TECHNICAL GUIDE

HOTEL ROOMS
BACnet® IP SOLUTIONS

INSTALLATION AND USER GUIDE

www.legrandoc.com

THE GLOBAL SPECIALIST IN ELECTRICAL AND DIGITAL BUILDING INFRASTRUCTURES

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Topics

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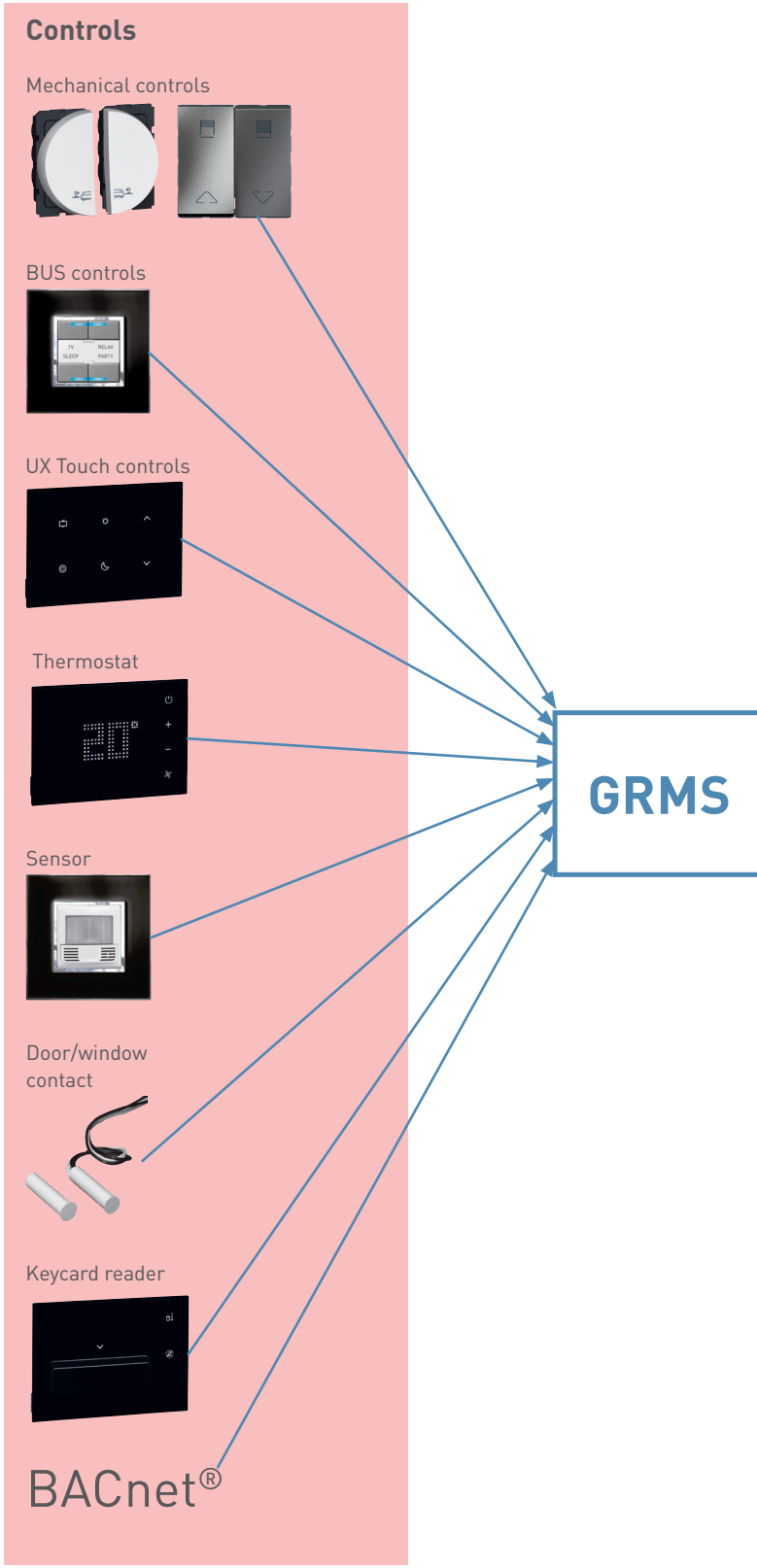
WHAT IS GRMS?

GRMS: Guest Room Management System

GRMS (Guest Room Management System) is the hotel room automation system. Depending on the commands sent by the controls, this automation system is used to control the lights (ON/OFF or dimming), openings (motorised curtains, shutters, windows, etc), thermoregulation (compatible with any type of HVAC – Heating, Ventilation and Air Conditioning system), launch background lighting and comfort scenarios and also control special hotel functions such as Make Up Room (MUR)/ Do Not Disturb (DND) services, presence/absence in the room. Lastly, the GRMS is used to communicate with third-party systems such as supervisors, access control systems, PMS, tablets/smartphones, TV systems, etc.

There are several types of control: conventional (or mechanical) controls, BUS controls, touch controls, automatic controls (sensor, door contact, etc), hotel controls (keycard reader, DND/MUR control, etc) and "network" controls. This offers a wide choice of functions, ergonomics and aesthetics to suit any environment and any style (traditional, modern, luxury, hi-tech, etc). "Network" controls are commands sent by third-party systems such as supervisors, access control systems, PMS, tablets/smartphones, TV systems, etc



The Legrand GRMS can adapt to all types of thermoregulation system – centralised system or local system. A centralised system is a system controlled via the IP network: the room thermostat sends its commands to the GRMS, which sends them to the IP network, as far as the IP gateway in the HVAC system, and this relays commands to the room heating/cooling unit. A local system is a system controlled by an HVAC actuator (part of the GRMS) in the room. This guide shows the different architectures according to the HVAC system in the System Architecture section. The Legrand GRMS is used to control: ON/OFF, 3-way or 0-10 V thermostatic valves for water underfloor heating or radiators, to control electric radiators, electric underfloor heating, electric radiant panel heaters and to control 2 or 4-pipe fan coil units with ON/OFF, 3-way or 0-10 V valves.

The keycard reader (or Virtual Keycard function) indicates presence/absence in the room. It is used to launch Welcome and Leave scenarios. The Welcome scenario is a scenario defined by the hotel manager to offer guests a welcoming scene when they enter their room. The Leave scenario is a cost-effective scenario (switching off the power, changing the thermostat from comfort mode to ECO mode, etc) to save energy.

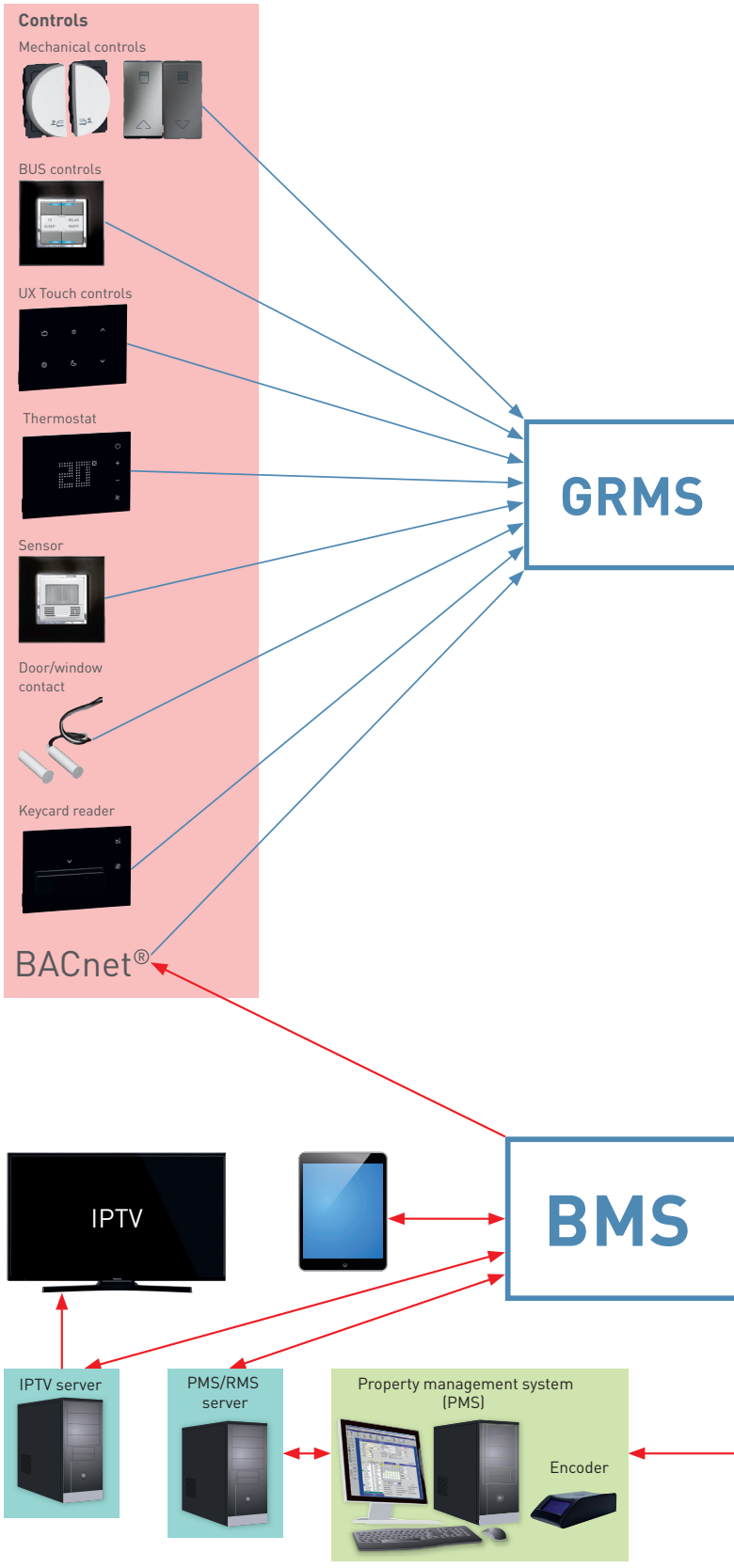
THE HOTEL SOLUTION

The hotel solution

The hotel solution is a set of different systems, each of which fulfils a particular function required for the hotel to operate. There is the PMS (Property Management Software) for managing room bookings and payment, there are access control systems to allow authorised individuals access to rooms, there is thermoregulation to control temperature in the room, there is the GRMS to manage the lights, shutters, etc and there are systems for providing comfort such as television, tablets/smartphones, etc. This hotel solution can be a solution where all these systems operate independently, or a solution where all these systems are interconnected for extra functions and comfort, etc.

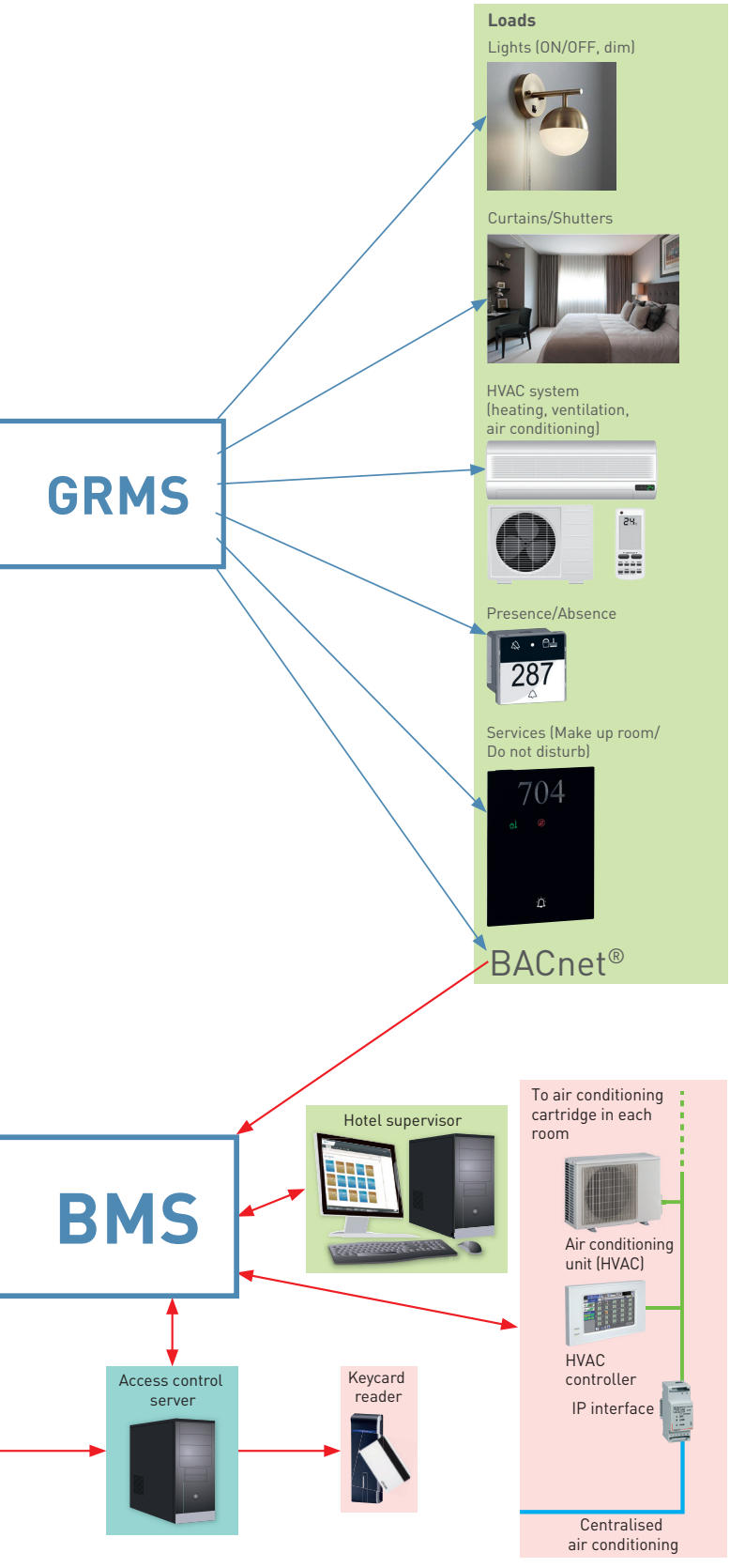
Legrand's philosophy is to work with market leaders. Legrand offers an open GRMS system which is easily integrated in the hotel solution. It uses the BACnet protocol. The BACnet (Building Automation Control and NETwork) protocol is the buildings protocol. The majority of systems that want to be interoperable have a BACnet-compatible gateway. The Legrand GRMS can talk natively to the BACnet protocol, so has no need for an extra gateway to interconnect.

The BMS (Building Management System) is the tool which allows all these systems to interconnect. It is a multi-protocol tool which defines the links between the systems (for example, it creates the link between the access control system of room 304 and the GRMS of room 304) but can also translate between the different system protocols and send all the data to one or more supervisors.



IP network

BMS: Building Management System



Interconnection of several systems provides additional functions such as for example:

- When the GRMS is linked to the PMS: the system can remember the previous room status in which the guest left it, if it is the same guest entering. But it will launch the Welcome scenario defined by the hotel manager if it is a new guest entering.

