




CÉLIANE™

Project and installation Guide

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I Céliane introduction

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Céliane introduction

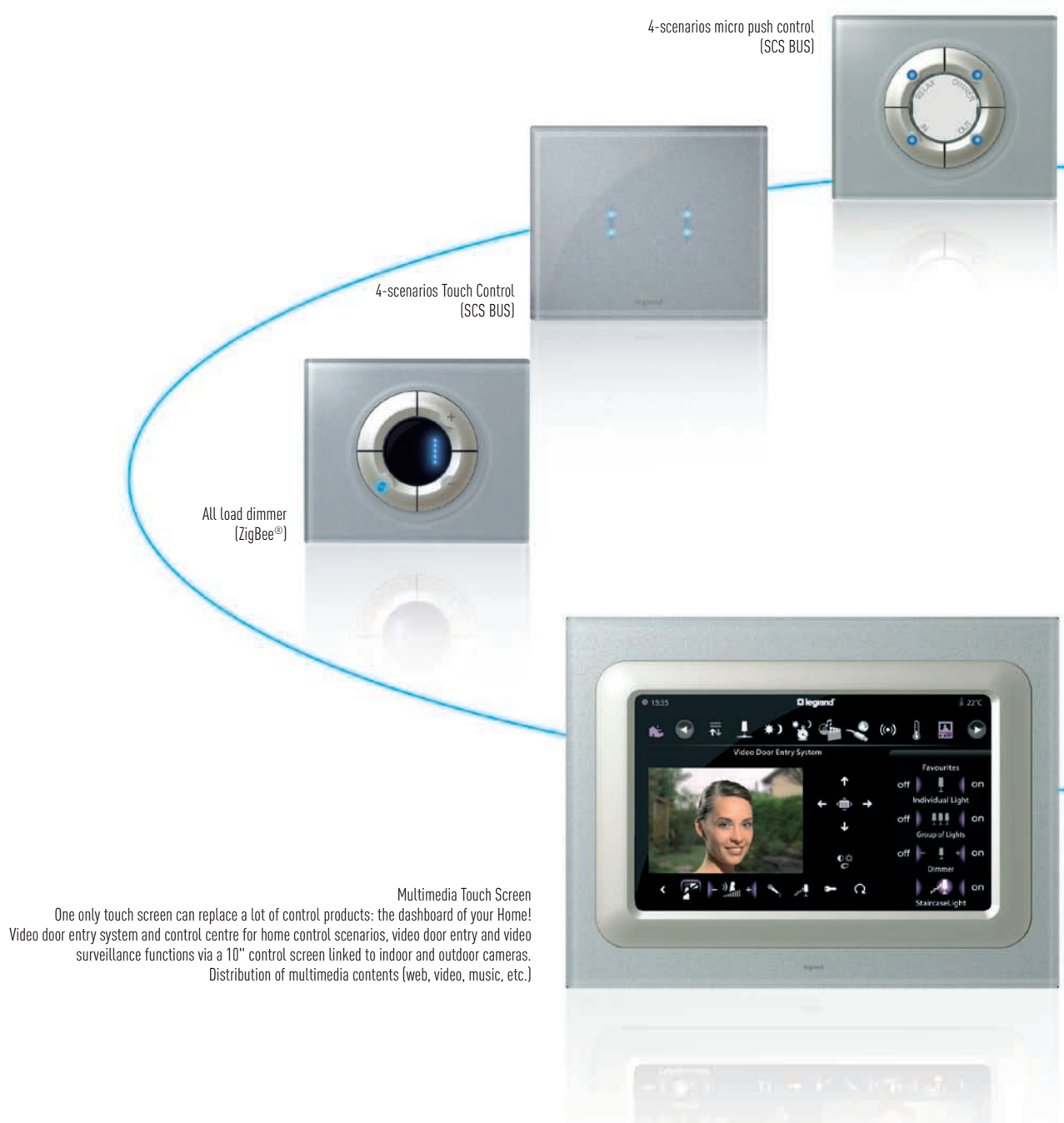
Céliane introduction

General features.....	00
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Creating value, solutions to enhance all your projects

MY HOME Legrand, the comprehensive and versatile home automation solution, which is integrated to Céliane line satisfies your most demanding customer's needs.

MY HOME Legrand is the answer for any kind of home automation requirement: from a single function like automation or independent different functions to completely networked integrated solutions.



The system works on two different media:

RADIO TECHNOLOGY USING ZIGBEE® PROTOCOL

BUS TECHNOLOGY USING SCS PROTOCOL

Products have been developed to ensure perfect interoperability and maximum reliability of the system. MY HOME Legrand installations can easily be modified and extended at any time.



Video display
Identify visitors in colour on the screen, talk hands free, open the door with a single action.



3,5" Touch screen
Control centre. Manage the scenarios for every room: lighting, shutters, sound system, temperature regulation, alarm system.



SCS BUS Basic control



Local Display
1,2" touch screen in «sound distribution» mode

MY HOME

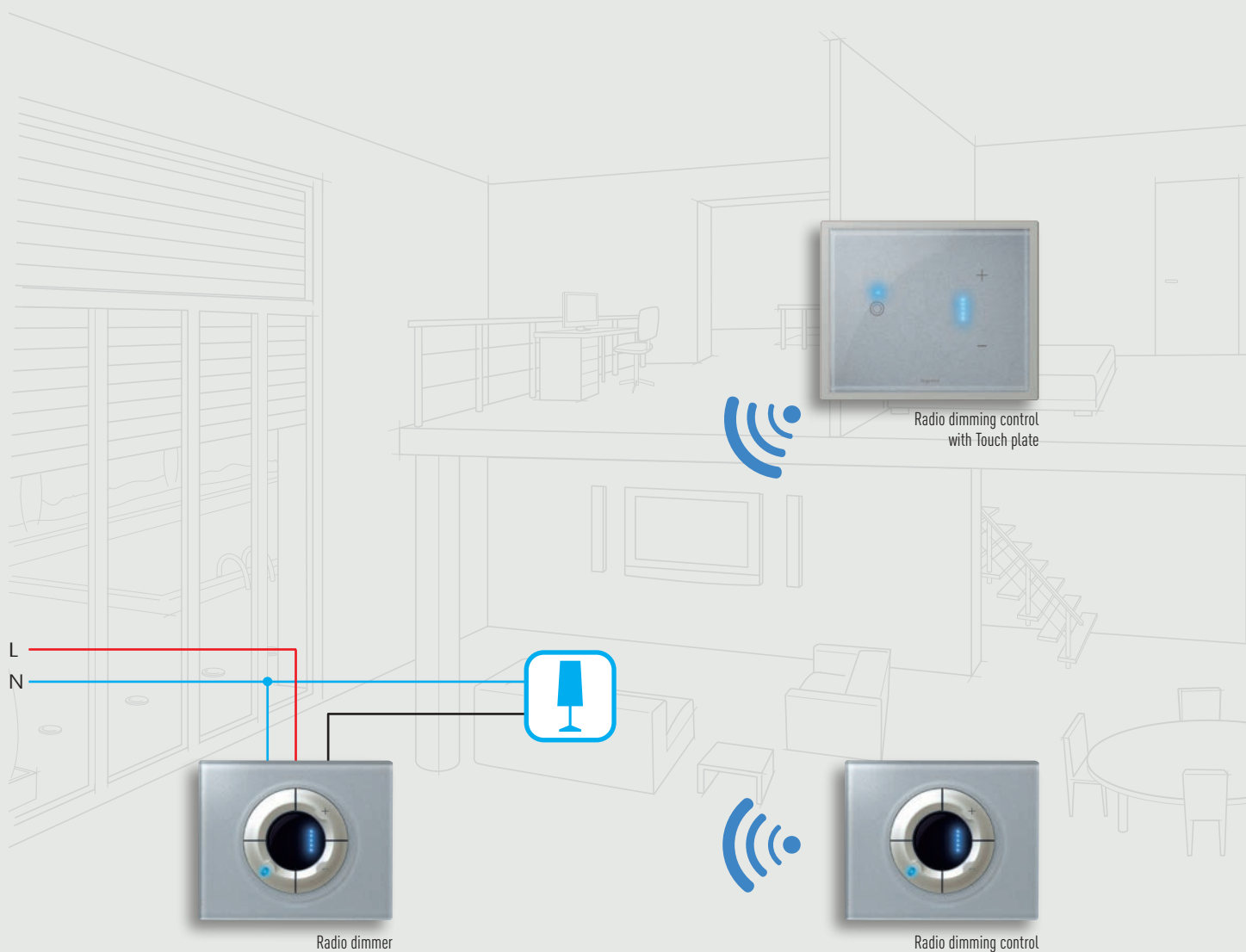

The answer for all home automation requirements, from a single function to global integrated solutions. My Home Legrand supports 2 technologies: Radio using ZigBee® protocol and BUS using SCS protocol.

Two technologies

RADIO ZIGBEE®

The standard in (wireless) radio solutions for renovation work and new-build. Multiplies the number of control points, without damaging the walls.

At a frequency of 2.4 GHz, using transmitters (wireless) and receivers, this can control lighting, shutters and also technical alarms. It can be used to control scenarios and offers the option of reverting back due to the two-way communication between devices. Can be used to complement the BUS system.



SCS BUS

Quick distribution and multiplication of a maximum number of functions where there is no restriction on space.

SCS BUS technology can be used to manage all functions simultaneously with a programmable electronic circuit. All the devices are power supplied and exchange the data through 2-wire extra-low voltage cables (27V).

This enables simultaneous management of a number of functions (scenarios): energy efficient, security, multimedia and comfort. Multi-interfaces choice for the user. Possible interfacing with Radio ZigBee®1.



Basic control



SCS/Zigbee® gateway



Radio switch control with Touch plate

Automation SCS BUS



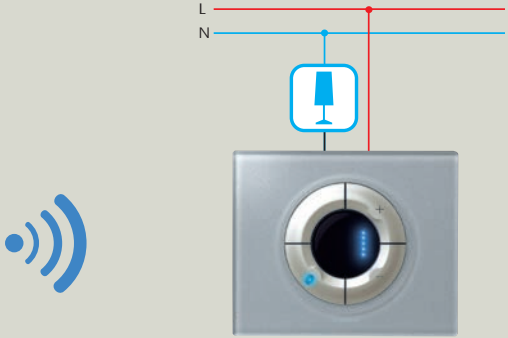
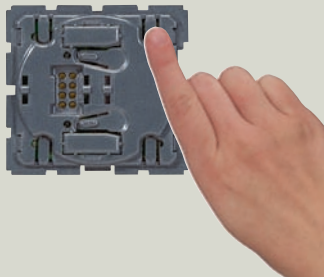




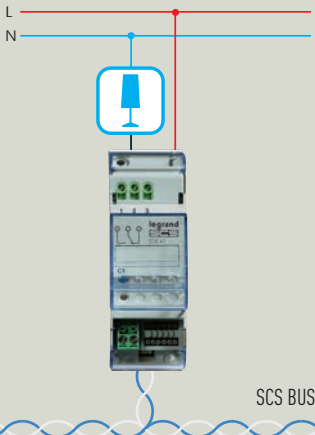
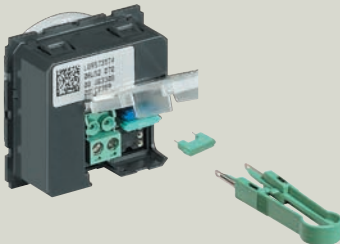
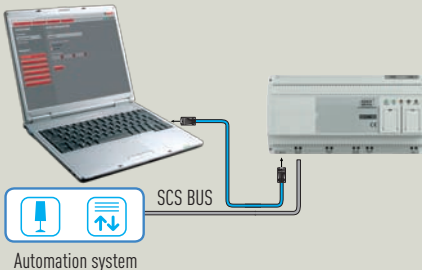
Multimedia touch screen



Video Display

Two Technologies

FEATURES	RADIO ZIGBEE® TECHNOLOGY
TECHNOLOGY:	<p>Radio based on ZigBee® protocol use 2,4 GHz frequency and doesn't require any special wiring using existing electrical infrastructure of a building.</p> 
TYPE OF DEVICES:	<p>ZigBee® devices can be divided into 2 types:</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>Command transmitting devices (Battery powered)</p> </div> <div style="text-align: center;">  <p>Receiving devices (switch and dimmers actuators) connected to the power cable for load management.</p> </div> </div>
FUNCTIONS:	<ul style="list-style-type: none"> - Shutters and light automation - Technical alarm (detection of gas and water) - Scenarios
CONFIGURATION OF THE DEVICES:	<p>Directly on the product with Push and Learn procedure.</p> 
WHEN TO USE IT?	<ul style="list-style-type: none"> - for less complex, new installations; - to make traditional electrical installation evolve into a home automation system; - when an extension is needed on an existing home automation system (e.g. to add a control point to an existing installation); - if it is not possible to make changes on the traditional electrical installation and no recabling is allowed (e.g. renovation).

FEATURES		SCS BUS TECHNOLOGY	
TECHNOLOGY:	The devices are connected in parallel with a non polarized twisted-pair cable for sending information and with low voltage (27V dc) electrical power.	 Twisted-pair BUS cable	
TYPE OF DEVICES:	 Command devices connected to the BUS cable	 Actuators connected to the BUS cable and also to the power cable for load management.	
FUNCTIONS:	<ul style="list-style-type: none">- Shutters and light automation- Scenarios- Burglar alarm- Technical alarm (detection of gas and water)- Energy management	<ul style="list-style-type: none">- Sound management- Video door and home video monitoring- Indoor and outdoor control of integrated functions- Expansion opportunities with ZigBee devices- Integration with Konnex protocol based systems.	
CONFIGURATION OF THE DEVICES:	 Simplified configuration with jumpers which can be used to configure presets or actions which can be identified on each accessory	 Automation system Configuration through a special software (virtual configurator) that enables to configure off-line the system (lighting and shutters automation).	
WHEN TO USE IT?	<ul style="list-style-type: none">- especially suitable for new installations in medium and large building;- To create fully networked solutions by integration different applications from comfort, safety or energy saving functions up to door entry systems, management of multimedia contents or remote supervision and control.		

Product technical sheets

The following pages contain all the technical information needed for assessing, designing, and installing a MY HOME Legrand home automation system. For more detailed information on the individual devices, please refer to the corresponding Product Technical Sheets. These can be found using the item code no.

For each device, the Product Technical Sheet lists the following information:

- Product description;
- Correlated items;
- Technical and size information;
- Configuration;
- Electric diagram, if applicable.

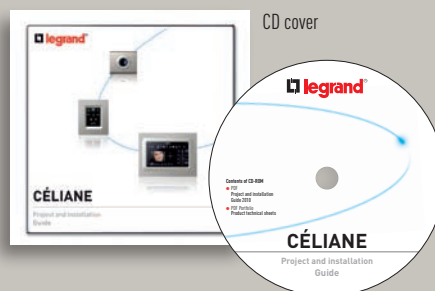
The Product Technical Sheets can be accessed in one of the following three ways:

1. "Product Technical Sheet" chapter at the end of the three sections of the guide:

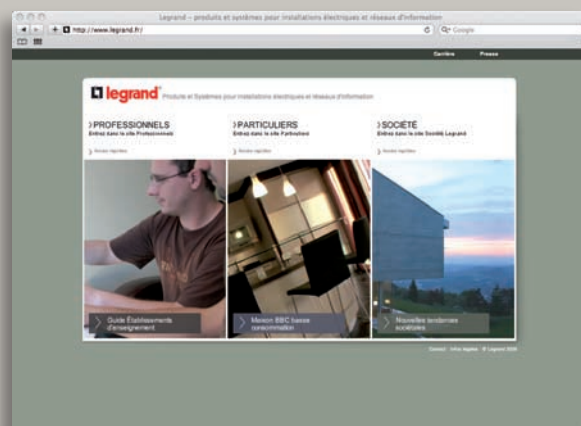
- Radio ZigBee®;
- SCS BUS;
- PLC system.



2. They are also available inside the attached CD, listed by item code no.



3. They are also available on the internet, by visiting the "Professionnelles" section of the www.legrand.fr website



Icon of the system the item belongs to,
e.g.: Sound Diffusion

Device item
code No.

PRODUCT TECHNICAL SHEETS



Flush mounting amplifier

673 02

Description

This device amplifies the stereo signal on the BUS and controls up to two loudspeakers with impedance between 8-16 Ω . On the front the amplifier has two pushbuttons which can: switch the loudspeakers ON/OFF, adjust the volume in output, change the audio source and cycle the saved stations (for the radio) or save the CD tracks. Correctly configured the amplifier can have two modes:
- "FOLLOW ME" mode: function which allows the same music in another room after the amplifier of the room previously occupied has been switched off and switching on the amplifier on the room you are now in.
- "NO FOLLOW ME" mode: when another amplifier is switched on, on changing room, the source configured the same as the configurator (inserted on M2) inserted on the amplifier switches ON, not necessarily the source which was being listened to before. By using the "+" input of one channel and the "-" input of the other channel, it is possible to install only one loudspeaker and create a monophonic system.

Related articles

682 63, 682 64 (White Cover) 680 83 (White front finishing frame)
685 63, 685 64 (Titanium Cover) 683 83 (Titanium front finishing frame)

Technical data

Power supply from SCS BUS: 18 - 27 Vdc
Maximum absorption: 250 mA with 8 Ω loudspeakers on 2 L-R outputs
130 mA with 8 Ω loudspeaker on 1 L-R output
130 mA with 16 Ω loudspeakers on 2 L-R outputs
90 mA with 16 Ω loudspeaker on 1 L-R output
40 mA (MUTE)*
Absorption in stand-by: 6 mA
Power (on 8 Ω): 2 Wrms (1 Wrms+1 Wrms)
16 Wpmo (8 Wpmo+8 Wpmo)
TYP channel balancing: ± 0.5 dB
MIN channel balancing: ± 1.5 dB
Frequency range 18 - 30 kHz
TYP distortion: 0.1%
Noise signal ratio: 68 dB
Operating temperature: 5 - 45 °C

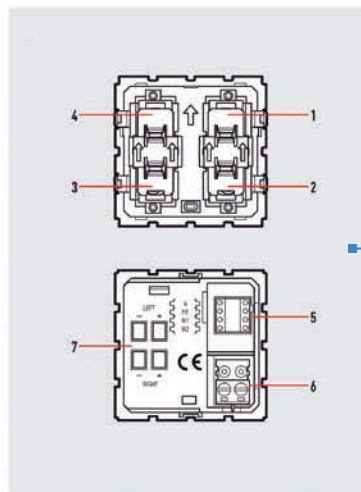
* take into account this value when the Sound system is integrated with the Z WIRE video door entry system.

Dimensional data

Size: 2 modules

Configuration

A: 1-9 address of the amplifier room
PF: 0-9 amplifier address
M1*: - (No configurator) volume level equal to 90% and "MUTE" mode: in this mode, when the video door entry system is being used the volume of the sound sources will be decreased;
1 volume level equal to 20% but "MUTE" mode not available;
2 volume level equal to 50% and "MUTE" mode: in this mode; when the video door entry system is being used the volume of the sound sources will be decreased;
3 volume level equal to 30% but "MUTE" mode not available;



Legend

1. Control to cycle and activate the available stereo sources
 2. Control to scan the emitters saved (for the radio)
 3. Control to switch off the amplifier (simple touch) and decrease the volume (long press)
 4. Control to switch on the amplifier (simple touch) and increase the volume (long press)
 5. Configurator housing
 6. Plug-in terminal for connection to the BUS
 7. Screw terminals for connection of the loudspeakers
- 4 volume level equal to 100% and "MUTE" mode: in this mode, when the video door entry system is being used the volume of the sound sources will be decreased;
5 volume level equal to 100% but "MUTE" mode not available;
M2: - (No configurator) when the amplifier is switched on, the last source which was on is activated, "FOLLOW ME" mode;
1-4 when the amplifier is switched on, the source with the same configuration as that set on the device itself switches on (example amplifier with M2=2, in this case the source with S=2 will switch on), "NO FOLLOW ME" mode.

Drawing with device
description

Device
description

Technical
specifications

Configuration

LEG00151-00-LJK

III-486

SCS BUS system



> SCS BUS system


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SCS BUS

COMPLETE HOME AUTOMATION SOLUTIONS

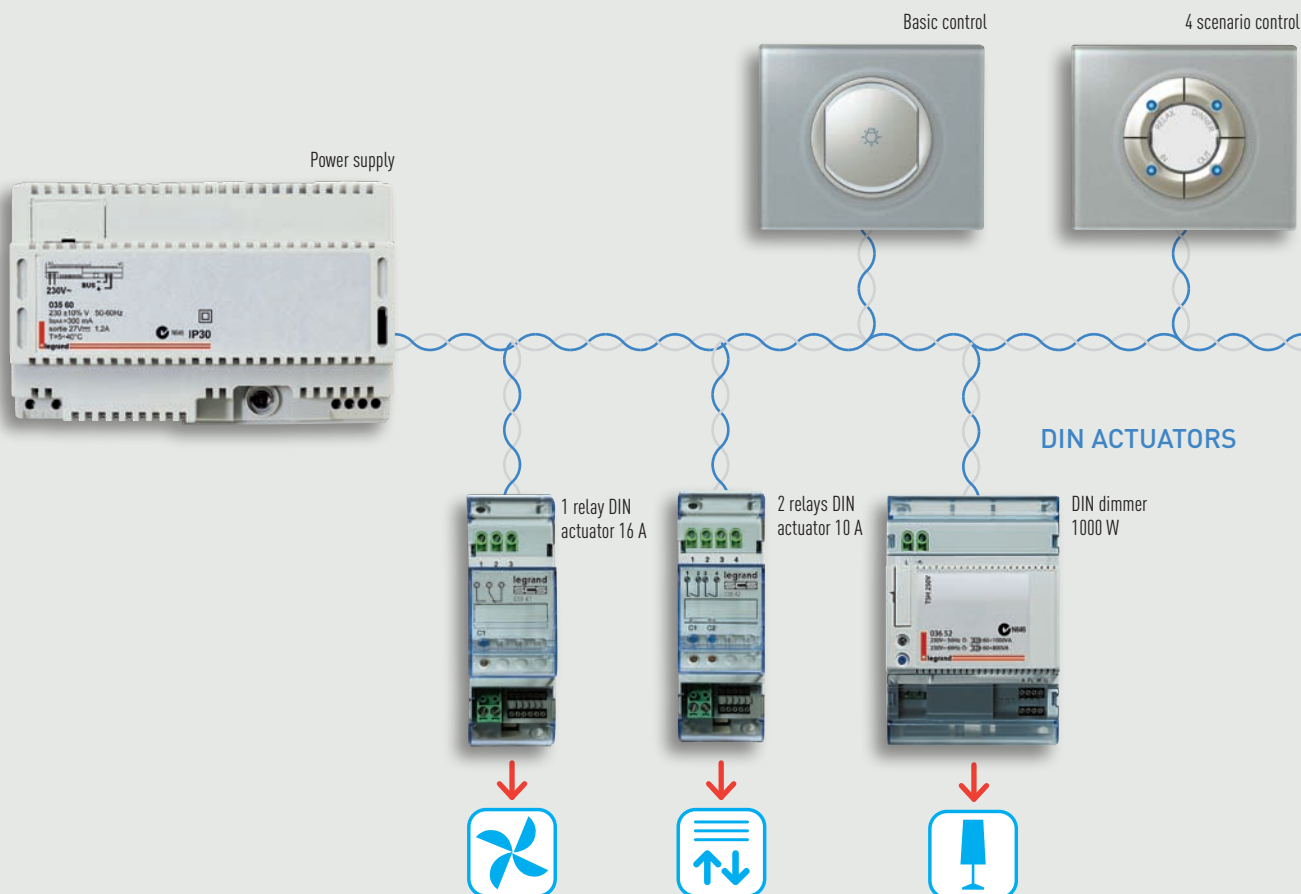
The BUS system can be used to perform various home automation functions for:

- ENERGY CONTROL;
- SAFETY;
- COMMUNICATION;
- COMFORT.

CHARACTERISTICS

The BUS systems, intended for new large installations, are made using a twisted pair, which connects the command and control devices to the actuators. The control devices are installed inside appropriate wall boxes. The actuators are installed inside the electric distribution board, junction boxes, or in direct proximity of the load. Control devices must be connected to the SCS BUS and to power cable for load managed.

BUS CONTROLS



CONFIGURATION OF THE FUNCTIONS

The association between control and actuator is ensured by the configuration: the configuration allocates a unique address to the control device and the actuator in communication with each other. The BUS system is therefore very versatile: with a simple change in the configuration it is possible to change the association between the control device and the actuator. It is also very safe, power supply does not reach the control boxes.

VERSATILITY

The versatility of the BUS system means that with just a few operations, it is possible to change the control points to meet the needs of the customer even after the system has been completely installed, and without the need for opening junction boxes or installing further cables.

TOUCH SCREEN CONTROLS

Local Display



Touch Screen



Multimedia Touch screen

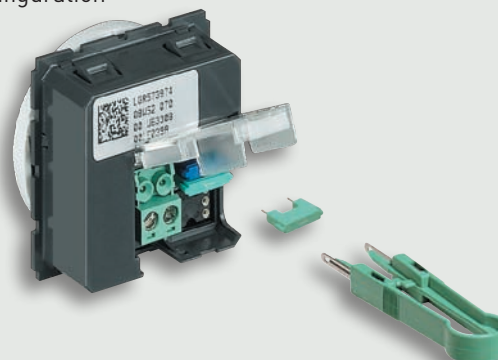


SCS BUS

BUS cable



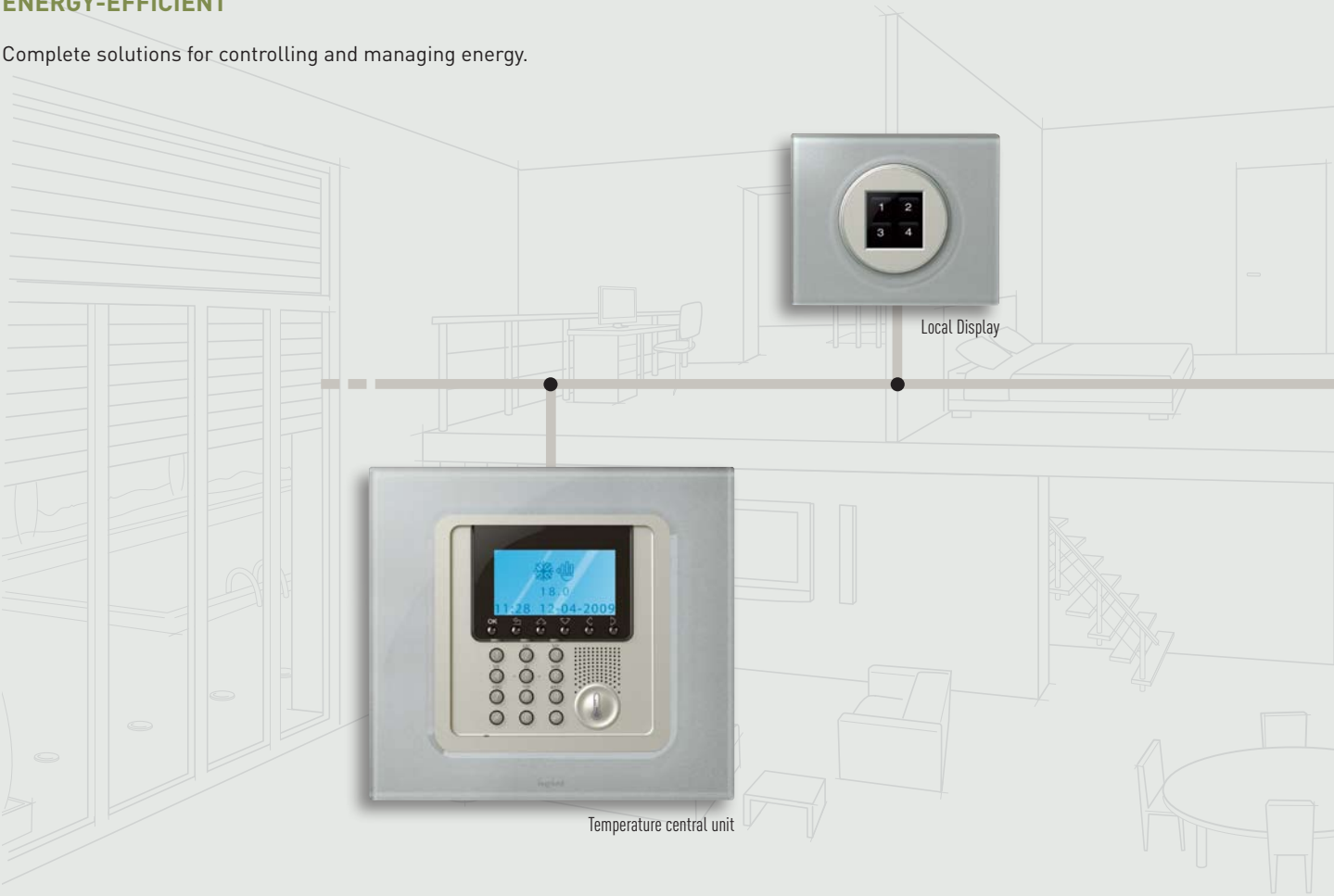
Configuration



The possible functions

ENERGY-EFFICIENT

Complete solutions for controlling and managing energy.



Display of consumption

A diagram showing a 'Touch Screen' unit connected to a bus. The bus is connected to three icons: a house with a cloud (representing gas), a water drop (representing water), and a plug (representing electricity). Each icon is followed by a unit: m^3/ϵ , m^3/ϵ , and KWh/ϵ respectively.

Touch Screen

m^3/ϵ

m^3/ϵ

KWh/ϵ

Room-by-room temperature control

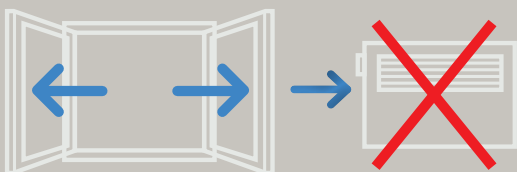
A diagram showing a 'Temperature central unit' connected to a bus. The bus is connected to a thermometer icon with a red arrow pointing up and a blue arrow pointing down, indicating temperature adjustment. The bus is then connected to a 'Local Display' unit.

Temperature central unit

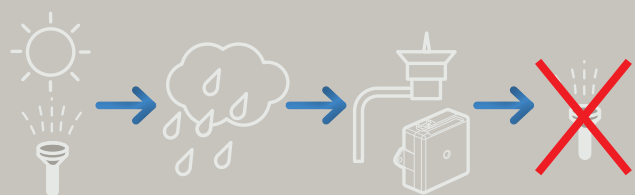
Local Display



Automatic switching off of heating when windows are opened



Irrigation management

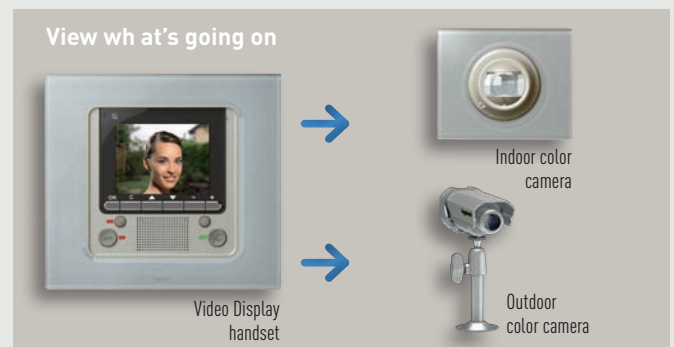
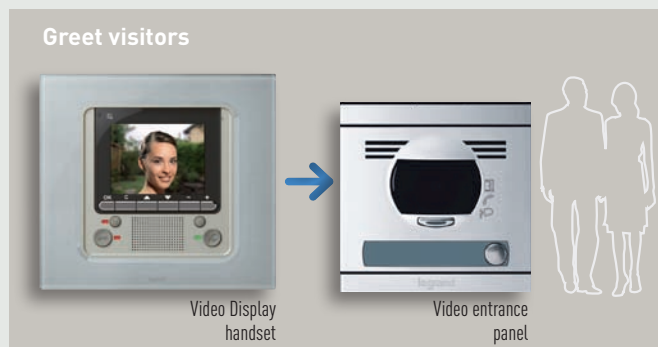
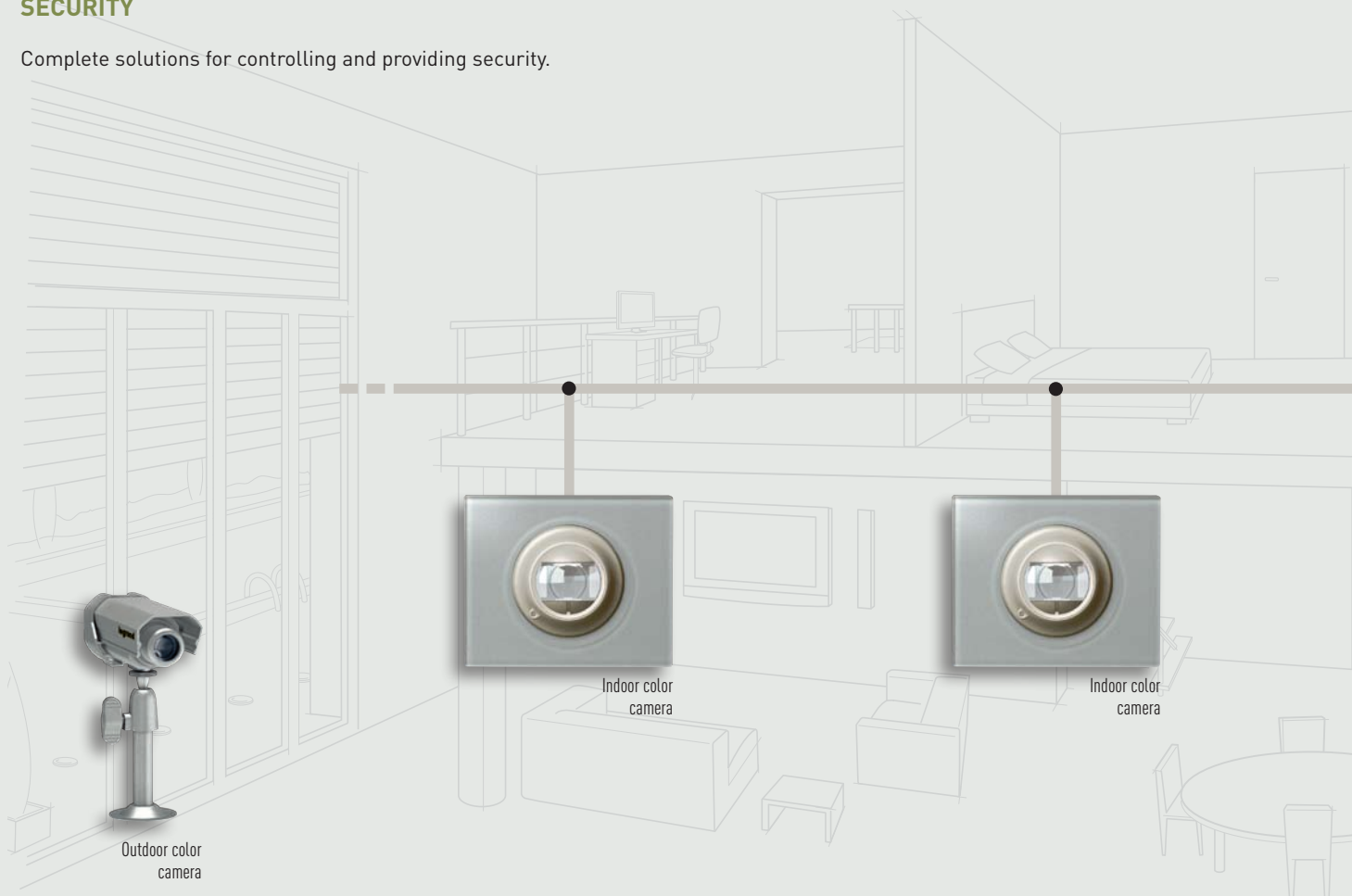


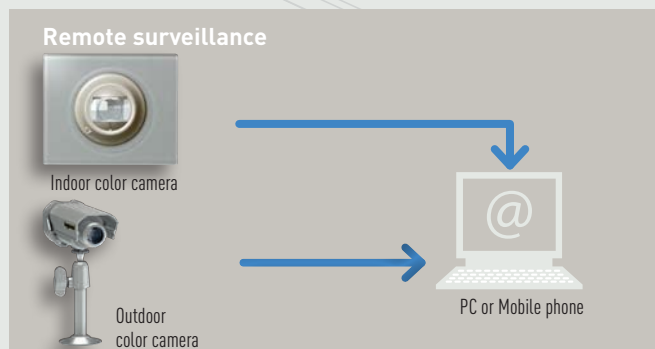
SCS BUS SYSTEM

The possible functions

SECURITY

Complete solutions for controlling and providing security.

