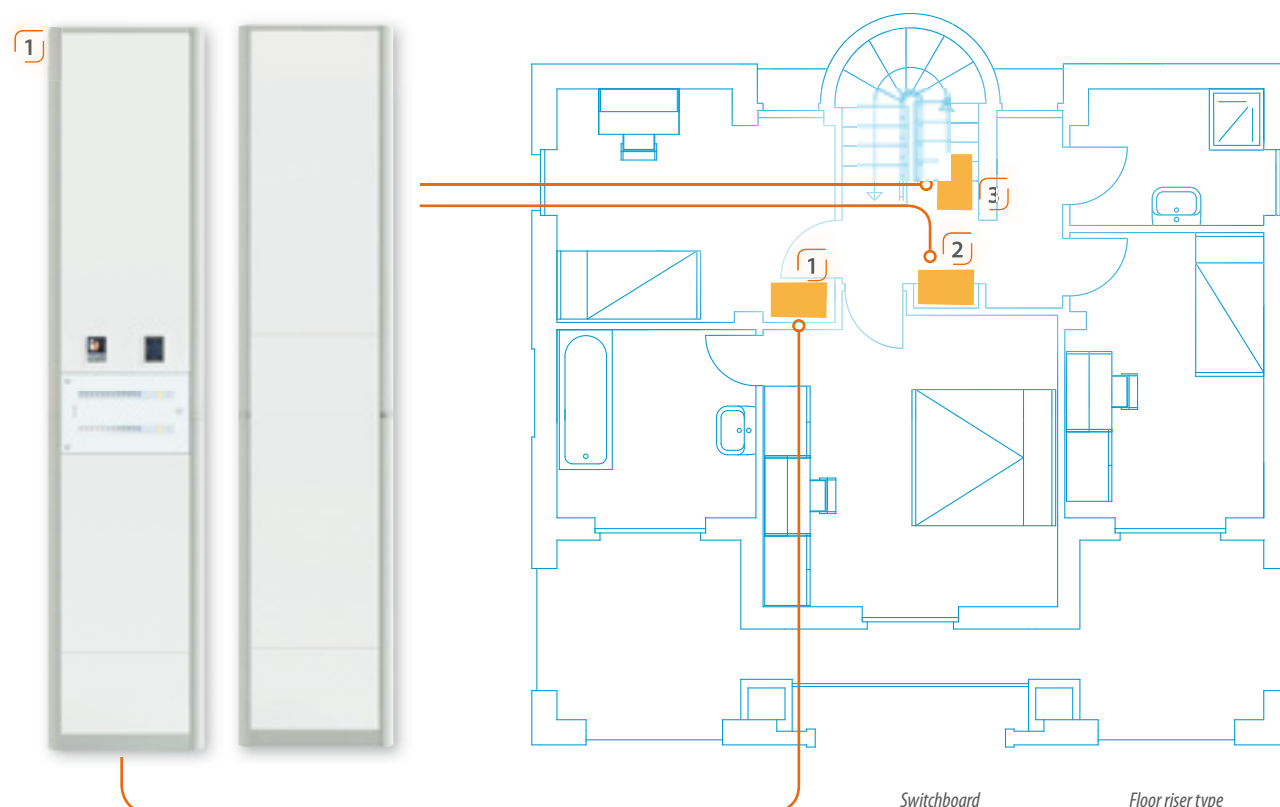
2. ELECTRIC DISTRIBUTION BOARD TYPE SOLUTION

Configuration ensuring the containment of all DIN actuators and power supplies of the MY HOME system, making them easily accessible.

On a design point of view, this solution can blend perfectly with the walls where it is located.

3. FLOOR RISER TYPE SOLUTION

Building floor crossing configuration, for distribution using common service cables.



NOTE: the front cover panels, available in white, can then be painted with the standard masonry paints available on the market, to meet the taste of the user.

Switchboard
type solution



Floor riser type
solution



MY HOME FLATWALL

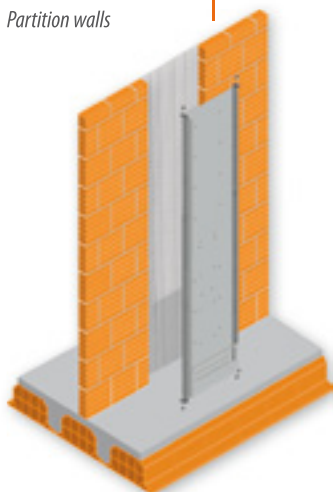
MY HOME FLATWALL features a sophisticated design and extreme functionality of all its components. The type of accessibility to the devices installed depends on their use:

■ some sections are only accessible to the installer, to perform the required maintenance operations on the installed devices.

■ other sections are accessible to the end user for interaction with the system.



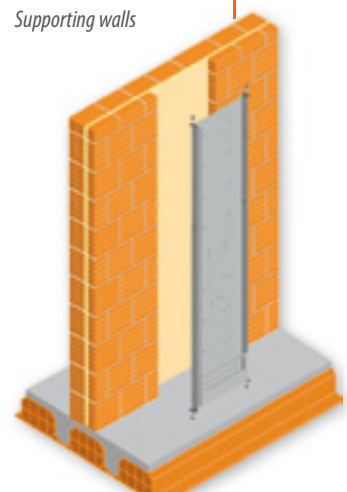
Partition walls



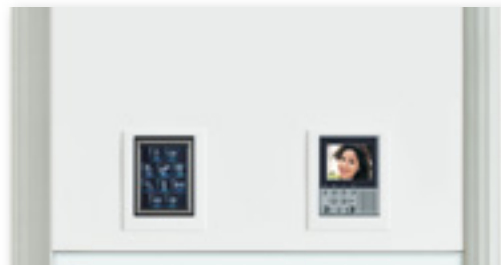
Plasterboard walls



Supporting walls



Note: For installation inside supporting walls, a 60 cm wide recess must be obtained in the wall from the floor to the ceiling. For partition or plasterboard walls leave an opening of approximately 60 cm during the construction of the wall.



Devices for interaction with the MY HOME system that can be operated by the end user (Touch Screen, burglar alarm central unit, Video Display).



Switchboard for electrical safety and protection devices accessible to the end user. Available in three versions (glass, metal and plastic), featuring installation reversibility. The hinged side can in fact be attached to the right or the left, so that the door can be opened from the most suitable and functional side.



Thanks to the very low protrusion from the wall, 2 cm only, the paintable front cover panels, and the side surround plates in anodised aluminium, MY HOME FLATWALL provides maximum integration with the residential environment.



Zone accessed by the installer only, housing power supply risers, actuators and other DIN devices (up to 288 modules), for the operation of the MY HOME system. The installation is completed by the white front cover panels.

MY HOME FLATWALL switchboard composition

MY HOME FLATWALL CONSISTS OF:

1. ONE TELESCOPIC BASE MODULE

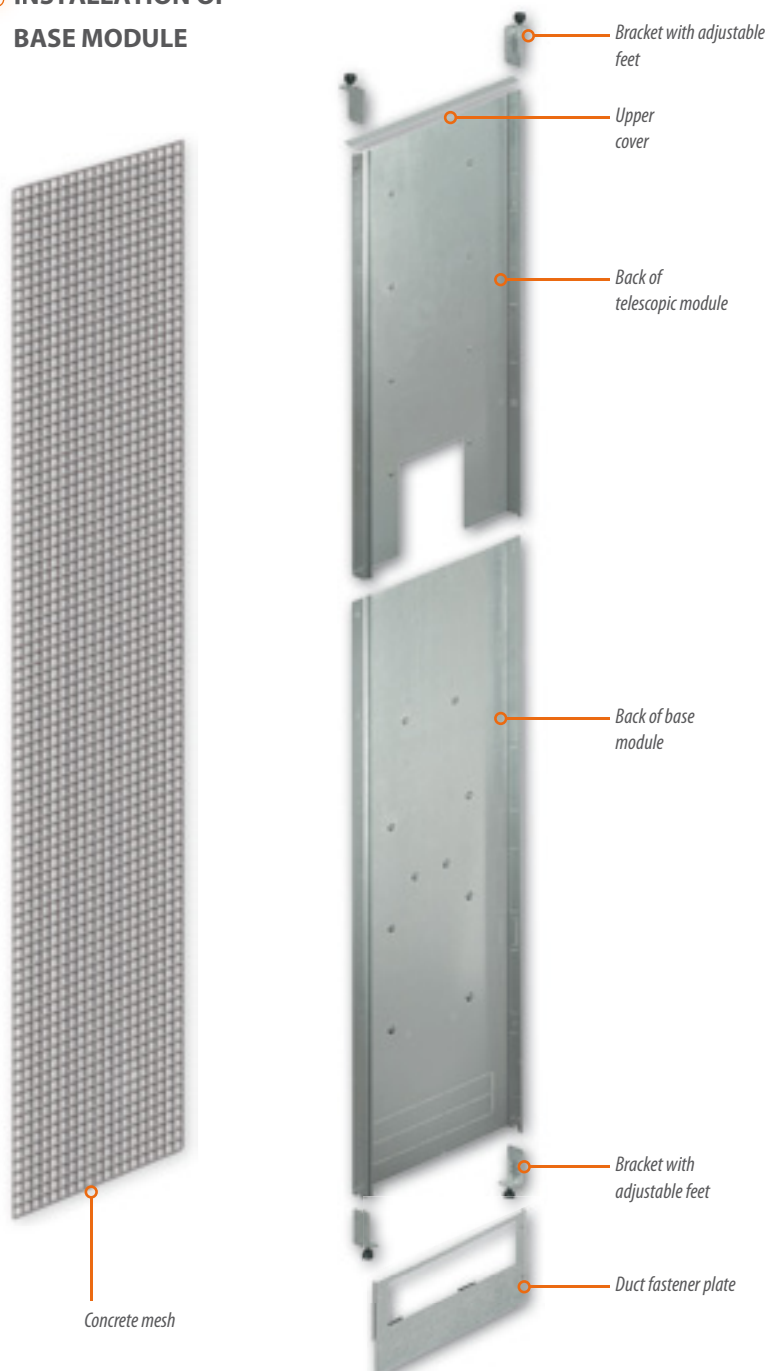
(adjustable on two heights: 270 and 240 cm), which constitutes the metal back to be fitted in the wall; the adjustable feet provide better positioning of the back.

2. A SERIES OF MODULAR DEVICE-HOLDER SUPPORTS

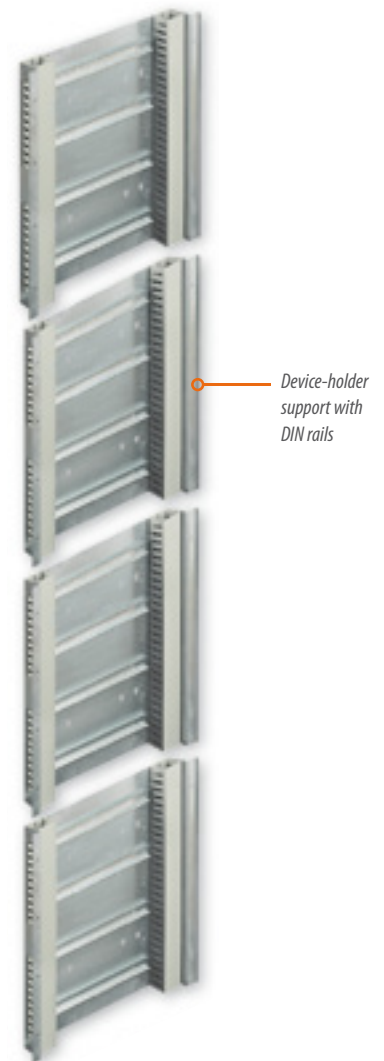
For the installation of all types of DIN electric devices, with plastic trunkings fitted on the sides, for easy passage and securing of wiring cables.

The supports can also accept appropriate brackets for the installation of MY HOME devices.

1) INSTALLATION OF BASE MODULE



2) INSTALLATION OF DEVICE-HOLDER SUPPORTS



3. FRONT COVER PANELS AND SURROUND PLATES

Meeting design and functional requirements.

The panels are available with a white finish (RAL 9003).

To meet the design requirements of the user they can be painted with standard masonry paints.

3 INSTALLATION OF FINISHING ELEMENTS

Brackets for MY HOME devices and video door entry system



Upper end cap

Front cover panel for the installation of MY HOME devices and video door entry system h 120 cm

Switchboard for DIN devices h 30 cm

Blanking module h 90 cm

Lower end cap

Side surround plates with opening handle (pair)

Electric distribution board position

The positioning of the electric distribution board(s) must be decided based on the type of building. The most suitable position of the distribution board should be agreed with the installer (unless already preset).

SERVICE SECTOR

Install a dedicated distribution board inside an equipment room for the centralisation of all the devices on DIN rail.

ONE FLOOR BUILDING

1, 2 or 3 rooms + bathroom & kitchen: arrange only one distribution board in a barycentre position, for the centralisation of all DIN devices.

More than 3 rooms + bathroom & kitchen

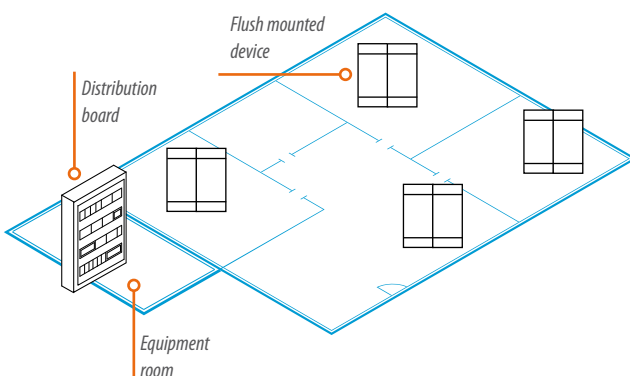
only include one distribution board, at a central position.

Part of the DIN rail devices will be installed on the board, while part of them will be distributed.

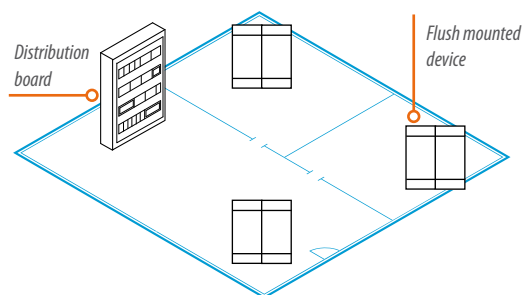
BUILDING ON SEVERAL FLOORS

Install the main distribution board in an equipment room, or under the stairs. Install another distribution board on each floor, in a barycentre position. DIN rail devices will be partly centralised, and partly distributed.

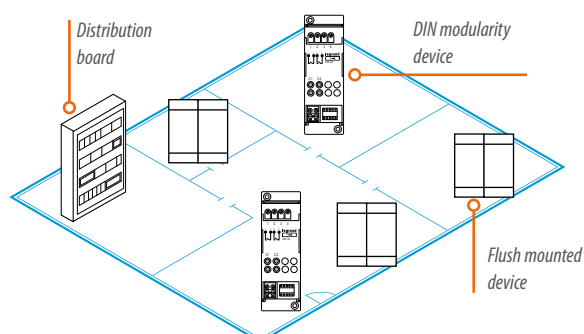
Service sector



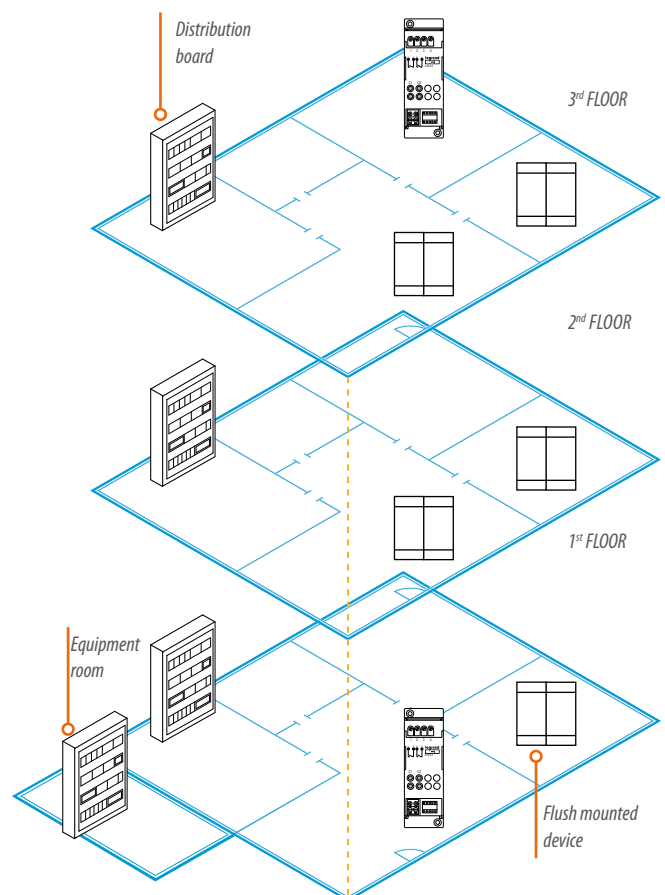
One floor building: 1, 2, or 3 rooms + bathroom & kitchen