- When the GRMS is linked to an access control system that can discriminate between the profile of the individual using their keycard to enter (guest or staff): the system can launch a welcome scenario for guests which differs from the welcome scenario for staff. This provides an optimised scenario for staff to save them time (for example, switching on all the lights for maximum ease of cleaning, locking all the control units so they can be cleaned without controlling the loads, opening the curtains, etc).

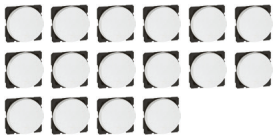
- When the GRMS is linked to the TV system: when the guest enters the room, the system can switch on the TV, which plays a welcome message. Or when the guest launches the going to sleep scenario, the system switches off the TV after a time delay defined by the hotel manager.

- When the GRMS is linked to the safe and to a supervisor at reception: the person on reception can check that the safe is empty at Check OUT.

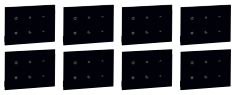
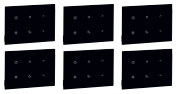
- When the GRMS is linked to the HVAC system and to a supervisor at reception: when a guest calls reception because they cannot adjust the temperature in their room, the person on reception can adjust the temperature for them without leaving their post.

- Etc.

SCALABILITY

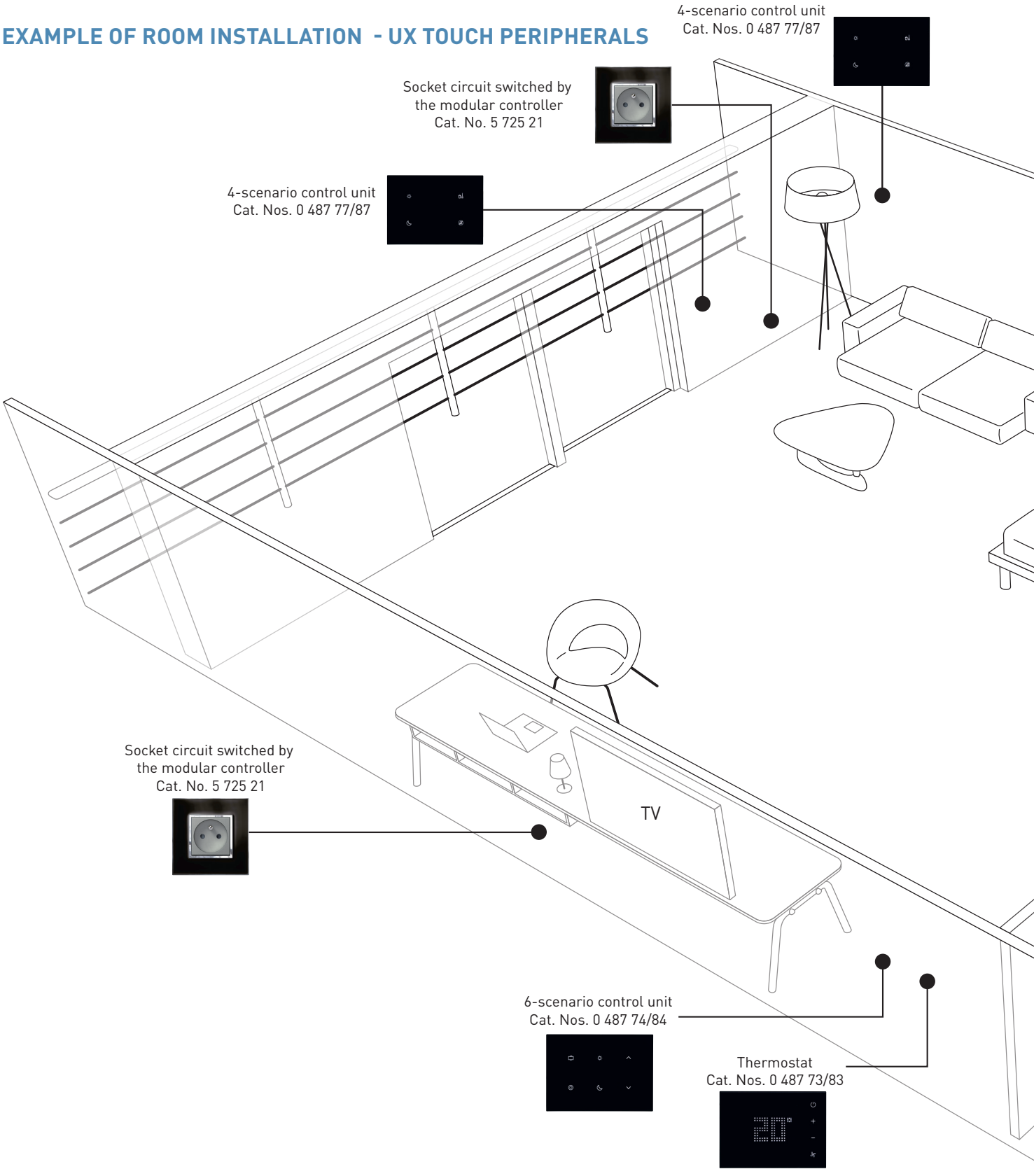
	Standard	Medium
Large Suite	16 ON/OFF circuits  16 mechanical controls  Mechanical corridor display unit Mechanical DND/MUR control Mechanical keycard reader	10 ON/OFF circuits 6 DALI circuits  2 dimming circuits - all loads  12 BUS controls  BUS corridor display unit  BUS DND/MUR control  BUS keycard reader  3 BUS thermostats 
Junior suite	8 ON/OFF circuits  8 mechanical controls  Mechanical corridor display unit Mechanical DND/MUR control Mechanical keycard reader	8 ON/OFF circuits 2 DALI circuits  8 BUS controls  BUS corridor display unit  BUS DND/MUR control  BUS keycard reader  BUS thermostat 
Room	5 ON/OFF circuits  4 mechanical controls  Mechanical corridor display unit Mechanical DND/MUR control Mechanical keycard reader	4 ON/OFF circuits 1 DALI circuit  5 BUS controls  BUS corridor display unit  BUS DND/MUR control  BUS keycard reader  BUS thermostat 

*Scalability: The Legrand GRMS can adapt to any type of hotel, from a standard hotel right up to Palace hotels. It is suitable for any type of room, from a 15 m² room to the 500 m² Large Suite. And the Legrand GRMS offers all hotel functions (corridor display unit, keycard reader or virtual keycard function, DND/MUR services, controlling loads

Luxury	Palace
8 ON/OFF circuits 10 DALI circuits  4 dimming circuits - all loads  8 UX Touch controls  UX Touch corridor display u  UX Touch keycard reader & DND/MUR c ol  4 UX Touch thermostats 	6 ON/OFF circuits 12 DALI circuits  8 dimming circuits - all loads  20 ART controls  2 UX Touch bedside panels  UX Touch corridor display  UX Touch keycard reader & DND/MUR ol 2 UX Touch thermostats 
6 ON/OFF circuits 4 DALI circuits  2 dimming circuits - all loads  6 UX Touch controls  UX Touch corridor display u  UX Touch keycard reader & DND/MUR c ol  2 UX Touch thermostats 	3 ON/OFF circuits 6 DALI circuits  6 dimming circuits - all loads  15 ART controls  2 UX Touch bedside panels  UX Touch corridor display  UX Touch keycard reader & DND/MUR ol UX Touch thermostat 
3 ON/OFF circuits 3 DALI circuits  3 UX Touch controls  1 UX Touch bedside panel  UX Touch corridor display u  UX Touch keycard reader & DND/MUR c ol 	3 ON/OFF circuits 5 DALI circuits  10 ART controls  1 UX Touch bedside panel  UX Touch corridor display u  UX Touch keycard reader & DND/MUR ol 

such as ON/OFF, dimming, shutters, thermoregulation, etc) and integration with other systems (access control, PMS, control via a tablet, centralised HVAC system, IPTV, etc), for a small room in a standard hotel right up to the Large Suite of a Palace hotel.