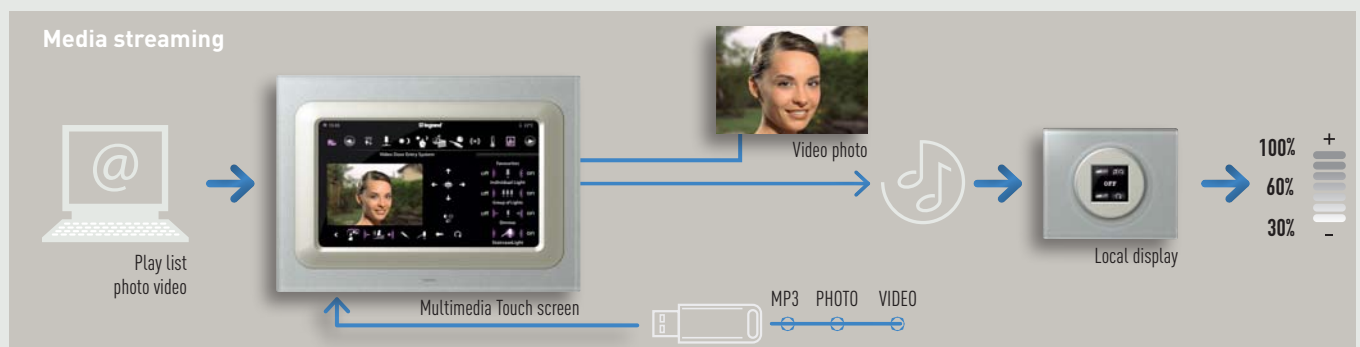
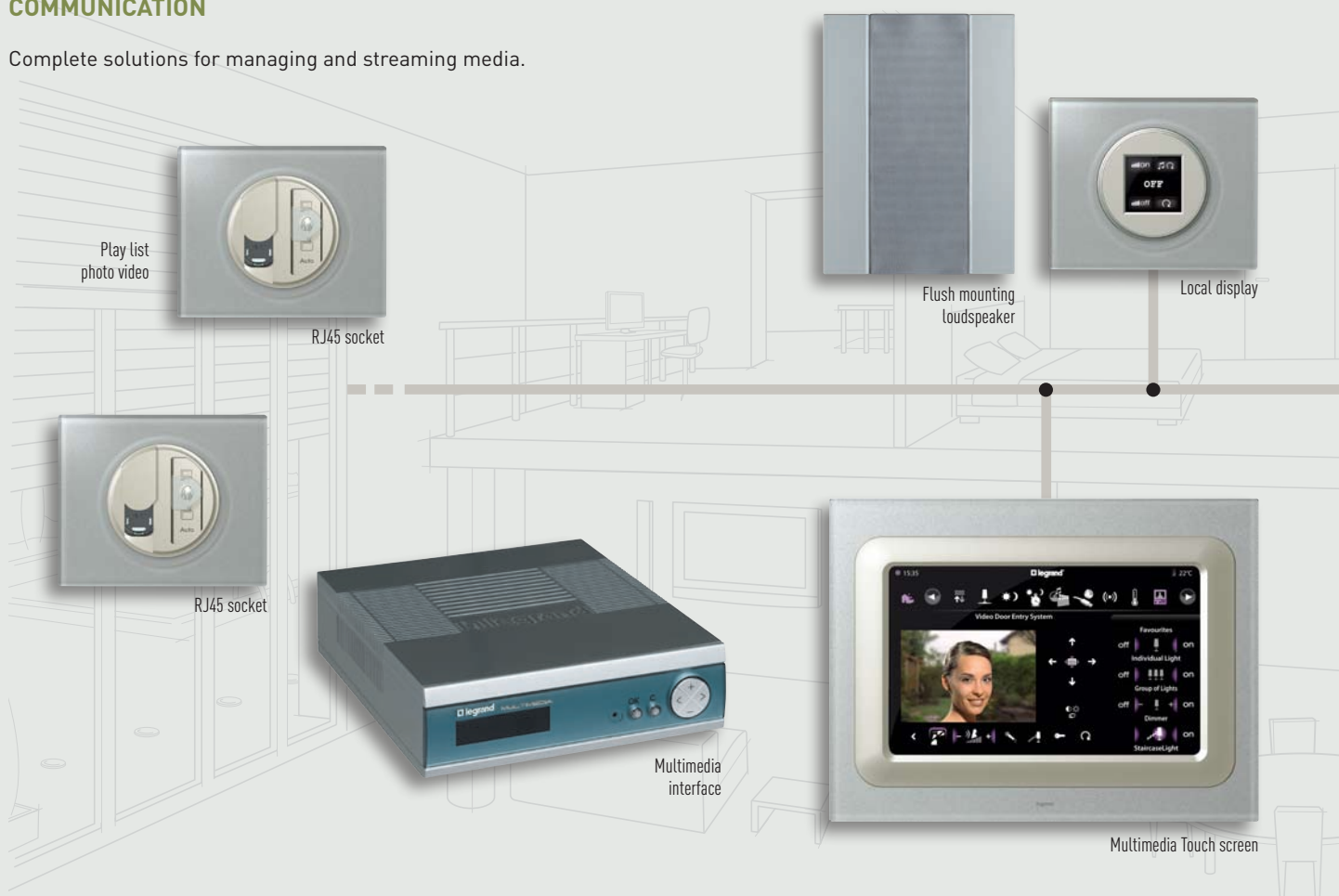


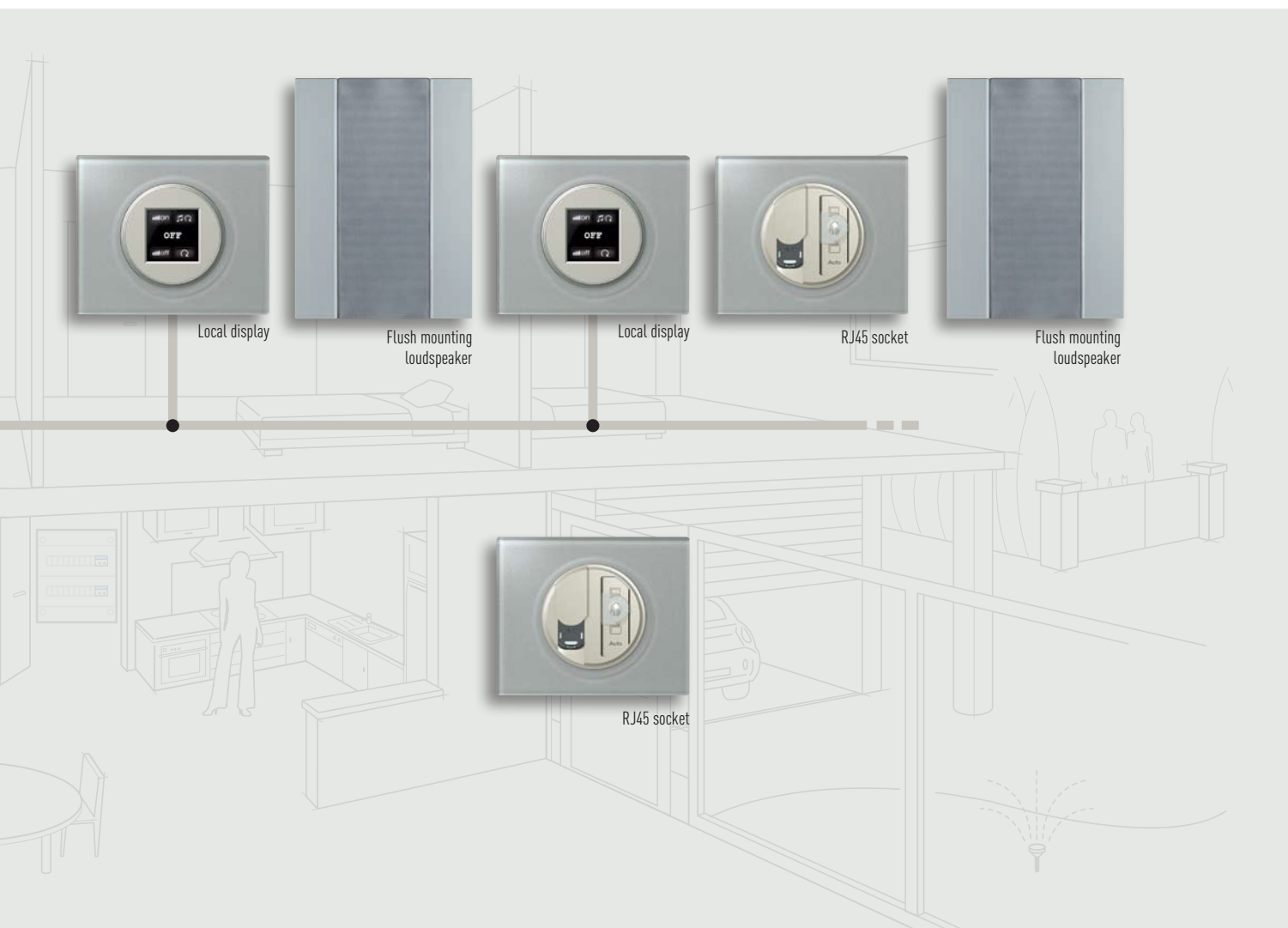


The possible functions

COMMUNICATION

Complete solutions for managing and streaming media.





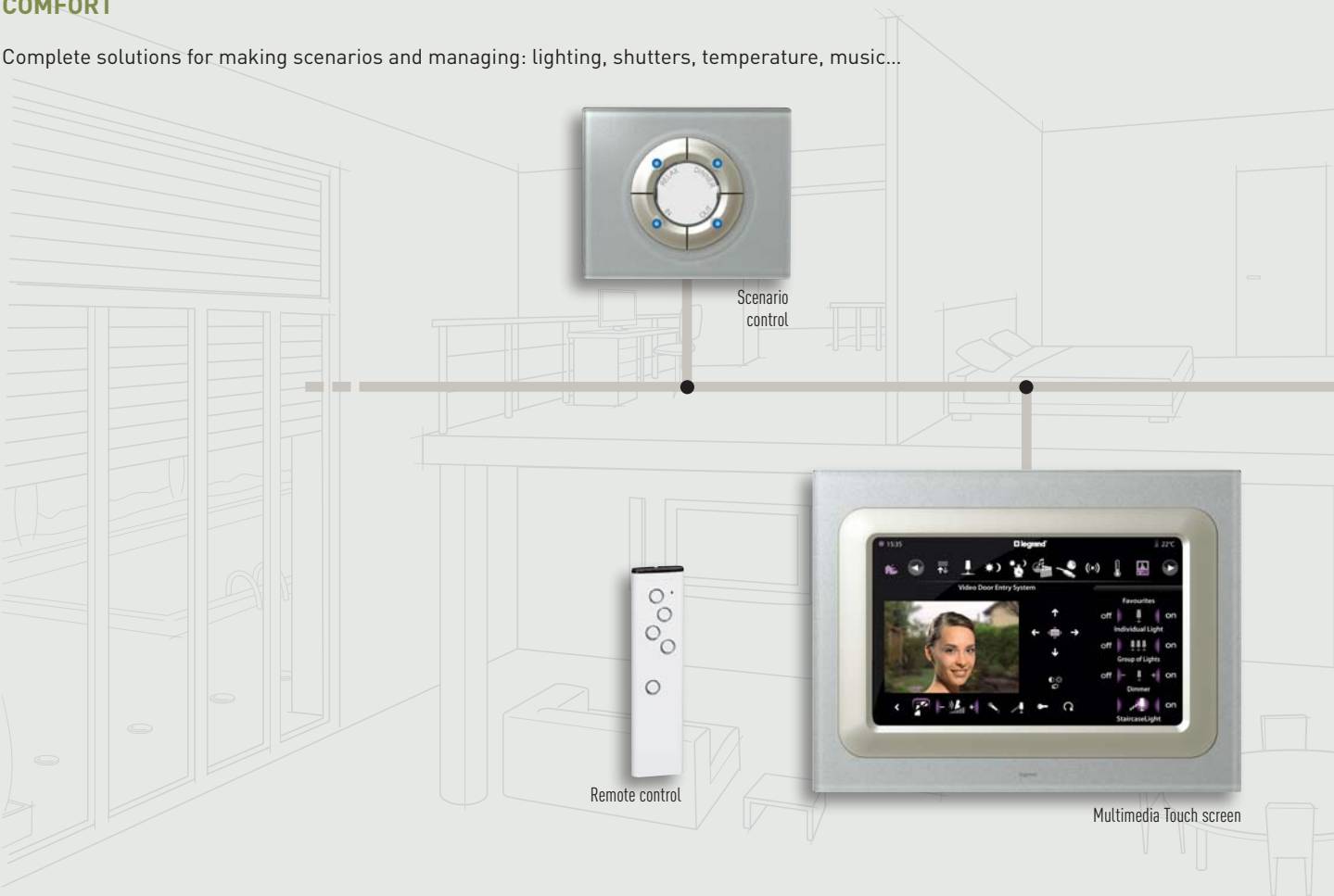
Media streaming and management. Greeting visitors



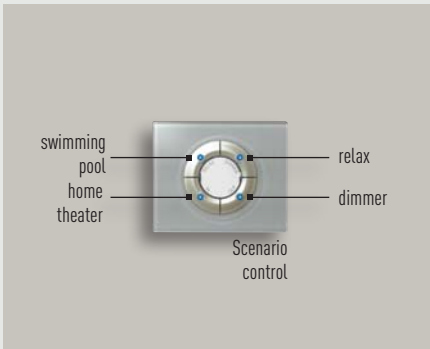
The possible functions

COMFORT

Complete solutions for making scenarios and managing: lighting, shutters, temperature, music...

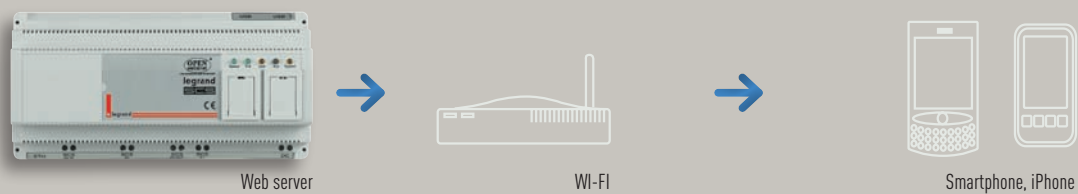


Zone management for energy-efficient, with full security, multimedia, and full comfort house. Multi-interfaces choice.





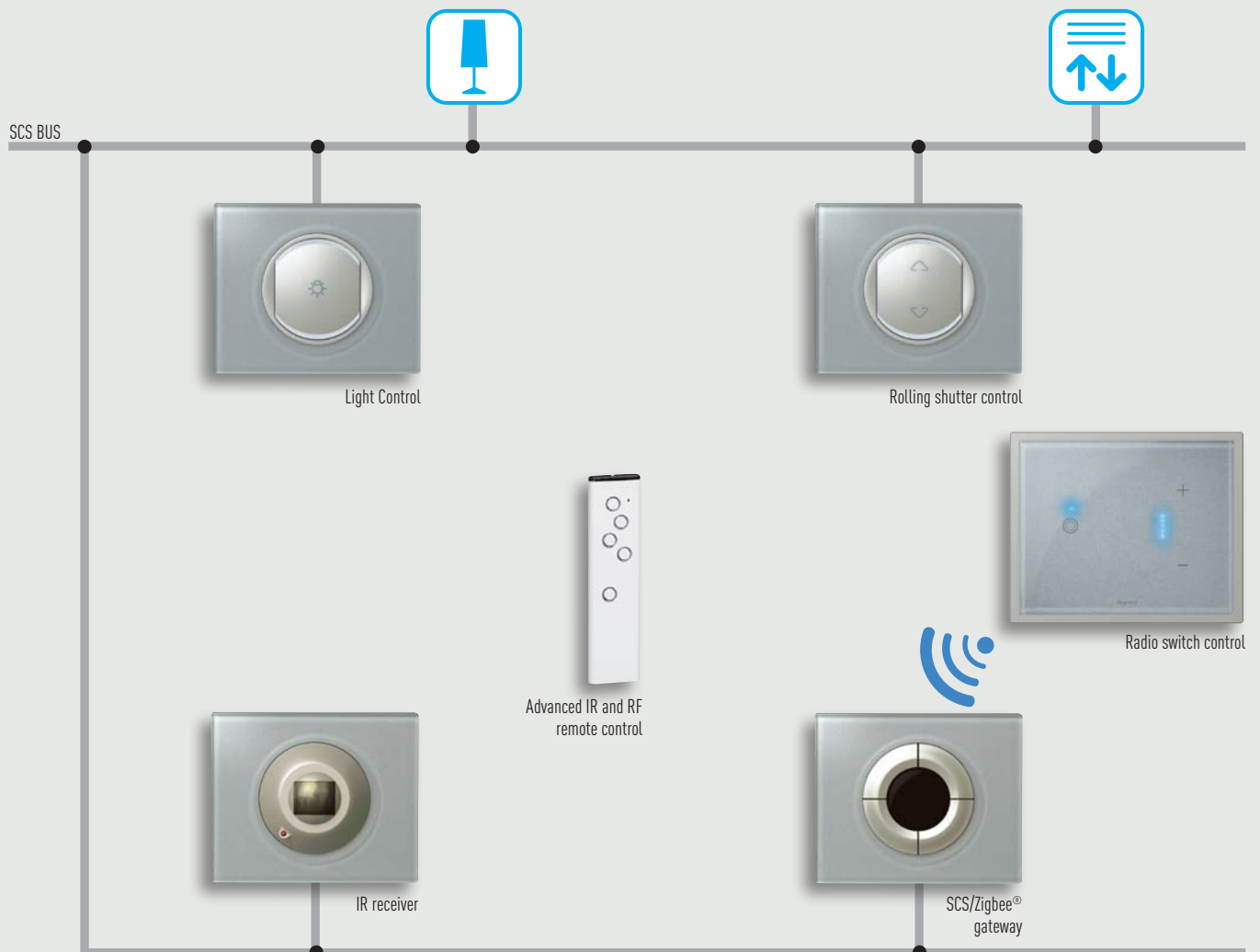
Control of the system from a mobile phone using the Open WebNet protocol



The single functions

AUTOMATION SYSTEM

The automation system is used to control lights, rolling shutters, swing doors and irrigation, etc. in a simple and logic way.



Thanks to the automation system, scenarios can be created and controlled.

Using the scenarios, one single pushbutton can be used to control several devices (lights, rolling shutters) within the automation system, and to control the other systems.

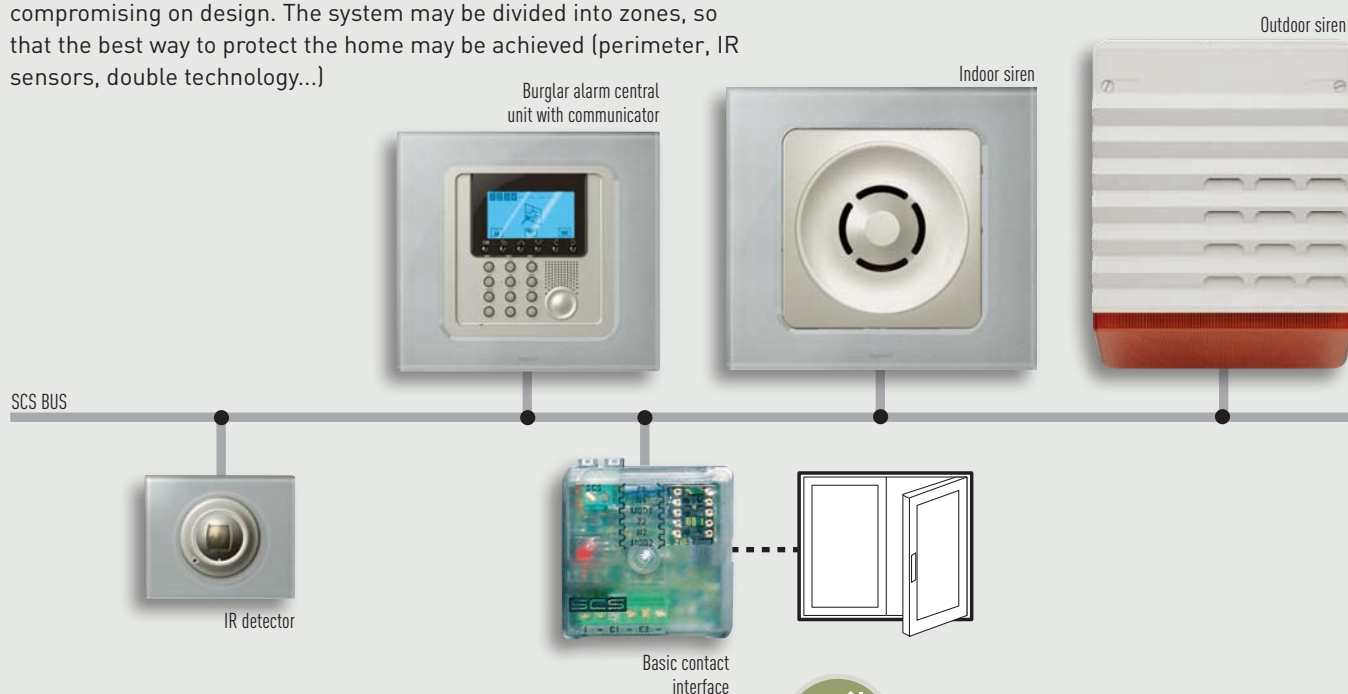
With the automation system, devices can also be controlled using the remote control.

The system may also be interfaced with the ZigBee® radio system, or with other traditional controls.

BURGLAR ALARM SYSTEM



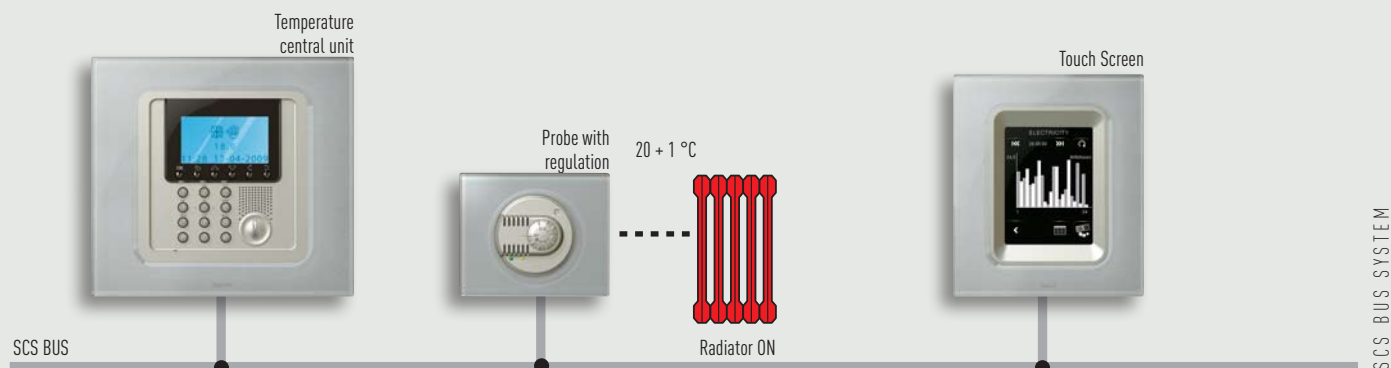
The burglar alarm system provides protection of the home without compromising on design. The system may be divided into zones, so that the best way to protect the home may be achieved (perimeter, IR sensors, double technology...)



ENERGY MANAGEMENT



Energy management is a complete system for control and display of the energy consumptions (water, electricity and gas) levels of the home. With the temperature control system, it is possible to create a centralised management system divided into zones: each room is fitted with a temperature sensor, to ensure maximum comfort and maximum savings.



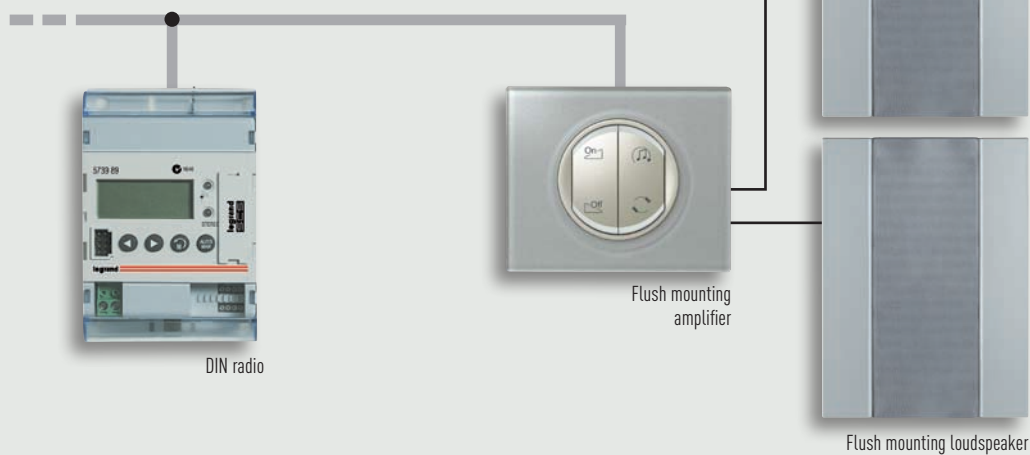
SCS BUS SYSTEM

The single functions

SOUND SYSTEM



With the sound system, it is possible to set-up inside the home a single or multichannel audio system, with centralised sound sources. Amplifiers and loudspeakers can be integrated in the home environment, in a discrete and elegant way.



VIDEO DOOR ENTRY AND HOME VIDEO SURVEILLANCE



Video door entry and home video door surveillance provides interaction with visitors calling from the entrance panels, as well as supervision of any common and private areas of the building.



Integration of the functions

CONTROL AND INTEGRATION



The functions of My Home Legrand may be integrated, ensuring interaction and expansion of the functions within the home. System integration also provides centralised supervision and control of the functions from the individual devices:

Touch Screen, Multimedia Touch Screen, Video Display and software Visual.

The integration of the functions also gives the possibility to display the images recorded by the camera following an alarm, switch the lights on when the burglar alarm is disarmed, or automatic lowering the sound system volume when a call is received on the video handset.



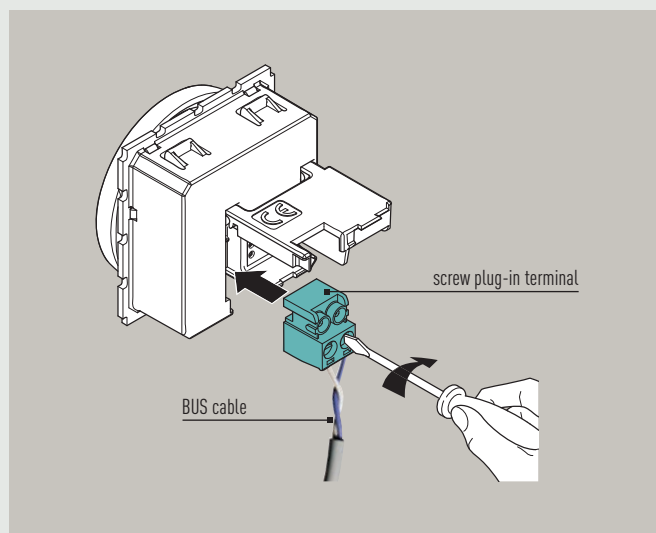
Introduction to the SCS BUS technology

Inside the SCS BUS system there are two type of devices:

- Control only devices;
- Actuator connected to the load.

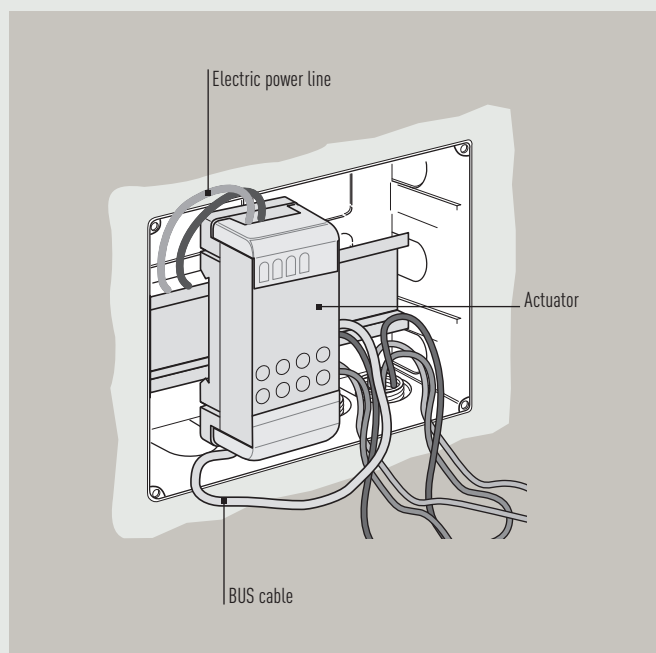
CONTROL DEVICES

These are control and management devices connected to the BUS, for the electric power supply and exchange of information.

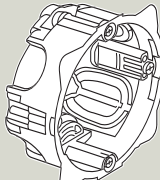
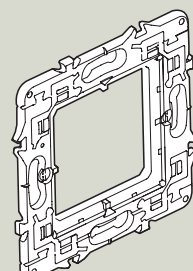
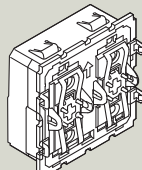
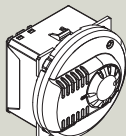

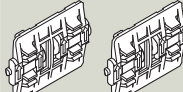

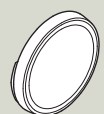
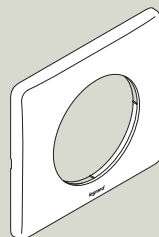
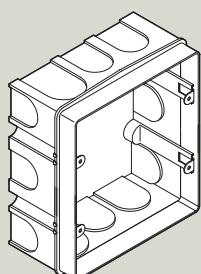
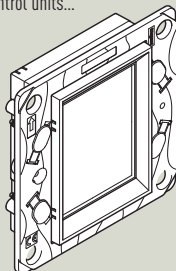
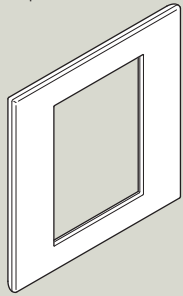


ACTUATOR CONNECTED TO THE LOAD

Besides connection to the BUS cable, these devices are also connected to the electric power line (phase conductor), for the management of the load.