One floor building: more than 3 rooms + bathroom & kitchen



Several floor building



Plug-in boxes position

The positioning and the quantity of plug-in boxes needed must be assessed based on the type of home. Let's now consider the following types of homes:

1 FLOOR APARTMENT

- 1, 2 or 3 rooms + bathroom & kitchen: minimum number of plug-in boxes, for cable joints only. All DIN devices are centralised.
- more than 3 bedrooms + bathroom & kitchen: plug-in boxes are used also for housing the DIN devices of the home automation system. DIN devices are both centralised and distributed.

APARTMENT ON SEVERAL FLOORS

Install one plug-in box under each electric distribution board, as well as other boxes distributed around the system, to house the DIN devices of the home automation system.

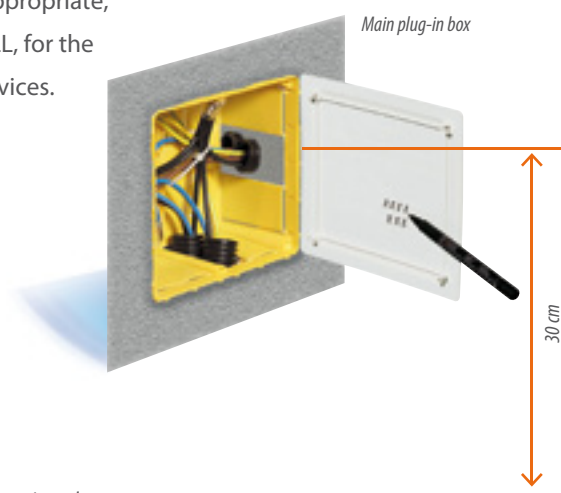
DIN devices are both centralised and distributed.

As an alternative, where appropriate, install MY HOME FLATWALL, for the centralisation of all DIN devices.

SERVICE SECTOR

Install plug-in boxes in the false ceiling, or under the floor.

All DIN devices are centralised.



Note: For the installation of the boxes refer to the CEI 64-50 guide.

The Guide recommends a minimum height of 17.5 cm from the floor. We suggest a height of 30 cm approximately.

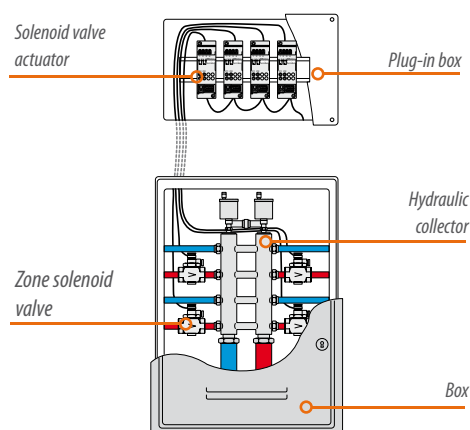
Installation:

Plug-in boxes should be installed, based on the floor plan, including the possible distribution of the furniture:

- in easily accessible locations, for maintenance purposes;
- in passage areas (e.g. hall) or areas that are not used very often (e.g. storage rooms);
- nearby the hydraulic collector of the Temperature control system (see drawing).

It is also recommended that the boxes are NOT positioned:

- behind large pieces of furniture or wardrobes;
- behind flush mounted appliances;
- in particularly visible areas.



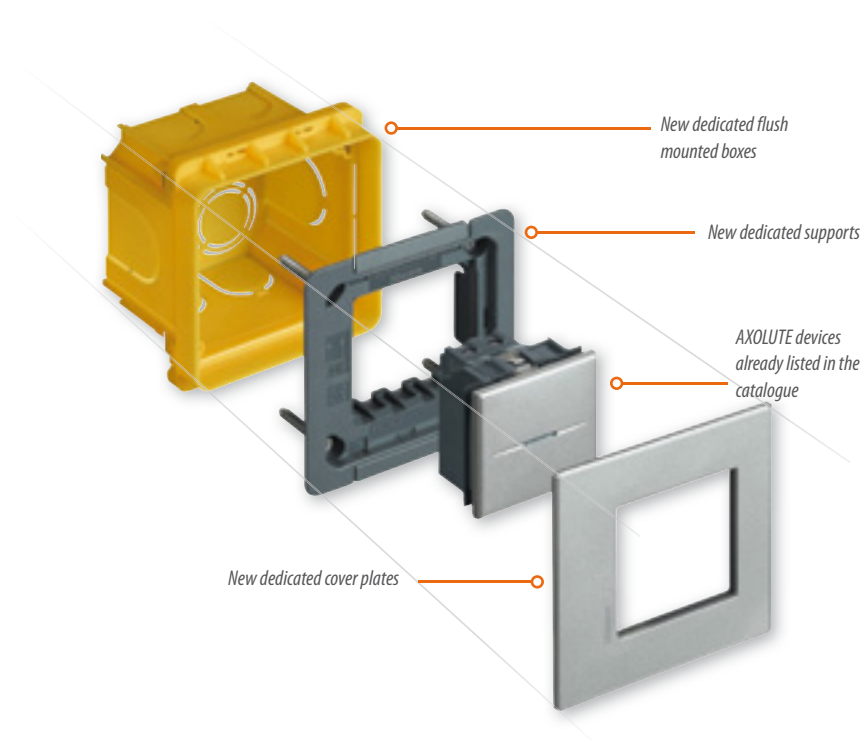
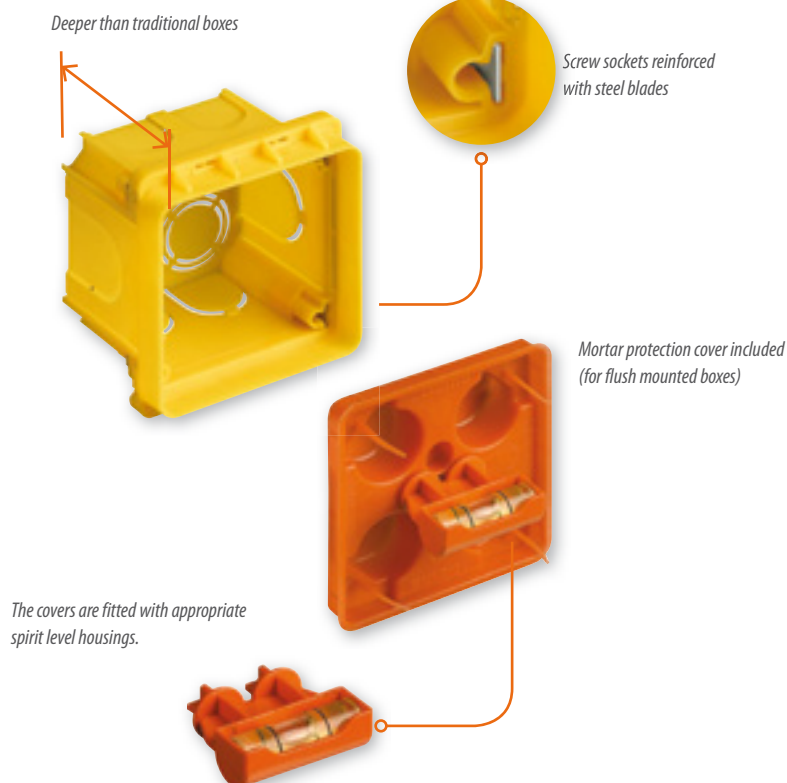
Indications for the installation of AXOLUTE ETÈRIS device holder boxes

To combine the MY HOME system with the new cover plates of the AXOLUTE ETÈRIS series, it will be necessary to use dedicated flush mounted boxes, supports and cover plates.