EXAMPLE OF ROOM INSTALLATION - UX TOUCH PERIPHERALS



Bedside panel
Cat. Nos. 0 487 72/82

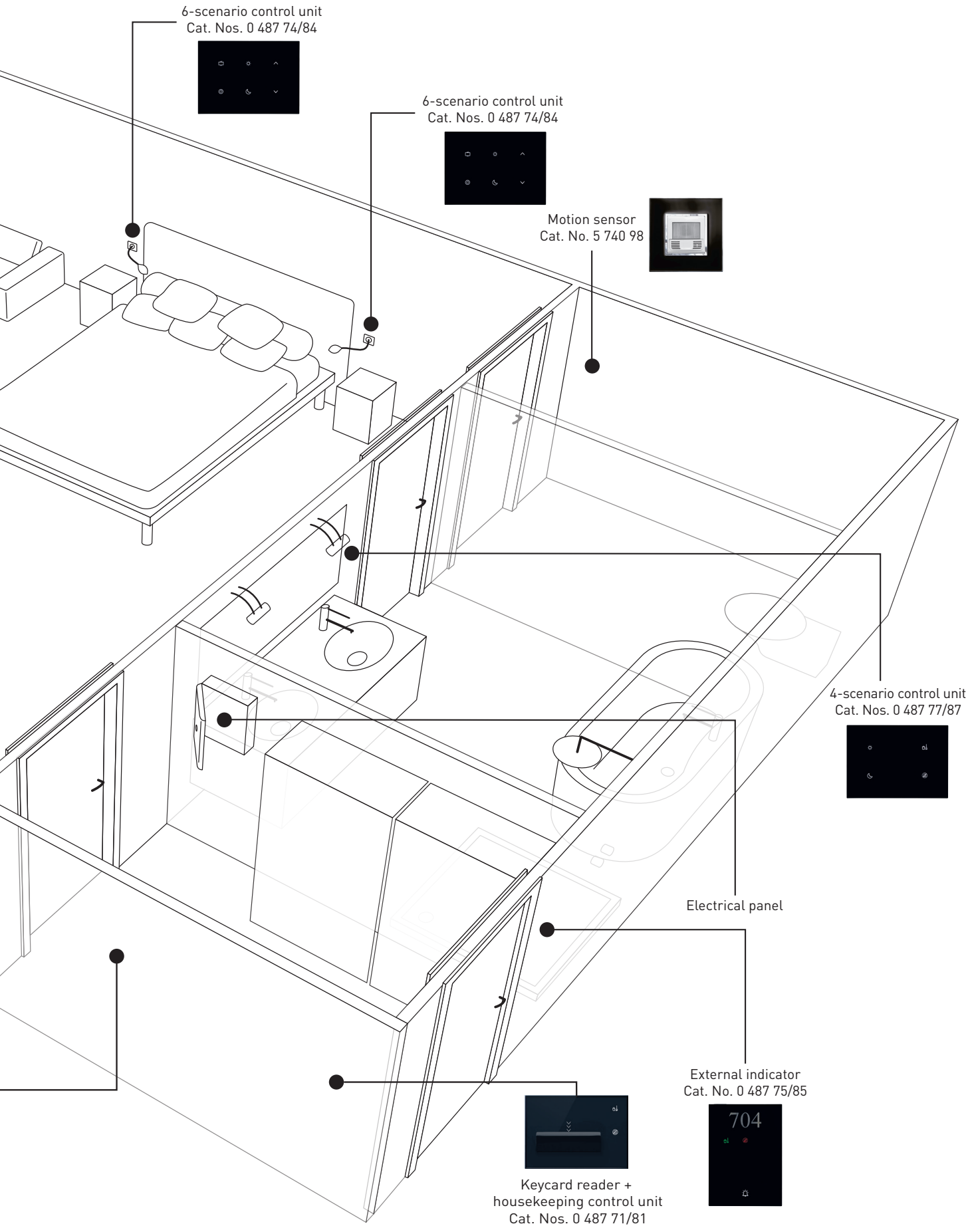
=

6-scenario
control
Cat. Nos. 0 487 74/84

+

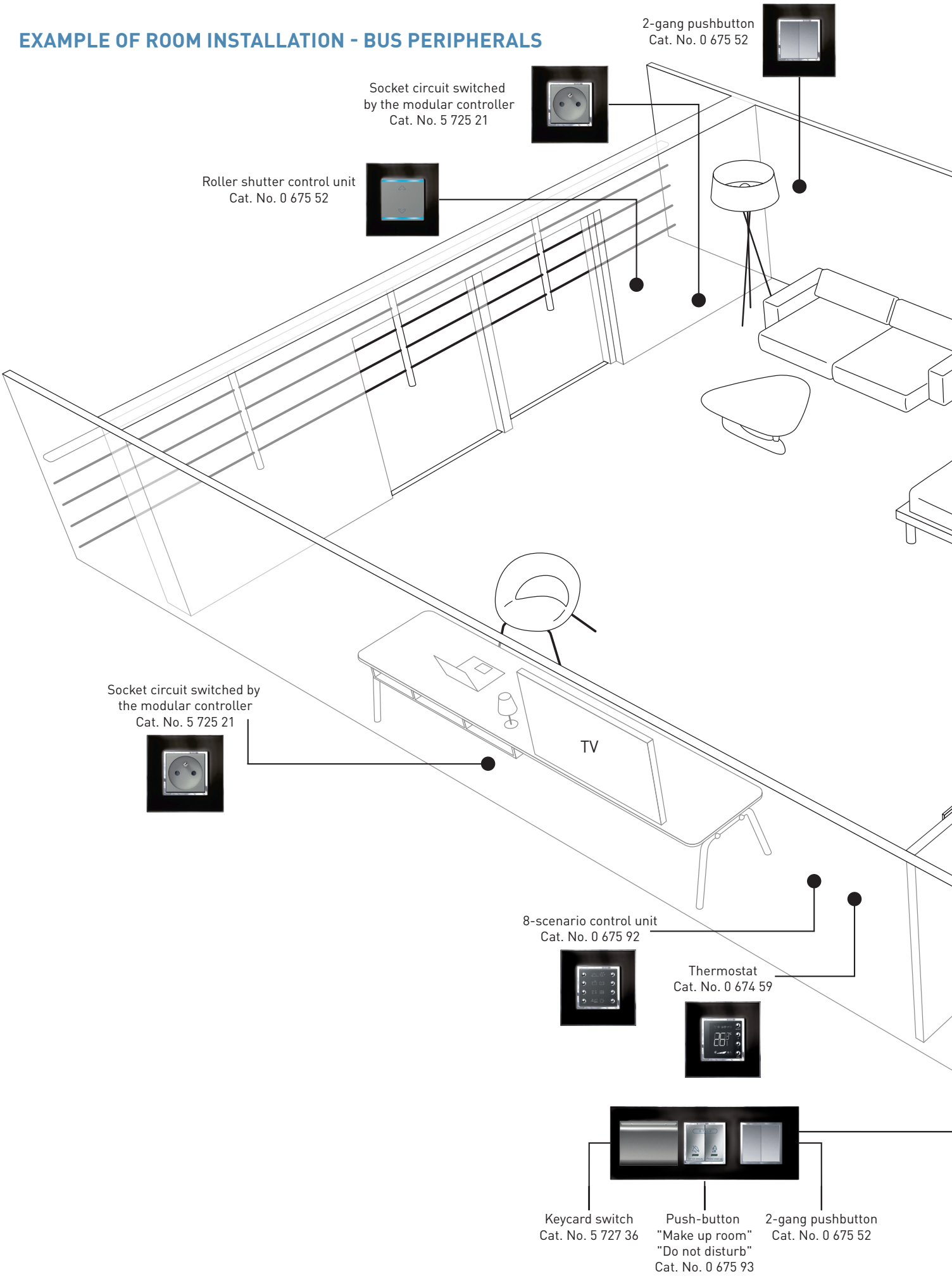
Thermostat
Cat. Nos. 0 487 73/83

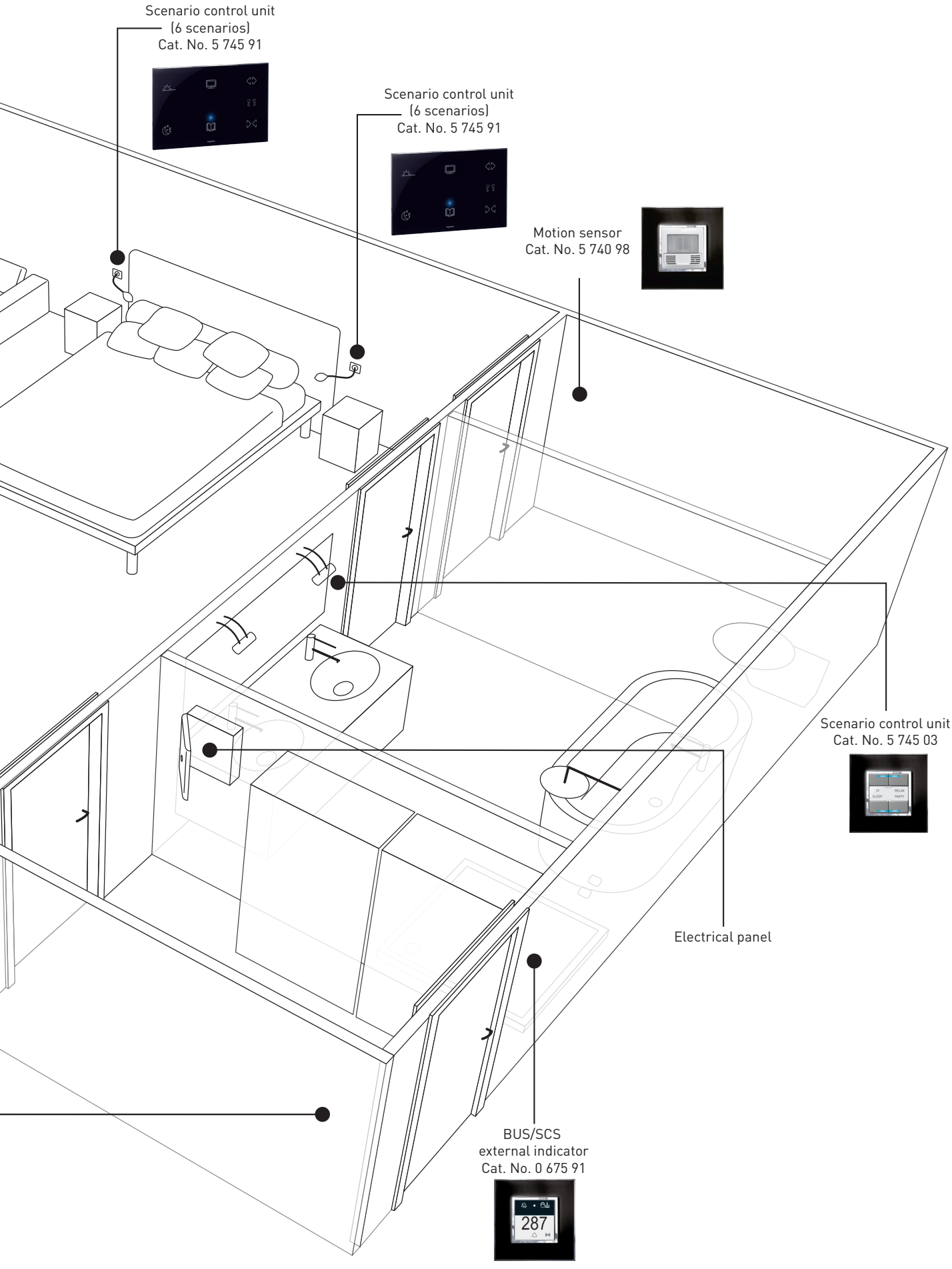
Bedside panel to be installed near the bedside table


6-scenario control unit
Cat. Nos. 0 487 74/84
6-scenario control unit
Cat. Nos. 0 487 74/84
Motion sensor
Cat. No. 5 740 98
4-scenario control unit
Cat. Nos. 0 487 77/87
Electrical panel
External indicator
Cat. No. 0 487 75/85
704
Keycard reader +
housekeeping control unit
Cat. Nos. 0 487 71/81

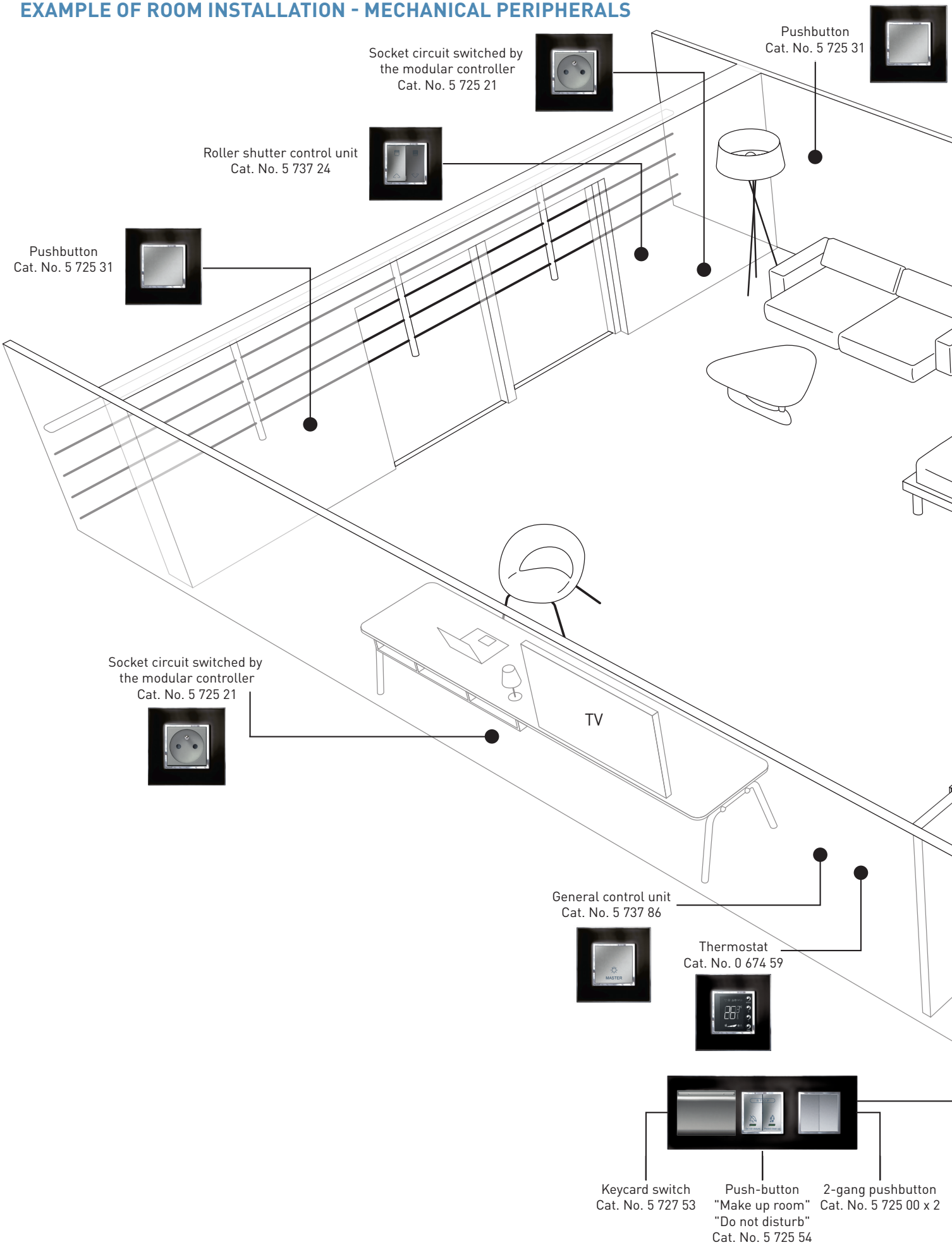
SYSTEM ARCHITECTURE

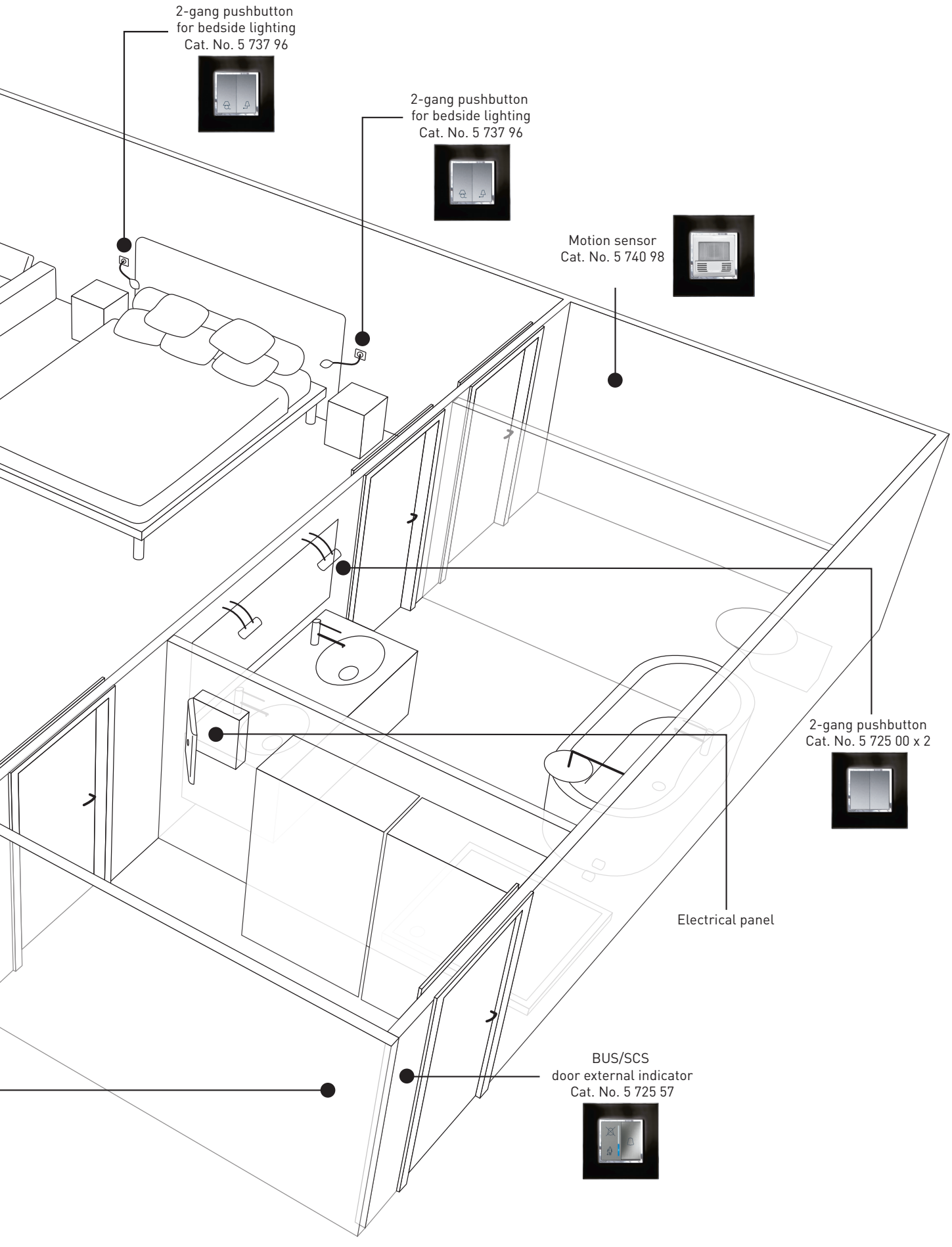
EXAMPLE OF ROOM INSTALLATION - BUS PERIPHERALS



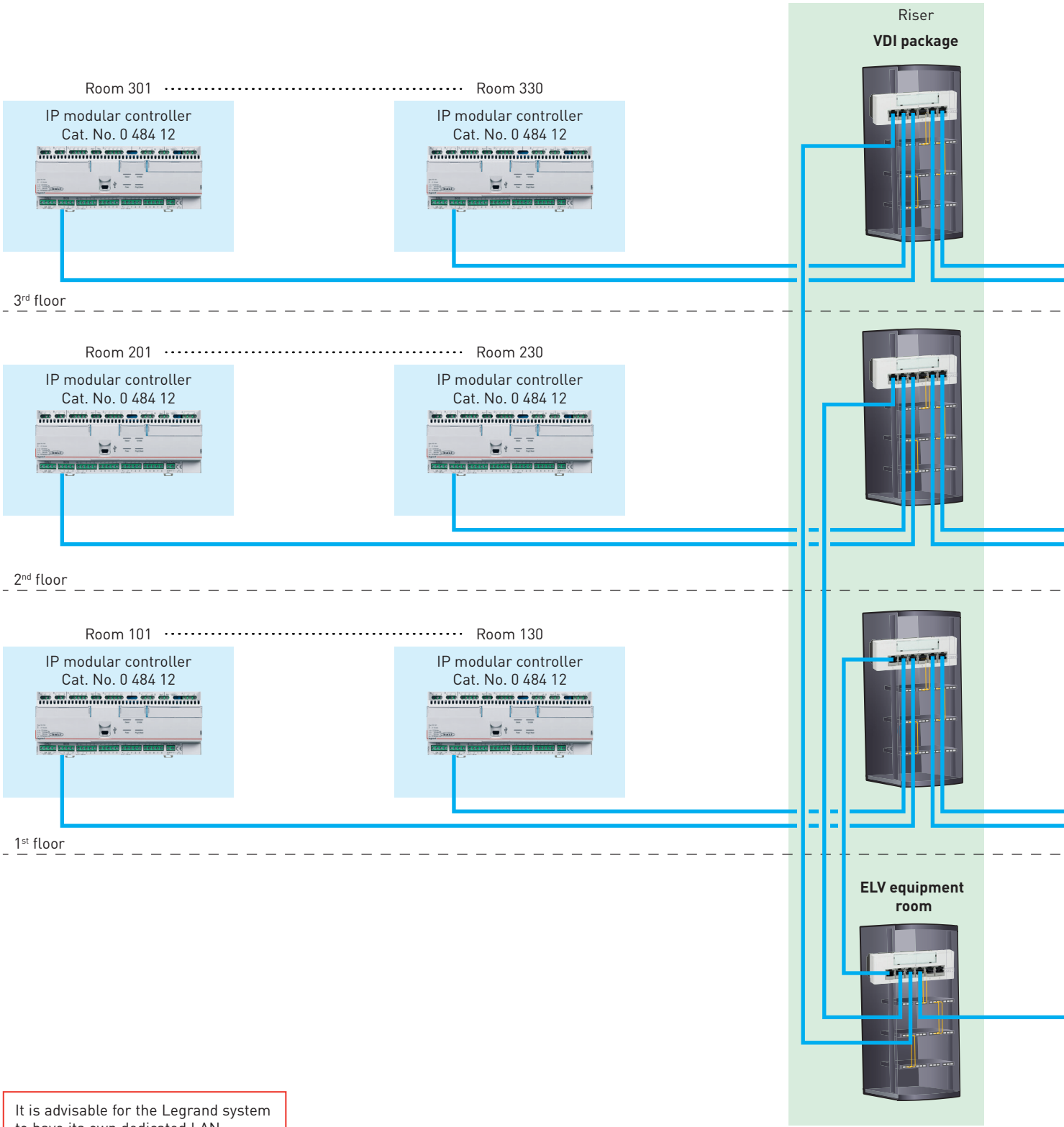

Scenario control unit
(6 scenarios)
Cat. No. 5 745 91
Scenario control unit
(6 scenarios)
Cat. No. 5 745 91
Motion sensor
Cat. No. 5 740 98
Scenario control unit
Cat. No. 5 745 03
Electrical panel
BUS/SCS
external indicator
Cat. No. 0 675 91
287