COMPOSITION OF THE DEVICES

<p>Flush-mounting box</p> 	<p>Small frame</p> 	<p>Electronic devices to be finished with front cover key Eg. base control, advanced control, amplifier...</p>  <p>Electronic devices in white or titanium colour e.g. probes, IR, Local Display, RCA Input, Connectors...</p> 	<p>1 module underkeys</p>  <p>1 function 2 functions</p> <p>2 module underkeys</p>  <p>1 function 2 functions</p>	<p>1 module front cover keys</p>  <p>1 or 2 functions</p> <p>2 module front cover keys</p>  <p>1 or 2 functions</p>	<p>Cover plate</p> 
<p>Flush-mounting box</p> 		<p>Video Display, Touch Screen, Control units...</p> 			<p>Cover plate</p> 

Product overview

MICROPUSH, TOUCH AND REMOTE CONTROL

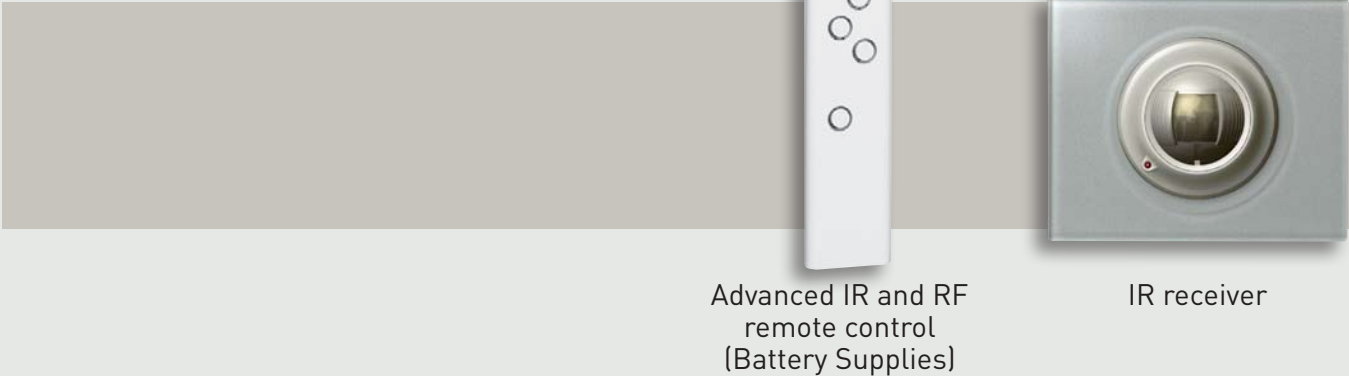
CONTROLS



TOUCH CONTROLS



REMOTE CONTROL



TOUCH SCREENS AND VIDEO DISPLAY

TOUCH SCREEN CONTROL

The devices must be fitted with cover plate.



Local Display 1,2"



Touch Screen 3,5"



Multimedia Touch Screen 10"

VIDEO DISPLAY

The devices must be fitted with surround plate.



Video Display 2,5"

The device is not a Touch Screen device.

DIN MODULES DEVICES



1 relay DIN
actuator 16 A



2 relays DIN
actuator 10 A for shutter



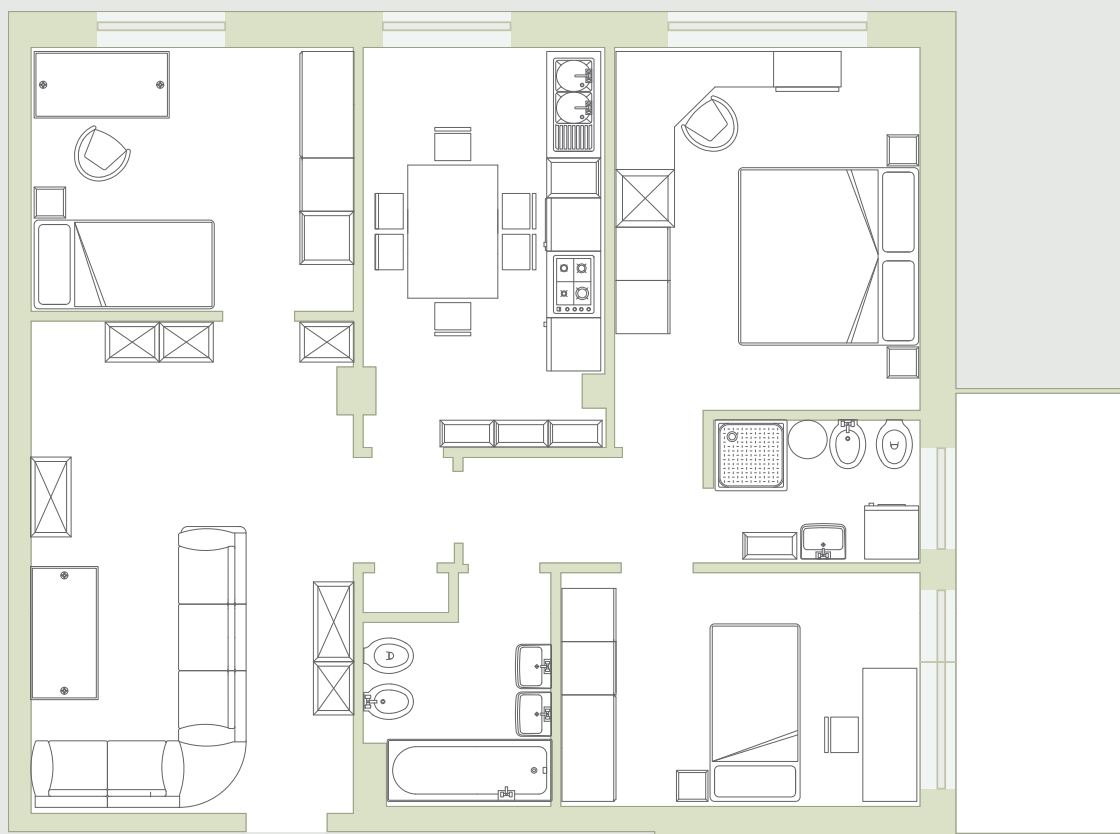
DIN
dimmer

Project approach

When completing a My Home Legrand project, a careful assessment of the following is of fundamental importance:

- Choose the functions;
- Analysis of the system to be completed, selecting between SCS BUS and ZigBee® radio system integration;
- System layout.








Irrespective of the type of system and the required house automation applications, it is necessary that the **layout of the house** is made available to the installer. It is also important that a check is carried out, to ensure that the initial project requirements are in line with the actual site: number of rooms and their use (living room, bedroom, bathroom etc.)

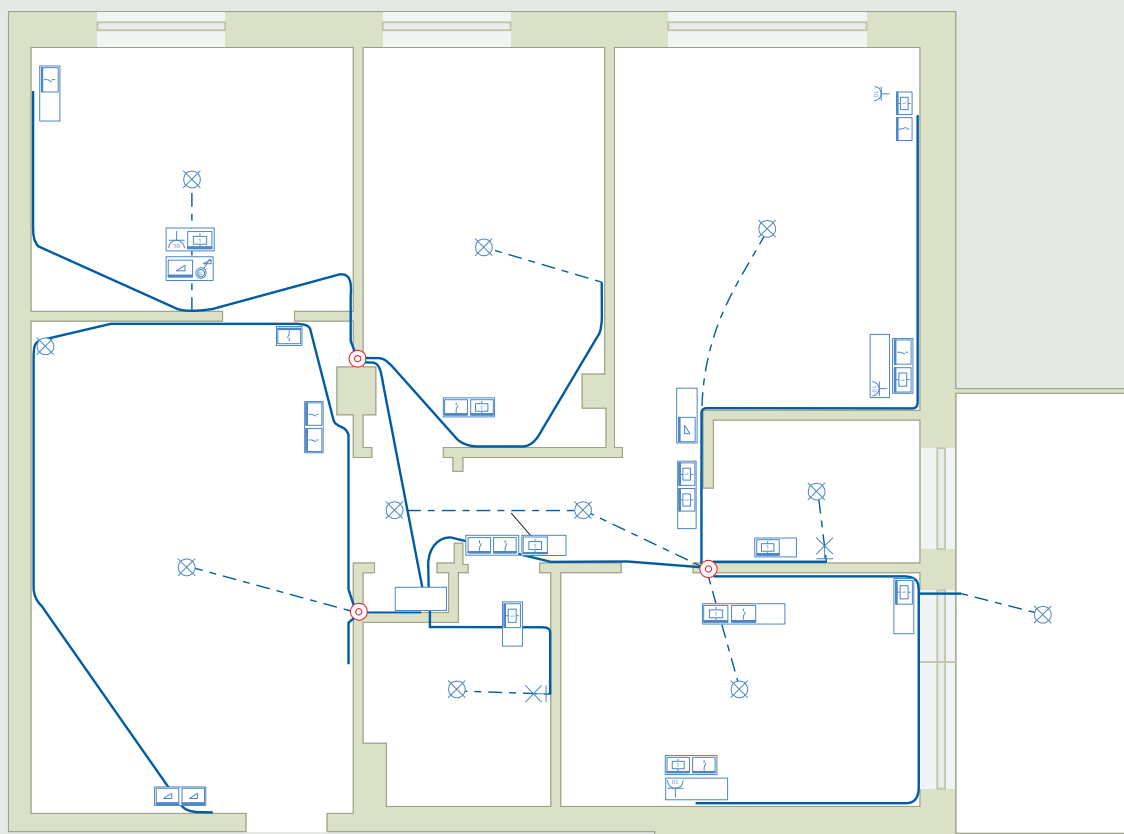


On a design and installation point of view, the installation of a house automation system is not much different from that of a traditional electric power system, particularly in terms of:

- The positioning of the electric distribution board;
- The positioning of the junction boxes;
- The positioning of wall boxes;
- The definition and positioning of loads and users.
- The layout of the ducts;
- The type of wiring;
- The coexistence of cables inside the same duct.

Symbol legend

	Pushbutton control – 1 load – special functions – 2 modules		Flush-mounted dimmer actuator – 2 modules		2 pole + earth socket 10 – 16A UNEL and two-centre		Ceiling lamp
	Flush-mounted 1-relay actuator – 2 modules		SLAVE dimmer to increase power		Wall lamp		



When installing house automation systems, some specific elements must however also be considered:

- Maximum distance between connections**
 In completing the system, take into account the maximum length of the extended cable and the maximum distance between the components.
- The maximum number of devices that can be connected**
 Depending on their total absorption and on the distances between the connection point and the power supply.
- Functions of the devices**
 By configuring the devices, it will be possible to define their function within the system.

The following pages will provide some suggestions and practical recommendations on the above points.

Positioning of the electrical distribution board

The switchboard or house automation panel

Irrespective of the type of wiring set-up, star system or free, to achieve integration of the various My Home Legrand systems, all the active (power supplies, interfaces etc) or passive devices must be grouped together in a central location, from where all their functions may be controlled and managed. This location is effectively the “brain” of the whole house automation system of the building. Its size shall be defined taking into account the following general requirements:

- Allow for extra space for expansion with new devices that may be needed for future needs.
- If power supplies are used, these must be installed in the lowest position of the switchboard, to facilitate any thermal dissipation.
- Select a switchboard capable of dissipating a power higher than the total of the power consumed by all devices that will be installed.

Positioning of distribution board

The positioning of the electric distribution board 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 installed). Let's now consider the following types of homes:

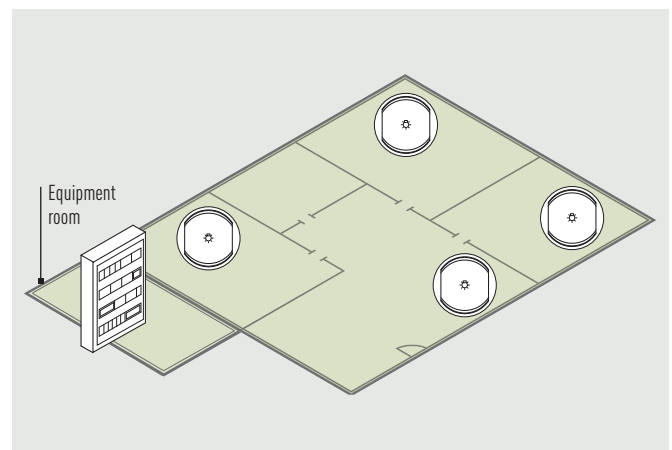
SERVICE SECTOR



Install one distribution board (or general cabinet) inside a technical room dedicated to the house automation systems, where all DIN rail devices should be centralised.



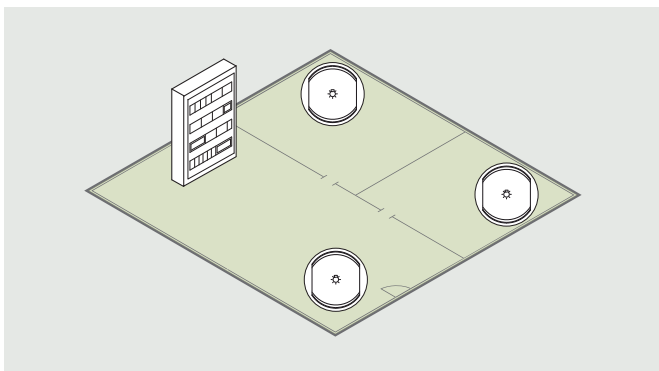
Symbol legend



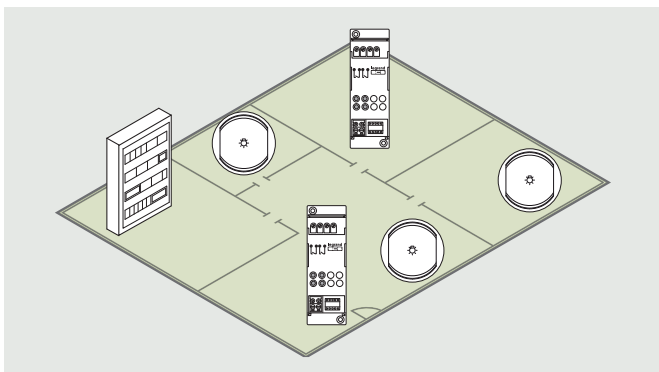
1 FLOOR APARTMENT



- **1, 2 or 3 rooms + bathrooms:** only include one distribution board, at a central position, where all DIN rail devices will be installed.



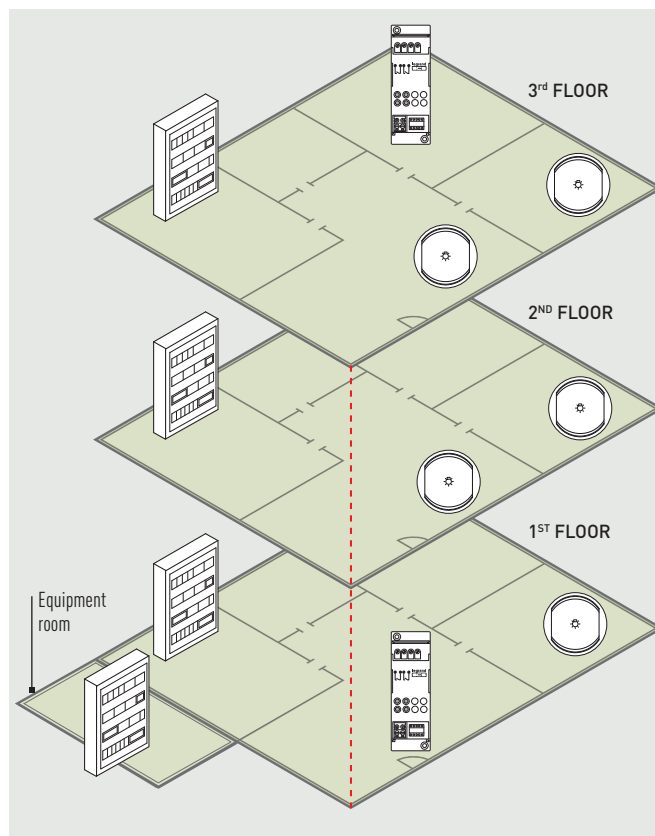
- **More than 3 rooms + bathrooms:** only include one distribution board, at a central position. DIN rail devices will be installed partly on the board, while the rest will be distributed around the house.



MULTI FLOOR HOUSE



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



Positioning of junction boxes

The positioning and the quantity of junction 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 + bathrooms:** minimum number of junction boxes, for cable joints only. All DIN devices are centralised.
- **More than 3 rooms + bathrooms:** the junction boxes are also used for housing the DIN devices of the house automation system. DIN devices are both centralised and distributed.

MULTI FLOOR HOUSE

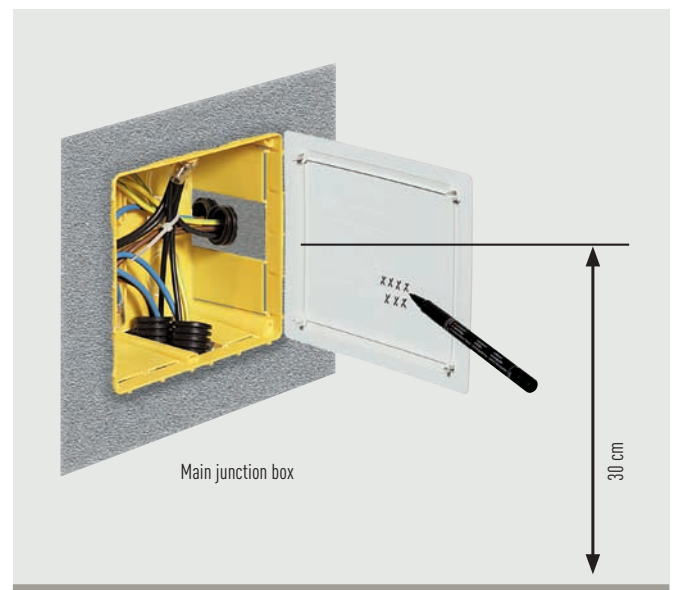
Install one junction box under each electric distribution box, as well as other boxes distributed around the system, to house the DIN devices of the house automation system. DIN devices are both centralised and distributed.

SERVICE SECTOR

Install junction boxes in the false ceiling, or underfloor. All DIN devices are centralised.



Switchboard



Main junction box

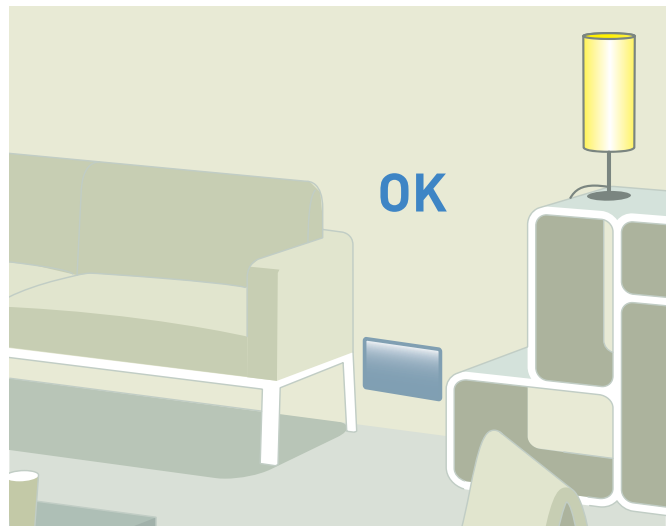
A minimum height of 17.5 cm from the floor is recommended. If possible, 30cm approximately. Normally, the main junction box should be installed under the electric distribution board.

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

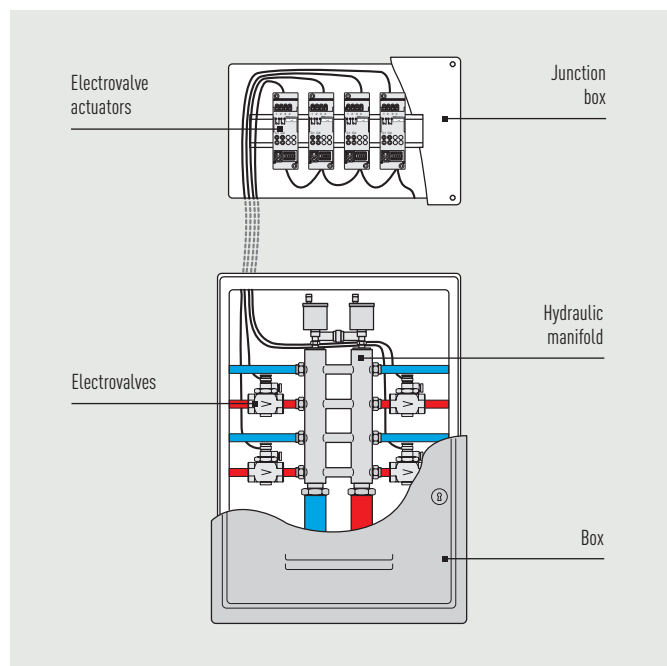
- In easily accessible locations, for maintenance purposes
- In passage areas (eg. landings), or areas not used regularly

It is also recommended that the boxes are **NOT** installed:

- Behind large pieces of furniture or wardrobes
- Behind flush mounting appliances
- In particularly visible positions



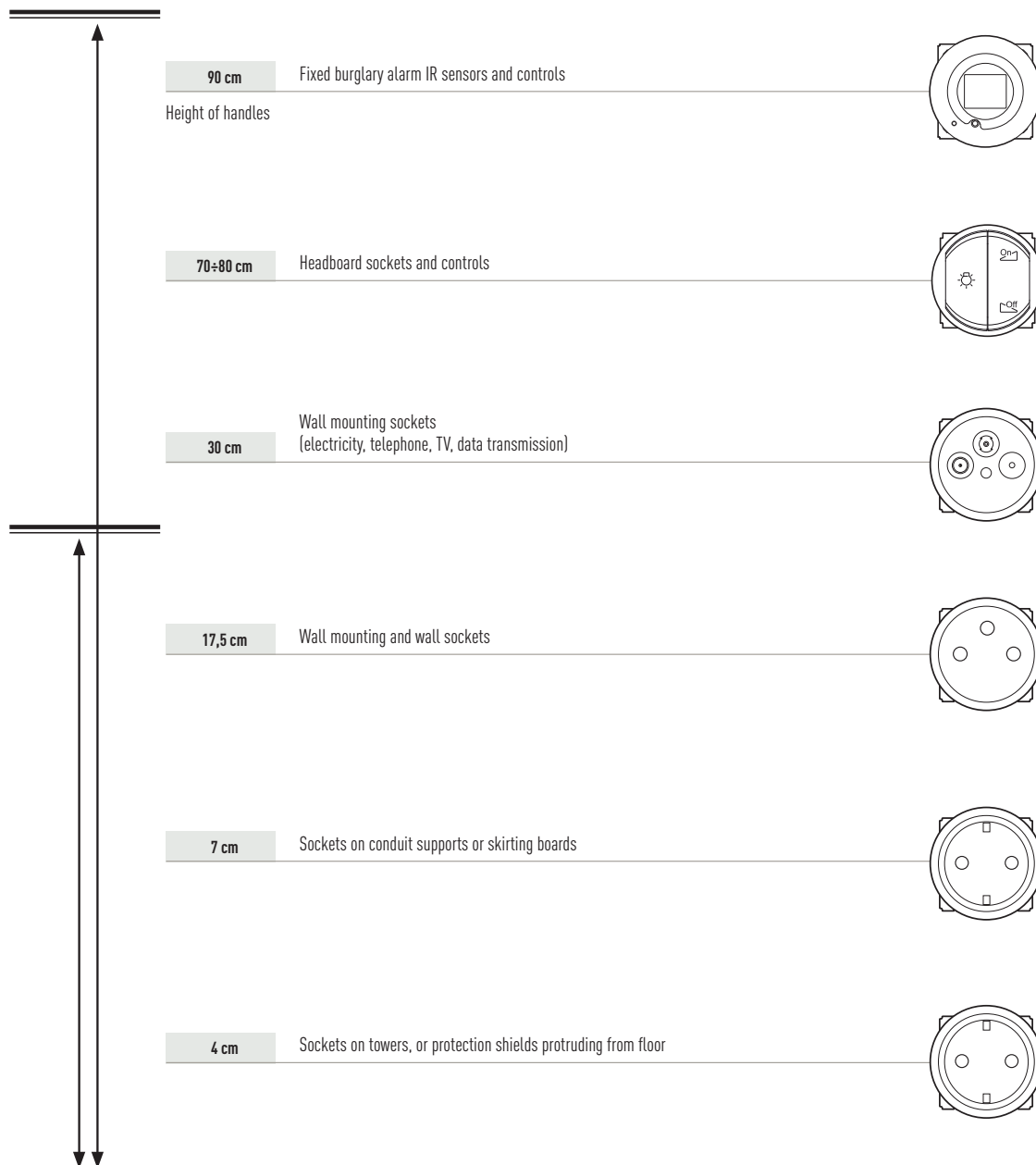
- Nearby the hydraulic manifold of the temperature control system



Positioning of wall boxes

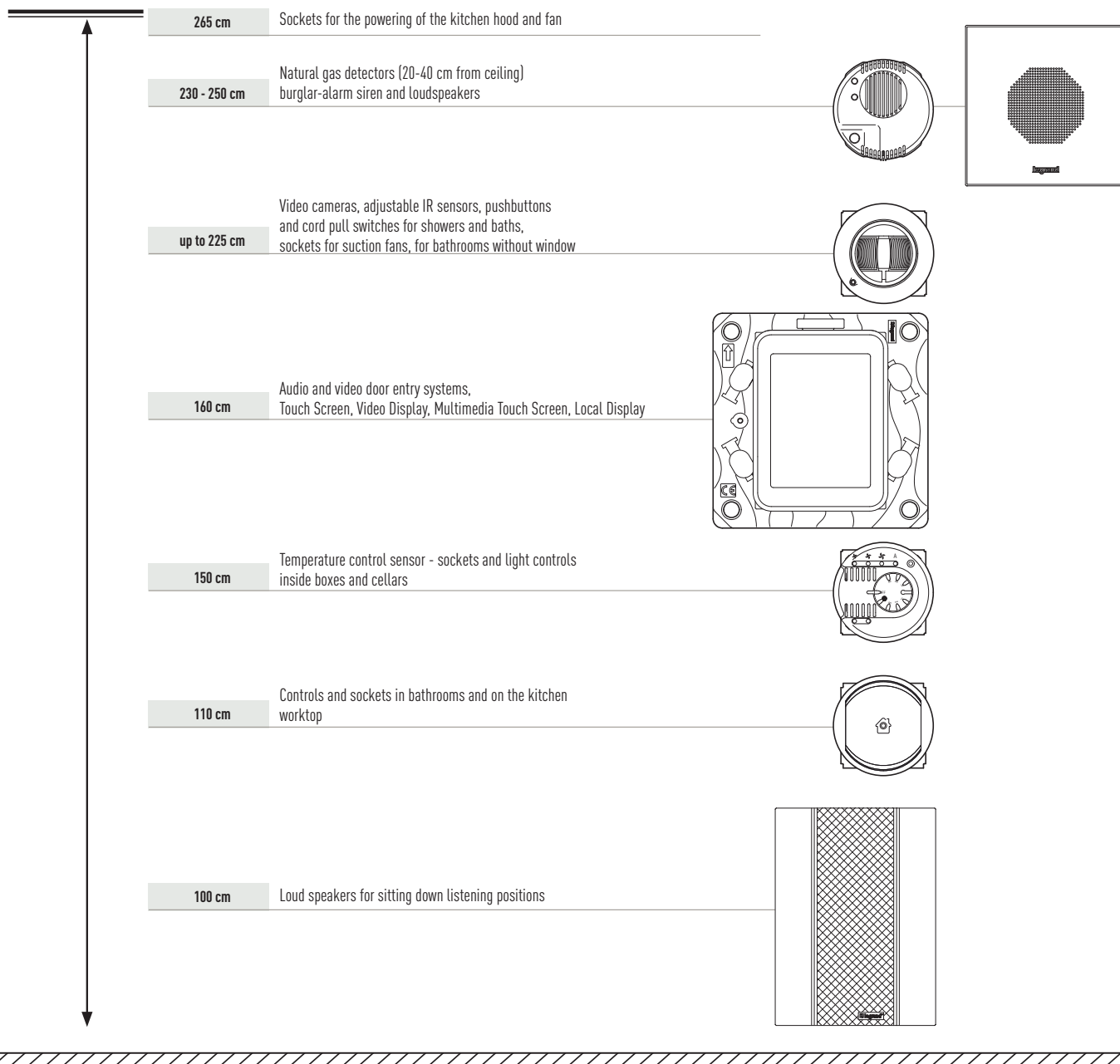
The positioning of wall boxes varies depends on the type of devices they will house (controls, IR sensors, temperature sensors, video cameras etc.).

The components must be installed at the following heights from the ground.



Inside a box, devices belonging to any house automation system may be installed together with power devices, **with the exclusion of:**

- General control, and illumination control devices (actuators, dimmers, heating devices), together with temperature control devices (sensors).
- Any type of actuator or power device, together with data transmission, telephone or TV signal devices.



Type of wiring

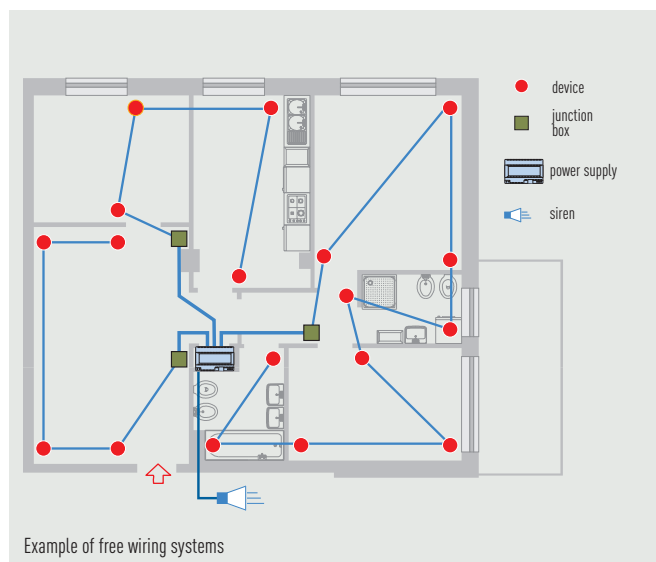
Systems may be installed using two different types of structures or modes of distribution:

- **FREE SYSTEM;**
- **STAR SYSTEM.**

The choice is based on installation needs, functions, and wall limitations.

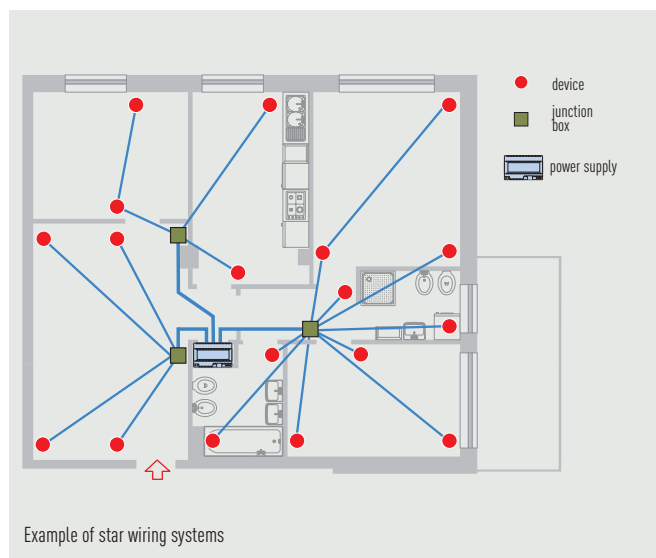
Example of free wiring systems

The **free wiring** system is normally used for the traditional distribution of power sockets. It is also suitable for My Home Legrand systems, light and shutter automation, temperature control and burglar alarm systems.



Example of star wiring systems

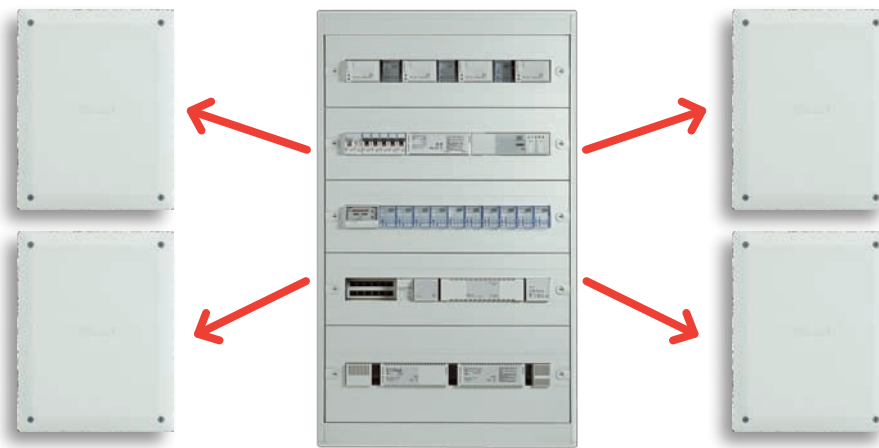
Star wiring is used for video intercom, sound, data transmission, telephone, TV and SAT signal systems.



DISTRIBUTION BETWEEN THE DISTRIBUTION BOARD AND JUNCTION BOXES

The distribution between the electric distribution board and the junction boxes must be of the **star type**. Use a number of ducts suitable for the systems / services being served.