For more information refer to the AXOLUTE Catalogue

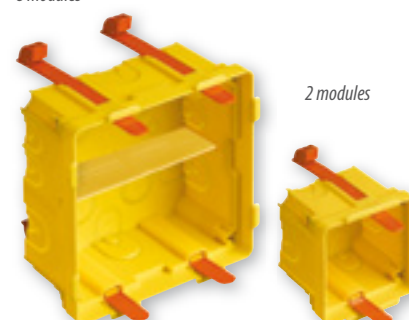
FEATURES OF THE NEW DEDICATED BOXES FOR AXOLUTE ETÈRIS

- 2 new modularities (2 and 8 mod.);
- More depth to ensure minimum protrusion of the light point from the wall;
- Can be installed in masonry walls and plasterboard/cavity walls.



PLASTERBOARD WALLS (10 to 45 mm thick boards)

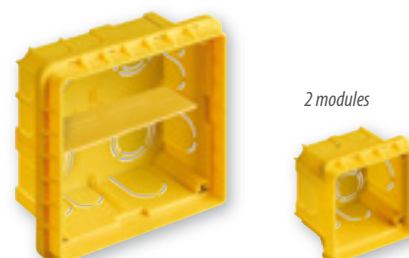
8 modules



2 modules

MASONRY WALLS

8 modules

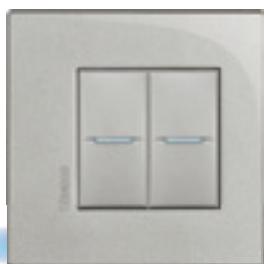


2 modules

Note: Etèris boxes are deeper than standard boxes. When designing the system, ensure that their positioning is adapted to the type of wall.

E.g. with standard partition walls with thicknesses of approx. 10 cm, it will not be possible to install 2 boxes opposite to each other (one each side of the wall) because the overall space required of 12 cm would exceed the thickness of the wall.

Example with 2 module control



Example with several 2 module devices



Example with 2 and 3 module devices



Depending on needs and look requirements, Etèris can be used to create a light point using several 2 module boxes joined together. Once the installation is completed,

the cover plates will be perfectly aligned and joined.

Example of vertical configuration



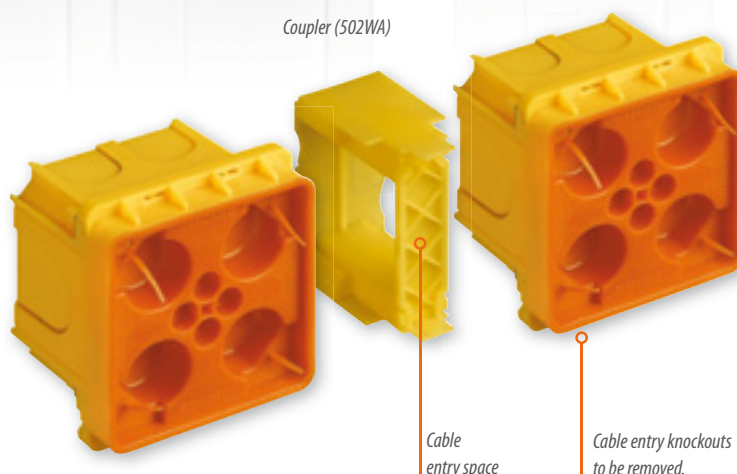
Example of horizontal configuration



JOINING THE BOXES TOGETHER

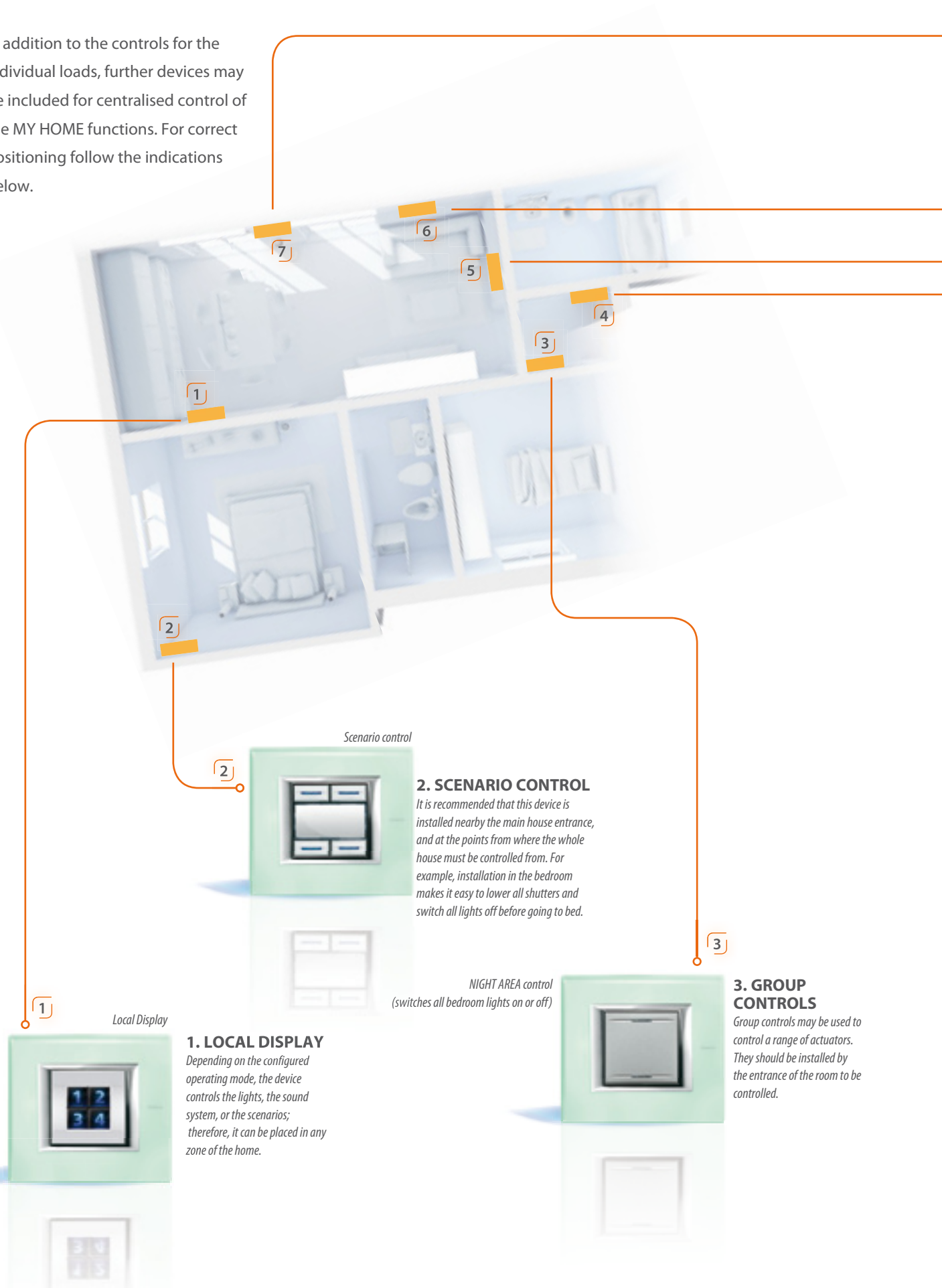
This operation is performed both for masonry and plasterboard boxes, using the appropriate coupler (item 502WA). The boxes will be perfectly joined and level with each other, making the subsequent steps much easier.

Coupler (502WA)



Local control device position

In addition to the controls for the individual loads, further devices may be included for centralised control of the MY HOME functions. For correct positioning follow the indications below.