EXAMPLE OF ROOM INSTALLATION - MECHANICAL PERIPHERALS

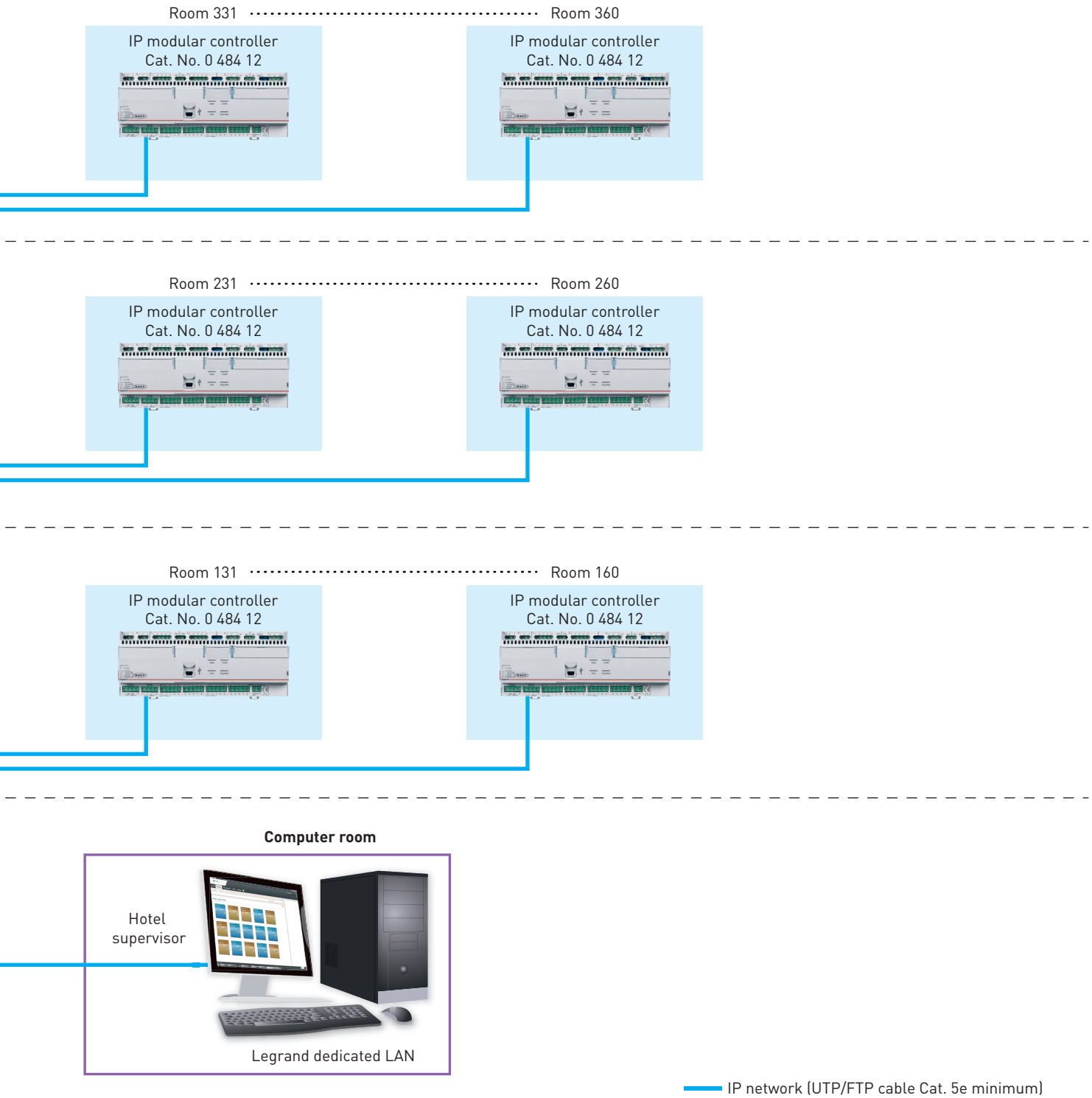



2-gang pushbutton
for bedside lighting
Cat. No. 5 737 96
2-gang pushbutton
for bedside lighting
Cat. No. 5 737 96
Motion sensor
Cat. No. 5 740 98
2-gang pushbutton
Cat. No. 5 725 00 x 2
Electrical panel
BUS/SCS
door external indicator
Cat. No. 5 725 57

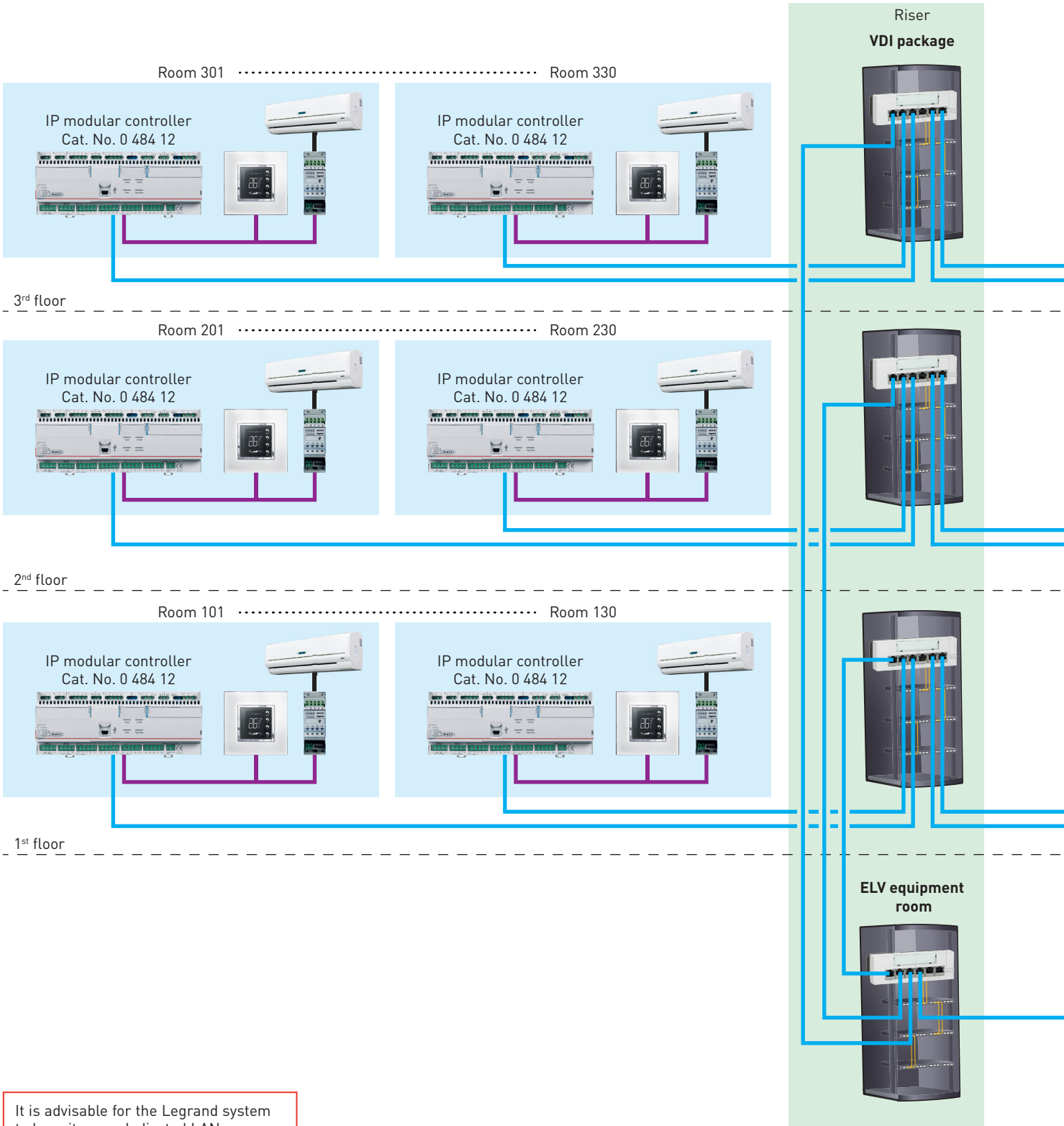
ROOM MANAGEMENT ARCHITECTURE WITH SUPERVISOR



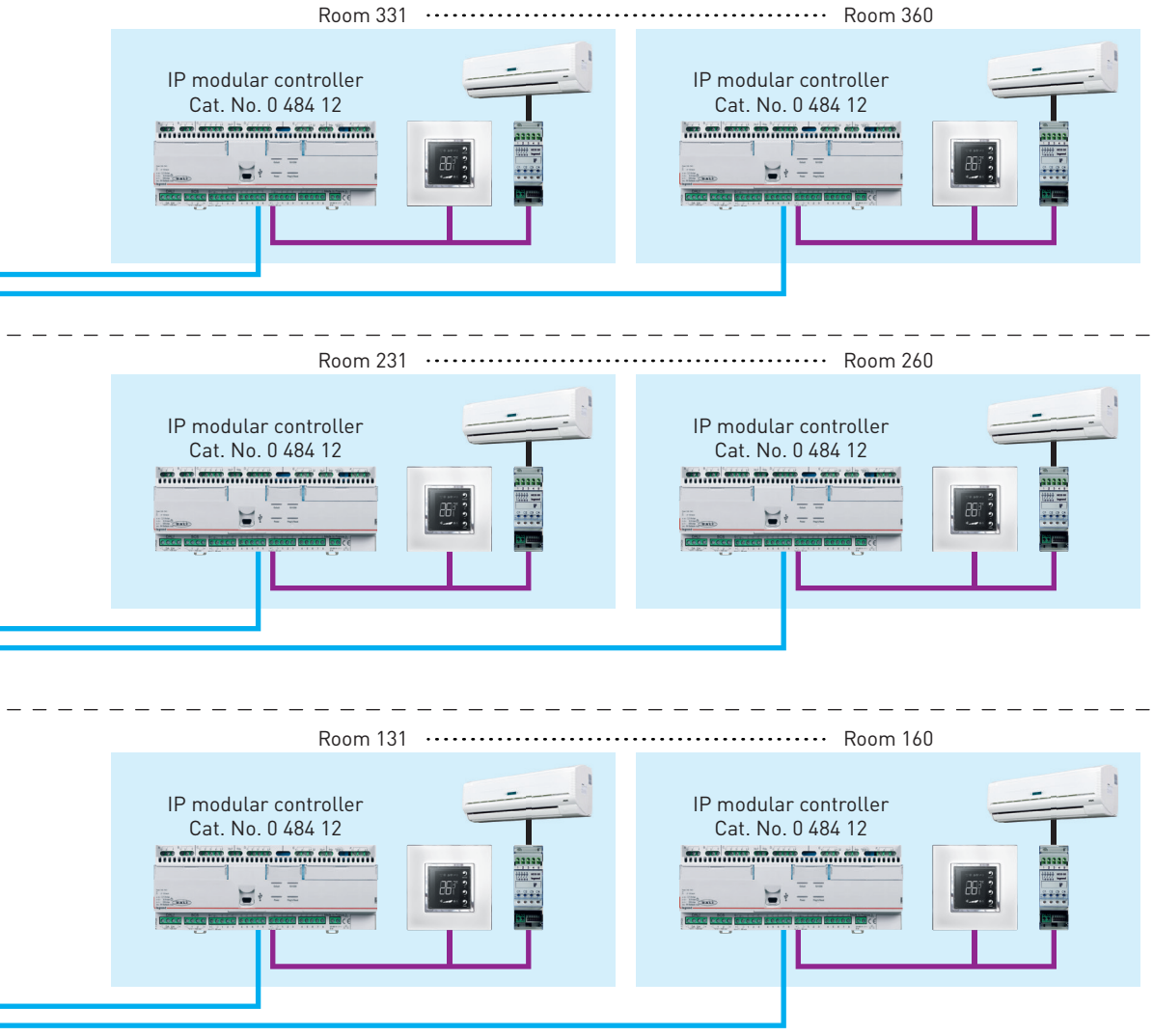
It is advisable for the Legrand system to have its own dedicated LAN.

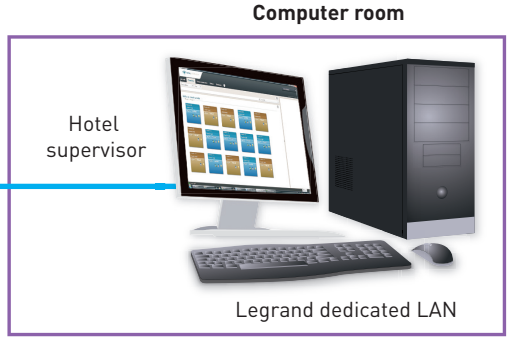

Room 331
Room 360
IP modular controller
Cat. No. 0 484 12
IP modular controller
Cat. No. 0 484 12
Room 231
Room 260
IP modular controller
Cat. No. 0 484 12
IP modular controller
Cat. No. 0 484 12
Room 131
Room 160
IP modular controller
Cat. No. 0 484 12
IP modular controller
Cat. No. 0 484 12
Computer room
Hotel
supervisor
Legrand dedicated LAN
IP network (UTP/FTP cable Cat. 5e minimum)

ROOM MANAGEMENT ARCHITECTURE WITH SUPERVISOR AND LOCAL MANAGEMENT OF HEATING/AIR CONDITIONING



It is advisable for the Legrand system to have its own dedicated LAN.