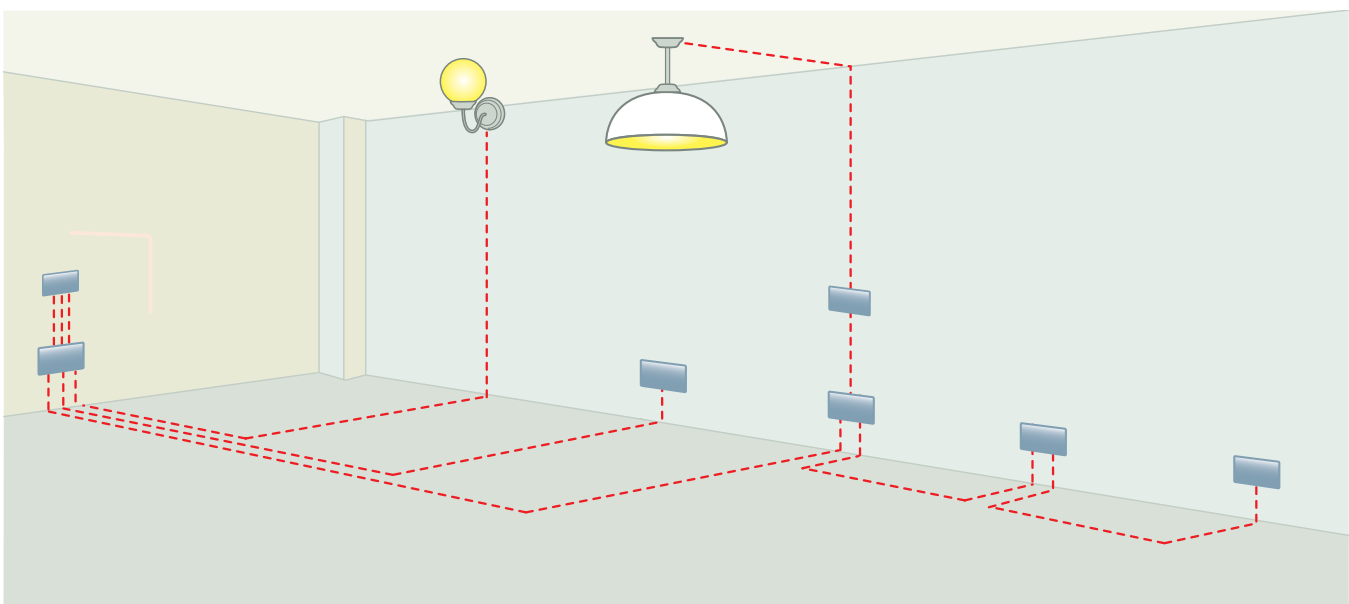
Install additional conduits, even if empty, for future system expansions.
It is recommended that 32 mm ducts are used.



DISTRIBUTION BETWEEN JUNCTION BOXES AND WALL MOUNTING BOXES

The distribution between junction boxes and wall mounting boxes must be of the **free system type**. Use a number of ducts suitable for the systems / services being served.

It is recommended that ducts with a diameter of at least 20 mm are used.



Grouping cables in the same duct

The cables for some applications may be installed inside the same conduits or pipes of the standard electric power supply system. This enables important savings, both in terms of installation works and costs.

The following table shows the My Home Legrand applications / systems, which cables may be installed in the same duct as the power supply wiring (however, under no circumstances these should be installed in the same conduits as 380 Vac power supply cables).

My Home Legrand applications	Grouping with power cables
Temperature control	YES
Automation	YES
Sound system	NO
Burglar alarm	YES
Video door entry and home video surveillance	(Note 1)
Control	(Note 2)

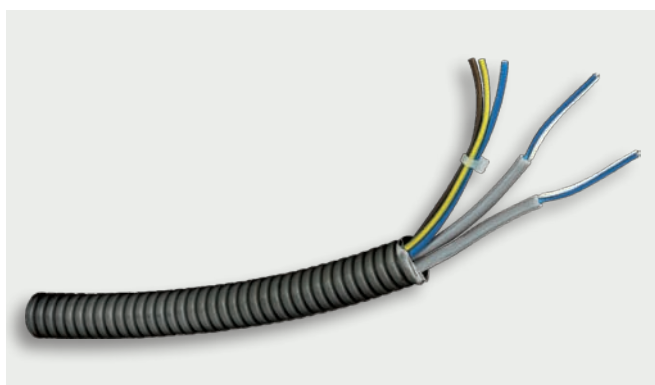
Although for some applications it will be possible to have the power system cables in the same ducts used for the My Home Legrand system, it is recommended that this solution is

only implemented for refurbishments. For new buildings it is recommended that such systems have their own dedicated ducts, separate from the electric power supply.

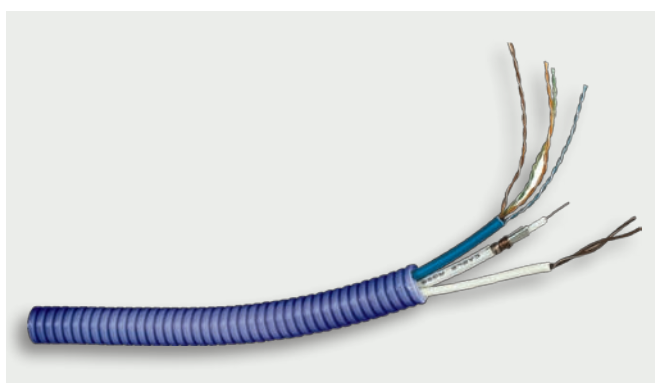
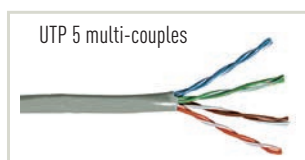
(Note 1) If the recommended cables are used for these systems, safety is guaranteed in terms of electrical insulation. However no guarantee is given for correct operation due to possible disturbance that may occur due to the My Home Legrand system cables being grouped with the electric power cables.

(Note 2) For the following systems, only My Home Legrand system cables can be installed in the same ducts as electric power supply cables: Automation and Temperature Control.

The light automation, shutters automation, burglar alarm, and temperature control **GREY SCS BUS** MAY be installed in the same ducts and boxes as the electric power cables.



The video handset, HOME VIDEO SURVEILLANCE, and sound system **WHITE SCS BUS**, MAY run in the same ducts as the data transmission, telephone, and TV-SAT signal cables, but **IT MUST BE** separated from the electric power supply cables.





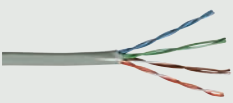

The separation of electric power supply cables from signal cables **MUST** also be ensured inside junction boxes and the electric distribution board. Attention must therefore be paid when positioning the entrance of the ducts to the junction boxes and the electric distribution board.



Selection table for the cable

The following table indicates the cable to be selected based on the application. It must be considered that two or more systems with different cables may be integrated with each other using the 035 62 interface.

APPLICATIONS

	Automation	Temperature control	Sound system	Burglar alarm	Video door entry and home video surveillance	Control
5739 99  (white)	● (1)	● (1)	■	● (1)	■	■
0492 31/32  (grey)	■	■		■	●	●
UTP 5 	●	●	●	● (2)	●	●
UTP 5E 	●	●	●	● (2)	●	●

■ Recommended cables (in accordance with installation regulations).

● Cables that may be used (for each system current installation regulations must be checked).

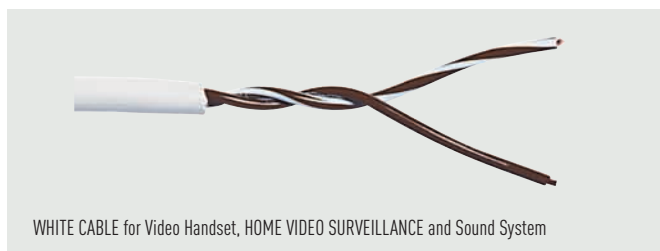
NOTE (1): Compulsory for the underground sections of the individual systems

NOTE (2): Cable recommended for connection of the contact interface with the corresponding magnetic contacts.

CABLE 5739 99

For video system, Legrand produces a dedicated cable, 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, differently to standard cables, which are not suitable for underground installation even when inside ducts, this cable may be installed underground provided that it is protected by suitable ducts.



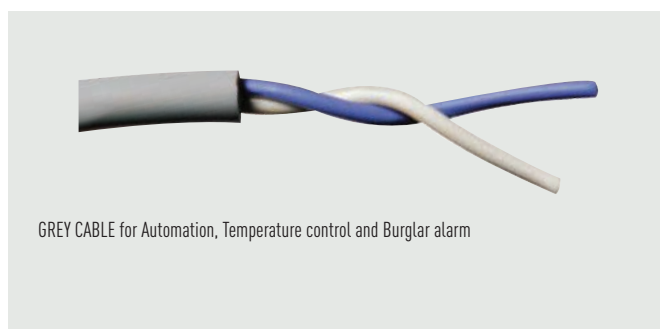
WARNINGS:

although the construction of the white cable, 5739 99 guarantees 300/500V electric insulation, it does not however guarantee immunity from disturbances that may occur if this cable is installed inside the same ducts as 230V power supply cables.

These types of installations are not recommended.

CABLE 492 31 AND 492 32

This cable has been designed for the installation of BUS systems for the following applications: Automation, Temperature Control and Burglar alarm. This cable can be used for the distribution of the power supply and operating signals. With the 300/500V insulated BUS cable, and the terminal protection cover, with which all devices are fitted, the systems may also be installed in the same boxes and ducts as the electric power supply lines (230 Vac).



TECHNICAL FEATURES

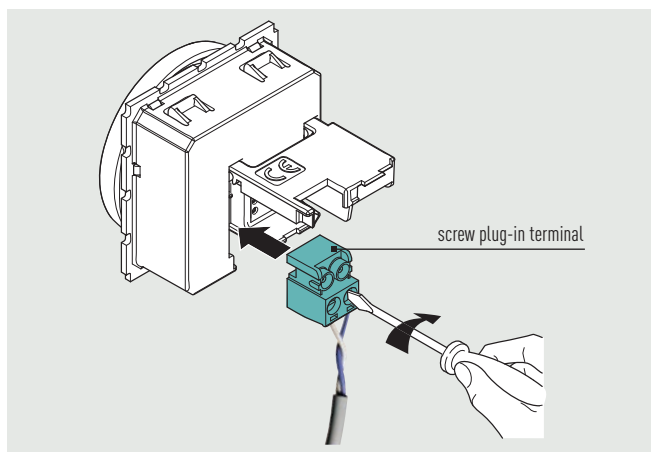
- SCS sheathed pair made up of 2 flexible wires, sheathed, unshielded;
- Insulation voltage: 300 – 500 V.

Coil length

White	5739 99	200 m
Grey	0492 31	100 m
	0492 32	500 m

PLUG-IN TERMINAL

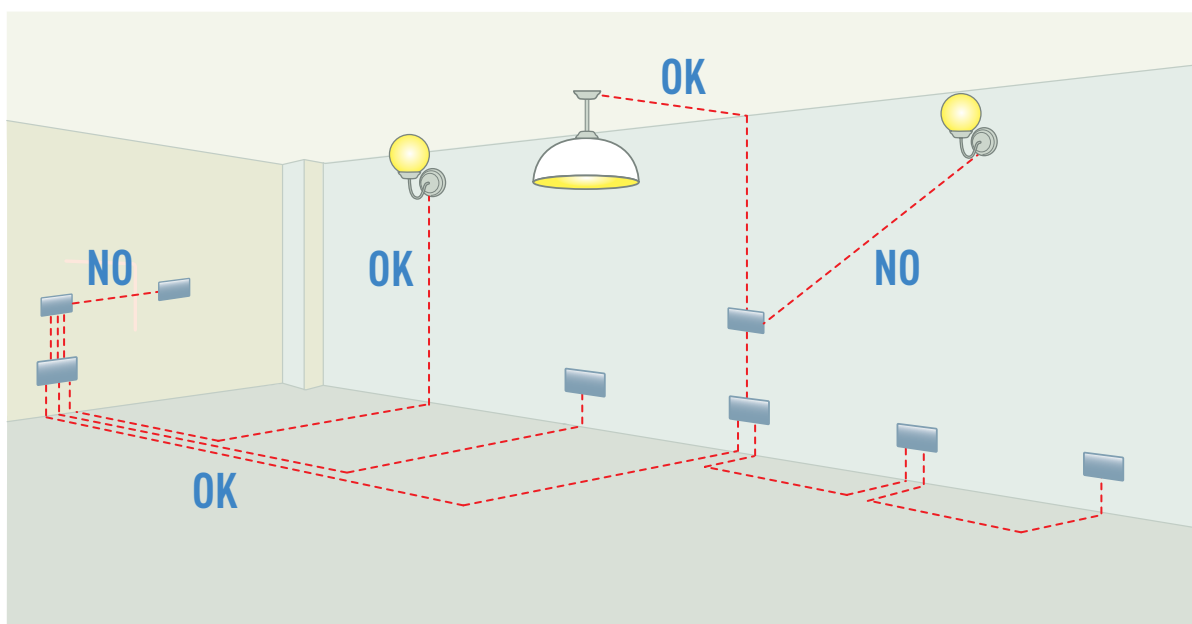
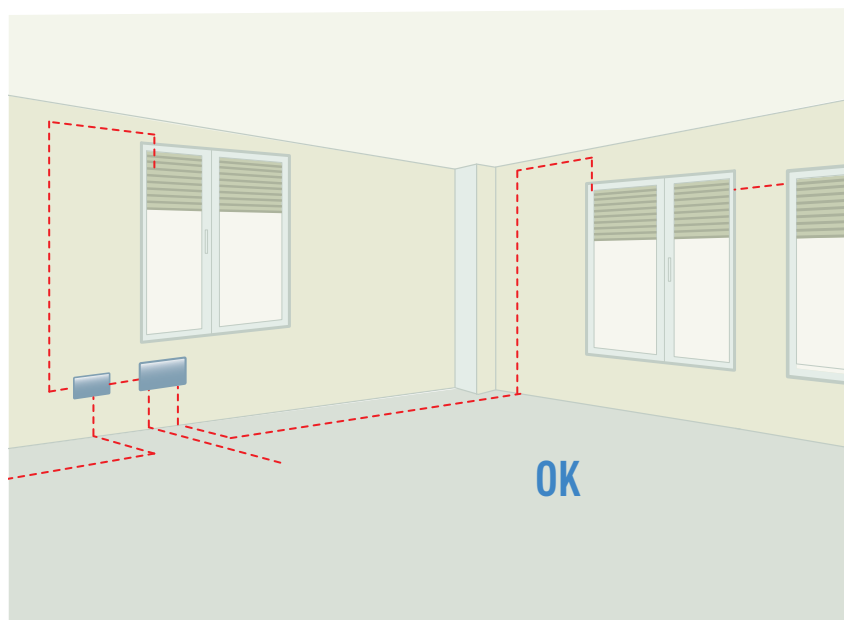
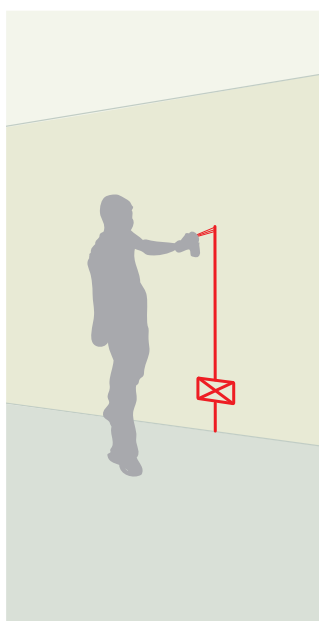
The devices connected to the SCS BUS using a screw plug-in terminal. With the plug-in terminal, it is possible to wire the system in advance and connect the devices just before the running test.



Layout of the ducts

This operation for the arrangement of the electric system consists in marking the paths of the connection ducts on the walls. These paths may be vertical or horizontal. Diagonal paths must be avoided unless, they must follow an

inclination of the wall or ceiling. Inside the ceiling and under the floor, ducts may be installed as desired. The distribution of wall boxes and loads/users, depends on the type of room and the type of load to be connected.

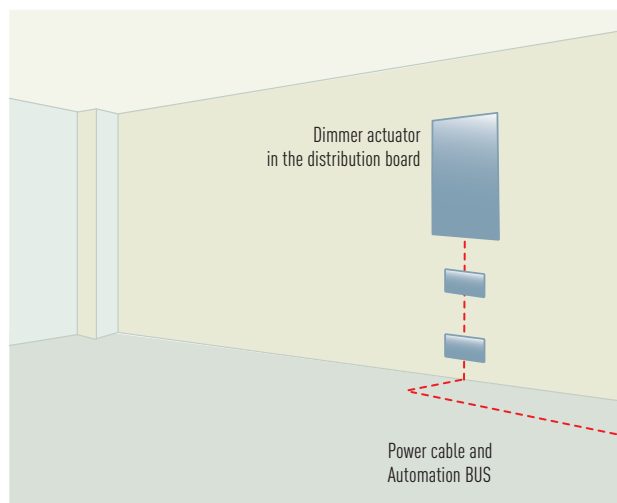
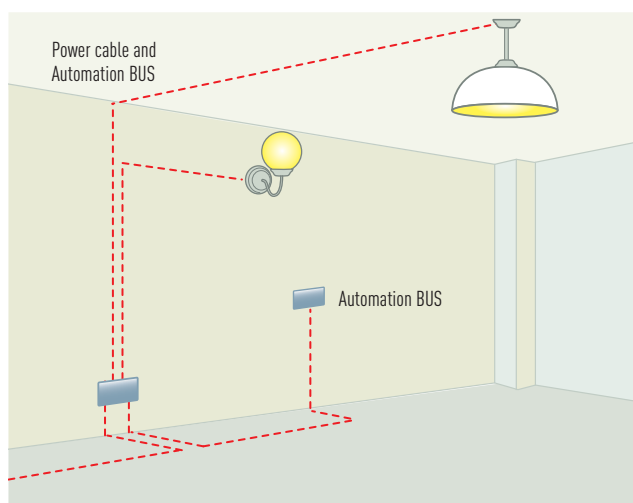


For all My Home Legrand application, when marking out the paths of the ducts, the following recommendations should be followed:

- The bending radiuses of the “main” paths must be such that all risk of damage to cables is avoided,
- Wall ducts must be horizontal, vertical or parallel to the wall edges. Diagonal path are only allowed for VERY short sections,
- Any exposed wires may follow the shortest path,
- Any wires installed inside ceilings or underfloor may follow the shortest path.

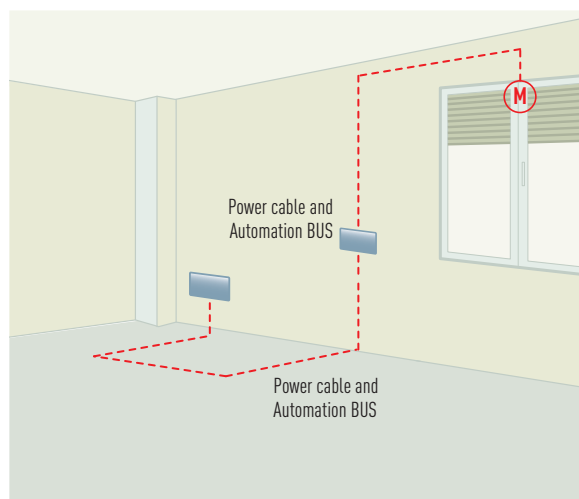
When designing a light automation system, comply with the following installation requirements:

- If various loads are to be installed in the room, controlled from several points (DIN actuator inside a junction box), the duct must go from the wall box to the box, and from the load to the box itself.
- If a load with light adjustment must be installed (DIMMER), the actuator shall be installed inside the distribution board, and the ducts will be installed in line with the above prescriptions.



When designing a **shutters automation system**, comply with the following installation requirements:

- If shutter control is to be installed, the duct must run directly from the wall box to the load.

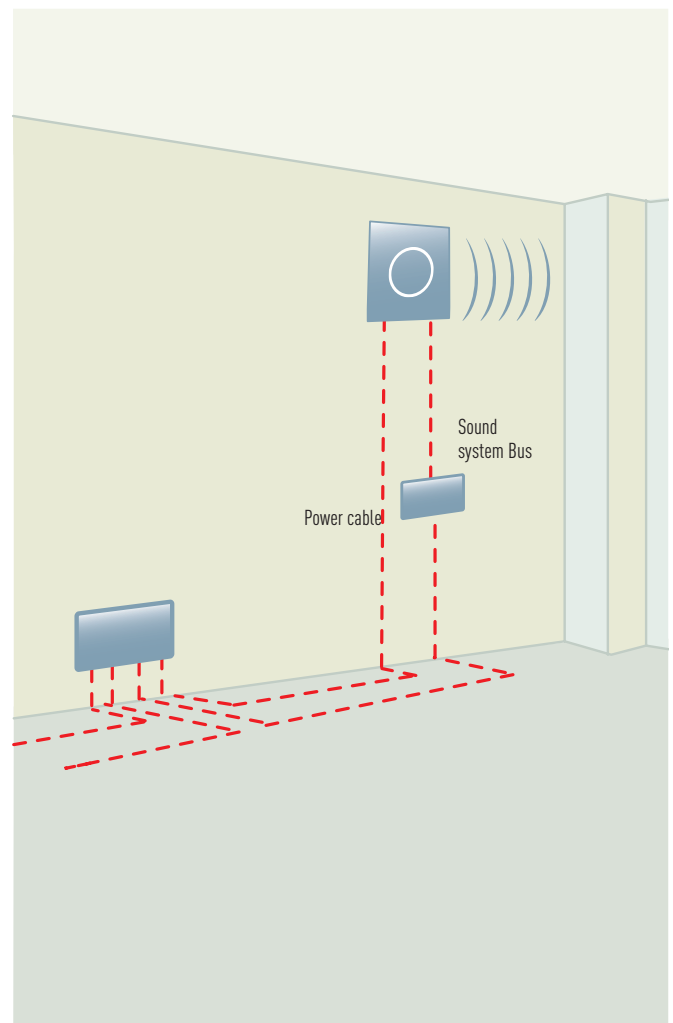
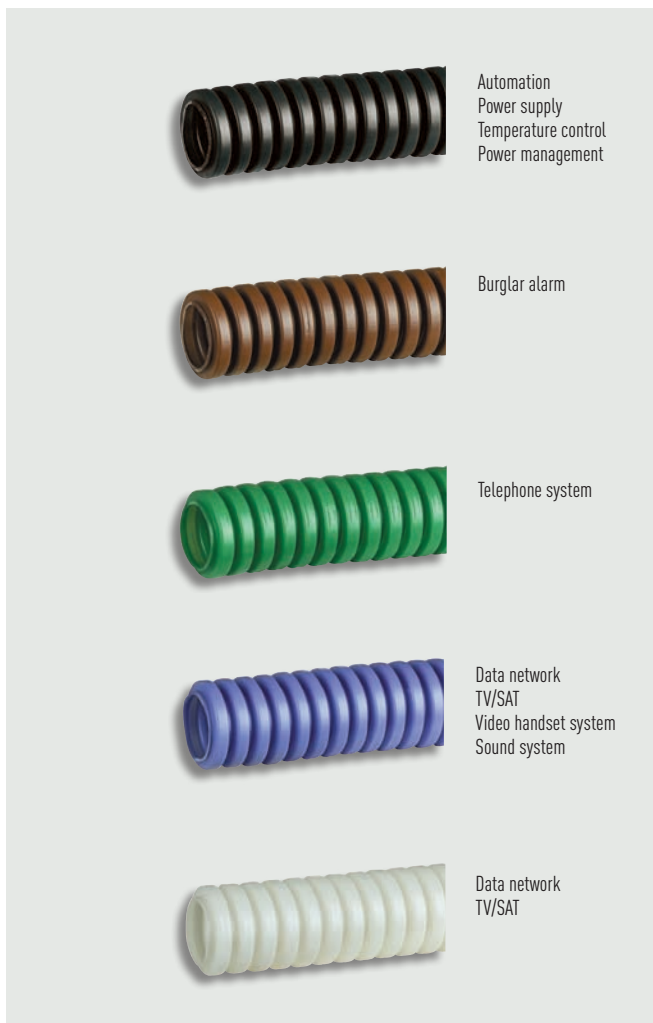


Layout of the ducts

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

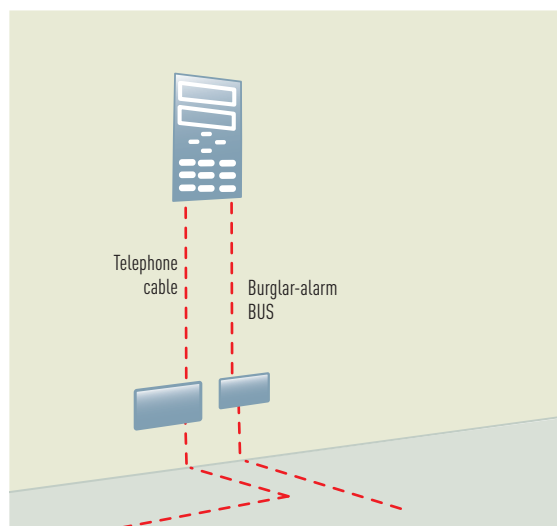
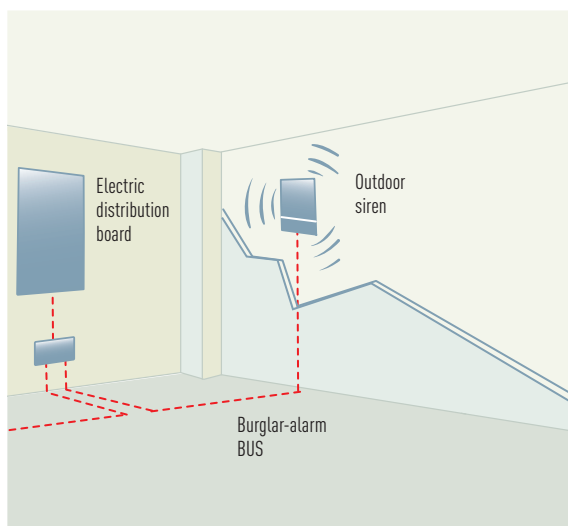
When installing a **Sound system**, comply with the following installation requirements:

- When connecting a DIN amplifier in flush mounting box, two separate dedicated ducts must be installed.



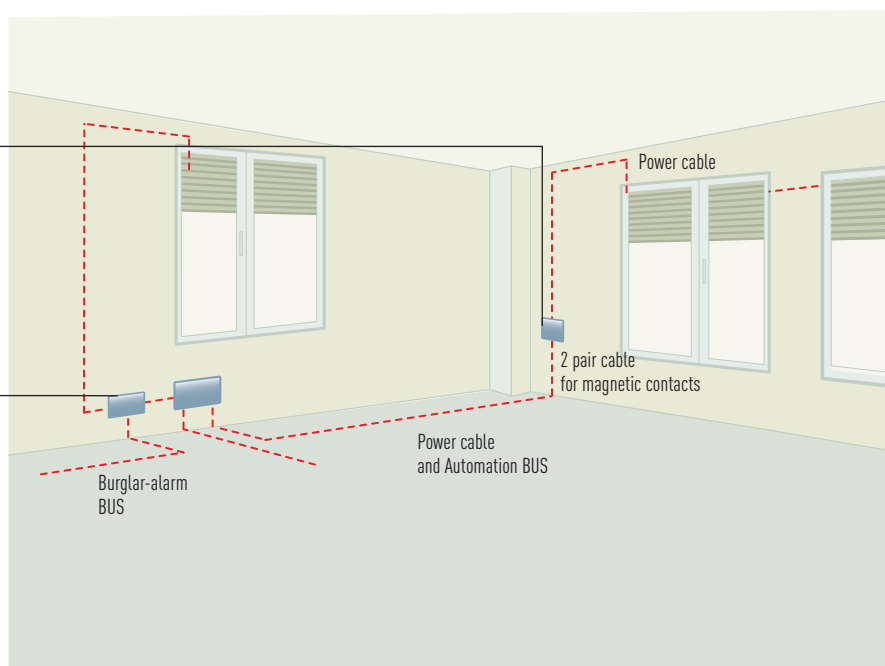
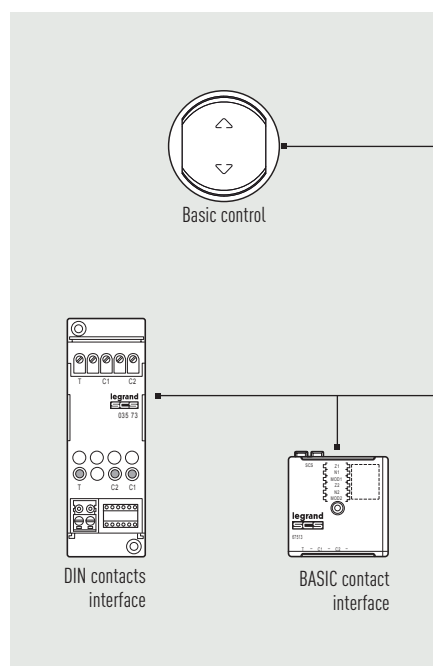
When installing a **burglar-alarm system**, comply with the following installation requirements:

- A dedicated duct must be installed for connection between the distribution board (burglar-alarm power supply) and the external siren.
- When connecting the burglar-alarm control unit to a telephone dialling device, install two separate ducts, one for the burglar-alarm BUS, and one for the telephone cable.



- When connecting magnetic contacts (windows), separate direct ducts must be installed, with separate boxes for the housing of

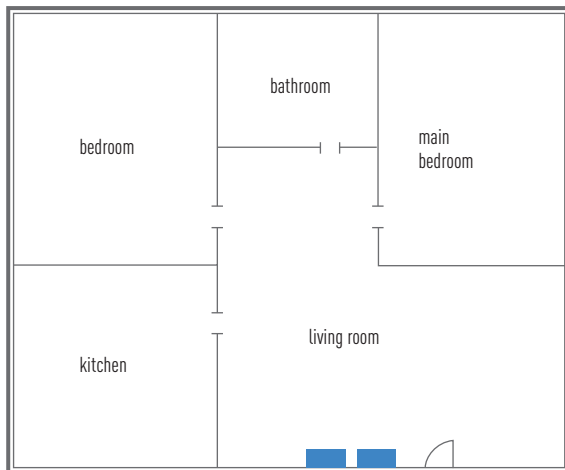
the contact interface (DIN or BASIC).



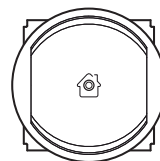
Positioning of controls: practical installation examples

When creating a My Home Legrand system, it is recommended that the controls are installed following some rules that will both facilitate and enhance the use of the system.

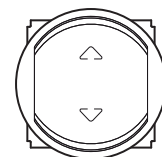
GENERAL CONTROLS



It is preferable to install 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 coming back in the house.



General lights
controls

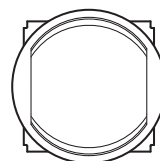


General shutters
controls

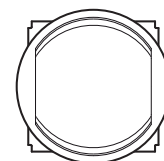
GENERAL ROOM CONTROLS



General room controls may be used to control a range of actuators. They should be installed by the entrance of the room to be controlled.

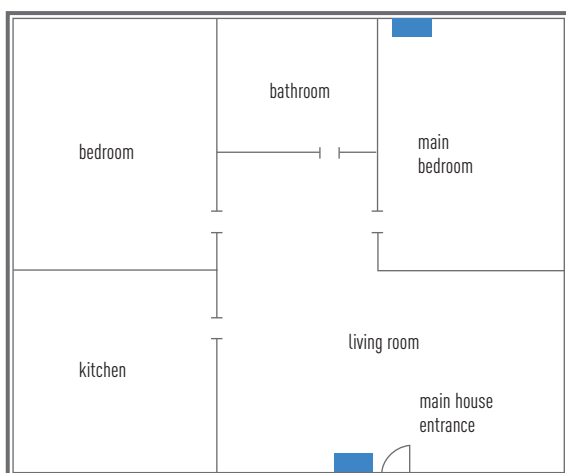


NIGHT AREA control
(switches on or off all the
bedroom lights)

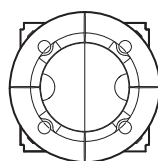


LIVING AREA control
(switches on or off all living room
and kitchen lights)

4 SCENARIOS CONTROL



It is recommended that 4 scenario control are installed nearby the main house entrance and at the points from where the whole house must be controlled. For example, installation in the bedroom makes it easy to lower all shutters and switch all lights off before going to bed.

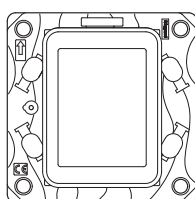


4 Scenarios control

TOUCH SCREEN



Touch Screen must be installed in a central position, so that it is visible and easily accessible from any room in the house. Touch Screen enables control and management of all home applications.

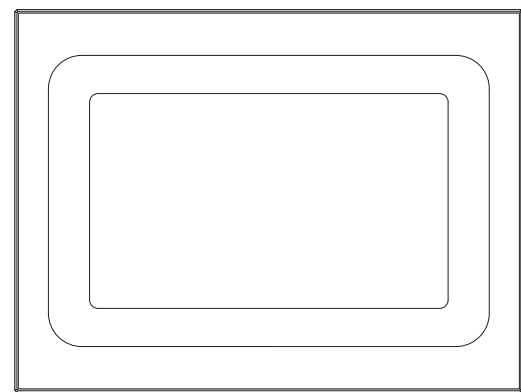
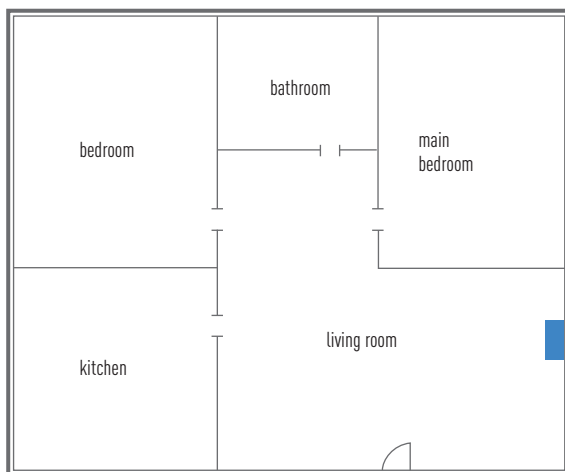


Touch Screen

Positioning of controls: practical installation examples

MULTIMEDIA TOUCH SCREEN AND PC WITH SOFTWARE VISUAL

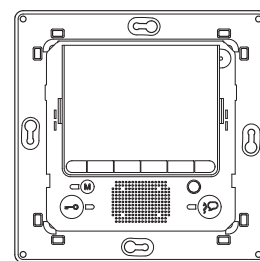
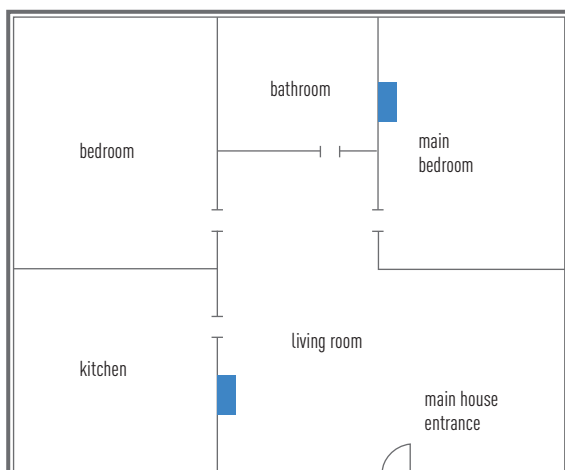
It is recommended that in private homes the Multimedia Touch Screen and the PC with VISUAL software are installed in a central location. For industrial and service sector environments, they should be installed in the reception area. The VISUAL software enables customisation of the pages and the functions that may be controlled.