7



Multimedia interface

7. MULTIMEDIA INTERFACE

To ensure operation, this device must be connected to the television set, together with any other multimedia devices to be managed.

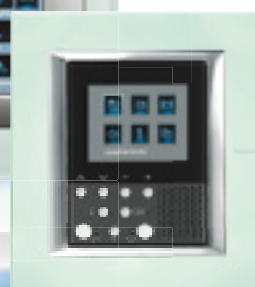
Multimedia Touch Screen



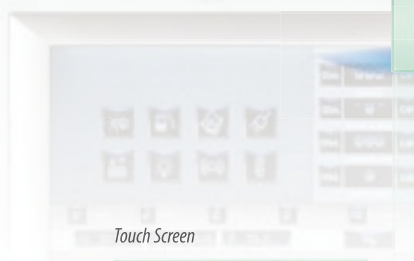
6

6. VIDEO HANDSETS AND MULTIMEDIA TOUCH SCREENS.

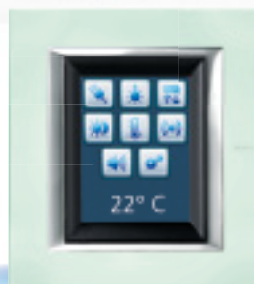
It is recommended that video handset are installed in areas of the home that can be easily reached, both during the day and the night. They have a double function, as they enable receiving calls from the entrance panels and also control of the MY HOME applications installed inside the home.



Touch Screen



5



5. TOUCH SCREEN

The TOUCH SCREEN must be installed in a central position, so that it is visible and easily accessible from any room of the house. The TOUCH SCREEN provides control and management of all MY HOME applications.

Shutter general controls

4



4. GENERAL CONTROLS

It is preferable to install the general controls for SHUTTERS and LIGHTS nearby the main entry of the house, so that lights may be switched on and off, and shutters may be opened or closed, from a single point, before going out, or when returning to the house.

Grouping cables

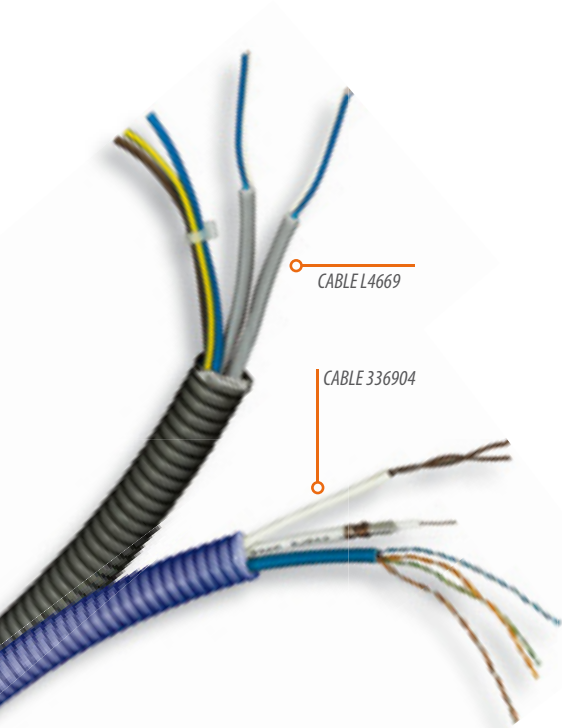
Although the construction of the cables guarantees 300/500V electric insulation, it does not however guarantee immunity from disturbances that may occur if they are installed inside the same conduits as the 230V power supply cables. *This type of installation is not recommended.* However, in case of

refurbishment, the cables for some applications may be installed inside the same conduits or pipes of the traditional electric power supply system. This solution results in important SAVINGS, both in terms of masonry work and costs. The following table shows the systems/MY HOME applications for

which the cables may be grouped in the same conduits as the power supply lines (however, under no circumstances they should be installed in the same conduits as 380 Vac power supply cables).

MY HOME APPLICATION		GROUPING WITH POWER CABLES
Comfort	Lighting / Automation	YES
	Sound system	NO
Sicurezza	Burglar alarm	YES
	Video surveillance system	* 1
Risparmio	Energy management	YES
Comunicazione	Video door entry system	* 1
	Integrated telephone system/ Data network	NO

*Note: * If the recommended cables are used for these systems, i.e. BTicino items, SAFETY is guaranteed in terms of electrical insulation. However, no guarantee is provided for correct operation, due to possible disturbance that may occur if the MY HOME system cable is grouped with the electric power cables.*



The light automation, shutters automation, temperature control, and energy management L4669 GREY BUS MAY be placed in the same conduit as the L4669S RED BUS of the burglar-alarm (in Level 1 system). Together, they can also share the same conduits and boxes as the electric power cables.

The video door entry system and sound system 336904 WHITE BUS may be placed in the same conduit with the data transmission, telephone system and TV-SAT signal cables, but must be separated from the electric power supply cables.

The separation of electric power supply cables from signal cables MUST also be ensured inside the junction boxes and the electric distribution board. Attention must therefore be paid when presetting the conduit entrances of the junction boxes and the electric distribution board.

Selection of the cable

BTICINO CABLE 336904

For video systems, BTicino produces a dedicated cable, 336904, made of two twisted conductors with a section of 0.50 mm² each. This cable ensures the best performance of the video system (greater distance between Entrance Panel and Handset, when compared to other cables). In addition, contrarily to standard cables, which are not suitable for underground installation, item 336904 may be installed underground in suitable conduits, as it complies with CEI 20-11 standards on cables for underground installation.

Technical features

- SCS sheathed pair made up of 2 flexible conductors, sheathed, twisted, unshielded.
- Insulation voltage: 450/750V
- Compliant to EN60811, EN50289, EN60228, 50265-2-1, EN50395, EN50396
- Coil length: 200 metres

BTICINO CABLE L4669 AND L4669/500

This cable has been designed for the installation of BUS systems for the following applications:

Automation, Energy management and Temperature control. This cable can be used for the distribution of power supplies and operating signals. When using the 300/500 insulated BUS cable, and the clamp protection cover, with which all devices are fitted, BTicino systems may also be installed in the same boxes and conduits as the electric power supply lines (230 Vac).

Technical features

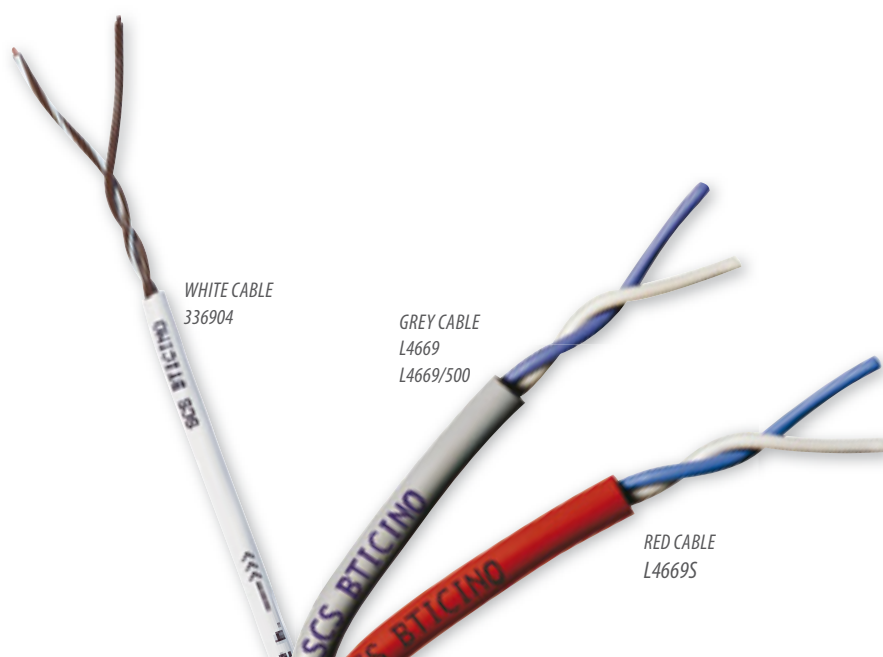
- SCS sheathed pair made up of 2 flexible conductors, sheathed, twisted, unshielded.
- Insulation voltage: 300/500 V
- Compliant to CEI 46-5 and CEI 20-20 standards.
- Coil length: - 100 metres (L4669) - 500 metres (L4669/500)

BTICINO CABLE L4669S

This cable has been specifically designed for the installation of MY HOME burglar-alarm systems. This cable can be used for the distribution of power supplies and operating signals. When using the 300/500 insulated BUS cable, and the clamp protection cover, with which all devices are fitted, BTicino systems may also be installed in the same boxes and conduits as the electric power supply lines (230 Vac). LEVEL 1 classified systems.