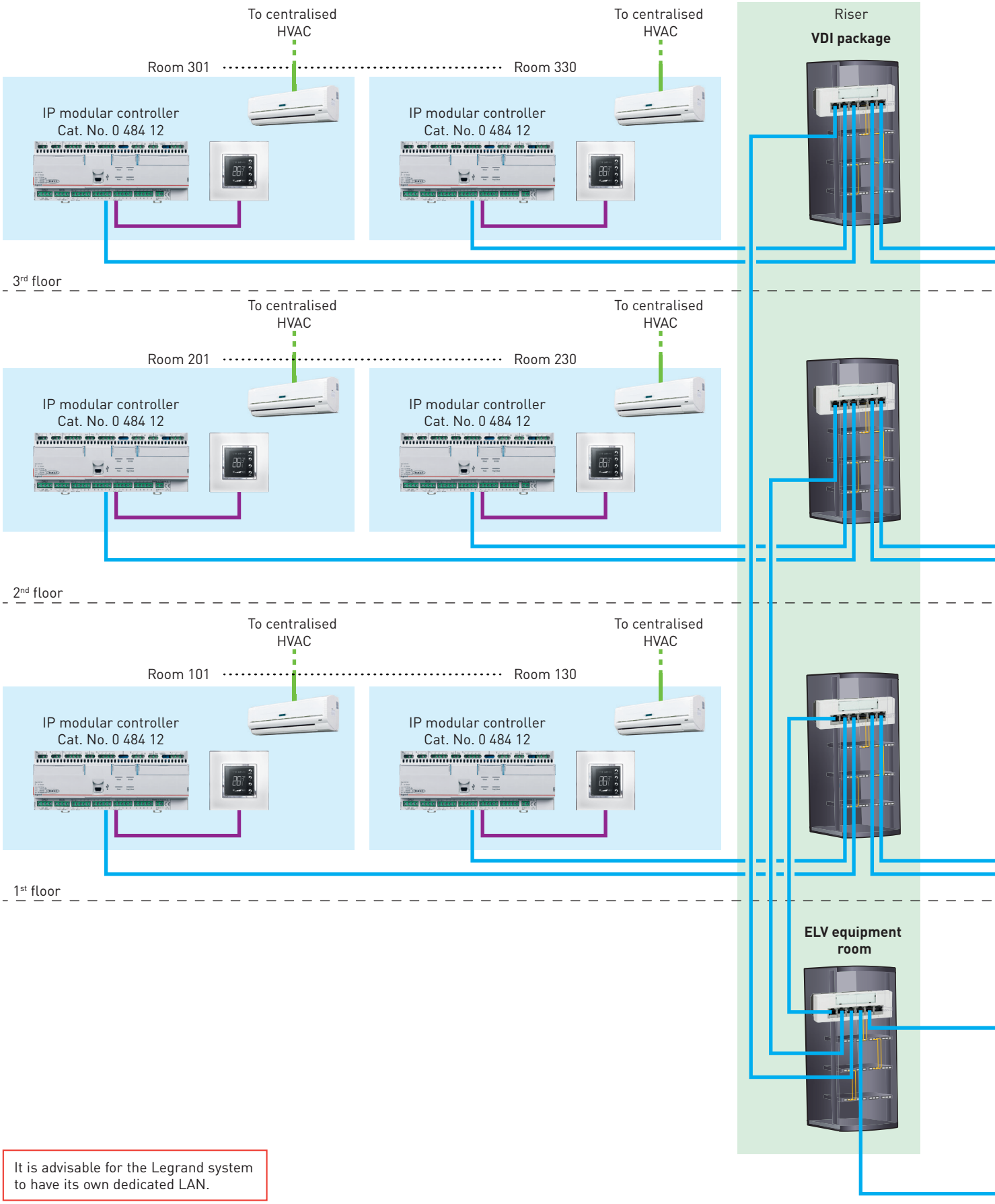


IP network (UTP/FTP cable Cat. 5e minimum)

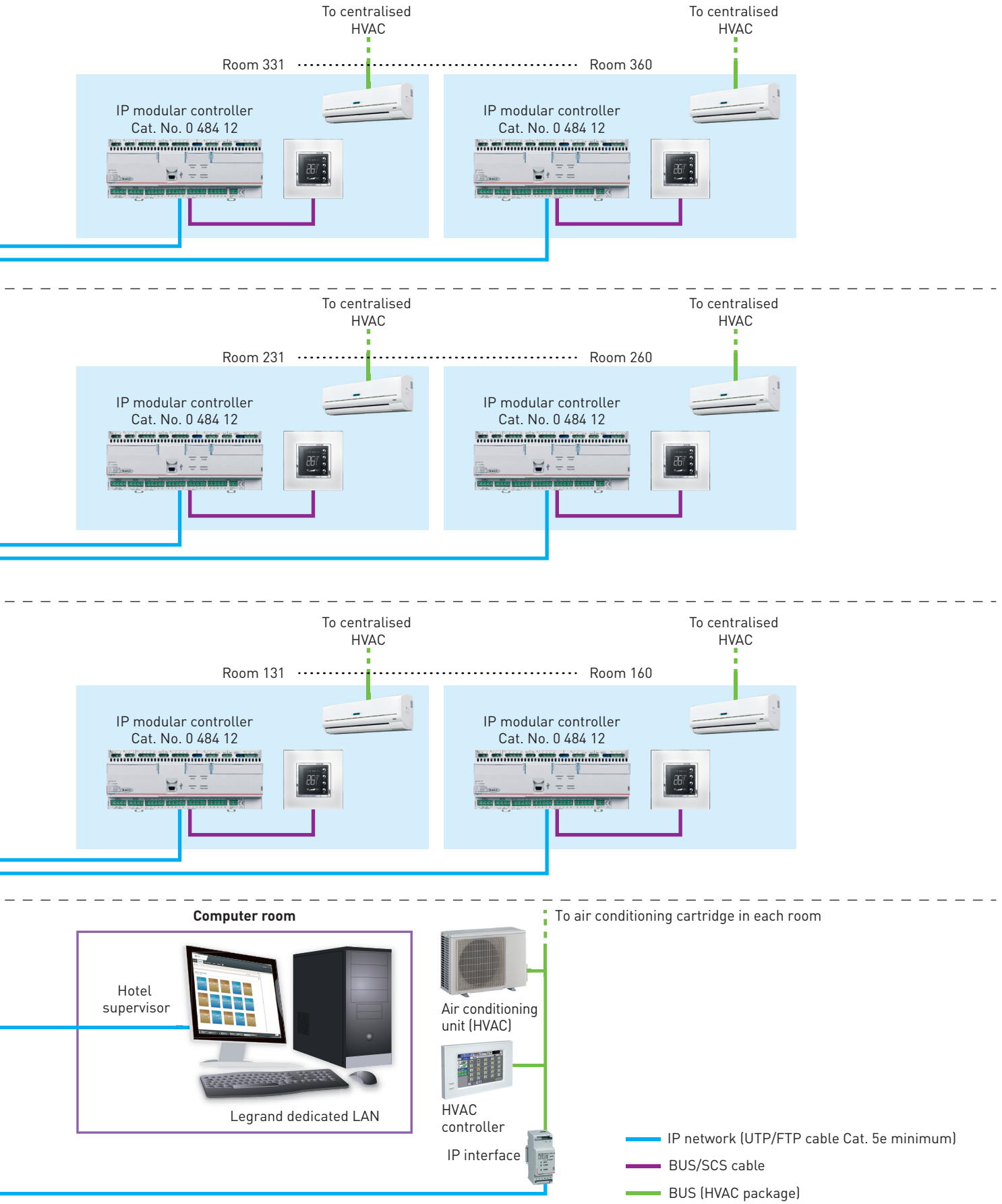
BUS/SCS cable

Min. 5 G 1.5 mm² RO2V

ROOM MANAGEMENT ARCHITECTURE WITH SUPERVISOR AND CENTRALISED MANAGEMENT OF HEATING/AIR CONDITIONING

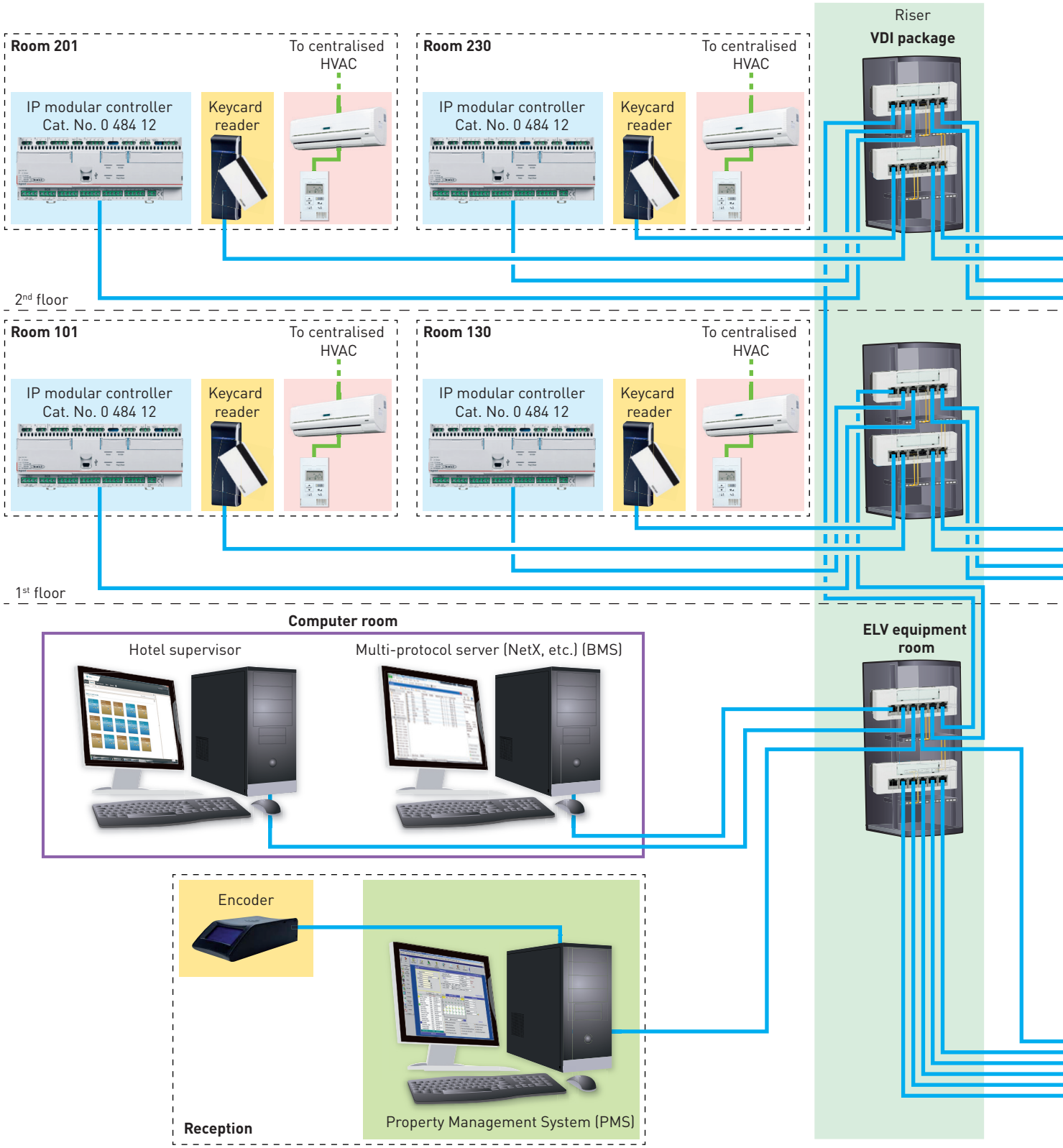


It is advisable for the Legrand system to have its own dedicated LAN.

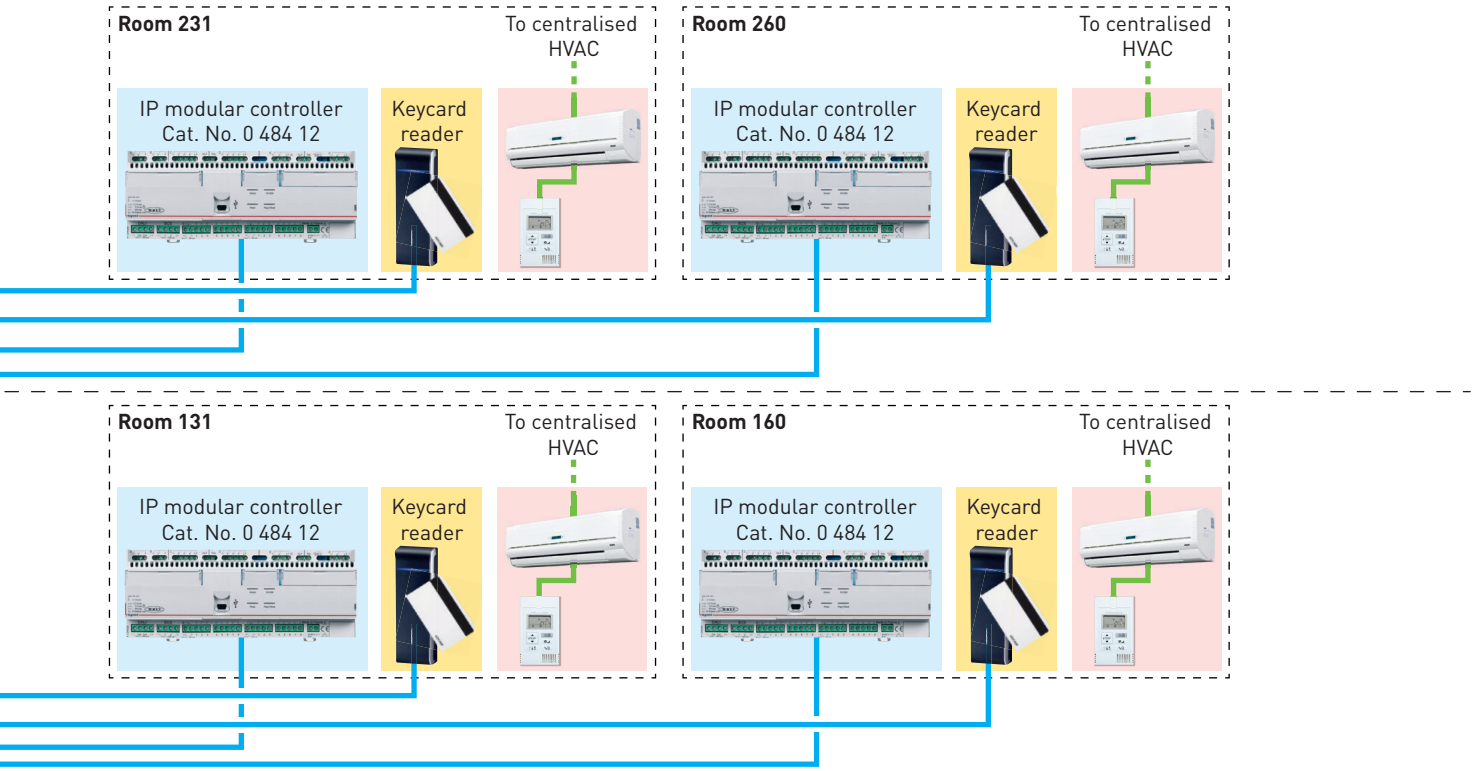

To centralised HVAC
Room 331
Room 360
IP modular controller Cat. No. 0 484 12
To centralised HVAC
IP modular controller Cat. No. 0 484 12
To centralised HVAC
Room 231
Room 260
IP modular controller Cat. No. 0 484 12
To centralised HVAC
IP modular controller Cat. No. 0 484 12
To centralised HVAC
Room 131
Room 160
IP modular controller Cat. No. 0 484 12
To centralised HVAC
IP modular controller Cat. No. 0 484 12
Computer room
Hotel supervisor
Legrand dedicated LAN
To air conditioning cartridge in each room
Air conditioning unit (HVAC)
HVAC controller
IP interface
IP network (UTP/FTP cable Cat. 5e minimum)
BUS/SCS cable
BUS (HVAC package)