Multimedia Touch Screen

VIDEO HANDSETS AND HANDSETS

It is recommended that video handsets and handsets are installed in areas of the home that can be easily reached, both at daytime and night time. They have a double function, as they enable receiving calls from the entrance panels and control of the My Home Legrand applications installed inside the home.



Video Display

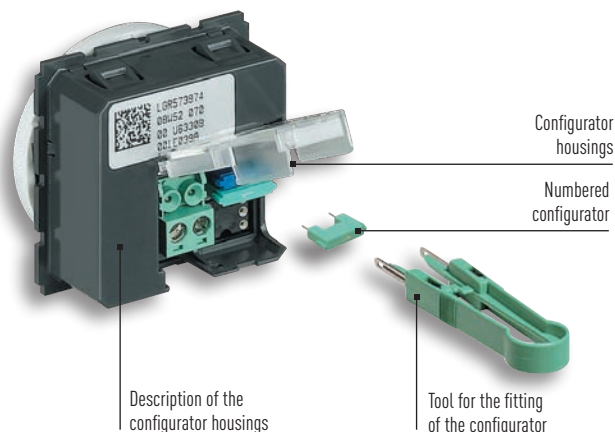
Basic configuration concepts

The configuration is a necessary for assigning an address to the device within the system and set its operating mode. A preliminary definition of the configuration, will help identify which functions should be included in the system, how

many devices should be installed, and where they should be installed within the house. Two types of configuration are possible: physical configuration and virtual configuration.

PHYSICAL CONFIGURATION

Physical configuration is completed by fitting special connection components called configurators in appropriate housings of each device, using a special tool. Configurators are distinguished by numbers, letters, colour, or graphic representations. This procedure is recommended for low or medium complexity systems. For systems consisting of several devices, for houses on several floors, hotels and the service sector, the virtual configuration described in the following pages is recommended.



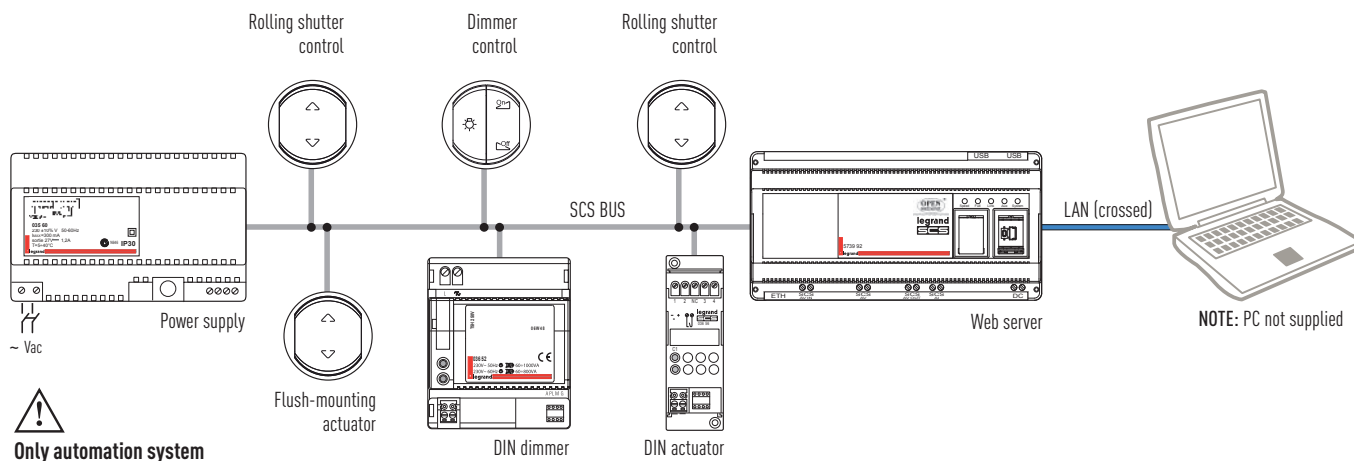
VIRTUAL CONFIGURATION

For systems with several devices, the configuration process may be greatly simplified by using, computer, as an alternative to the manual configuration procedure.

This type of configuration, called “virtual configuration”, makes it possible to configure each device without the use of the standard alphanumeric configurators. The address and the operating mode of the device is set using a special software installed on the

computer; this solution is particularly suited to large system, as it allows modification of the configuration at any time, without the need for manual intervention on each device.

Virtual configuration may be used only in Automation systems: both in individual systems, and also in case of several systems integrated with each other in “logic extension” mode.



Automation system

> Automation system

General features	000
General rules for installation	000
Wiring diagrams	000
Configuration	000



Introduction to the Automation system

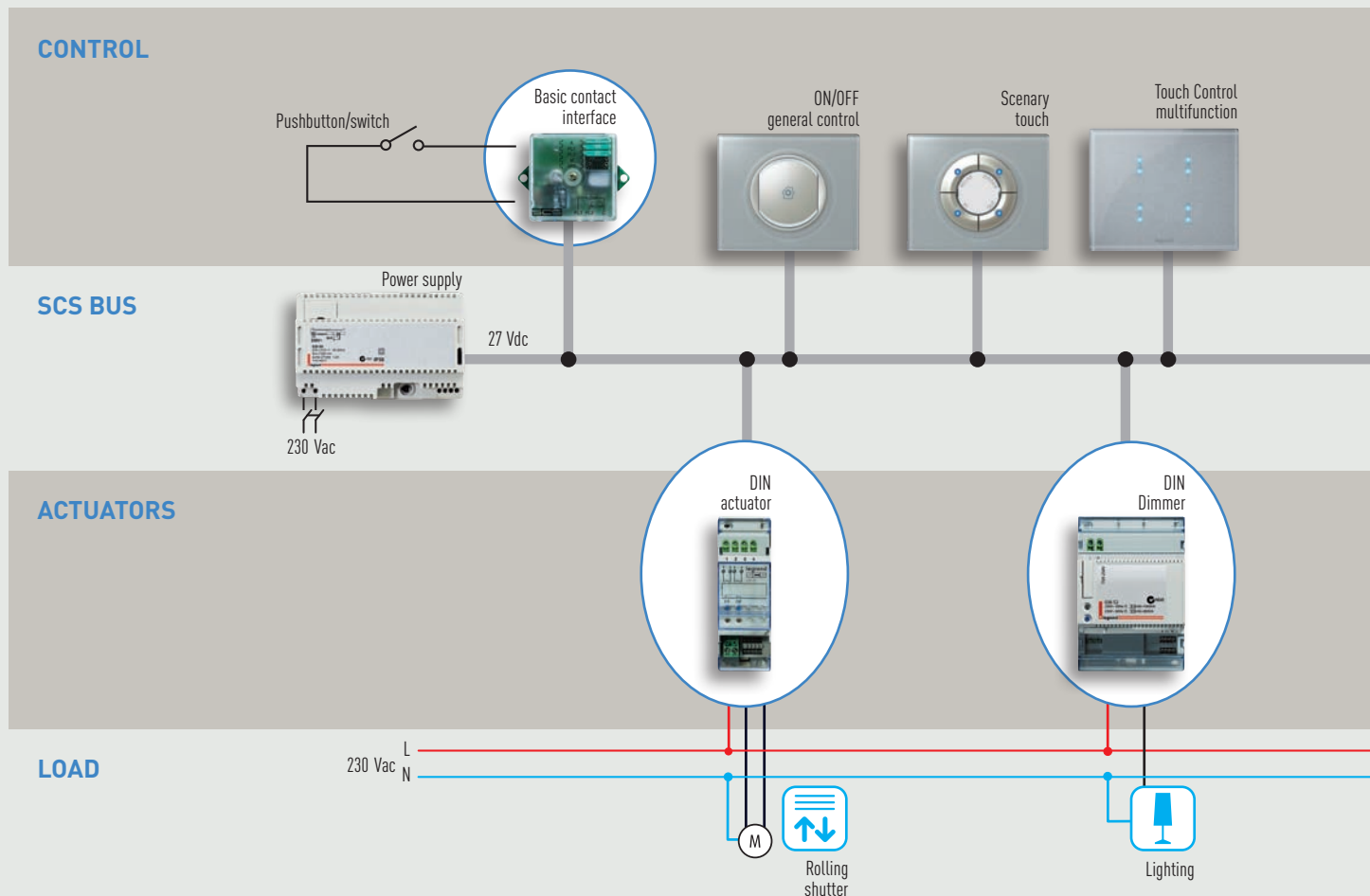
The My Home Legrand Automation system, allows you to manage functions in a simultaneous and integrated way. To date, these functions have been performed with special and complex electrical devices such as:

- Lighting control
- Control for shutters and/or electric curtains, fans, exhausters, etc.

Compared to the devices of a conventional electrical system, Automation devices have an electronic circuit with a programmable logic and are connected in parallel with a 2-conductor SCS BUS cable for sending information and with low voltage (27 Vdc) electric power.

There are two types of devices in the system:

- **Controls**, connected only to the SCS BUS cable;
- **Actuators**, connected both to the SCS BUS cable and to the power line for managing the connected load.



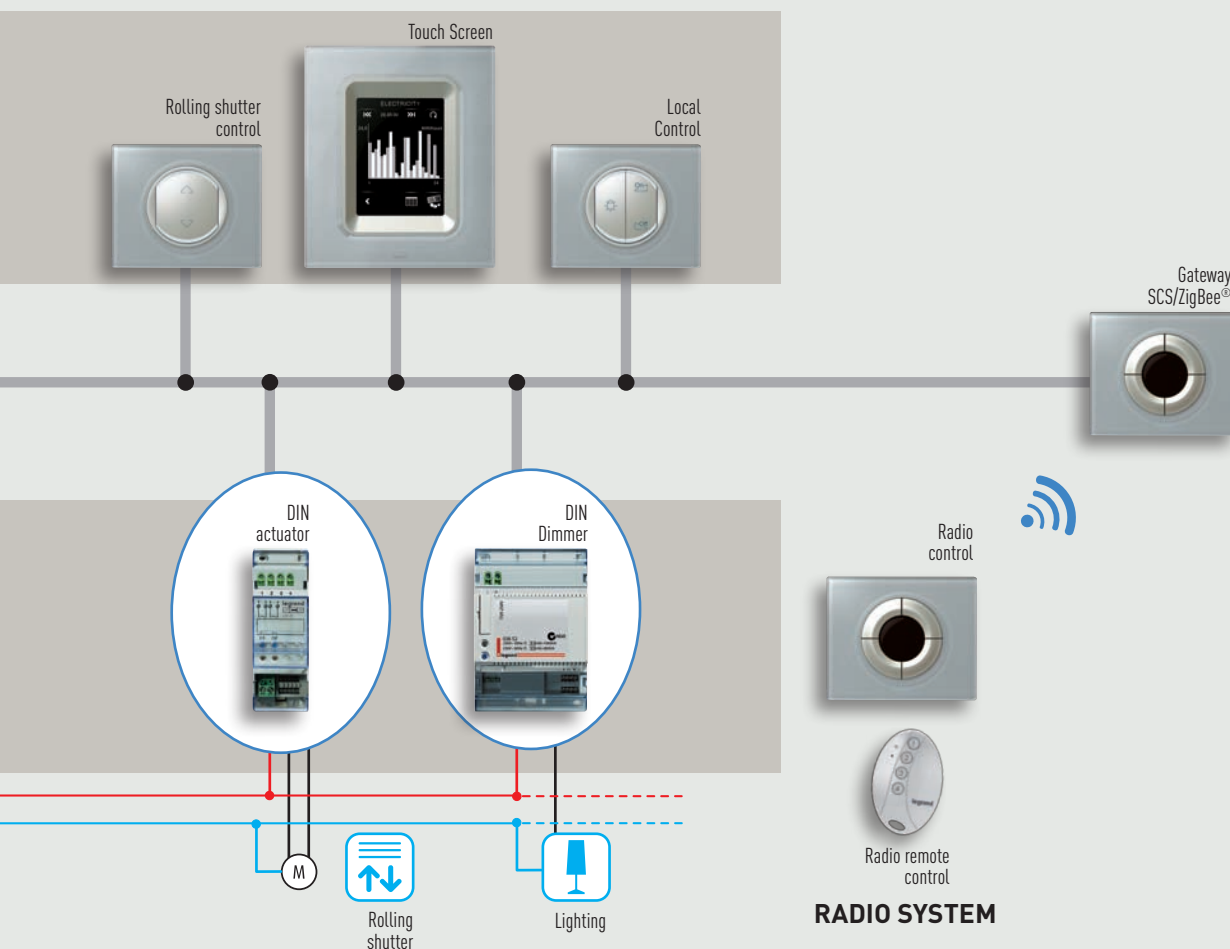
When the Automation system devices are configured properly, it is possible to manage the load as follows:

- **Control for a single load** (lamp, rolling shutter, etc.);
- **Control for one or more load groups** (for example, only the shutters on the first floor, north side, etc.);
- **Simultaneous management of all loads** (for example, general deactivation of all lamps in the house and/or closing of all rolling shutters).

It is also possible to carry out special functions - which can hardly be achieved with conventional electrical systems.

These functions are called **scenarios**, which consist of a set of simultaneous controls used for arranging the room according to the user's lifestyle.

An example of a scenario can be represented by the simultaneous activation of lights, shutters, etc., which can be set by the user after getting home by using one single control device or by using the Touch Screen menu. If the Automation system is integrated with Sound system and Temperature control system, the scenario can also set up a room with background music and with the required temperature.



Introduction to the Automation system

TYPE OF SYSTEMS AND DEVICES

Most devices of the Automation system are installed with the same procedures used for conventional electrical system devices, namely:

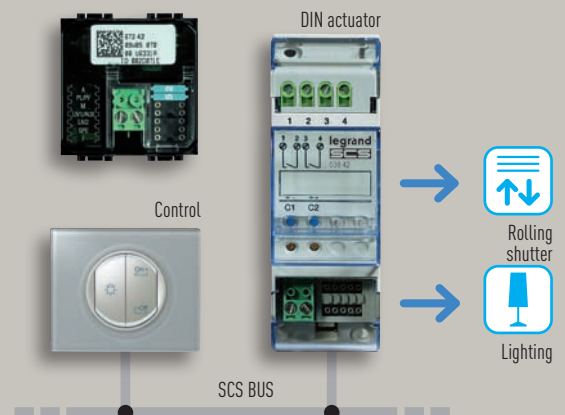
- Flush-mounted in device-holder boxes;
- In switchboards on DIN rail.

Some devices are installed with different procedures; for example actuators can be directly installed inside the load to be controlled.

WIRE SYSTEM

Wire-system devices communicate with each other through a two-conductor SCS BUS cable.
(Sheathed no-polarised connectors)

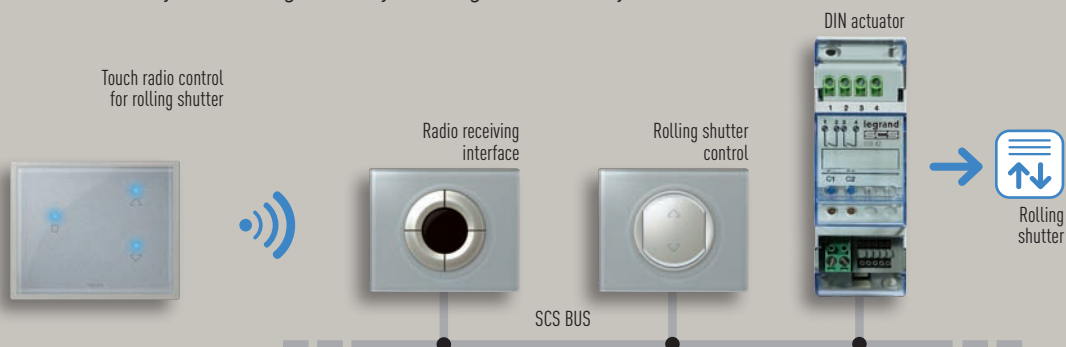
The range includes devices for Basic functions such as controls and actuators as well as devices for advanced functions such as the scenario control, the IR remote control receiver and the Touch Screen.



COMBINED RADIO/WIRE

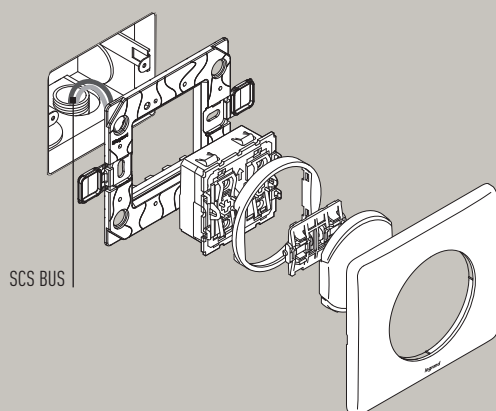
The advantages given by the installation flexibility of the radio devices can be used for expanding a wire system in rooms that are not set up for SCS BUS cabling. This can be achieved by connecting Gateway SCS/ZigBee®:

- Receiving to control any actuator of the wire system by a radio control (remote control or flat control);
- Transmitting for controlling any radio actuator by a wire system control.

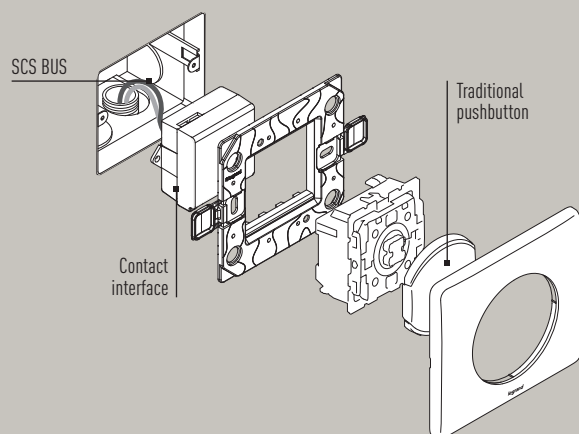


THE DEVICES CAN BE INSTALLED:

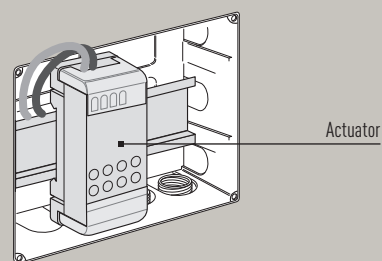
In flush-mounting boxes



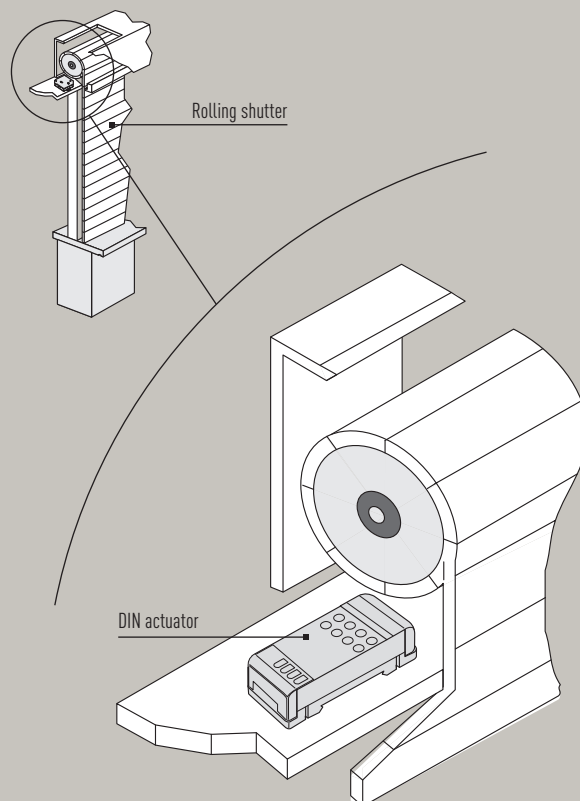
Basic devices in flush-mounting boxes so that the existing controls can be used



On Din Rail



Next to the load



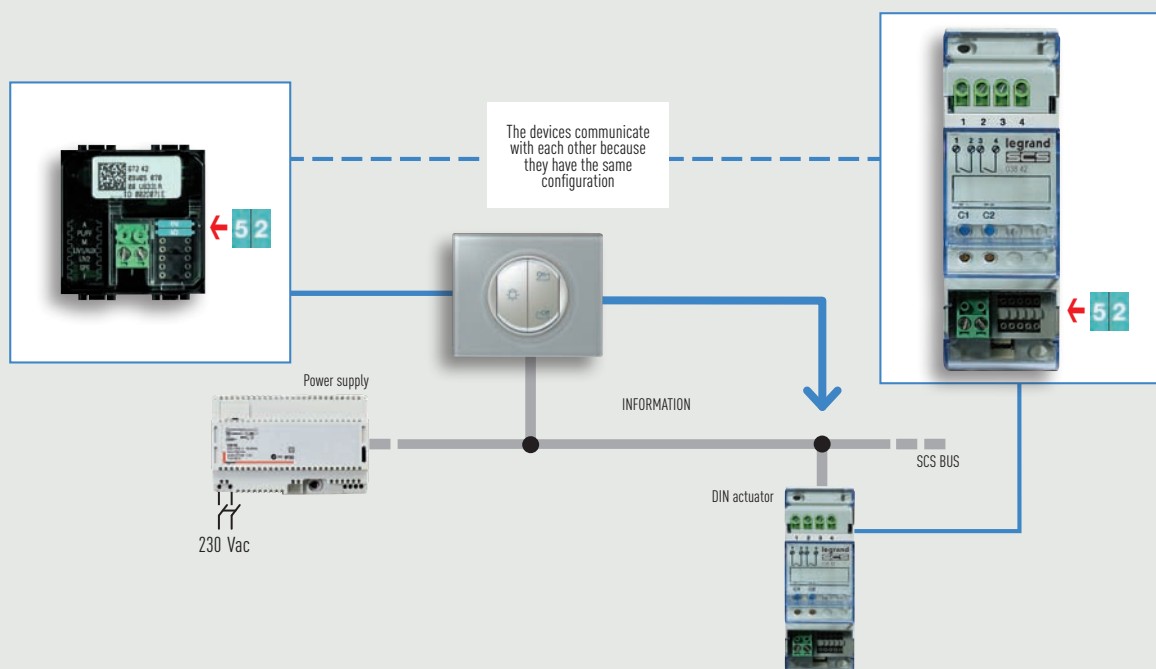
Introduction to the Automation system

DEVICE CONFIGURATION

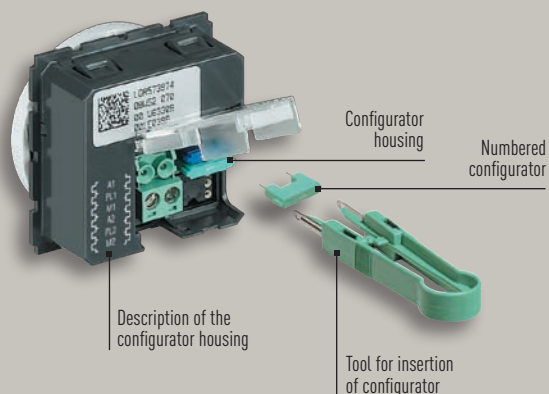
In order for each SCS BUS system device to perform its functions properly, it must be appropriately configured, thus assigning its functioning mode and address.

This procedure, called **configuration**, is carried out by inserting push-in devices, called **configurators**, which can

be distinguished by their number, letter or graphic label or by virtual configuration. The **destination address** or source address of the control as well as the **operating mode** of the device (activation/deactivation or adjustment of a load) shall be assigned with the configuration inside the system.



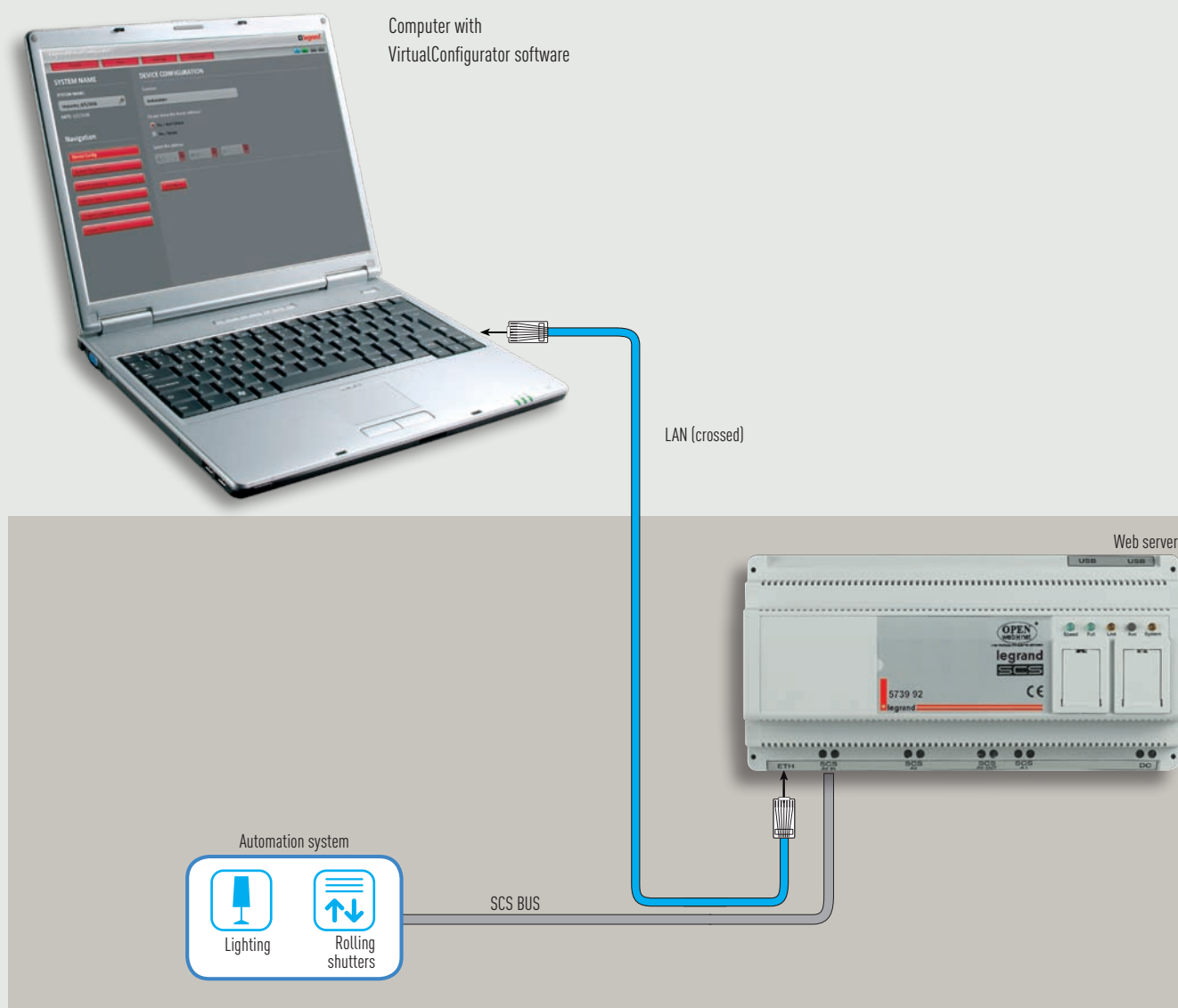
PHYSICAL CONFIGURATION



VIRTUAL CONFIGURATION

To simplify the configuration of systems with many devices, “virtual configuration” is available. The configuration parameters are no longer established manually with the configurators, but through the use of a special software called


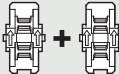

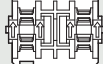

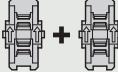

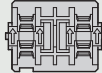

VirtualConfigurator, in a personal computer. The configuration is then transferred to the device involved by LAN connection.



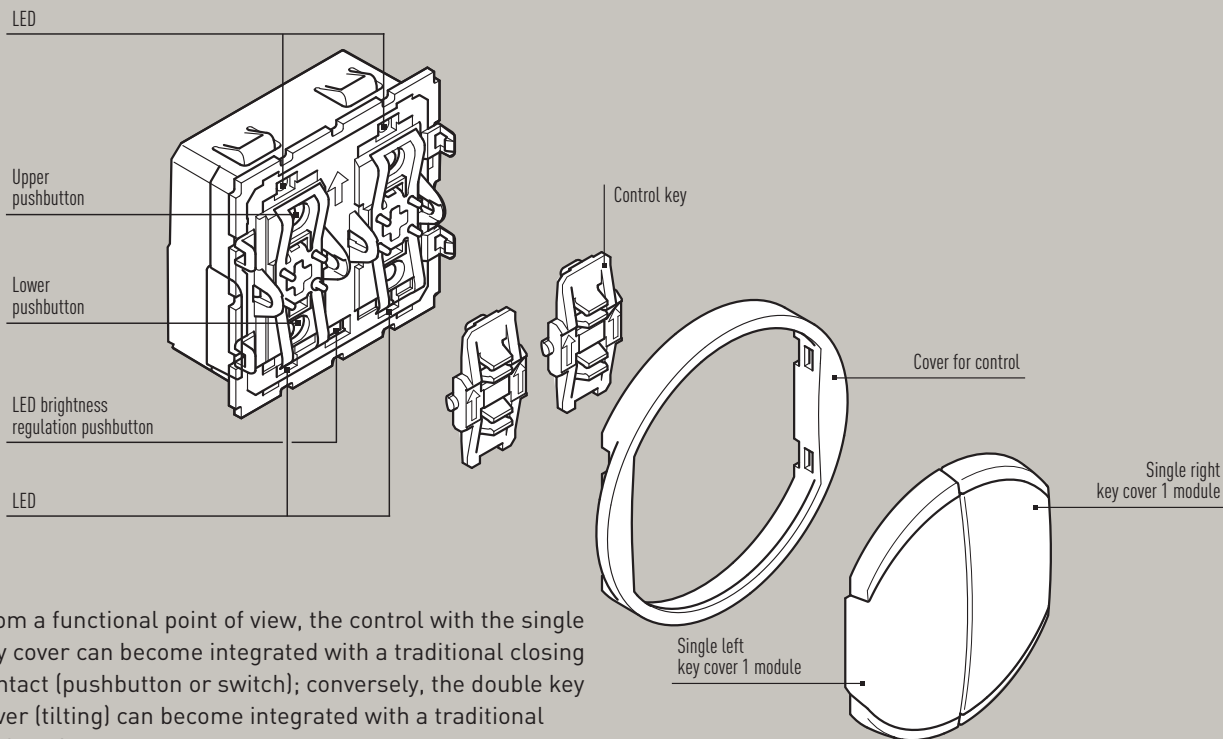
Control devices

BASIC CONTROL DEVICES

Control devices allow you to control the state of the actuators, thus executing different functions: ON, OFF, timing, etc., which depend on the functioning mode that has been assigned to them through an appropriate configuration. The electronic part of these devices is separated from the mechanical operating part so that one can choose the type, number and size of the control pushbuttons. The device can be modular, thus meeting the different installation requirements and different functions required by the user.

Controls	Push button mode	Switch mode	Key cover
			
			
			
			

Pay attention to the left and right silk-screen printed single key covers



From a functional point of view, the control with the single key cover can become integrated with a traditional closing contact (pushbutton or switch); conversely, the double key cover (tilting) can become integrated with a traditional exchanging contact.

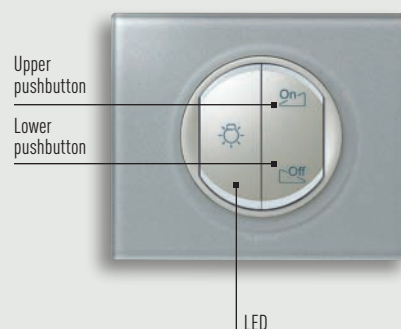
All controls are provided with an indicator which indicates the state of the control (activated or deactivated), thus enabling its identification in the dark.

The following devices belong to this category:

- Basic and special control
- Touch controls
- Passive IR detector
- IR receiver

These components are able to send controls for single loads (lamps, exhausters, air-conditioners, etc.) and to double loads (motor for rolling shutters, curtains, etc.).

Infrared devices have the advantage of sending their control to the SCS BUS when they are activated by a remote control or by the presence of a person; conversely, the controls must be operated locally from the user.



2 modules
control device



Touch
control multifunction



Passive
IR detector

Control devices

CONTROL DEVICES FOR ENHANCED FUNCTIONS – SCENARIOS

This category includes devices that provide special and advanced automation functions.

It is possible to create scenarios, in other words particular environmental comfort situations represented, for example, by the activation of a few lights at a given brightness level and by the position of some shutters in order to watch TV or read a book, according to the user's lifestyle. Another example of advanced scenario that can be carried out with different integrated My Home Legrand systems is represented

by the activation of particular background music, by the temperature setting and by the brightness level of the house when receiving friends. The above-mentioned scenarios are managed by particular devices able to memorize all the controls determining the scenario and that the user can set simultaneously by pressing just one pushbutton.