Technical features

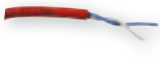
- SCS sheathed pair made up of 2 flexible conductors, sheathed, twisted, unshielded for burglar-alarm system.
- Insulation voltage: 300/500 V.
- Compliant to CEI 46-5 and CEI 20-20 standards.
- Coil length: 100 metres



Selection of the cable

MY HOME APPLICATIONS

The following table enables selecting the right cable based on the MY HOME application.

		MY HOME APPLICATIONS											
		COMFORT				SAFETY		SAVING	COMMUNICATION				CONTROL
													
		Lighting	Automation	Temperature control	Sound system	Wire burglar alarm	Video surveillance system	Energy management	Video door entry system	Integrated telephone system	TV/SAT	Data network	Web Server video
	BTicino 336904 (white)	 (*)	 (*)	 (*)		 (*)		 (*)					
	BTicino L4669 (grey)												
	BTicino L4669S (red)												
	BTicino L4668CM UTP 5												
	BTicino C9881U/5E C9882U/5E UTP 5E multi-pair												
	Telephone pair												
	RG6 cable												

 Cables recommended by BTicino (in accordance with installation regulations).  Cables that may be used (for each system, the current installation regulations must be checked).

NOTE (*): Compulsory for the underground sections of the individual systems

Selection of the conduits

Inside the home, cables must be placed inside protective conduits made of insulating material, embedded in floors, walls or ceilings. For garages and cellars, due to the difficulty in embedding the components in the walls (garage walls normally made of solid concrete, and often less than 10 cm wall thickness in cellars), it is preferable to leave conduits and boxes exposed. The path of the conduits must take into account the possibility of cables connecting different systems. For the installation of flush mounted components, corrugated tubes of different colours should be used. This will make installation and individuation of the system easier. It is recommended that only conduits with a minimum diameter of 25 mm are used.



Automation
Energy
Temperature control
Energy management



Burglar alarm



Telephone system



Data network
TV/SAT
Video door entry system
Sound system



Data network
TV/SAT

Note (*): CEI 306-2. Guide for telecommunication and multimedia distribution wiring inside residential buildings.

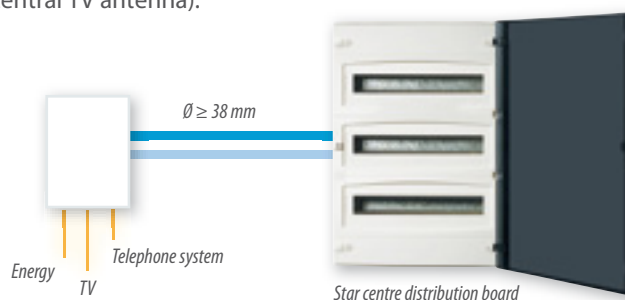
REQUIREMENTS OF THE CEI 306-2 STANDARDS (*)

In the planning and sizing of the conduits the CEI 306-2 standards recommend to allow for any future requirements of advanced wiring systems.

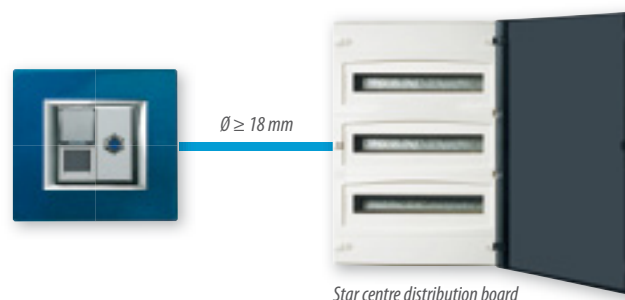
For the realisation of conduits to and from the star centre the said Standards recommend that the following is installed :

1. 1 piping with minimum diameter 38 mm for the connection of the Star centre to the infrastructure of the common section of the building, or the access point of the various services (telephone system, power supply, central TV antenna).

1



2



3



2. 1 piping with minimum diameter of 18 mm for the conduits connecting the star centre to the device holding boxes. In the case of "exposed" conduits, trunkings of similar capacity may also be used.

3. 1 piping of suitable diameter for the installation of 1 cable for the terrestrial TV system and up to 8 cables for the connection of the star centre to the terrestrial TV antennas and satellite TV dishes.

Positioning of conduits

This electric SYSTEM LAYOUT is defined by marking the walls with the paths of the connection conduits. These paths shall be vertical or horizontal.

Diagonal paths must be avoided unless they follow an inclination of the wall or ceiling. Inside the ceiling and under the floor, conduits may be installed as desired.

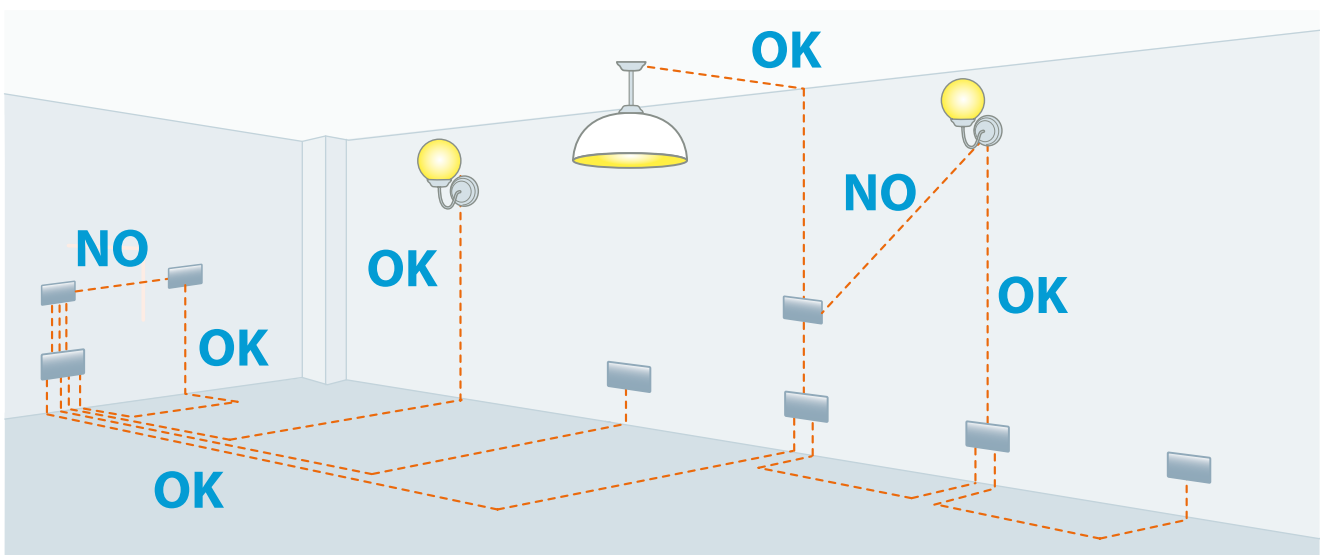
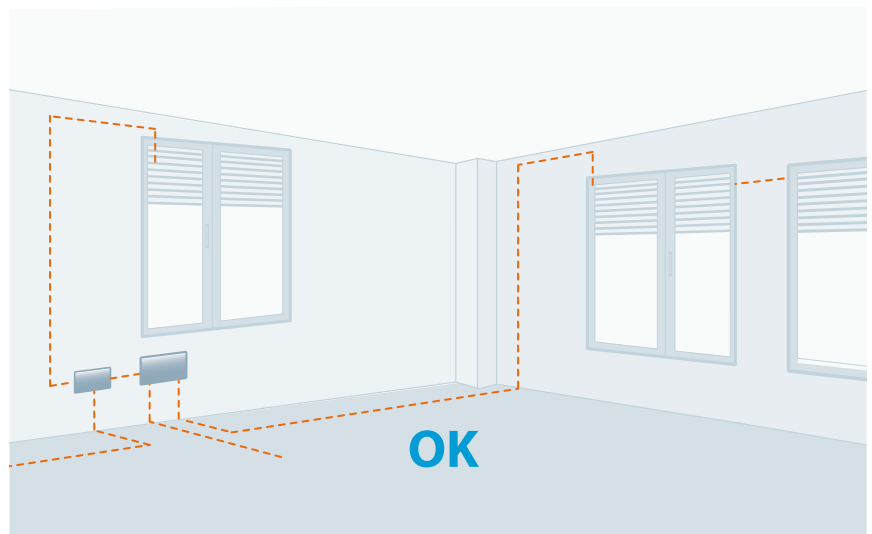
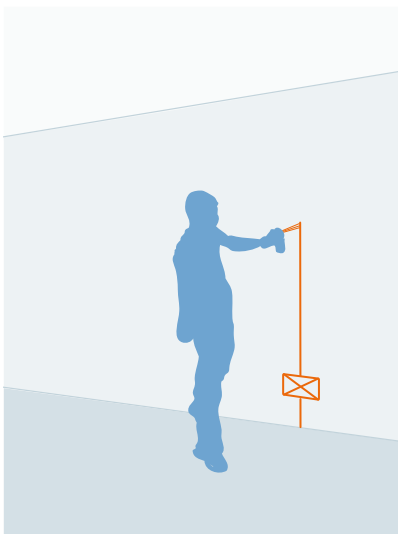
The distribution between junction boxes and loads/users depends on the type of room and the type of load to be connected.