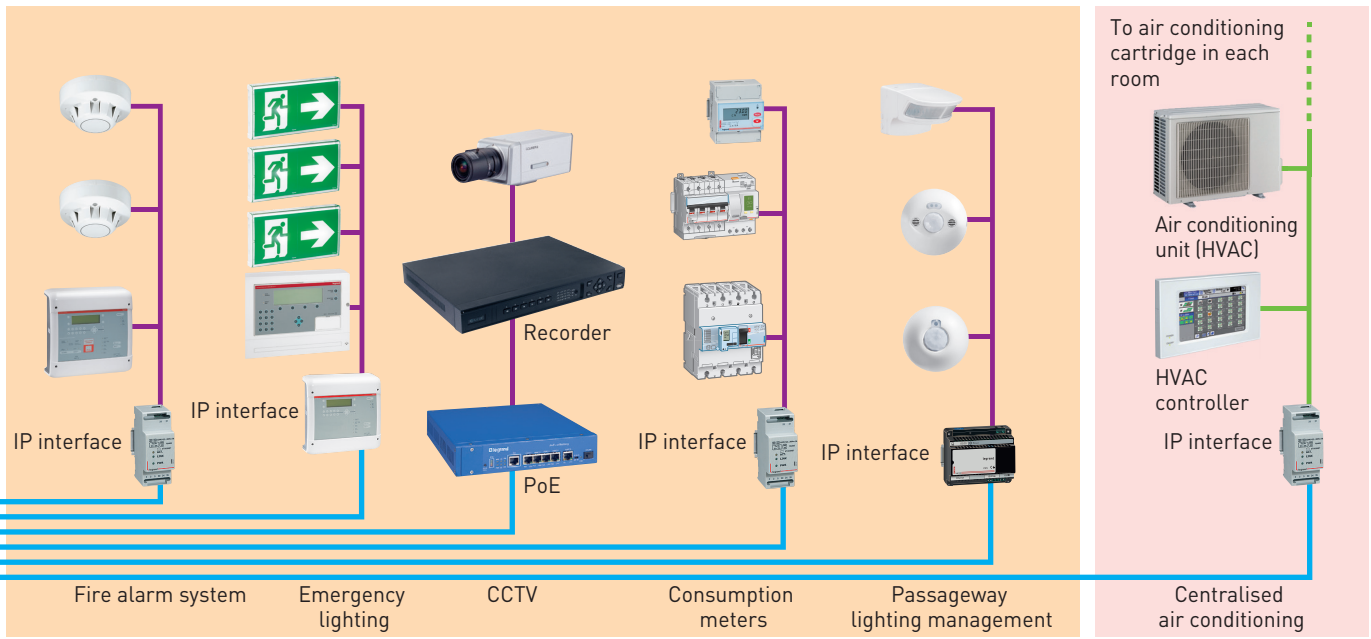
OVERVIEW OF HOTEL ARCHITECTURE

Room management architecture with supervisor and integration of other multi-brand systems (Property Management System (PMS)/access control/HVAC/fire alarm/emergency lighting/CCTV/energy meters, etc)



It is advisable for each Legrand system to have its own dedicated LAN.





IP network (UTP/FTP cable Cat. 5e minimum)

BUS

BUS (HVAC package)

GRMS package

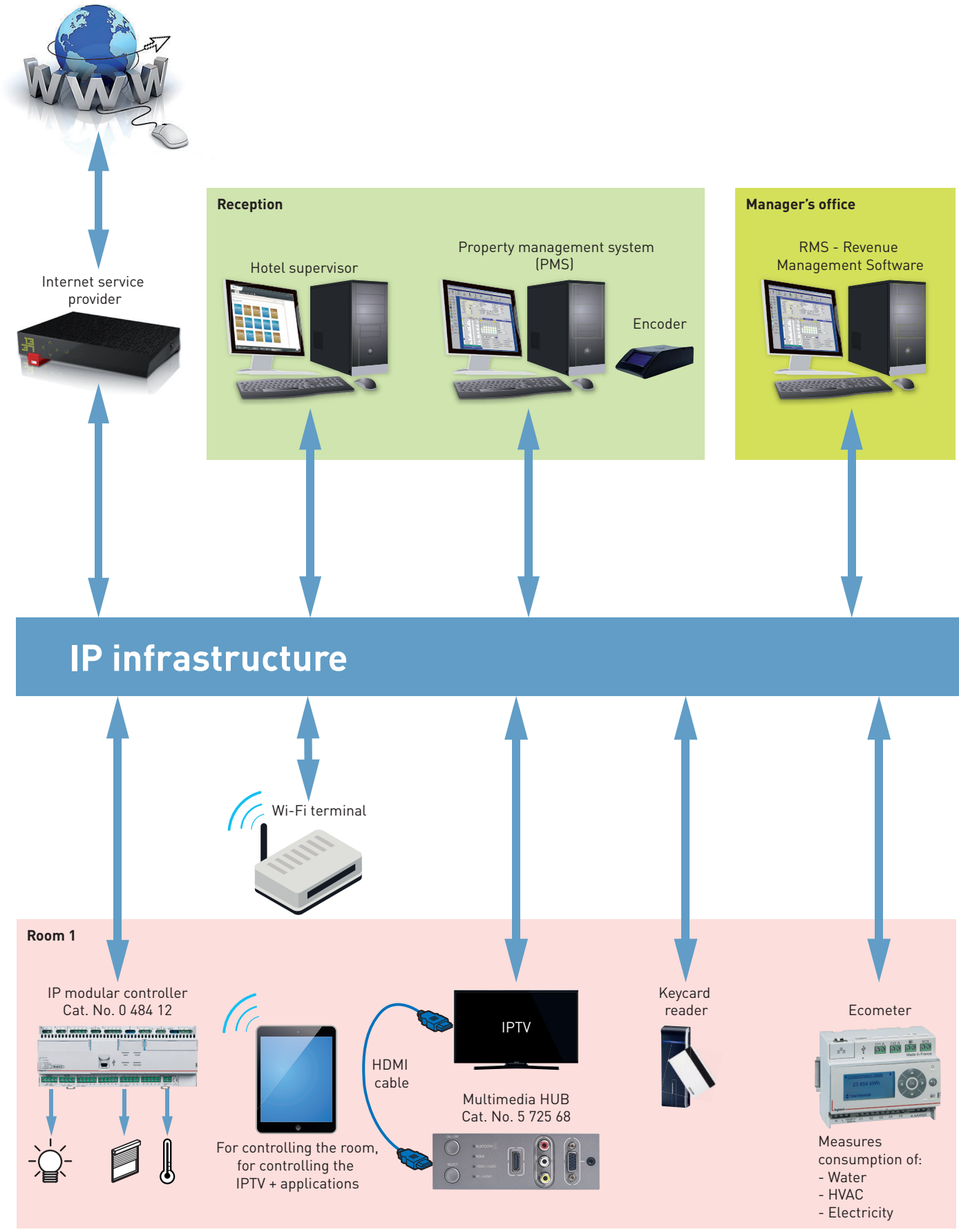
Access control package

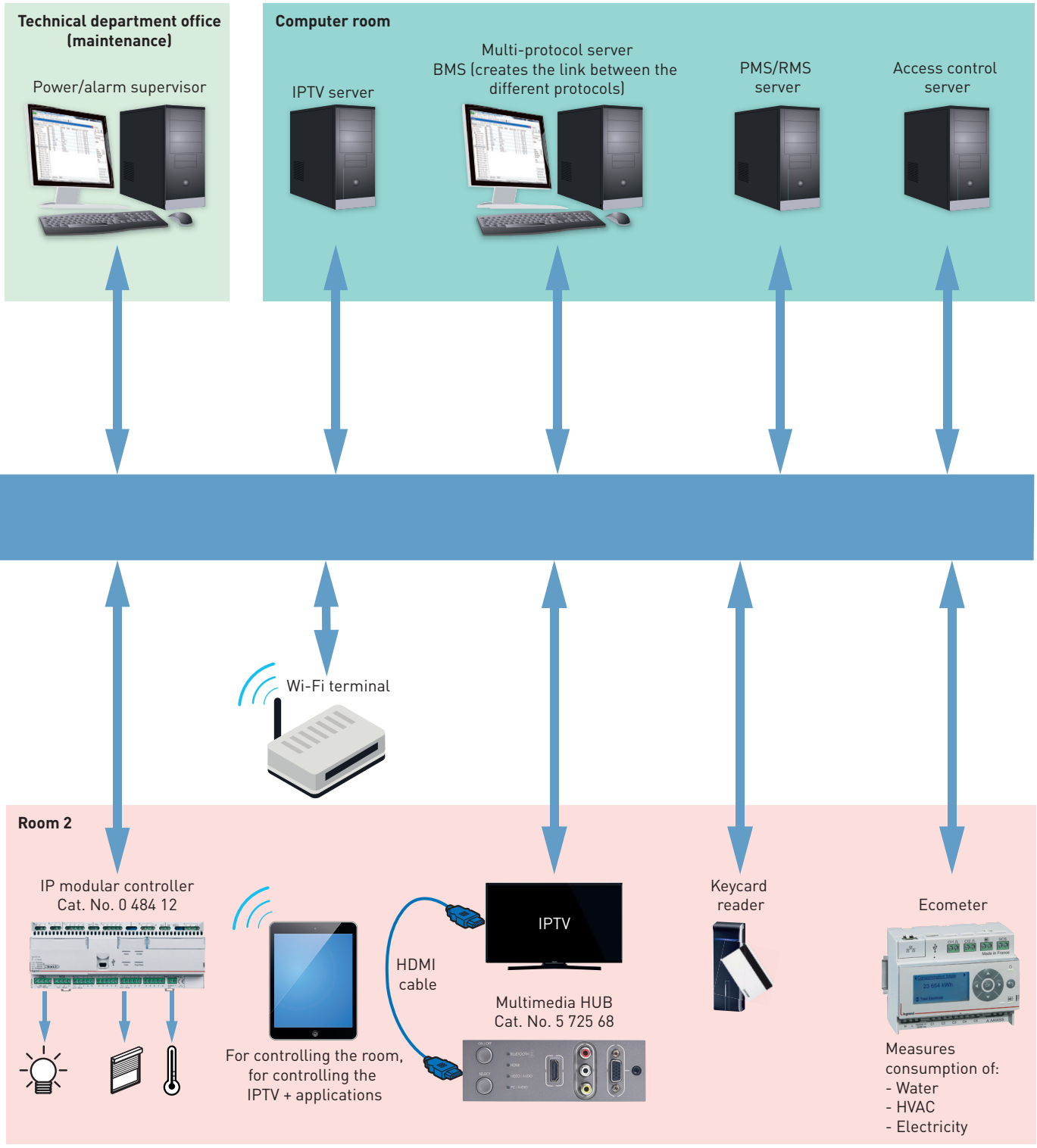
HVAC package

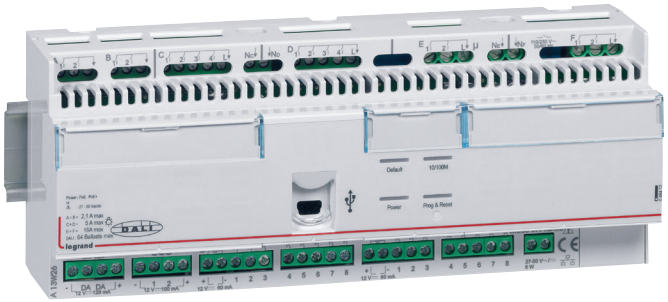
Booking management package

Security package

EXAMPLE OF A HOTEL IP INFRASTRUCTURE (NOT EXHAUSTIVE)




Technical department office (maintenance)
Power/alarm supervisor
Computer room
IPTV server
Multi-protocol server
BMS (creates the link between the different protocols)
PMS/RMS server
Access control server
Wi-Fi terminal
Room 2
IP modular controller
Cat. No. 0 484 12
For controlling the room, for controlling the IPTV + applications
HDMI cable
IPTV
Multimedia HUB
Cat. No. 5 725 68
Keycard reader
Ecometer
Measures consumption of:
- Water
- HVAC
- Electricity



0 484 12: CONTROLLER (RCU) WITH 16 INPUTS/16 OUTPUTS

IP modular controller Cat. No. 0 484 12 is specially designed for controlling hotel rooms and communal spaces (meeting rooms, sports halls, restaurants, etc). It is powered by an external power supply Cat. No. 0 035 67.

It comprises:
- 16 configurable auxiliary inputs for issuing ON/OFF, Dim +/-, scene and roller shutter up/down/stop commands via switches, pushbuttons and other volt-free contact devices
- 16 configurable binary outputs for controlling lighting (2 blocks of 4 relays: 4.3 A max. across both blocks), shutters (2 blocks of 2 relays: 2.1 A max. across both blocks), socket outlets (2 blocks of 2 relays: 16 A max. across both blocks)
- A DALI dimming output capable of supplying up to 64 ballasts: • In broadcast mode
  • In group mode (16 groups max.)

Each output can be integrated in different scenarios associated with conditional functions such as volt-free contacts, light level detection or timer programming. Presence is managed either by a keycard switch, or automatically (Virtual Keycard).

A BUS/SCS input is used to associate compatible actuators and BUS control units with the SCS protocol.

A 100 mA power supply is included. Thereafter, a BUS power supply should be added.

The controller can be associated via the BUS/SCS with:
- 32 dimmer outputs max.
- 32 ON/OFF outputs max.
- 16 shutter/curtain outputs max.
- 64 controls and/or contact inputs max.
- 4 thermostats max.
- 10 temperature probes max.
- 16 keycard readers max.
- 4 DND/MUR buttons max.
- 10 motion sensors max.
- 10 light level detectors max.

The parameters are set by the Hotel Room Controller software (HRCS) via the IP network.
The software can be downloaded from www.legrandoc.com.
Communication protocol over IP network: BACnet®.