LOCAL DISPLAY



TOUCH SCREEN



MULTIMEDIA TOUCH SCREEN



SYSTEM MANAGEMENT SCENARIOS



Scenario programmer 035 65
for advanced scenarios



The following functions can be executed by the control devices:

- **Scenario module 035 51** with two DIN modules to store 16 scenarios for the automation, sound system, temperature control and Video door entry applications.
- **Scenario programmer 035 65** for the creation and management of enhanced scenarios, also depending on events in time, state of the systems and other.

The scenarios stored by the above devices can be selected by using the basic and special control, the IR receiver for remote control, the Scenary Touch, the Touch Screen and the Multimedia Touch Screen.



Scenario module 035 51
to save max 16 scenarios



SYSTEM MANAGEMENT SCENARIOS



BASIC AND SPECIAL CONTROL



IR RECEIVER +
REMOTE CONTROL



SCENARIO CONTROL

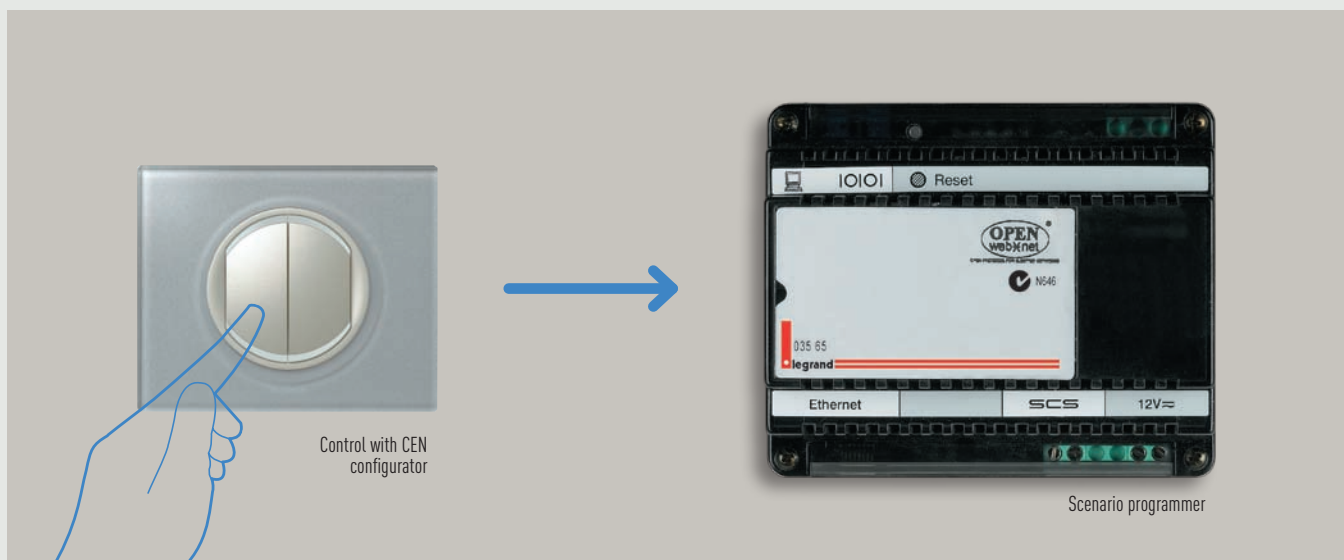
Control devices

CONTROL DEVICES FOR ENHANCED FUNCTIONS FOR SCENARIO PROGRAMMER 035 65

The device, installed in a My Home Legrand system, performs the scenarios programmed with the 035 65 software (supplied with the CD which comes with the device) after the following activation, deactivation, block or unblock events:

- Pressing a control pushbutton (configured in CEN mode);
- Switching a light ON or OFF (apart from the dimmer light points);
- Operation of automatic devices (movement of rolling shutters);
- An event managed by one of the nine auxiliary channels;
- A time or a date;
- A burglar-alarm system event;
- A condition which occurs on the temperature control system
- A call from the entrance panel or the state of a video door entry system camera.
- A sound system event

After these events the scenario programmer 035 65 can then control the My Home Legrand system applications. The performance of a **conditioned scenario** matched to a particular time or date allows for example simulating being at home through the automatic activation of the rolling shutters or the lighting while away from home and at prefixed times. An automation system control pushbutton can be programmed so that, if pressed, it blocks all the scenarios being run (Panic Key).



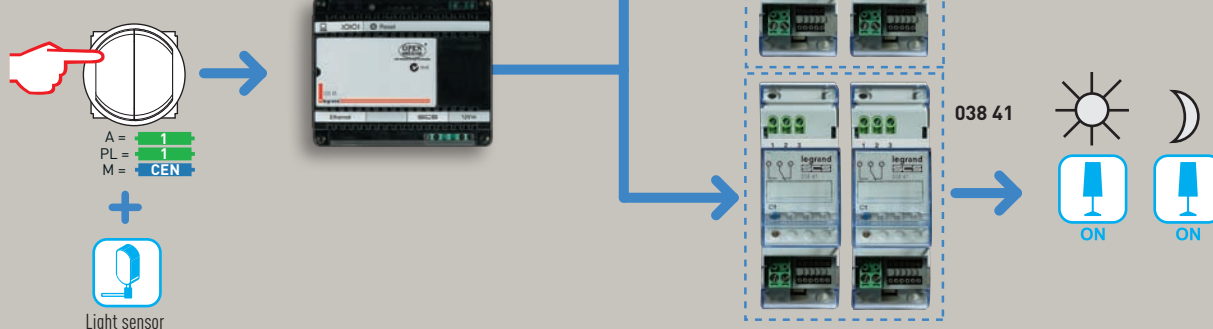
Example of scenarios

Two examples of scenarios which are possible with the scenario programmer 035 65 device are given below.

The control device keys are associated with the scenarios to activate with the program supplied with the programmer.

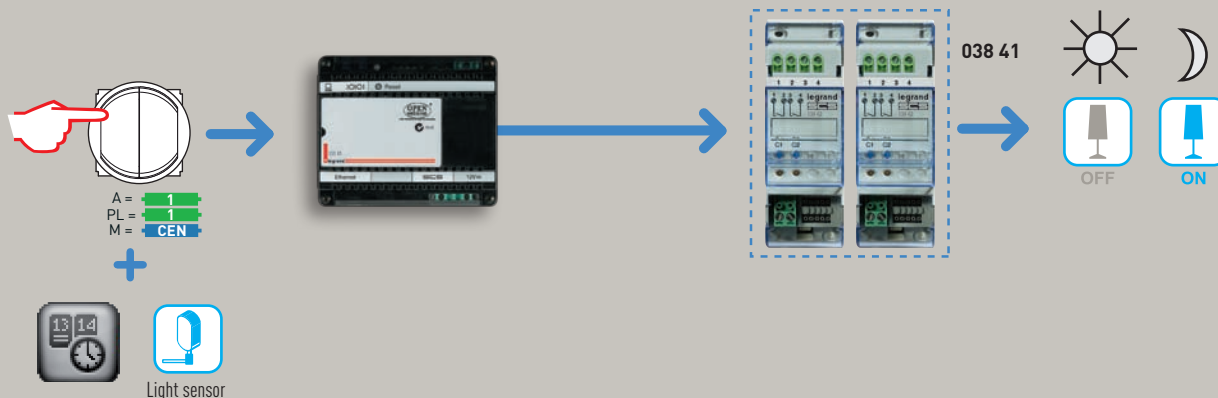
Scenario 2 - Returning home:

If the light detector detects that it is still daytime, when the key of the control device is pressed, the shutters open, but the lights stay off. If on the other hand it is already dark outside, the lights come on, but the shutters stay closed.



Scenario 2 - Garden lights:

Following activation of the control device, every night at 8.00 pm, when the light detector detects that outside is dark, the garden lights will automatically switch-on.



Control devices

CONTROL DEVICES FOR ENHANCED FUNCTIONS

LOCAL DISPLAY

The Local Display is a room control to manage the scenarios, sound system and temperature control. With just one touch the 4 icons can call 4 scenarios.



Local Display

TOUCH SCREEN

The colour Touch Screen is a room control for all My Home Legrand functions. It is possible to switch the lights on and off, lower or lift the shutters, control the watering system in the garden, adjust the temperature in all rooms, automatically activate scenarios according to logical or time conditions, etc. The display starts with a "home page".

The applications that can be managed are shown graphically inside the home page. When you touch the icon of the application you want to manage (e.g. lighting), a page will be displayed. This page will contain the customised icons of the light points. Again, with a simple touch on the chosen icon, the lamp or lamps associated to it will turn on or turn off. The Touch Screen can be easily installed in a flush-mounting box.



Touch Screen

MULTIMEDIA TOUCH SCREEN

The Multimedia Touch Screen is a control device, like the Touch Screen, manages all the system functions. In systems combined with Sound System and Video door entry it can manage multimedia functions and answer calls from the entrance panel.



Multimedia Touch Screen

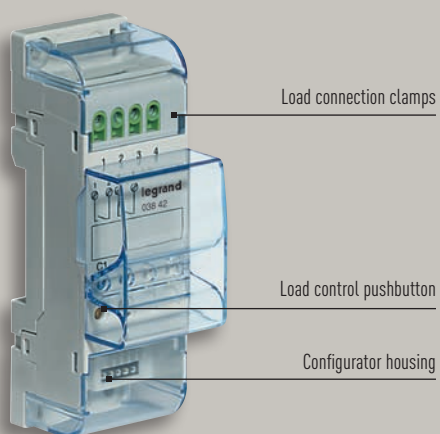
Actuators

DIN MODULE ACTUATORS

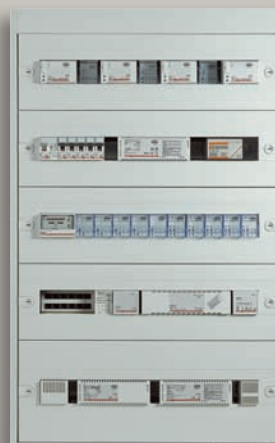
These devices are suitable for centralised installation in electrical panels and switchboards. Available in the 1, 2 and 4-relay versions for control of individual or double loads (motors for electrical blinds), they are fitted with a load control pushbutton to perform load operation tests.

With these actuators, the rear DIN adaptor and the front cover can be removed to reduce the size and therefore allow for installation in cable trays, junction boxes, false ceilings, shutter boxes, etc.

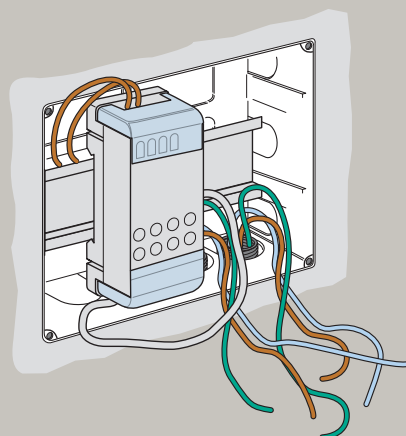
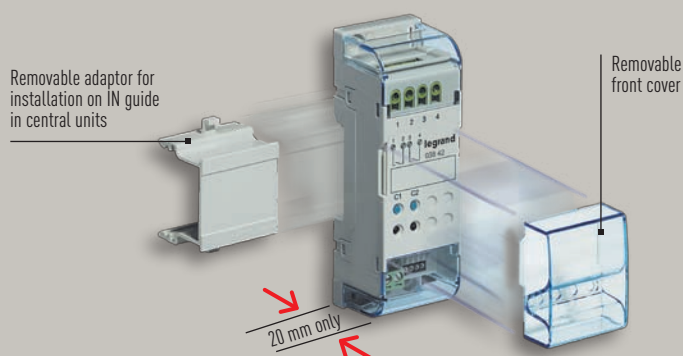
DIN actuator for installation in switchboards



Example of switchboard installation



Example of junction box installation



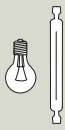




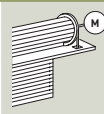
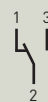
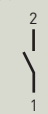
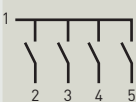
Actuators







These devices perform the controls received, and monitor the connected load in a similar way to an electro-mechanical relay.

For this reason, they must be connected to the SCS BUS cable using the removable terminals as well as to the 230 Vac supply line of the load.

OVERVIEW OF THE ACTUATORS

This table lists the actuators divided by type of use.

Actuators	BUS absorption	Driven loads						Dissipated power
								
		Incandescent /halogen lamps	Resistive loads	Fluorescent lamps	Electronic transformers	Ferromagnetic transformers	Rolling shutter motors	
038 41 	22 mA	10 A 2300 W	16 A 3500 W	4 A 1000 W	4 A 1000 W	4 A cos φ 0.5 1000 VA	-	1.5 W
038 42 	28 mA (Single loads) 15.5 mA (Interlock)	6 A 1400 W	10 A 2300 W	1 A 250 W	1 A 250 W	2 A cos φ 0.5 500 VA	2 A 500 W	1.7 W
038 44 	40 mA (Single loads) 22 mA (Interlock)	2 A 500 W	6 A 1400 W	0.3 A 70 W	0.3 A 70 W	2 A cos φ 0.5 500 VA	2 A 500 W	3.2 W
036 56	30 mA	- -	- -	2 A 460 W MAX 10 ballast tipo T5, T8, compatte o driver per led.	- -	- -	- -	0.5 W
036 52	9 mA	0.25 – 4 A 60 – 1000 W	0.25 – 4 A 60 – 1000 W	- -	- -	0.25 – 4 A 60 – 1000 VA	-	11 W (Max. Load 1000 W) 5 W (Max. Load 500 W)
036 53	9 mA	- -	- -	- -	0.25 – 1.7 A 60 – 400 VA	- -	- -	11 W

Actuators	BUS absorption	Driven loads						Dissipated power
		 Incandescent /halogen lamps	 Resistive loads	 Fluorescent lamps	 Electronic transformers	 Ferromagnetic transformers	 Rolling shutter motors	
026 02	- -	16 A 3680 W	- -	4.3 A 10 (2 x 36 W)	16 A 3680 VA	16 A 3680 VA	- -	- -
026 11	165 mA	- -	- -	50 W 1000 VA	- -	- -	- -	- -
026 21	- -	4.3 A 1000 W	- -	- -	4.3 A 1000 VA	4.3 A 1000 VA	- -	- -
026 22	- -	1.7 A 2 x 400 W	- -	- -	1.7 A 2 x 400 VA	1.7 A 2 x 400 VA	- -	- -

Interfaces

The automation also allows you to use traditional devices or a personal computer, thus allowing high flexibility of use for external systems. The connection between modern digital SCS BUS technology and a traditional cabling component or PC is represented by special devices called interfaces. As a result, these devices interpret information of the traditional world, thus translating it into signals compatible with SCS BUS logical devices.

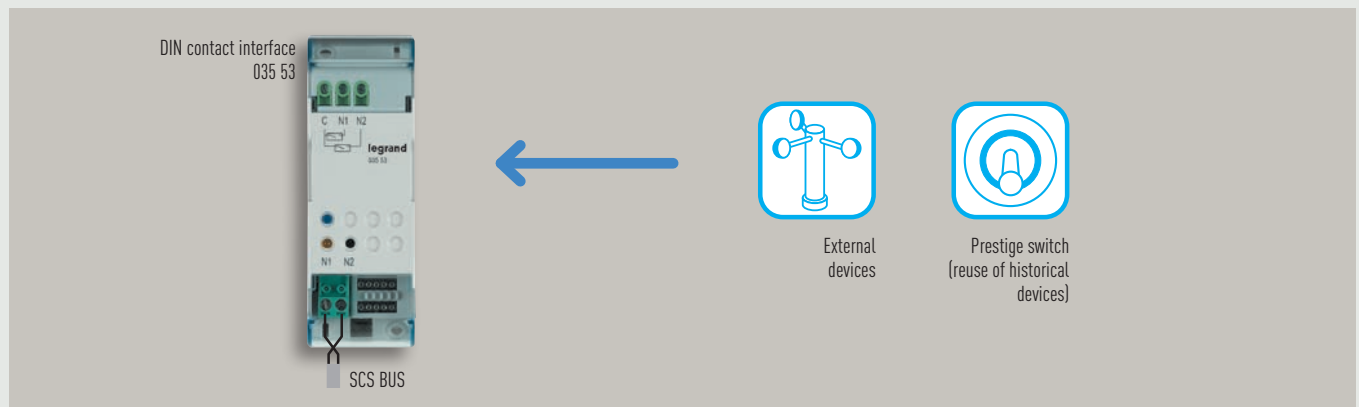
These interfaces are:

- DIN module contact interface 035 53
- Basic module contact interface 5739 96
- SCS/SCS gateway 035 62
- SCS/OPEN KONNEX interface 5739 93 (see CONTROL AND INTEGRATION section).
- WEB SERVER 5739 92

CONTACT INTERFACE IN DIN MODULE

This device can be used to connect traditional devices - like switches and pushbuttons - to the BUS, thus extending the use of BUS to pre-existing traditional systems.

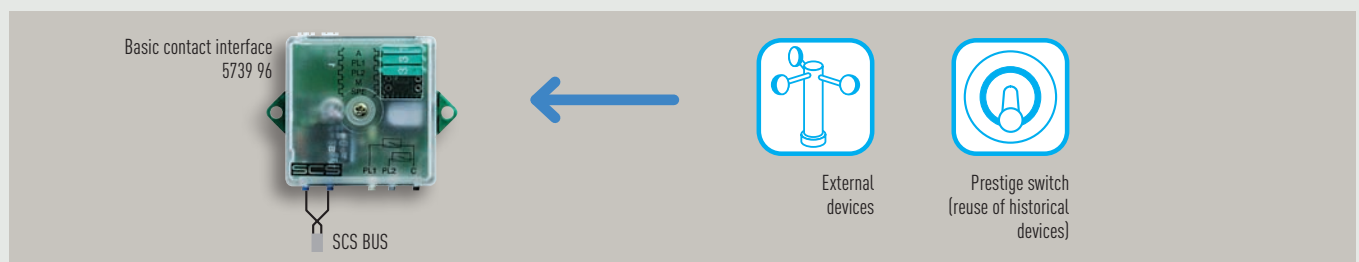
Thermostats, control systems, humidity sensors, wind sensors, etc. can also be connected.



CONTACT INTERFACE IN BASIC MODULE

Thanks to its limited size, this device can be installed behind other devices; indeed, in a 503E box, the interface can be installed just behind traditional devices (e.g.: switches, pushbuttons) or reduced-thickness electronic devices (e.g. controls, sensors). Thermostats, humidity sensors,

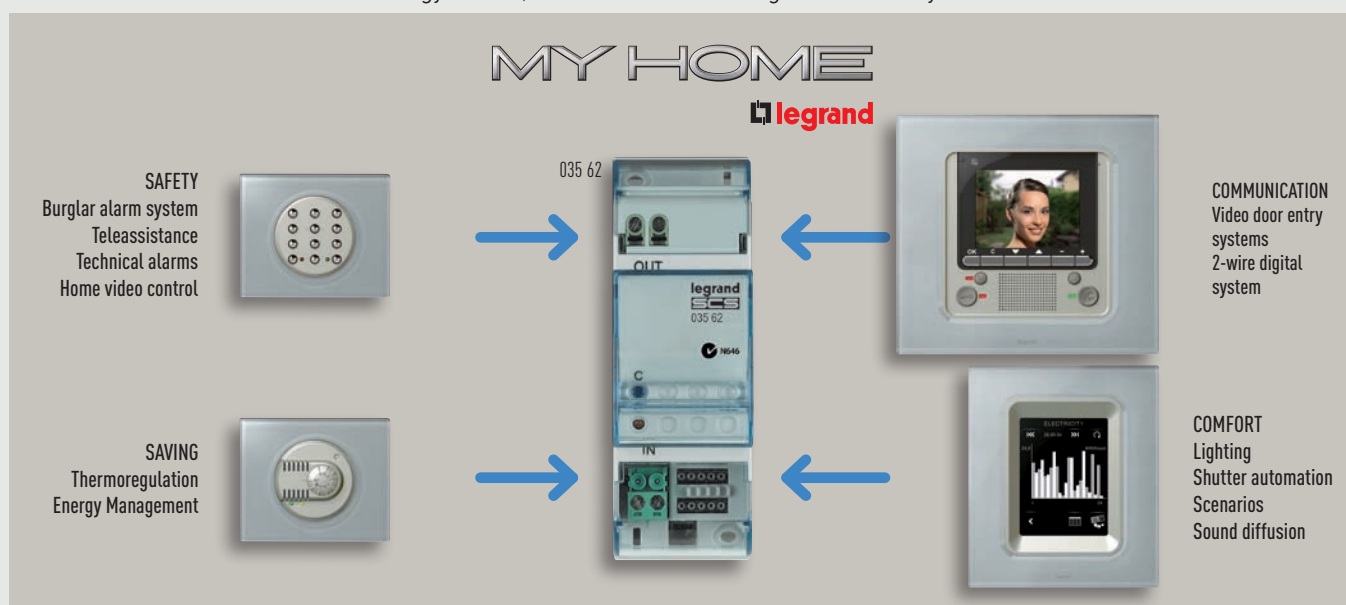
wind sensors, etc. can also be connected. Such a simple installation solution makes it easier to convert traditional electrical systems into home automation systems, since existing flush-mounted boxes can be left in place, with no need for any masonry.



SCS/SCS GATEWAY

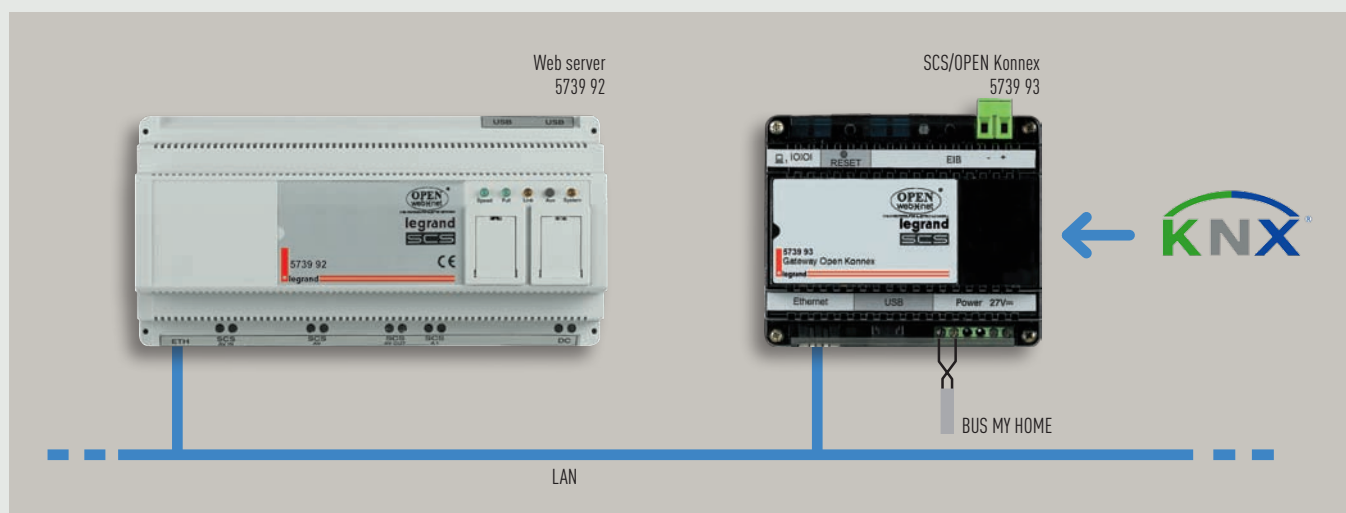
This device, coming inside a DIN container, allows for communication between SCS-technology BUSES, even when

these have different functions. This interface allows to extend existing Automation systems.



SCS/OPEN KNX GATEWAYS

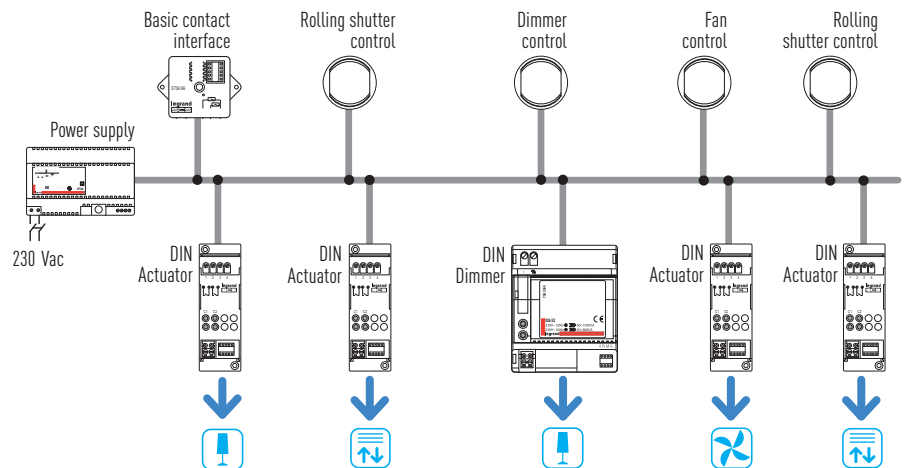
These gateways connect systems based on the SCS technology with standard KNX systems.



Maximum number of devices which can be configured

A maximum of 9 room addresses can be managed in a single system. For every room it will be possible to manage up to a maximum of 9 addresses, hence 9 actuators (a total of 81 addresses). Other associations to one or more groups are added to these addresses.

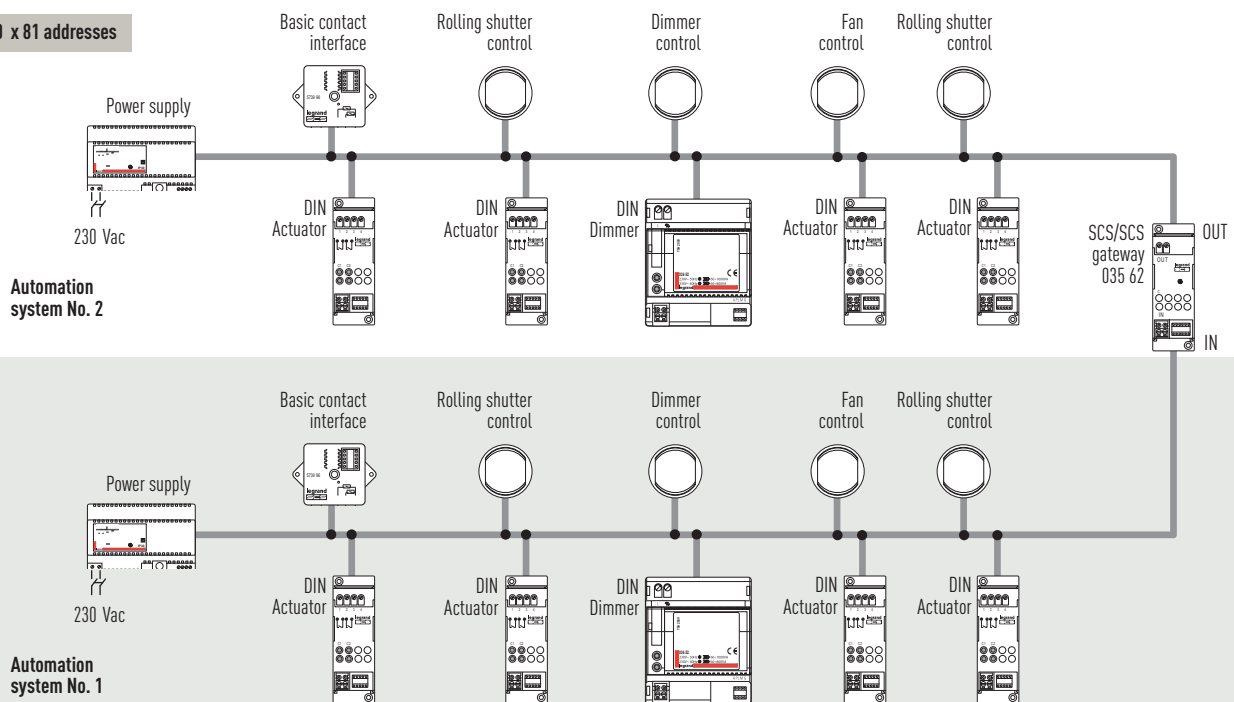
Max 81 addresses



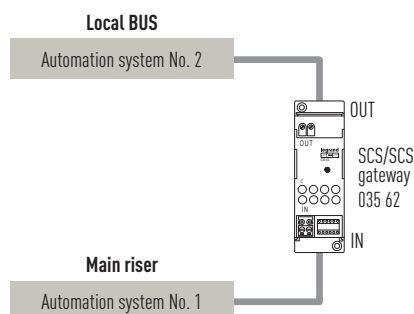
EXTENDED SYSTEMS (LOGICAL EXPANSION)

Within big houses or in service/industrial sectors, there may be the need to carry out Automation systems characterised by a number of devices that may exceed the above-mentioned address limit. In this case it is possible to carry out a complex Automation system by connecting several Automation systems (maximum 9) to a common bus (main riser), using SCS/SCS gateway - 035 62 - configured in "logical expansion" mode.

Max 10 x 81 addresses



The diagram previously described suggests the representation “at levels” of the complete system, in which the riser bus connected to the IN terminal of SCS/SCS gateway 035 62 assumes the identification of main Riser while each individual system connected to the OUT terminal is identified with Local BUS. The integrated system previously described can thus be represented with the following simplified diagram:



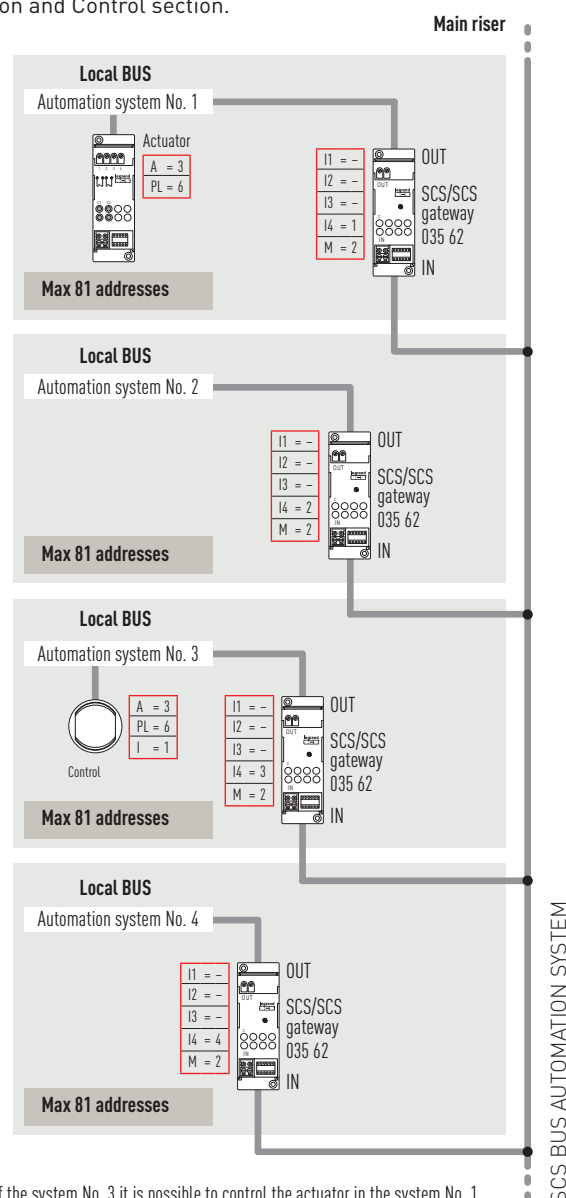
FEATURES AND RULES FOR INSTALLATION

There are 81 configuration addresses for each system (9 light points for each of the 9 rooms). In the main riser it is possible to install control devices configured to send GROUP or GENERAL controls to some or all of the actuators situated in the single systems and in the same main riser. POINT-POINT controls generated inside each single system and on the main riser can reach the actuators situated in the whole system only if they are sent from the appropriately configured cross control device situated on the main riser or on one of the single systems (max 9) connected. In this case it is possible to address up to a maximum of 810 devices (81 devices per system x 9 systems + 81 devices on the main riser). If you need to control and execute the centralised management of the system with Web Server, Touch Screen and Control Unit, these devices will have to be installed in the main riser.

WARNING: configure SCS/SCS gateway 035 62 for operation in “logical extension” mode, inserting configurator 2 in position M and configuring the addresses of positions I3 and I4 with values between 01 and 09, as in the following diagram.