As far as the conduits are concerned, **irrespective of the type of MY HOME application**, it is recommended that the following requirements are complied with:

1. The bending radiuses of the "main" paths must be such that all risks of damage to conduits and cables are avoided.
2. All conduits embedded in the walls must be horizontal, vertical or parallel to the wall edges. Diagonal path are only allowed for VERY short sections.

3. Any exposed wires may follow the shortest path.

4. Any wires installed inside ceilings or under the floor may follow the shortest path.



DISTRIBUTION BETWEEN DISTRIBUTION BOARD AND PLUG-IN BOXES

The distribution between the electric distribution board and the plug-in boxes must be of the star type.

Use a number of conduits suitable for the systems / services being distributed.

Install additional conduits, even if empty, for future system expansions. It is recommended that 32 mm conduits are used.

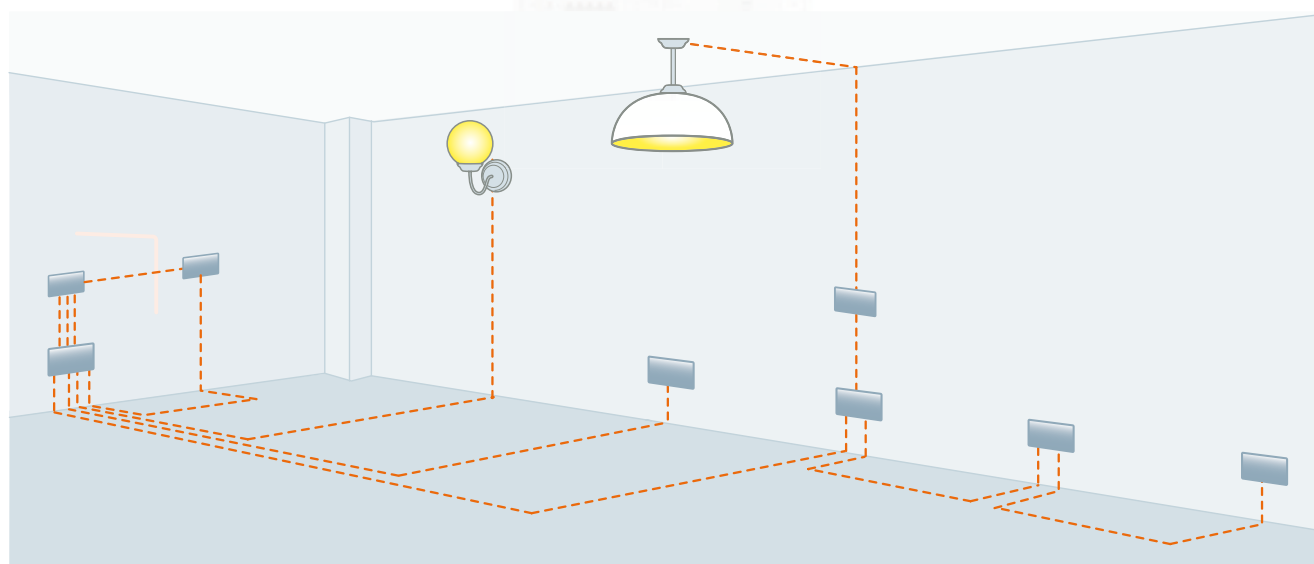


DISTRIBUTION BETWEEN PLUG-IN BOXES AND WALL MOUNTED BOXES

The distribution between plug-in boxes and junction boxes must be of the free system type.

Use a number of conduits suitable for the systems / services being distributed. It is recommended that

conduits with a diameter of at least 20 mm are used.



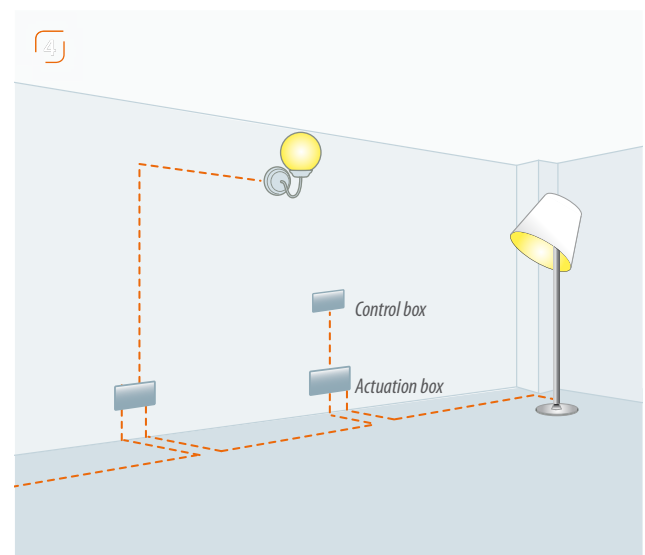
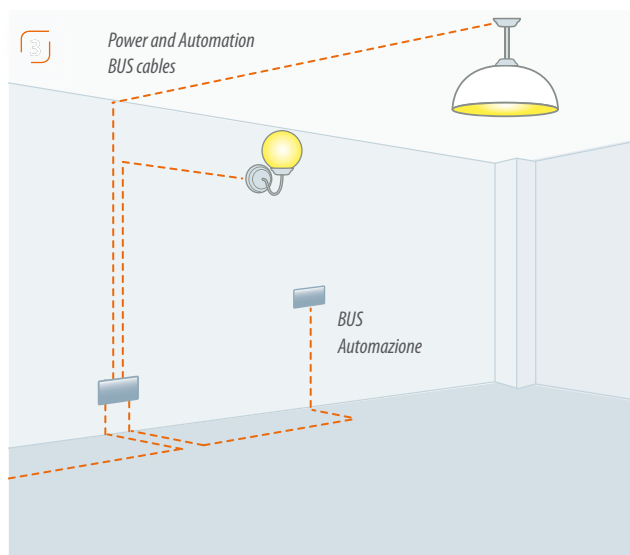
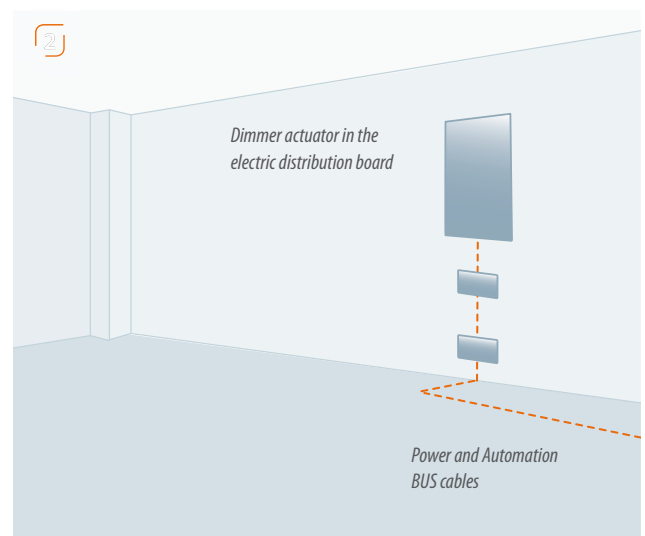
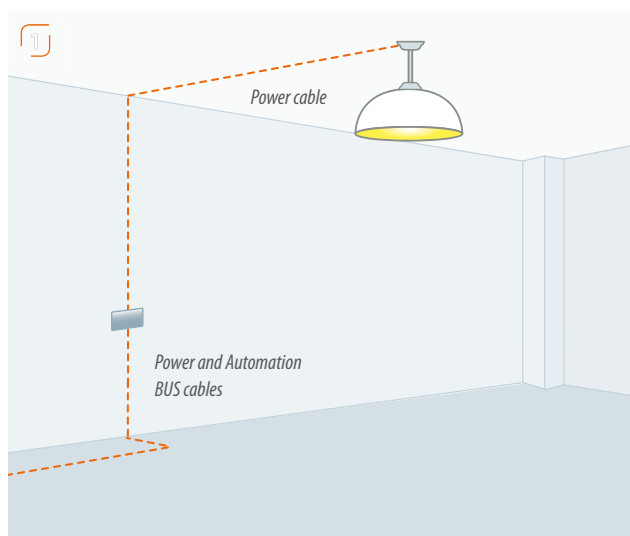
Positioning of conduits