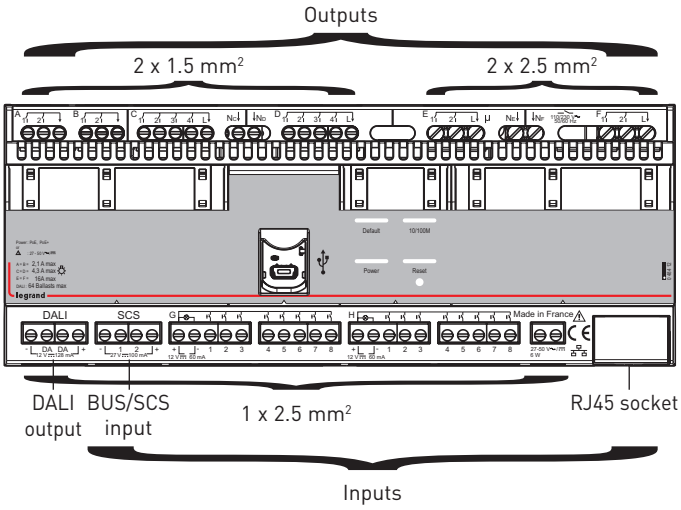
Technical characteristics

Product power supply	• Screw terminal block (27-50 V~/V⎓) or • RJ45 (class 0 PoE/PoE+)
Number of load terminals	16 outputs { A - B: 2.1 A blocks C - D: 4.3 A blocks E - F: 16 A blocks
Number of auxiliary input terminals	16 inputs (G - H: 2 blocks of 8 inputs)
Capacity of load terminals	2 x 1.5 mm^2 (A to D) 2 x 2.5 mm^2 (E to F)
Capacity of SCS terminals	1 x 2.5 mm^2
Capacity of DALI load terminals	1 x 2.5 mm^2
Capacity of contact input terminals	1 x 2.5 mm^2
Contact input	Pushbutton or switch
RJ45	10/100 Mbps
Degree of protection Penetration of solid bodies and liquids	IP 20 (installed in an enclosure)
Impact resistance	IK 04
Number of modules	12
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C
No-load power consumption	< 1 W

All the outputs + thermostats are variable COV type (variable Change On Value).

Technical characteristics (continued)

Size: 12 DIN modules



Blocks A and B can be used as a shutter output or as a housekeeping (DND/MUR) indicator output.

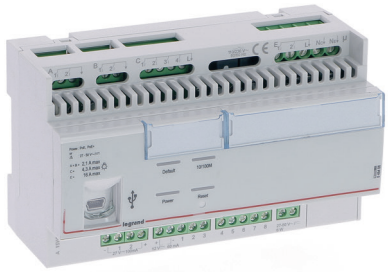
	Housekeeping mode	Shutter mode
A1/B1	DND indicator	Up
A2/B2	MUR indicator	Down

For blocks C to F, the Neutral must be connected for zero current breaking.

NC = neutral terminal for block C.
ND = neutral terminal for block D.
NE = neutral terminal for block E.
NF = neutral terminal for block F.

		❶		❷		❸		❹		❺		❻		❼		❽		❾	
Outputs A - B	230 V~	80 VA	0.3 A	250 VA	1.1 A	250 VA	1.1 A	2 (2 x 36) W	0.8 A	80 VA	0.3 A	80 VA	0.3 A	500 W	2.1 A	250 VA	1.1 A	250 VA	1.1 A
	110 V~	40 VA		125 VA		125 VA		1 (2 x 36) W		40 VA		40 VA		250 W		125 VA		125 VA	
	12 - 48 V~/V⎓	4 - 15 VA	0.3 A													13 - 52 VA	1.1 A	13 - 52 VA	1.1 A
Outputs C - D	230 V~	160 VA	0.7 A	500 VA	2.1 A	500 VA	2.1 A	4 (2 x 36) W	1.7 A	160 VA	0.7 A	160 VA	0.7 A	1000 W	4.3 A	500 VA	2.1 A	500 VA	2.1 A
	110 V~	80 VA		250 VA		250 VA		2 (2 x 36) W		80 VA		80 VA		500 W		250 VA		250 VA	
Outputs E - F	230 V~	500 VA	2.1 A	1000 VA	4.3 A	1000 VA	4.3 A	10 (2 x 36) W	4.3 A	500 VA	2.1 A	500 VA	2.1 A	3680 W	16 A	500 VA	2.1 A	500 VA	2.1 A
	110 V~	250 VA		500 VA		500 VA		5 (2 x 36) W		250 VA		250 VA		1760 W		250 VA		250 VA	

❶ LED lamps
❷ ELV halogen, compact fluorescent and fluorescent lamps with separate electronic ballast
❸ ELV halogen, compact fluorescent and fluorescent lamps with separate ferromagnetic ballast
❹ Fluorescent tubes
❺ Compact fluorescent lamps with built-in electronic ballast
❻ Compact fluorescent lamps with built-in ferromagnetic ballast
❼ Halogen lamps
❽ Motors
❾ Contactors



0 484 08: CONTROLLER (RCU) WITH 8 INPUTS/10 OUTPUTS

IP modular controller Cat. No. 0 484 08 is specially designed for controlling hotel rooms and communal spaces (meeting rooms, sports halls, restaurants, etc). It is powered by an external power supply Cat. No. 0 035 67.

It comprises:

- 8 configurable auxiliary inputs for issuing ON/OFF, Dim +/-, scene and roller shutter up/down/stop commands via switches, pushbuttons and other volt-free contact devices

- 10 configurable binary outputs for controlling lighting (1 block of 4 relays: 4.3 A max.), shutters (2 blocks of 2 relays: 2.1 A max. across both blocks), socket outlets (1 block of 2 relays: 16 A max.)

Each output can be integrated in different scenarios associated with conditional functions such as volt-free contacts, light level detection or timer programming. Presence is managed either by a keycard switch, or automatically (Virtual Keycard).

A BUS/SCS input is used to associate compatible actuators and BUS controls with the SCS protocol.

A 100 mA power supply is included. Thereafter, a BUS power supply should be added.

The controller can be associated via the BUS/SCS with:
- 32 dimmer outputs max.
- 32 ON/OFF outputs max.
- 16 shutter/curtain outputs max.
- 64 controls and/or contact inputs max.
- 4 thermostats max.
- 10 temperature probes max.
- 16 keycard readers max.
- 4 DND/MUR buttons max.
- 10 motion sensors max.
- 10 light level detectors max.

The parameters are set by the Hotel Room Controller software (HRCS) via the IP network.
The software can be downloaded from www.legrandoc.com.
Communication protocol over IP network: BACnet®.

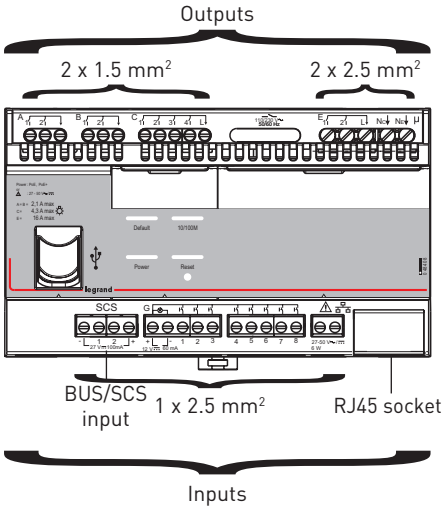
Technical characteristics

Product power supply	• Screw terminal block (27-50 V~/V⎓) or • RJ45 (class 0 PoE/PoE+)
Number of load terminals	10 outputs { A - B: 2.1 A blocks C: 4.3 A blocks E: 16 A blocks
Number of auxiliary input terminals	8 inputs (G: 1 block of 8 inputs)
Capacity of load terminals	2 x 1.5 mm^2 (A to C) 2 x 2.5 mm^2 (E)
Capacity of SCS terminals	1 x 2.5 mm^2
Capacity of contact input terminals	1 x 2.5 mm^2
Contact input	Pushbutton or switch
RJ45	10/100 Mbps
Degree of protection Penetration of solid bodies and liquids	IP 20 (installed in an enclosure)
Impact resistance	IK 04
Number of modules	8
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C
No-load power consumption	< 1 W

All the outputs + thermostats are variable COV type (variable Change On Value).

Technical characteristics (continued)

Size: 8 DIN modules



Blocks A and B can be used as a shutter output or as a housekeeping (DND/MUR) indicator output.

	Housekeeping mode	Shutter mode
A1/B1	DND indicator	Up
A2/B2	MUR indicator	Down

For blocks C and E, the Neutral must be connected for zero current breaking.

NC = neutral terminal for block C.
NE = neutral terminal for block E.

		❶		❷		❸		❹		❺		❻		❼		❽		❾	
Outputs A - B	230 V~	80 VA	0.3 A	250 VA	1.1 A	250 VA	1.1 A	2 (2 x 36) W	0.8 A	80 VA	0.3 A	80 VA	0.3 A	500 W	2.1 A	250 VA	1.1 A	250 VA	1.1 A
	110 V~	40 VA		125 VA		125 VA		1 (2 x 36) W		40 VA		40 VA		250 W		125 VA		125 VA	
	12 - 48 V~/V⎓	4-15 VA	0.3 A													13-52 VA	1.1 A	13-52 VA	1.1 A
Outputs C	230 V~	160 VA	0.7 A	500 VA	2.1 A	500 VA	2.1 A	4 (2 x 36) W	1.7 A	160 VA	0.7 A	160 VA	0.7 A	1000 W	4.3 A	500 VA	2.1 A	500 VA	2.1 A
	110 V~	80 VA		250 VA		250 VA		2 (2 x 36) W		80 VA		80 VA		500 W		250 VA		250 VA	
Outputs E	230 V~	500 VA	2.1 A	1000 VA	4.3 A	1000 VA	4.3 A	10 (2 x 36) W	4.3 A	500 VA	2.1 A	500 VA	2.1 A	3680 W	16 A	500 VA	2.1 A	500 VA	2.1 A
	110 V~	250 VA		500 VA		500 VA		5 (2 x 36) W		250 VA		250 VA		1760 W		250 VA		250 VA	

❶ LED lamps
❷ ELV halogen, compact fluorescent and fluorescent lamps with separate electronic ballast
❸ ELV halogen, compact fluorescent and fluorescent lamps with separate ferromagnetic ballast
❹ Fluorescent tubes
❺ Compact fluorescent lamps with built-in electronic ballast
❻ Compact fluorescent lamps with built-in ferromagnetic ballast
❼ Halogen lamps
❽ Motors
❾ Contactors

E49: POWER SUPPLY FOR BUS/SCS

The power supply should be used to power the system's communication bus (BUS/SCS).

Technical characteristics

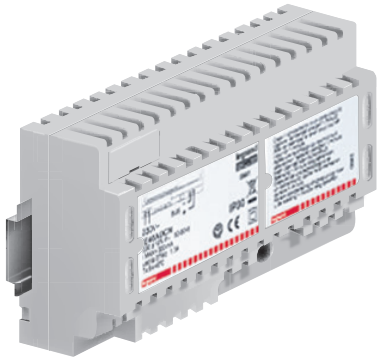
- Supply voltage: 230 V~
- BUS output voltage: 27 V⎓
- Max. BUS current: 600 mA
- Max. power: 21.5 W
- Max. consumption: 26.8 W
- Operating temperature: -5°C to +45°C
- Storage temperature: -20°C to +70°C
- Protection index: IP 20
- Size: 2 DIN modules

0 634 42 OR 346 020: POWER SUPPLY FOR CONTROLLER

The power supply should be used to power the controller.

Technical characteristics

- Supply voltage: 230 V~
- Output voltage: 27 V⎓
- Max. current: 600 mA
- Max. power: 20 W
- Max. consumption: 26.8 W
- Operating temperature: -5°C to +45°C
- Storage temperature: -20°C to +70°C
- Protection index: IP 20
- Size: 2 DIN modules



E46ADCN: BUS/SCS POWER SUPPLY

The power supply should be used to power the system's communication bus (BUS/SCS).

Technical characteristics

- Supply voltage: 230 VA ± 10% – 50/60 Hz
- BUS output voltage: 27 V=
- Max. BUS current: 1.2 A
- Max. dissipated power: 11 W
- Max. consumption: 43.4 W
- Operating temperature: 5°C to 40°C
- Storage temperature: -20°C to +70°C
- Protection index: IP 30
- Size: 8 DIN modules

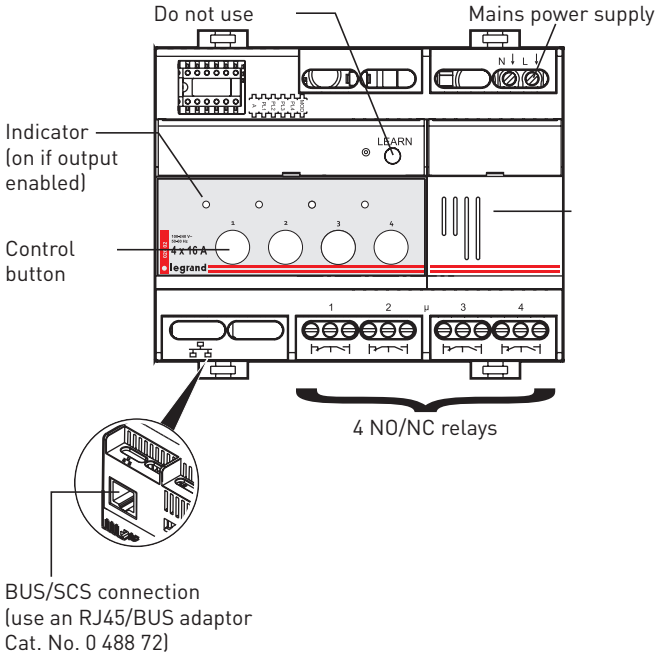
0 026 02 OR BMSW1003: ON/OFF ACTUATOR WITH 4 CIRCUITS AND STATUS MEMORY

This actuator has 4 relays with 2 NO/NC channels and a pushbutton for local control of each circuit, active even if the device has not been configured.

It incorporates the zero current synchronisation function (identical phase between product power supply and its outputs) which is particularly suitable for controlling energy-saving lamps.

It is powered at 230 V and has the status memory function.