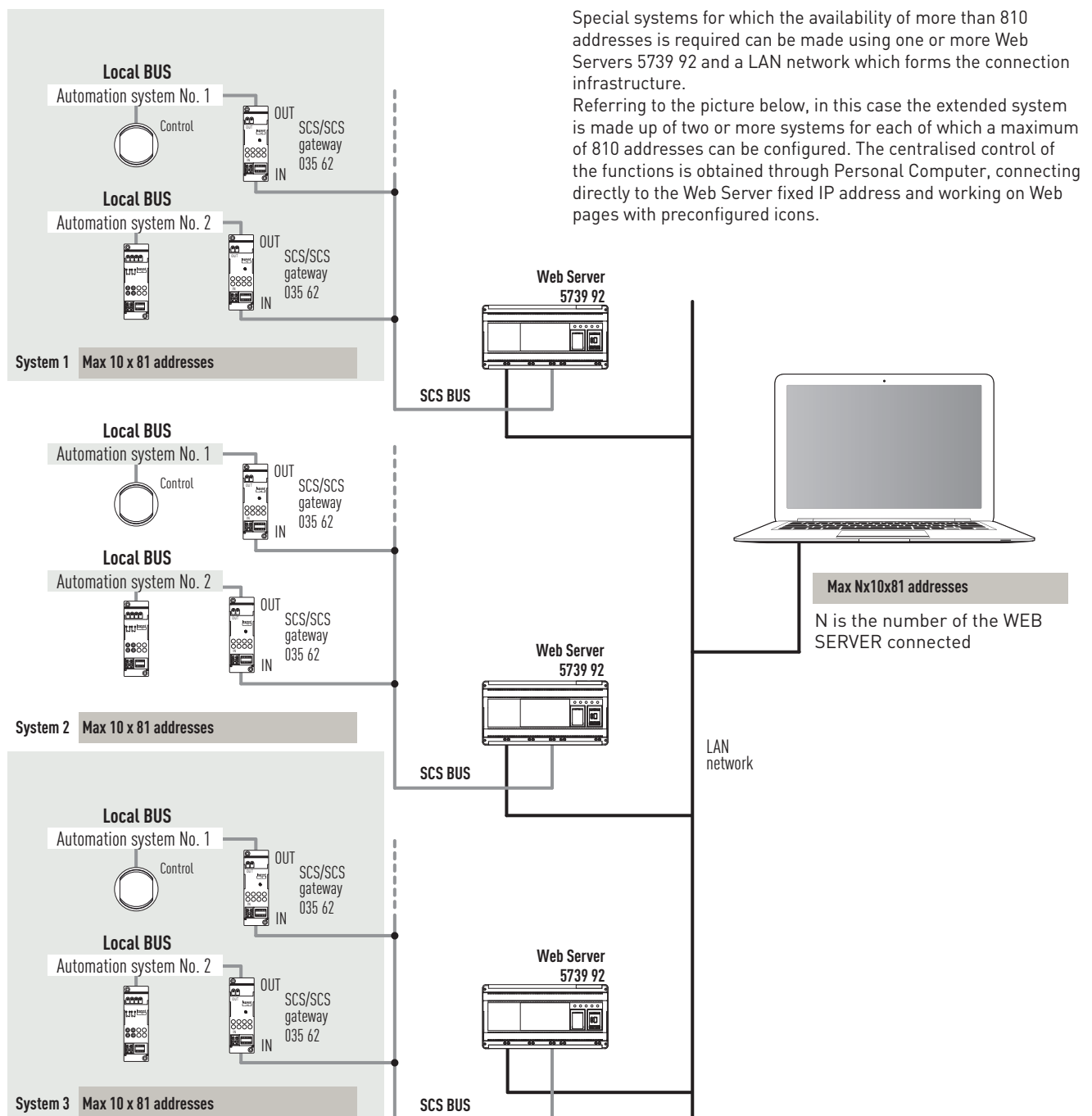
It is important to remember that for the correct operation of an integrated system and thus to use the device virtual configuration mode as well, the Automation system **must be made in agreement with the type of diagram described.**

If three or more systems (up to a maximum of 9) must be combined, these must be connected by means of SCS/SCS gateway 035 62 with a common bus, which from now on we will call “riser”, on which the control, activation and management (for example Touch Screen) devices can also be installed because they belong to the My Home Legrand Automation system. The riser cannot be made, for example, with a Burglar-alarm or 2 wire Video door entry system. For the combination of different systems see the indications given in the Integration and Control section.



Using the control of the system No. 3 it is possible to control the actuator in the system No. 1.

Maximum number of devices which can be configured



Special systems for which the availability of more than 810 addresses is required can be made using one or more Web Servers 5739 92 and a LAN network which forms the connection infrastructure.

Referring to the picture below, in this case the extended system is made up of two or more systems for each of which a maximum of 810 addresses can be configured. The centralised control of the functions is obtained through Personal Computer, connecting directly to the Web Server fixed IP address and working on Web pages with preconfigured icons.

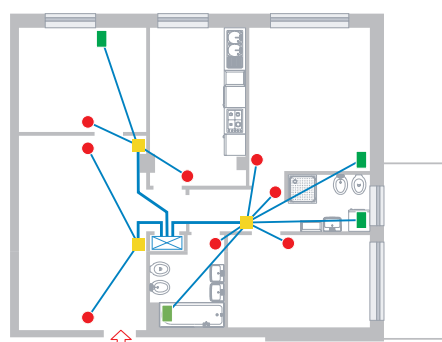
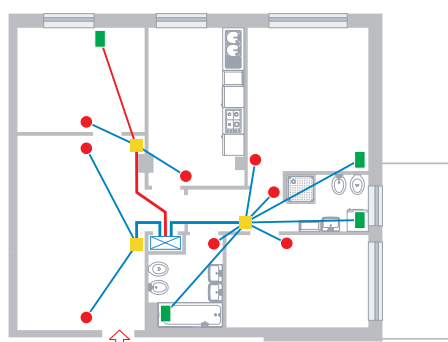
Distances and maximum number of devices

The maximum number of devices that can be connected to the BUS depends on their total absorption and on the distance between the connection point and the power supply. The power supply unit can deliver up to 1,2 A hence, the maximum number of devices will be determined by the sum of the absorptions of the single devices you need to install (see absorption table in

the following pages). For the purposes of the above-mentioned calculations included in the "Technical features". When calculating the absorptions, it is also necessary to consider the availability of current according to the length of the cable. When setting up, please observe the following rules:

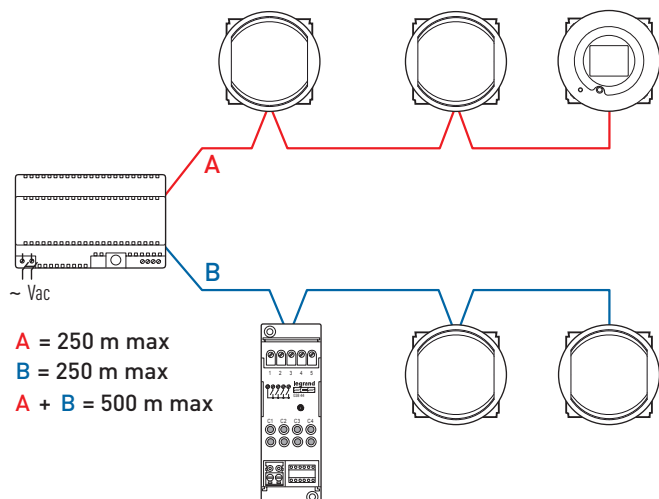
1) The connection between the power supply and the furthest away device must not be longer than 250 m

2) The overall length of connections should not exceed 500 m (extended cable)



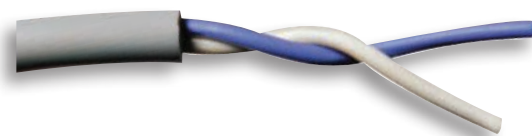
max	1,2 A	with 035 60
max	600 mA	with 035 67
max	250 mA	between the power supply and the furthest away device
max	500 mA	total length

3) For optimum division of the currents on the BUS line power supply should be positioned in the middle.



NOTE:

The maximum current available at the end of the 250 m SCS BUS cable 492 31 is 600 mA.



Distances and maximum number of devices

With very extended systems or with current absorption exceeding a limit of 1.2 A supplied by the power unit 035 60, it is necessary to divide the system into several sections supplied with their own power supply unit and connected between each other with a special interface (SCS/SCS gateway 035 62) configured in "physical expansion" mode.

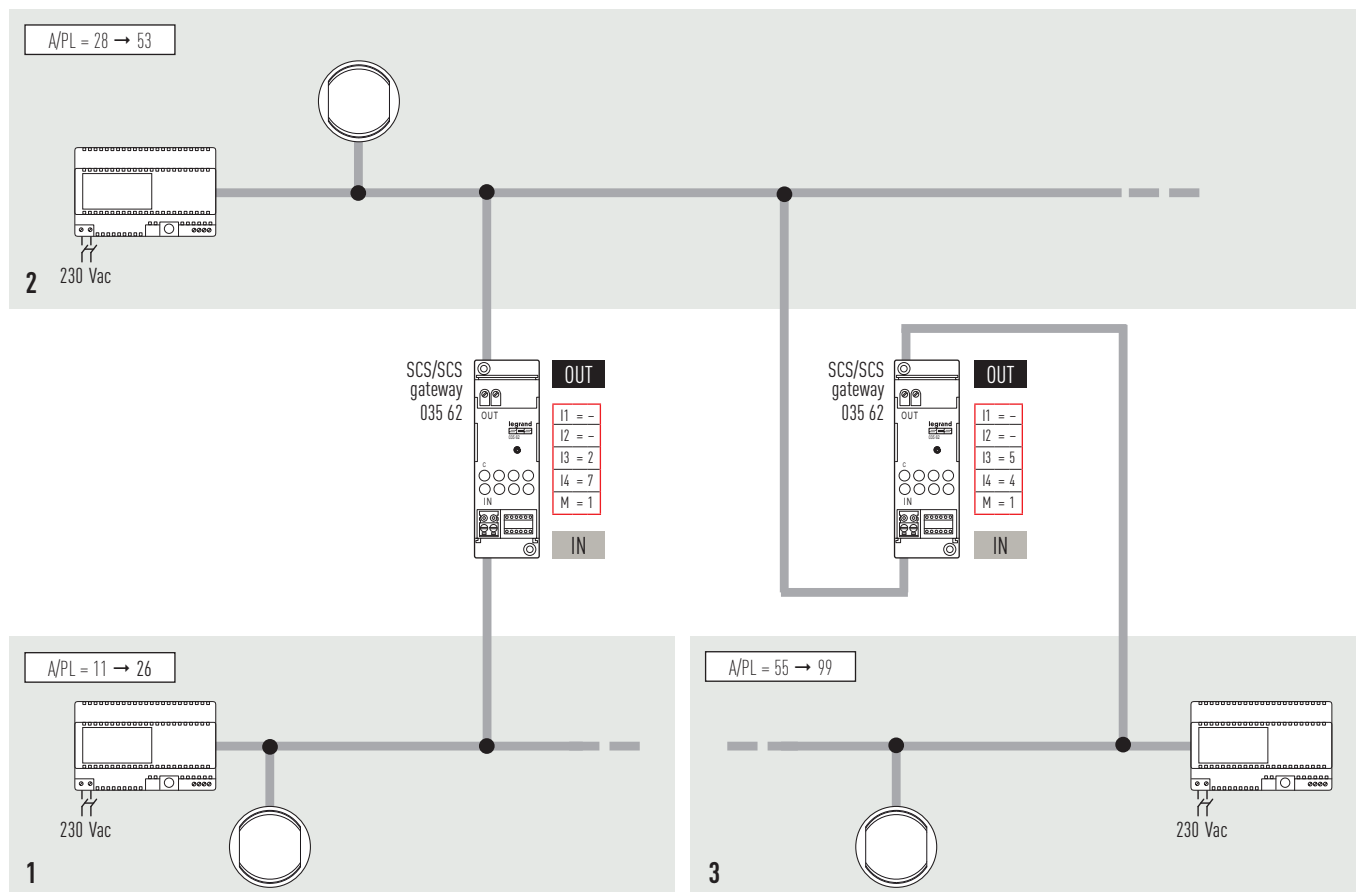
PHYSICAL EXPANSION

Limit systems shall be applied to each bus in terms of absorption and maximum wiring distance, as shown in the previous page.

Therefore, it is not possible to supply a system consisting of two or more buses with only one power supply unit 035 60, connected to each other by interfaces configured in "physical expansion" mode even if the number and type of components connected to the system do not exceed the set maximum absorption. Positions I3 and I4 shall be configured according to the configuration of the

Automation devices in the two systems connected to each other. With reference to the picture, let us suppose, for example, that I3=2, I4=7:

- On the input bus (IN), the addresses of Automation devices No. 1 must be between A=1 / PL=1 and A=2 / PL=6;
- On the output bus (OUT), the addresses of Automation devices No. 2 must be between A=2 / PL=8 to the address of the next interface.



INSTALLATION RULES

When setting up the system, consider the following recommendations:

1. The buses, connected to the interface input and output, must be supplied with their own power supply unit; additionally, the system limits apply for each of them, in terms of absorption and maximum distance specified.

Therefore, it is not possible to supply a system consisting of two or more buses with only one power supply unit (035 60), connected to each other by various interfaces configured in physical expansion mode even if the number and type of components connected to the system do not exceed the set maximum absorption.

2. Two interfaces in parallel cannot be connected to the same bus.
3. It is possible to, use up to **4 interfaces** in series, which divide the system into **5 separate sections**.
4. The scenario module 035 51 and all the devices that can be configured using self-learning mode are installed on the stretch of bus corresponding to its local address. For example if the module scenarios are configured as A=0 (no configurator), PL=1 it will be placed on the stretch of system 1.

Dissipation, size and absorption table

Item	Description	Absorption from Bus (power supply: 27 Vdc)	Size	Dissipation	
				Dissipated power with maximum load	Maximum load
026 02	4 relays DIN actuator 16 A	5 mA	6 DIN modules		
026 11	Ballast DIN dimmer 0 – 10 V	165 mA	6 DIN modules		
026 21	DIN dimmer 1000 VA	5 mA	6 DIN modules		
026 22	Din dimmer 2 x 400 VA	5 mA	6 DIN modules		
026 31	SCS/DALI gateway	5 mA	6 DIN modules		
035 51	Scenario module	20 mA	2 DIN modules	0,6 W	
035 52	Memory module	5 mA	2 DIN modules	0,1 W	
035 53	DIN contacts interface	9 mA	2 DIN modules	0,2 W	
035 60	Power supply 230 V		8 DIN modules	11 W	1,2 A
035 62	SCS/SCS gateway	IN: 25 mA OUT: 5 mA	2 DIN modules	1 W	
035 67	Power supply 230 V		2 DIN modules	5,3 W	
036 52	DIN dimmer 1000 W	9 mA	4 DIN modules	11 W	1000 W
036 53	DIN dimmer 400 W	9 mA	4 DIN modules	11 W	400 VA
036 56 ⁽¹⁾	Ballast DIN dimmer 1 – 10 V	30 mA	2 DIN modules	0,5 W	
038 41 ⁽¹⁾	1 relay DIN actuator 16 A	22 mA	2 DIN modules	1,5 W	
038 42 ⁽¹⁾	2 relays DIN actuator 10 A	28 mA (single loads) 15,5 mA (interlock)	2 DIN modules	1,7 W	
038 44 ⁽¹⁾	4 relays DIN actuator 6 A	40 mA (single loads) 22 mA (interlock)	2 DIN modules	3,2 W	
672 16	IR receiver	8,5 mA	2 flush-mounting modules		
672 17	Scenario control	9 mA	2 flush-mounting modules		
672 18					
672 41	Basic control	9 mA	2 flush-mounting modules		
672 42	Special control	7,5 mA	2 flush-mounting lowered modules		
672 43	Touch control multifunction	20 mA with LED=MIN			
672 44		25 mA with LED=MED			
		30 mA with LED=MAX			
672 46	Touch control	20 mA			
672 47					
5739 96	Basic contacts interface	3,5 mA	basic module		

NOTE: 1) the dissipated power specified is the one recorded when all device relays are at maximum load. In case of lower loads, dissipated power is reduced and can be calculated using the following formula:

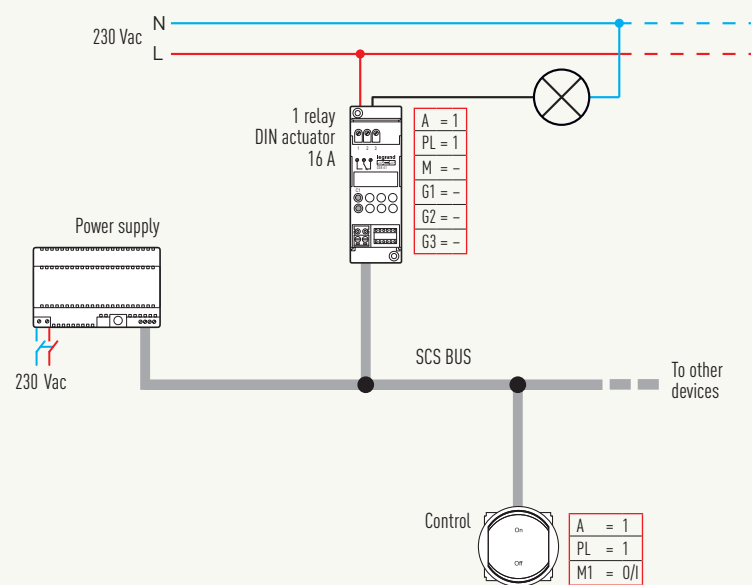
$$P[mW]=140+400 \cdot N+10 \cdot (I_1^2+I_2^2+\dots+I_N^2)$$

P: dissipated power in mW; N: number of loaded relays; I_n : load current corresponding to the "N" relay.

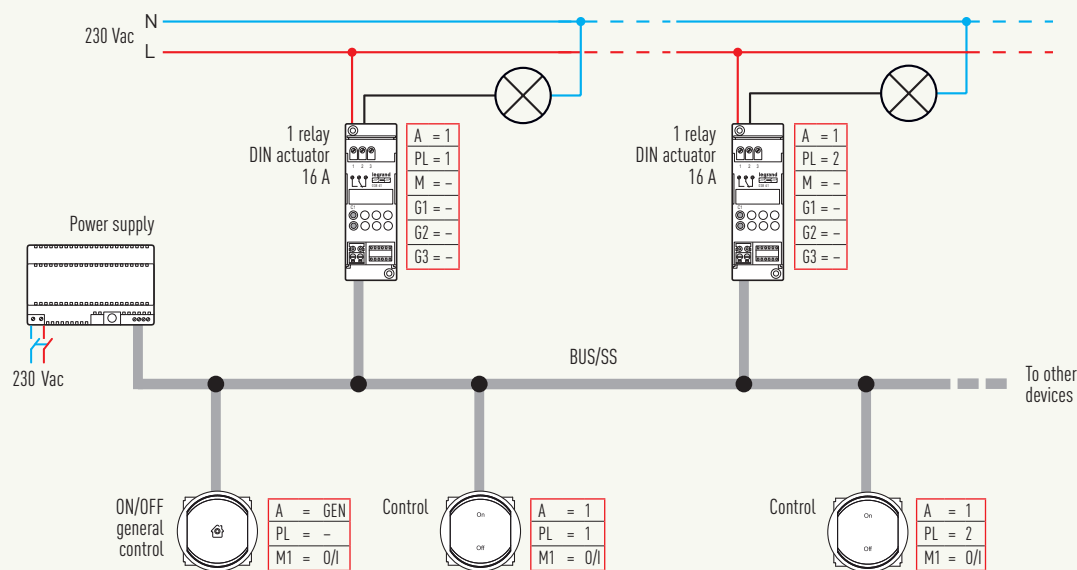
Install the items having the highest dissipated power (particularly power supplies and dimmers) in the lowest positions of the switchboard to enhance heat dissipation. Do not install devices dissipating power above 5 W next to each other: leave an empty module between them.

Single functions

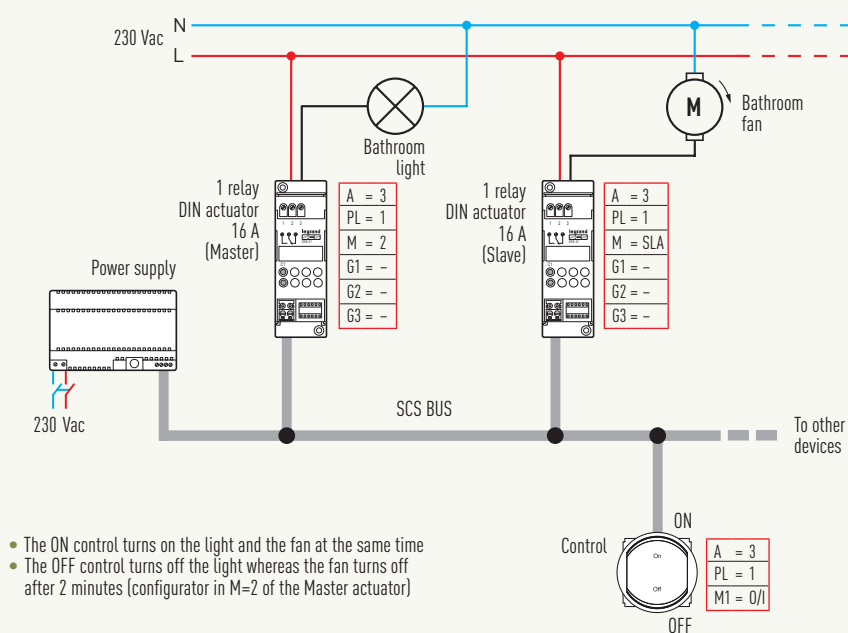
SWITCHING A LAMP ON AND OFF



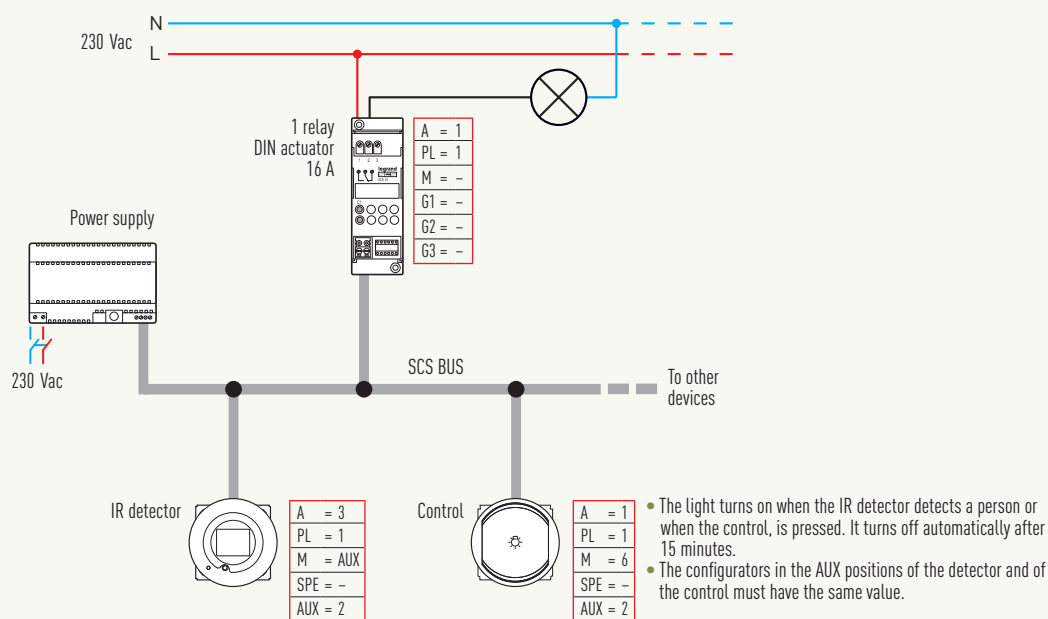
SWITCHING TWO LAMPS ON AND OFF WITH ON/OFF GENERAL CONTROL



SWITCHING-ON CONTROL FOR BATHROOM LIGHT AND FAN WITH DELAYED SWITCHING-OFF

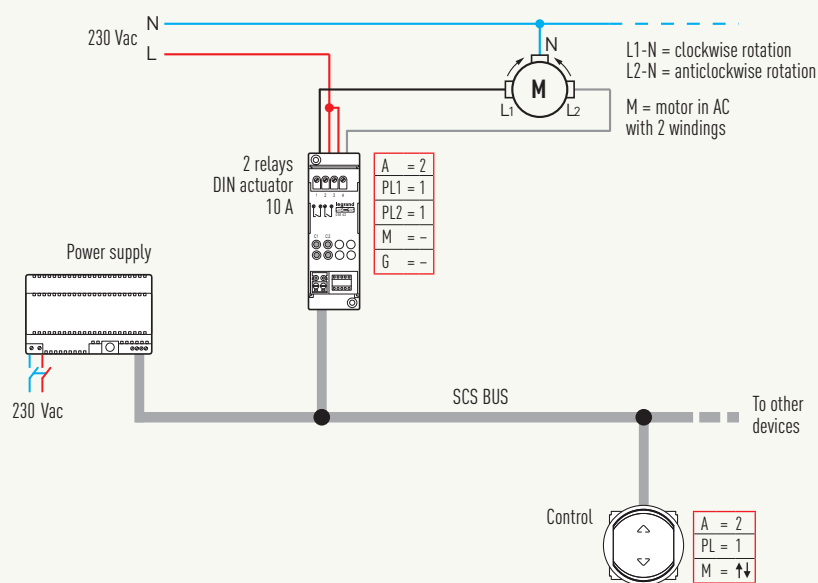


AUTOMATIC LIGHT SWITCHING-ON AND LOCAL CONTROL OF TIMED ON

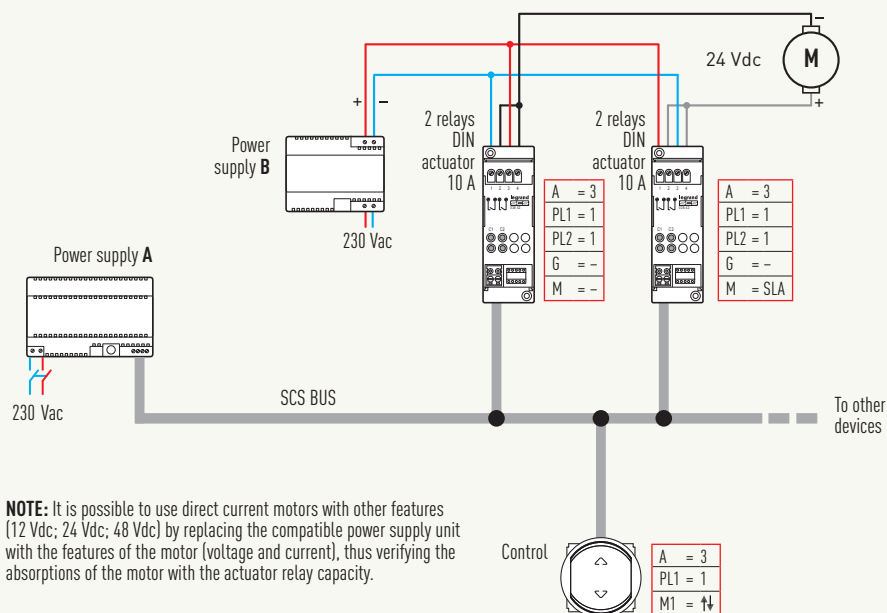


Single functions

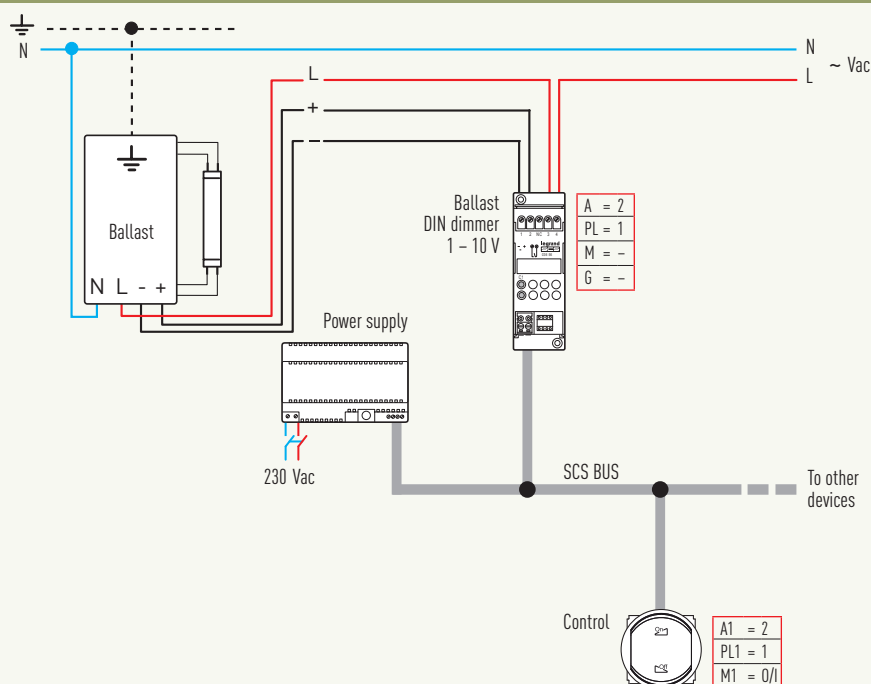
MOTOR CONTROL IN ALTERNATED CURRENT FOR ROLLING SHUTTERS, CURTAINS OR MOTORISED ROLLING SHUTTERS



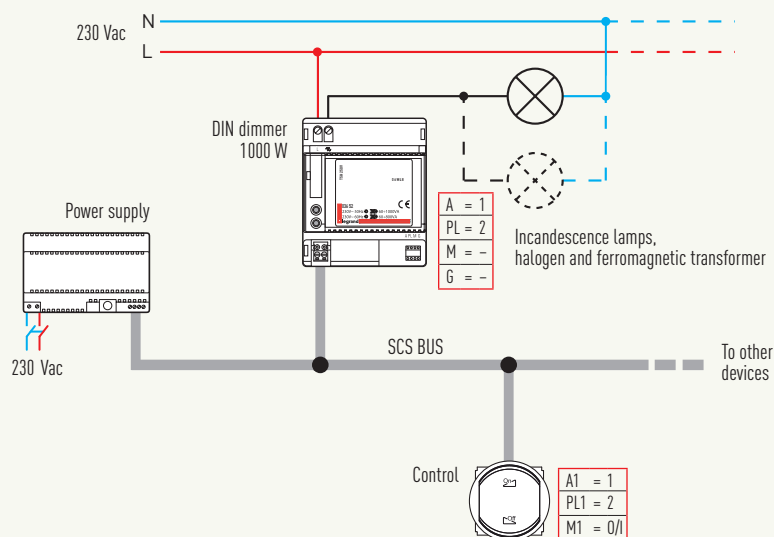
MOTOR CONTROL IN DIRECT CURRENT FOR MOTORISED CURTAINS (EXAMPLE 24 Vdc)



SWITCHING ON AND OFF AND BRIGHTNESS ADJUSTMENT OF FLUORESCENT LAMPS BY MEANS OF THE "BALLAST"

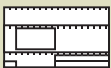
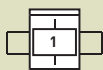





SWITCHING ON AND OFF AND BRIGHTNESS ADJUSTMENT OF INCANDESCENCE LAMPS, HALOGEN AND FERROMAGNETIC TRANSFORMERS

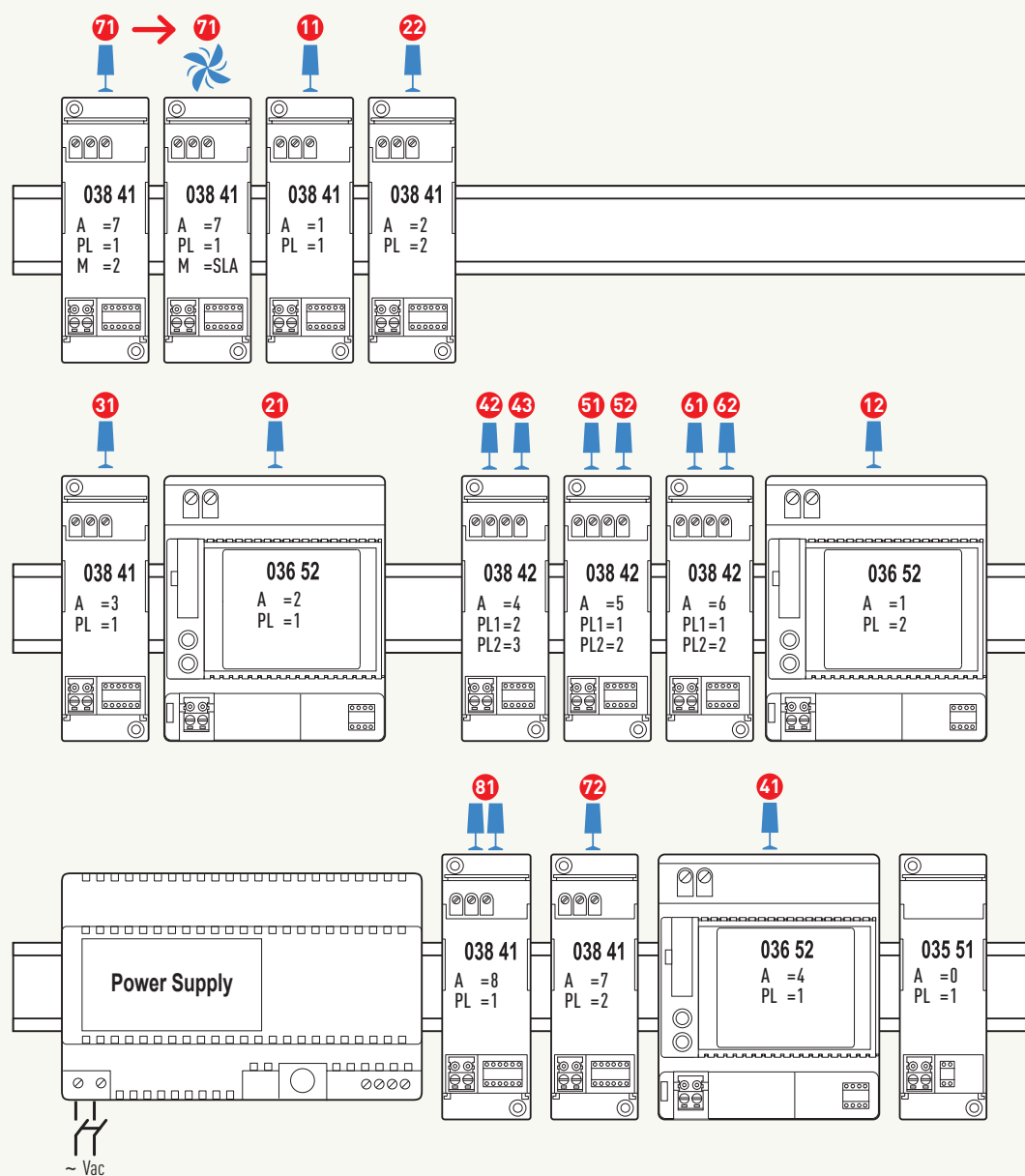


Example of lighting system and management of rolling shutters

Distribution of components inside the individual rooms	
Living room	1 general lighting control (1) + 1 general automation control (36) + Touch Screen Control (34) 1 ceiling light point (11) controlled from 4 points (2-5-6-7) 1 light point (12) controlled from one point (3) with dimmer
Bedroom/Studio	1 ceiling light point (21) controlled from 2 points (8-11) with dimmer 1 light point for bedside table lamp (22) including an actuator and a controlled socket, controlled from 1 point (10) 1 motorised rolling shutter (23) controlled from 2 points (38-39)
Kitchen	1 ceiling light point (31) controlled from 1 point (12) 1 motorised rolling shutter (32) controlled from 2 points (41-42)
Corridor	2 ceiling light points (81) controlled from 5 points (29-30-31-32-33)
Bathroom	1 ceiling light point (71) controlled from 1 point (25) with activation of exhaust fan 1 wall light point (72) controlled from 1 point (28)
Bedroom	1 ceiling light point (41) controlled from 3 points (13-15-16) with dimmer 2 light points for bedside table lamp (42) (43) including an actuator and controlled sockets, each controlled from 1 point respectively (17-18) 1 motorised rolling shutter 44 controlled from 2 points (44) controlled from 2 points (45-46) 1 scenario control unit (43)
Second bathroom	1 ceiling light point (51) controlled from 1 point (19) 1 wall light point (52) controlled from 1 point (20) 1 motorised rolling shutter (53) controlled from 1 point (48)
Second bedroom	1 ceiling light point (61) controlled from 2 points (21-22) 1 light point for bedside table lamp (62) including an actuator and a controlled socket, controlled from point (23) 1 motorised rolling shutter (64) controlled from 2 points (50-51)