LIGHT AUTOMATION SYSTEM

Comply with the following installation requirements:

1. if the requirement for the room is that the load is controlled from one point only (flush mounted actuator with control), the conduit will be directed from the junction box towards the load.
2. if a load with light intensity adjustment is required (DIMMER), the actuator will be positioned in the electric distribution board and the conduit will be as above.
3. if the requirement for the room is that there should be various loads controlled from several points (DIN actuator in plug-in box or distribution board)
4. in case of a load connected to a controlled socket (e.g. bedside cabinet lamp or floor lamp in the living room) with Basic actuator, the conduit will go through the actuation and control junction boxes.

Light automation system



SHUTTER AUTOMATION SYSTEM

If a shutter automation system is required, the conduit will go from the junction box to the load.

ENERGY MANAGEMENT SYSTEM

For the connection of NON-flush mounted appliances, install the flush mounted actuator for the management of the load at the side of the power socket. The conduit will go from the junction box and the nearest junction.

SOUND SYSTEM

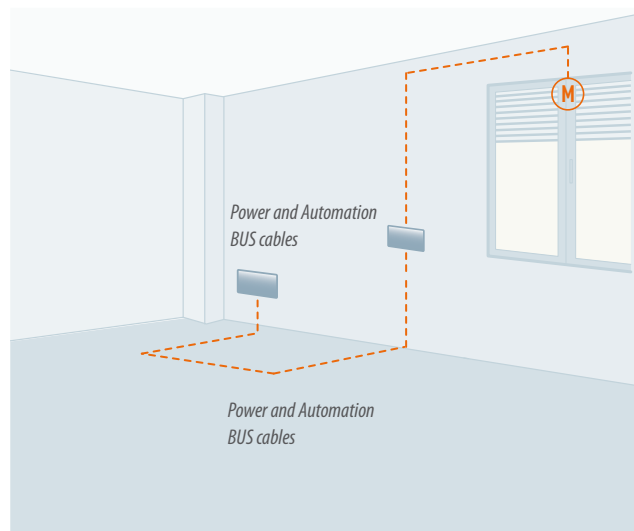
For the connection of a flush mounted DIN amplifier, allow for two separate dedicated conduits.

RESIDENTIAL STRUCTURED CABLING

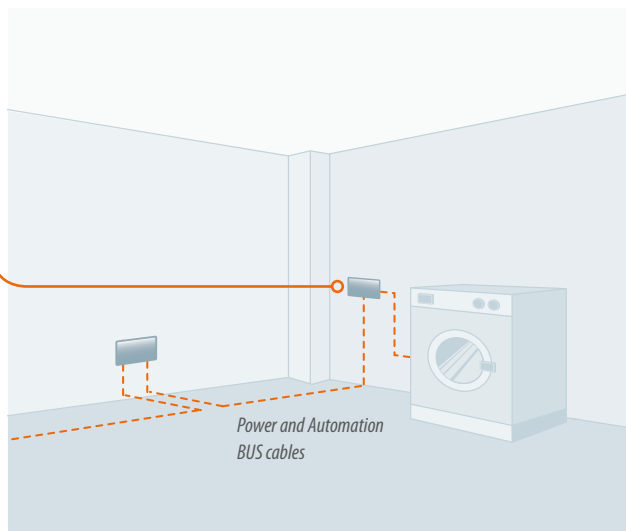
Allow for star wiring between the switchboard or electric distribution board of the communication area.



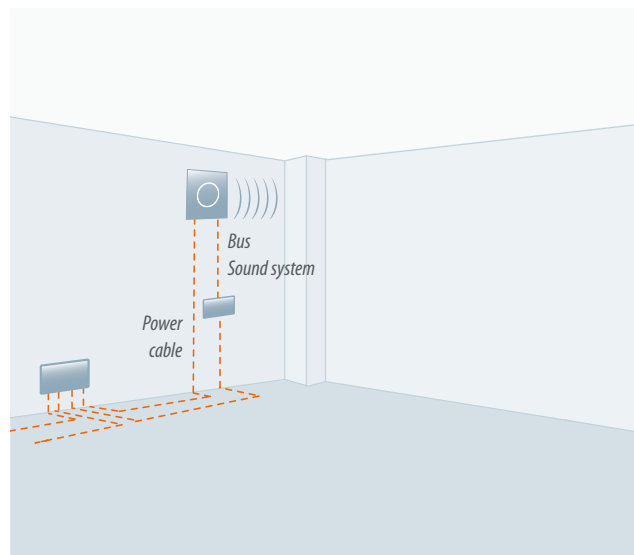
Shutter automation system



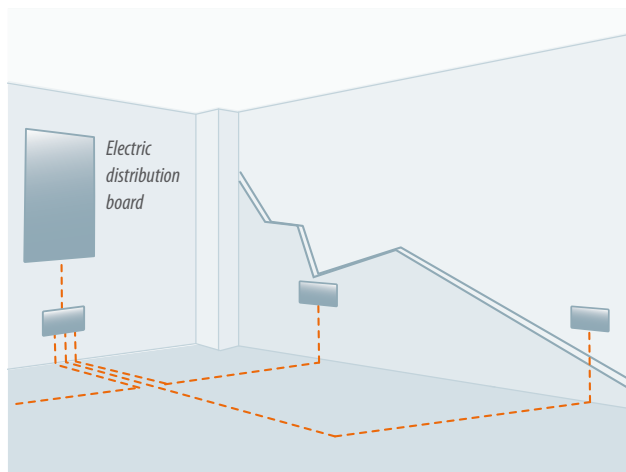
Energy management system



Sound system



Residential structured cabling



It is recommended that power sockets are **ALWAYS** installed near data transmission sockets.

Positioning of conduits

BURGLAR-ALARM SYSTEM

Comply with the following installation requirements:

1. For the connection between the electric distribution board (burglar-alarm power supply) and the outdoor siren install a dedicated conduit.
2. For the connection of the burglar-alarm central unit to the telephone communicator install two separate conduits, one for the burglar-alarm BUS and the other for the telephone cable.
3. For the connection of the magnetic contacts (windows), install separate conduits going to separate boxes where the contact interface must be housed (DIN or BASIC).

Burglar-alarm system