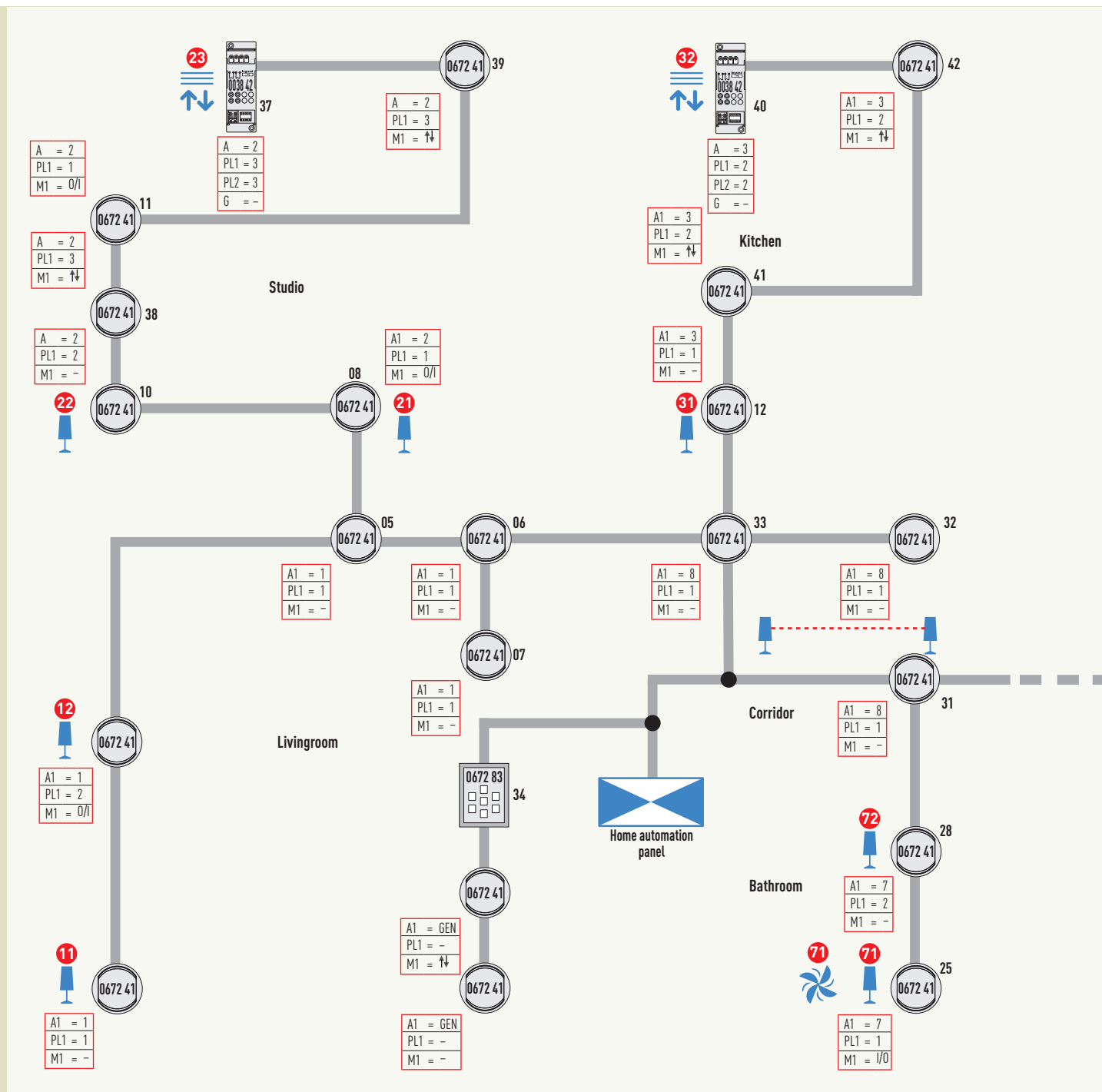
	Home automation panel	DIN modules
	1 SCS power supply	8
	7 x 1 relay DIN actuators	(7x2) =14
	3 DIN dimmers	(3x4) =12
	3 x 2 relay DIN actuators	(3x2) =6
	1 035 51	2
	Total	42

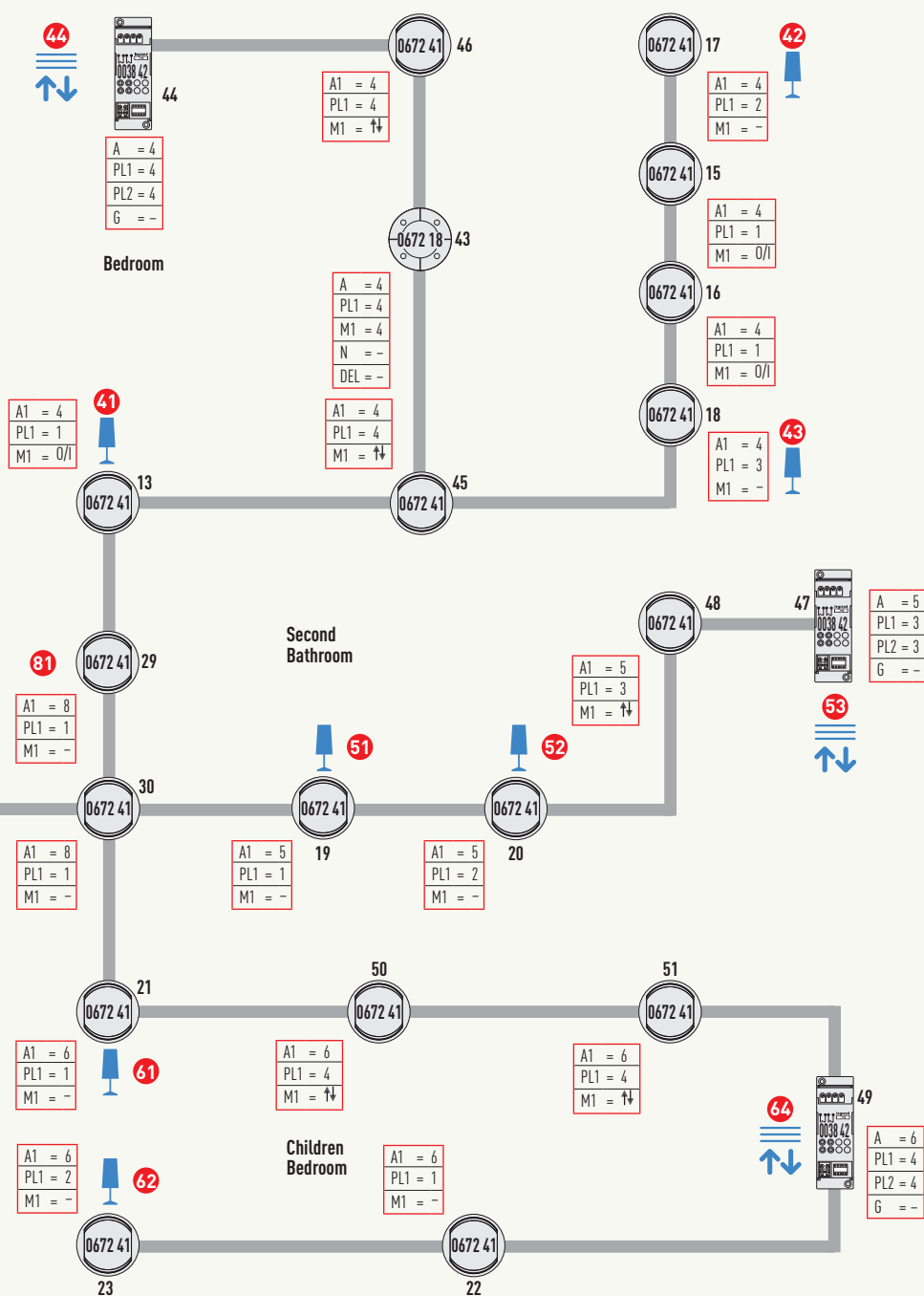
54-MODULE HOME AUTOMATION PANEL



NOTE:
Never install a dimmer next to a power supply
Never install several dimmers next to each other

Example of lighting system and management of rolling shutters





The DIN Attuators witch controls shutters are positioned close to the shutters engine.

Basic configuration concepts

Configuration example

The drawing shows a system for the management of three light points and three shutters. Each actuator is identified by three numbers: Room number (A), progressive device number (PL for the lights, and PL1 and PL2 for the shutters actuators), and the Group (G) they belong to.

Definition of the addresses

Point-point control

Control N° 1 (A=1, PL=1) controls actuator N° 1 (A=1, PL=1 and G=1); in the same way, control N°2 (A=1, PL=2) controls actuator N°2 (A=1, PL=2 and G=1) etc...

Room control

Room control no. N°8 (A=AMB, PL=2) controls actuators N° 4 and 5 marked with A=2.

Group control

Group control N° 7 marked with A=GR and PL=1, controls actuators N°1 and 2 marked with G=1.

Operating modes of controls

The configurator fitted to position M of each control device defines the operating mode. The O/I configurator specifies a light switch on control, performed using the upper key cover (ON) and the bottom key cover (OFF).

On the other hand, the control devices are fitted with configurators in the A and PL position. They specify the addresses of the actuators receiving the control (only one, a group, or several actuators of a room). They are also fitted with configurators in the M position for the definition of the function (ON/OFF or UP/DOWN).

General control

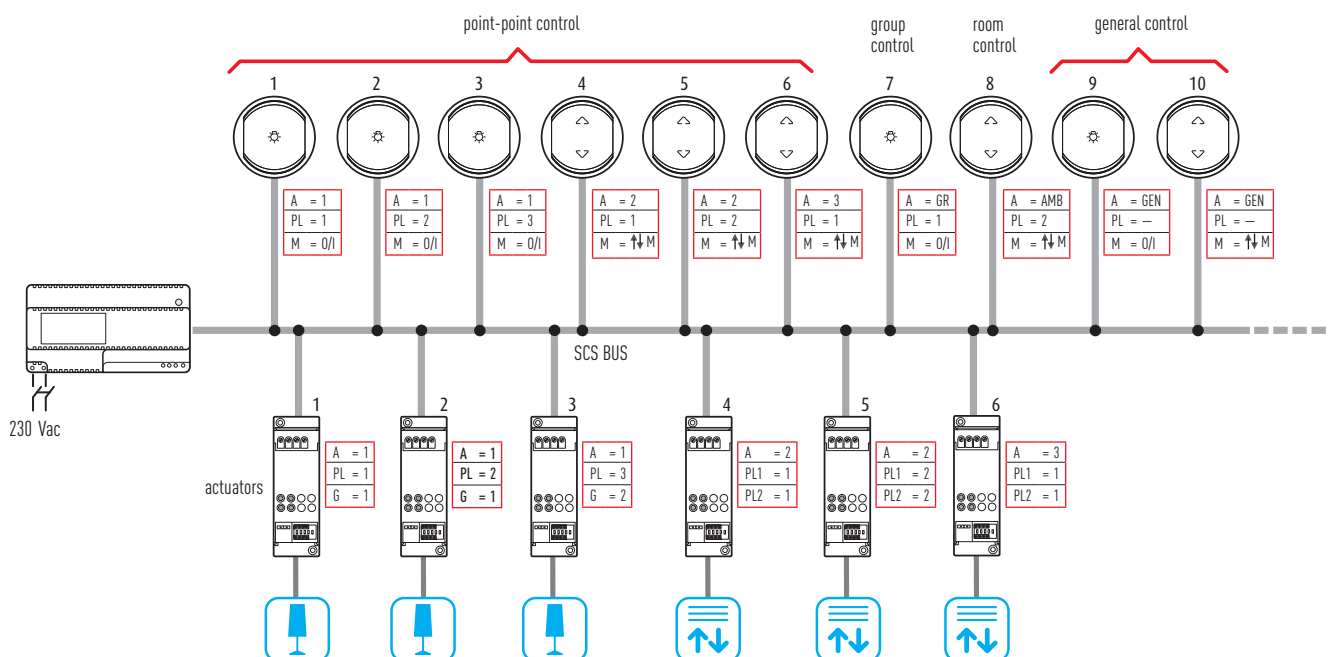
M position to define the function (ON/OFF or UP/DOWN).

The devices identified as A=GEN and PL=- (no configurator), send a general control to all actuators within the system, for the control of lights and the shutters.

NOTE:

Differently from light actuators, the actuators for the management of shutters are configured both in position PL1 and PL2.

On the other hand, the configurators $\uparrow\downarrow$ and $\uparrow\downarrow$ M in the M position specify a control for the management of shutters, for actuators No. 4, 5 and 6.



Basic concepts for the configuration of actuators and controls

Actuators: Addresses and types of controls

In order to understand the addressing logic, it is appropriate to define some of the terms that occur regularly in the text.

Room (A)

Set of devices belonging to a logic zone (in a home, for example, the living room, the bedroom, etc.).

Light Point (PL)

Numeric identification of the single actuator inside the Room.

Group (G)

Set of devices that may also belong to different rooms, but which must be controlled at the same time (e.g. the rolling shutters of the North side of the home, the lighting of the day time area, etc.).

Actuators address

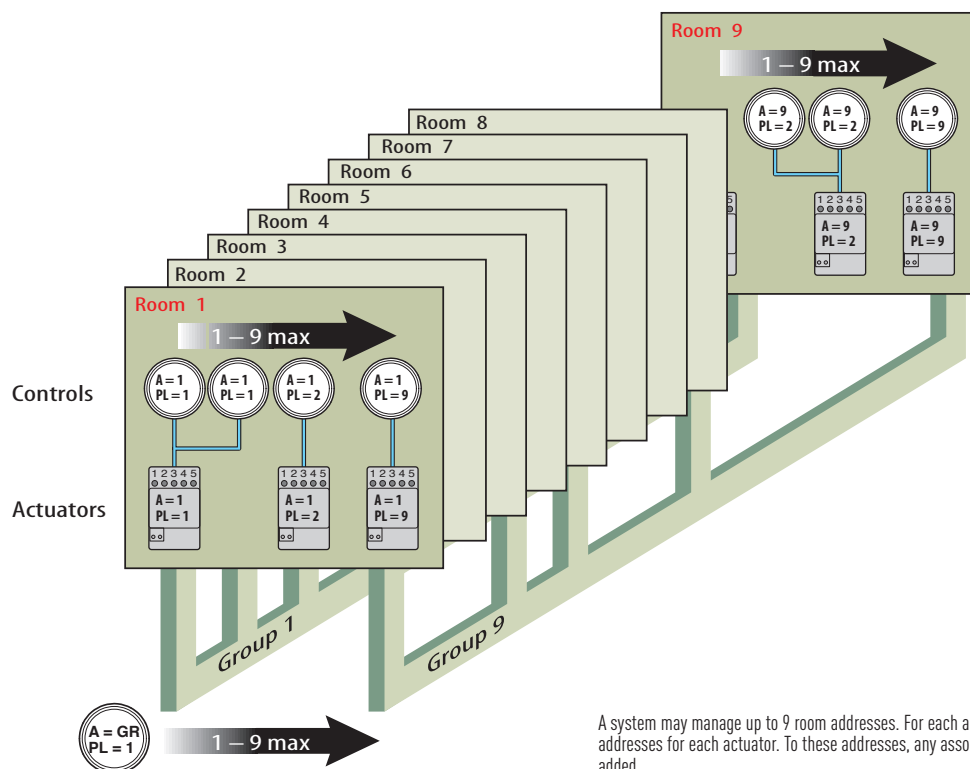
The address of each actuator is univocally defined assigning the numeric configurators 1-9 in the A (Room) and PL (Light Point inside the Room) positions.

For each room, it will be possible to define up to 9 addresses; in a system it will be possible to define up to 9 rooms.

The definition of the group the room belongs to is ensured by fitting a third numeric configurator in the housing identified with G (Group).

Some actuators have several G (G1, G2 and G3) positions, as they may belong to several groups at the same time.

Example: The actuator configured with A=1, PL=3 and G=4 is device No. 3 of area 1, belonging to group 4.



A system may manage up to 9 room addresses. For each area it will be possible to manage up to 9 addresses for each actuator. To these addresses, any associations to one or more groups are also added.

Basic concepts for the configuration of actuators and controls

Controls: addresses and types of controls

Also the control devices have A and PL positions, for the definition of the address of the devices receiving the controls (actuators).

These positions require numeric configurators with graphics, which enable the device to send the corresponding control, in the various modes listed in the table below.

Addressing mode of devices

Type of control	Control device		Actuator device	
	Configurator housing	Configurator value	Configurator housing	Configurator value
Point-point	A	1 – 9	A	1 – 9
	PL	1 – 9	PL	1 – 9
Room	A	AMB	A	1 – 9
	PL	1 – 9	PL	1 – 9
Group	A	GR	G1	1 – 9
	PL	1 – 9	G2	1 – 9
			G3	1 – 9
General	A	GEN		
	PL	–		
AUXILIARY control	A	AUX		
	PL	1 – 9		

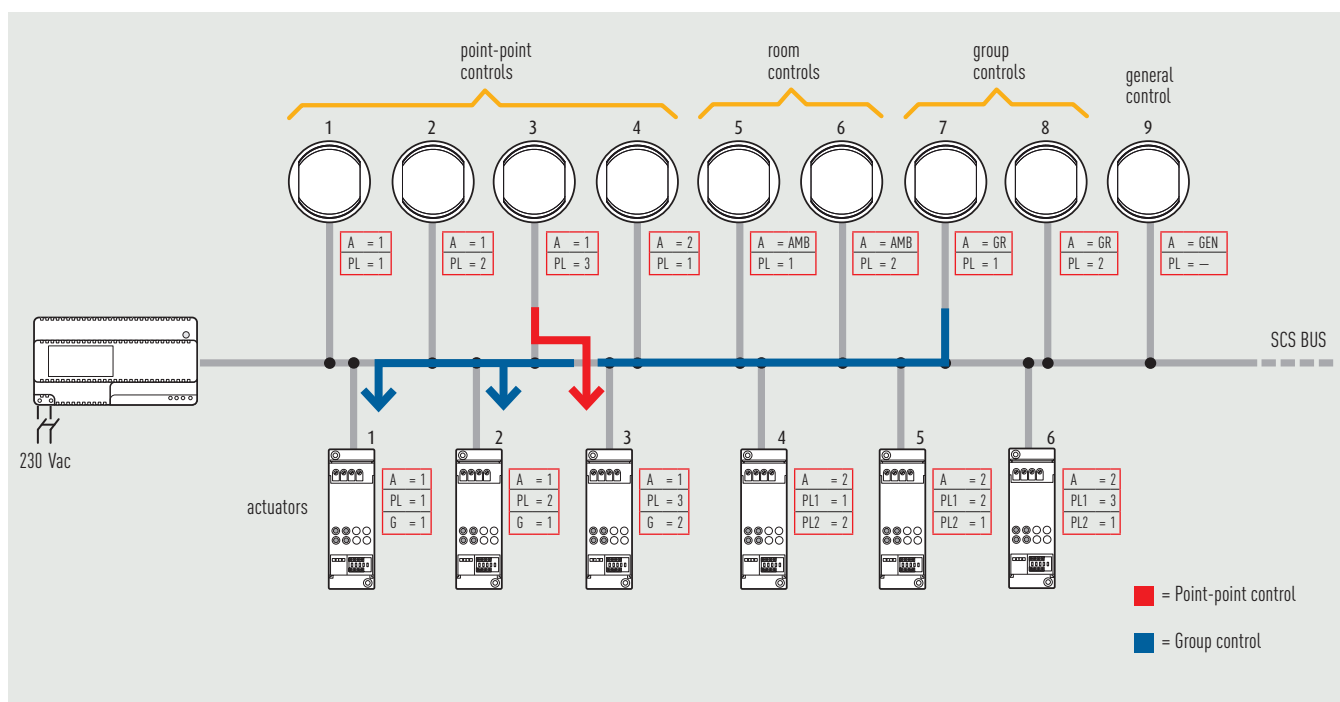
Point-point control

Point-point control

If control N° 3 is configured with A = 1 and PL = 3, this device sends its control to the actuator identified with A = 1 and PL = 3.

Group control

If control N° 7 is configured with A = GR and PL = 1, this device sends its control to the actuator identified with G = 1 (belonging to group 1).



Addressing levels

In order to better clarify the concepts outlined in the previous page, below is an explanation of the four addressing mode. The control devices (senders), enable the activation of the actuators (receivers), with the following modes:

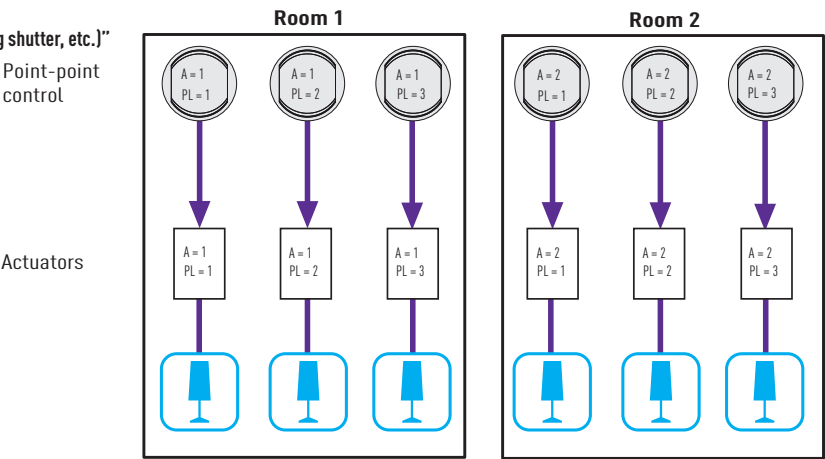
Point-point control

Control directed to one actuator only, identified with a “room number” and a “light point number”.

Control device: A = n* PL = n*

Actuator: A = n* PL = n*

Example: control of a single load (lamp, fan, rolling shutter, etc.)”



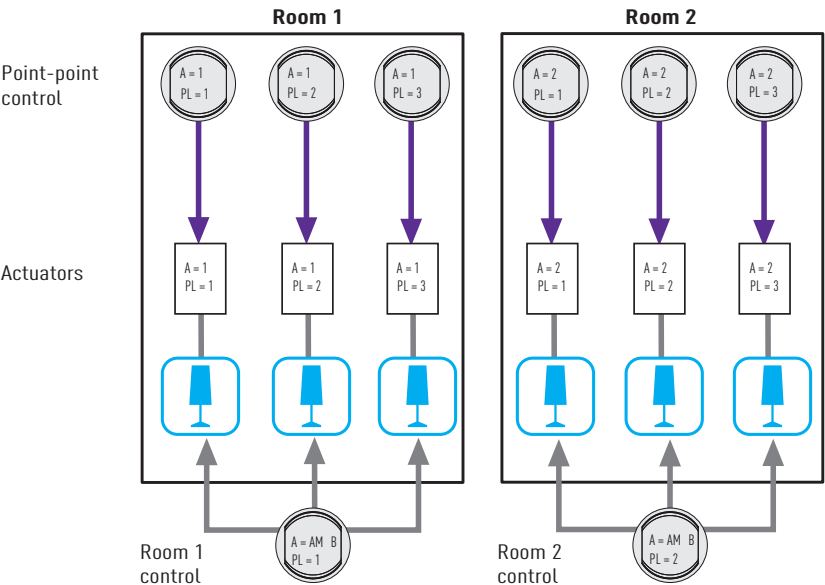
Room control

Control sent to all actuators identified with the same room number.

Control device: A = AMB PL = n*

Actuator: A = n* PL = n*

Example: control of all the lights in a room



n* = any numeric configurator from 1 to 9

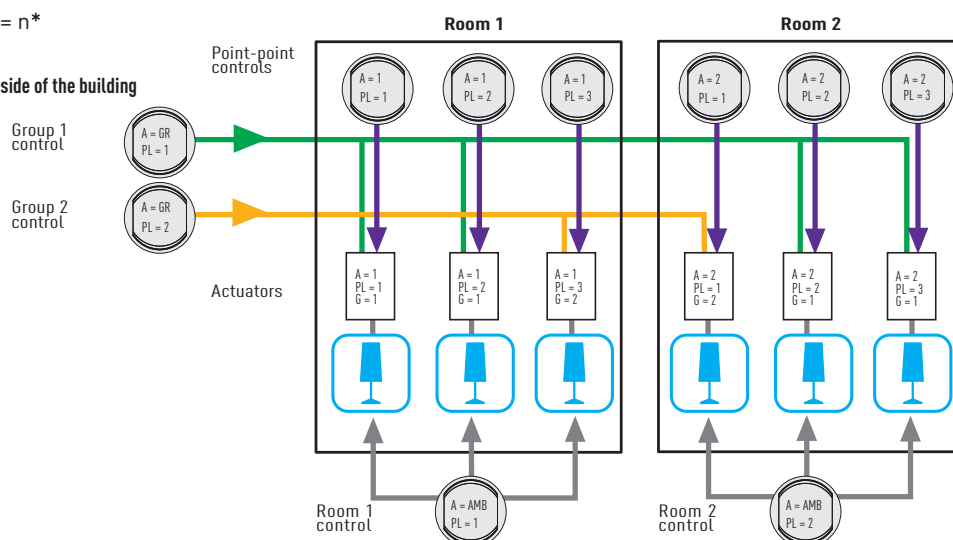
Group control

Control sent to all actuators that perform special functions, even if they belong to different rooms, identified by the same "group number".

Control device: A = GR PL = n*

Actuator: A = n* PL = n* G = n*

Example: Control of all lights of a floor on the North side of the building



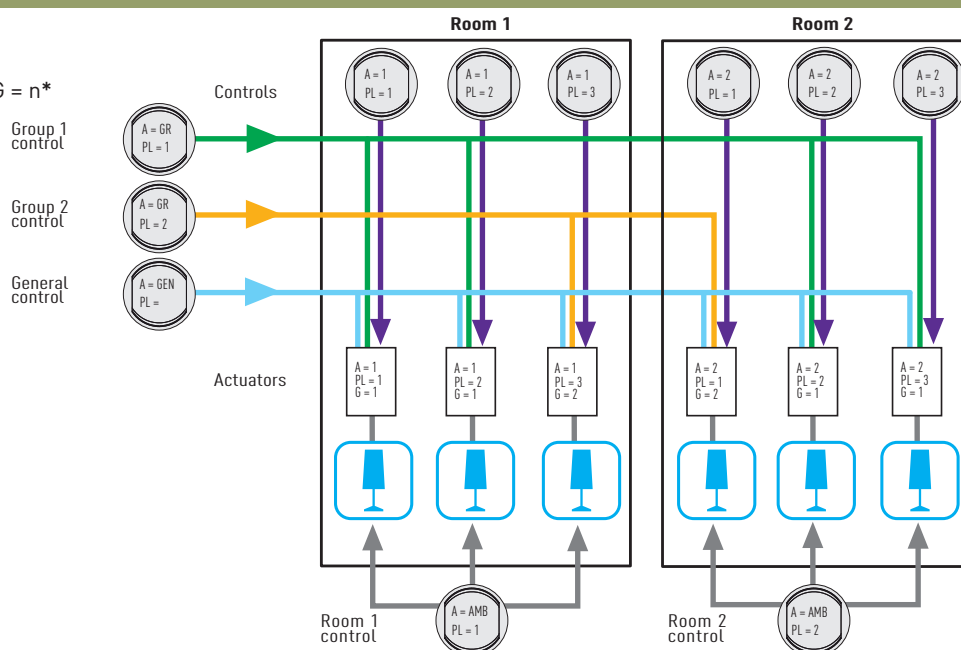
General control

Sent to all system actuators.

Control device: A = GEN PL = /

Actuator: A = n* PL = n* G = n*

Example: control of all building lights



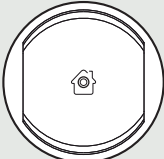
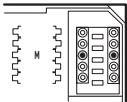
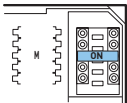
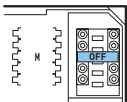
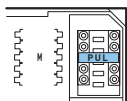
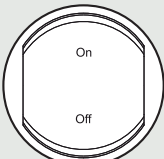
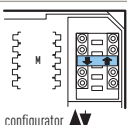
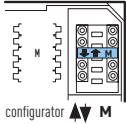
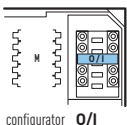
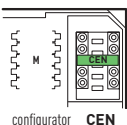
n* = any numeric configurator from 1 to 9

Operation modes

Main control operating modes

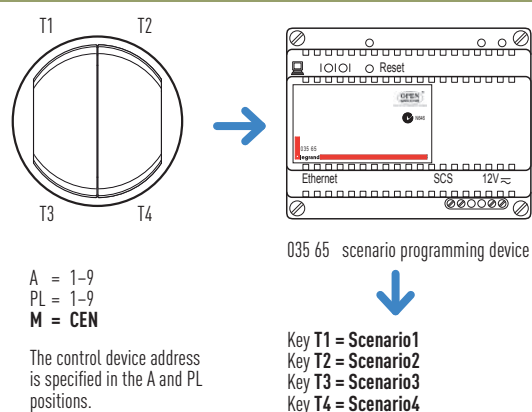
The devices installed within the automation system may perform different operations, such as light intensity adjustment, switching on/of of lights, or opening/closing of shutters. The definition of the function performed, i.e. what function **must be** performed by the device, is set by fitting the configurators in the **M** marked

housings of the control devices, together with the appropriate key covers (for flush mounting only devices). The following table shows the various operating modes based on the configurator and the type of key cover used in the device.

Table		
Key cover	Configurator value (M)	Function performed
 Push button mode	 no configurator	Cyclical ON-OFF control Repeatedly pressing the relay actuators device key cover, ON and OFF controls will be sent in a cyclical way. With dimmer actuators, keep the pushbutton pressed to adjust the load power.
	 configurator ON	ON control When pressing the corresponding key cover, the device sends the ON control.
	 configurator OFF	OFF control When pressing the corresponding key cover, the device sends the OFF control.
	 configurator PUL	Monostable ON-OFF control (pushbutton) This mode can perform an ON/OFF control similar to the control of a traditional point-point pushbutton, thus intended just for one address.
 Switch mode	 configurator ▲▼	Bistable control with hold (UP-DOWN for rolling shutters) Pressing the key cover (lower or upper) sends the UP-DOWN control to the rolling shutter motor. After the control has been sent, press the lower or upper key cover again, to stop the rolling shutter in the required position.
	 configurator ▲▼ M	Monostable control (UP-DOWN for rolling shutters) The device sends an UP-DOWN control for a rolling shutter motor as long as the lower or upper key cover is pressed. When the key cover is released, the motor STOPS.
	 configurator O/I	ON/OFF control Used with relay actuators, when the upper key cover is pressed the device sends an ON control; when the lower key cover is pressed the device sends an OFF control. With dimmer actuators, pressing the upper and lower key cover adjusts the load power.
	 configurator CEN	CEN The device activates the advanced scenarios saved in 035 65.

CEN operating mode

This special operating mode can be used for managing scenario programming devices 035 65. As outlined in this guide, the device can be used to manage scenarios, including complex ones, that are activated automatically following system events, or manually by pressing the key of a control device configured with the CEN configurator in the M position. The connection between the key (upper or lower) of the control device and the scenario to activate, is performed using the software for the creation of scenario, following by saving the scenario inside the device. For example, four independent scenarios may be activated, using the control device 672 41, and using pushbuttons T1-T4.



Auxiliary controls

Some special functions may be performed using a common resource for all SCS systems: the auxiliary channels. Up to 9 transmission channels are available for sending controls. It is possible to send controls through the auxiliary channels from any devices, by configuring A=AUX and PL=1-9. The PL configurator specifies through which auxiliary channel the control must be

sent, while the operating mode is specified by configurator M as for all other controls. Actuators do not directly recognise these controls; it is therefore necessary to use the special control that translates the auxiliary in a control that can be performed by the actuators.

Main actuator operating modes

Actuators may be configured with the following operating modes:

	Configurator value (M)	Function performed
	<p>configurator 1 - 4</p>	<p>Special functions</p> <p>This mode can be used to perform special functions (delayed OFF, timed STOPS), based on the type of actuator used (single or double) and the numeric configurator used.</p>
	<p>configurator SLA</p>	<p>Slave</p> <p>This mode can be used to instruct two or more actuators to perform the control. In practice, with the SLA (Slave) configurator, the actuators repeat the function performed by another actuator operating as a Master. Actuators must have the same addresses and must be of the same type (or all light actuators, or all shutter actuators)..</p>
	<p>configurator PUL</p>	<p>PUL</p> <p>The device does not activate with Room and general controls</p>



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