Technical characteristics



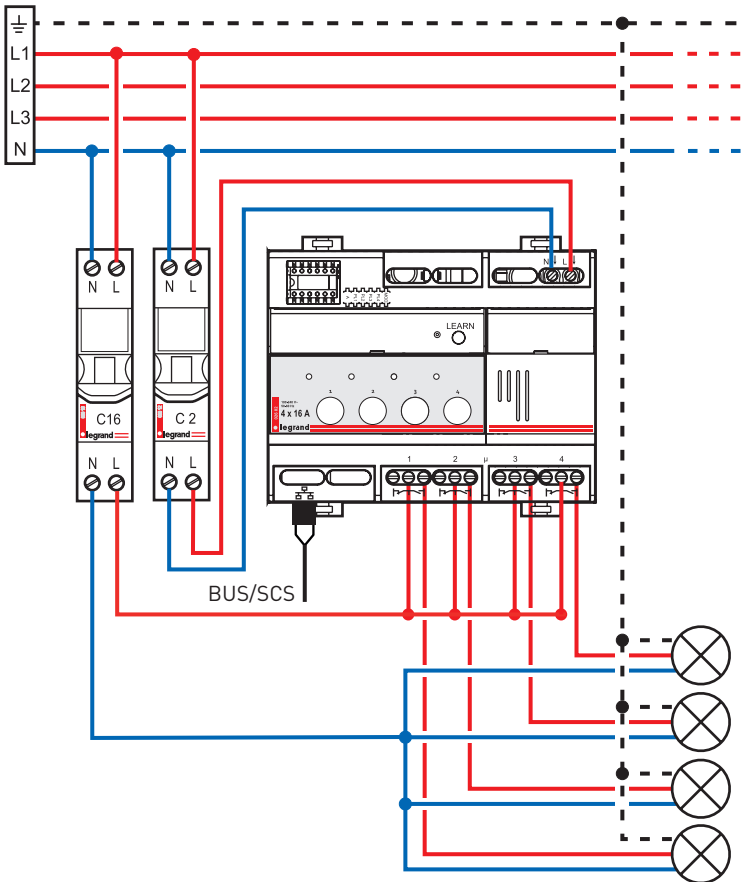
Number of supply terminal blocks	1
Number of load terminals	4
Connection terminals	
Terminal type	Screw
Terminal capacity	2 x 2.5 mm^2
Type of contact	Normally open 16 A monostable relay
Number of RJ45s	1
Mains voltage	100-240 V~
Frequency	50/60 Hz
Degree of protection	
Penetration of solid bodies and liquids	IP 20 (installed in an enclosure)
Impact resistance	IK 04
Number of modules	6
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C
No-load power consumption	0.8 W
BUS consumption	5 mA
Zero current breaking	yes

Technical characteristics (continued)

① Halogen lamp
② Fluorescent tubes
③ Halogen lamps with separate electronic or ferromagnetic transformer
④ Compact fluorescent lamp with built-in ballast
⑤ LED lamp

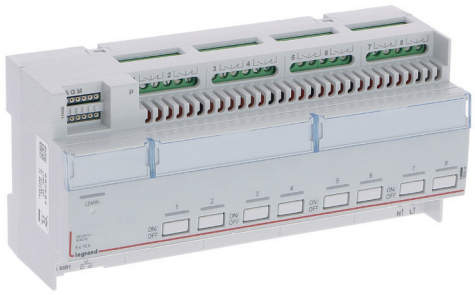
	①		②		③		④		⑤	
230 V~	3680 W	16 A	10x(2x36 W)	4.3 A	3680 VA	16 A	1150 VA	5 A	1 x 500 VA	2.1 A
110 V~	1760 W		5x(2x36 W)		1760 VA		550 VA		1 x 250 VA	

Connection



IMPORTANT: This product must be used on a single phase to comply with zero current synchronisation. The output contacts use the same supply phase.

Earth connection for class I luminaires



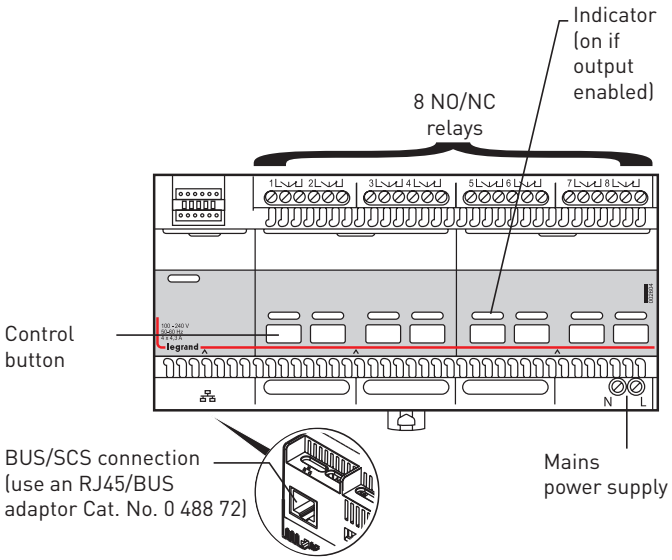
0 026 04 OR BMSW1005: ON/OFF ACTUATOR WITH 8 CIRCUITS AND STATUS MEMORY

This actuator has 8 relays with 2 NO/NC channels and a pushbutton for local control of each circuit, active even if the device has not been configured.

It incorporates the zero current synchronisation function (identical phase between product power supply and its outputs) which is particularly suitable for controlling energy-saving lamps.

It is powered at 230 V and has the status memory function.

Technical characteristics



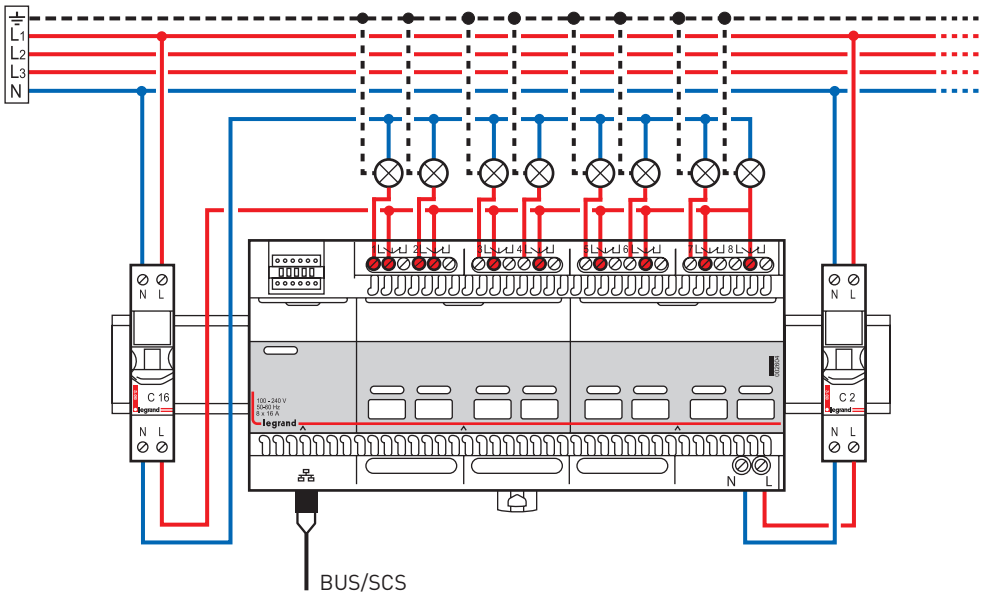
Number of supply terminal blocks	1
Number of load terminals	8
Connection terminals	
Terminal type	Screw
Terminal capacity	2 x 2.5 mm^2
Type of contact	Normally open 16 A monostable relay
Number of RJ45s	1
Mains voltage	100-240 V~
Frequency	50/60 Hz
Location category	Indoors
Degree of protection	
Penetration of solid bodies and liquids	IP 20 (installed in an enclosure)
Impact resistance	IK 04
Number of modules	10
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C
No-load power consumption	0.9 W
Zero current breaking	yes

Technical characteristics (continued)

① Halogen lamp
② Fluorescent tubes
③ Halogen lamps with separate electronic or ferromagnetic transformer
④ Compact fluorescent lamp with built-in ballast
⑤ LED lamp

	①		②		③		④		⑤	
230 V~	3680 W	16 A	10x(2x36 W)	4.3 A	3680 VA	16 A	1150 VA	5 A	1 x 500 VA	2.1 A
110 V~	1760 W		5x(2x36 W)		1760 VA		550 VA		1 x 250 VA	

Connection



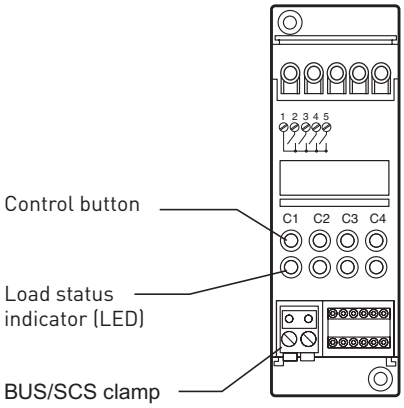
Earth connection for class I luminaires

IMPORTANT: This product must be used on a single phase to comply with zero current synchronisation. The output contacts use the same supply phase.

F411/4: ACTUATOR WITH 4 X 2 A RELAYS

This actuator has 4 independent relays which can be interlocked with a common terminal for controlling four ON/OFF loads or 2 motor loads (roller shutters, curtains, etc) and pushbuttons for local control of each load, only active if the actuator has been configured. It is powered by the BUS.

Technical characteristics



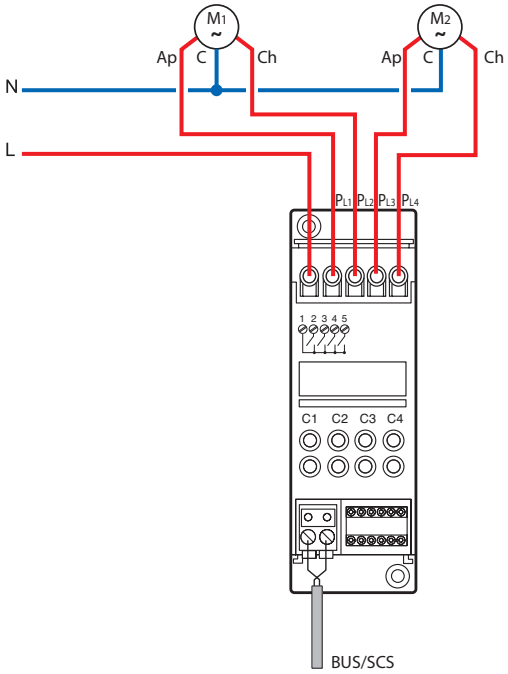
Connection terminals Terminal type	Screw
Terminal capacity	2 x 2.5 mm^2
Type of contact	Normally open 2 A monostable relay
Mains voltage	100-240 V~
Frequency	50/60 Hz
Degree of protection Penetration of solid bodies and liquids	IP 20 (installed in an enclosure)
Impact resistance	IK 04
Number of modules	2
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C
No-load BUS consumption	40 mA
On-load BUS consumption	119 mA
Zero current breaking	No

Power/Consumption of controlled loads:

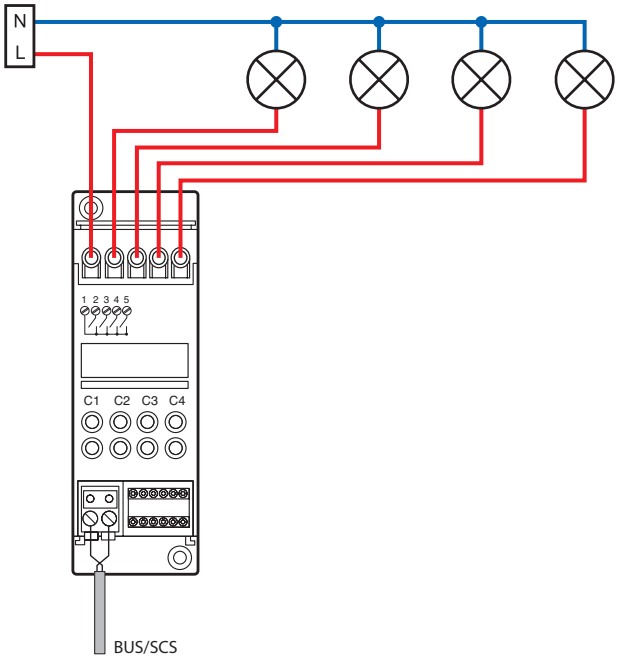
	Incandescent lamps Halogen lamps		Compact fluorescent lamps		Linear fluorescent lamps Electronic transformers		Ferromagnetic transformers		Geared motors for roller shutters	
230 VAC	460 W	2 A	70 W	2 lamps maximum	70 W	0.3 A	2 A cos φ 0.5	460 VA	460 W	2 A

Connection

Connection of 2 motor loads:



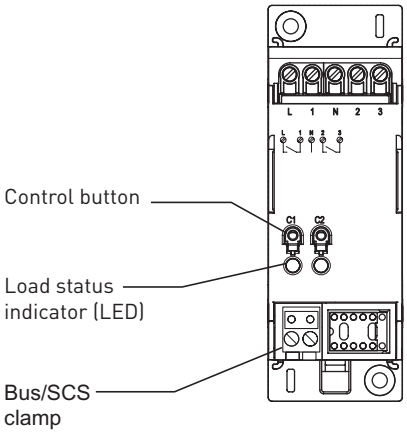
Connection of 4 ON/OFF loads:



F411U2: ACTUATOR WITH 2 X 10 A RELAYS

This actuator has 2 independent channels, which can be interlocked for controlling 2 ON/OFF loads (LED lamps, compact fluorescent lamps, etc) or 1 motor load (roller shutters, curtains, etc). Each channel is able to switch up to a maximum of 10 A. The device incorporates the zero current synchronisation function, which is particularly suitable for controlling energy-saving lamps. It is powered by the BUS.

Technical characteristics



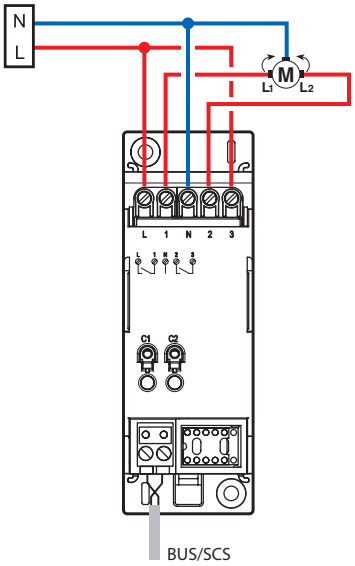
Connection terminals	
Terminal type	Screw
Terminal capacity	2 x 2.5 mm²
Type of contact	Normally open 10 A monostable relay
Supply voltage	BUS/SCS 18-27 V⎓
Degree of protection	
Penetration of solid bodies and liquids	IP 20 (installed in an enclosure)
Impact resistance	IK 04
Number of modules	2
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C
No-load BUS consumption	5 mA
On-load BUS consumption	55 mA
Zero current breaking	yes

Power/Consumption of controlled loads:

	Incandescent lamps Halogen lamps		LED lamps Compact fluorescent lamps		Linear fluorescent lamps Electronic transformers		Ferromagnetic transformers		Geared motors for roller shutters	
250 VAC	2300 W	10 A	500 W	2 A	920 W	4 A	920 VA	4 A cos φ 0.5	460 W	2 A
110 VAC	1100 W	10 A	250 W	2 A	440 W	4 A	440 VA	4 A cos	250 W	2 A

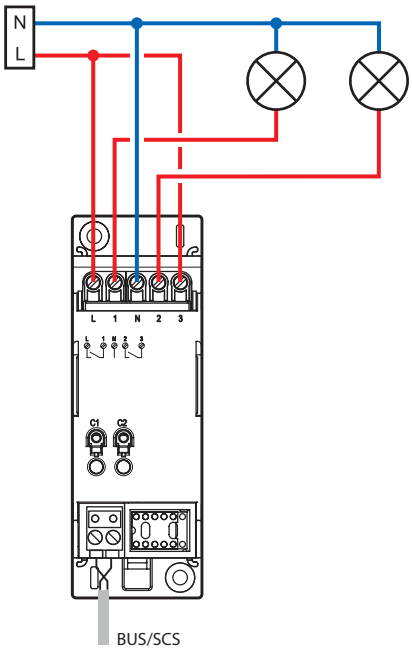
Connection

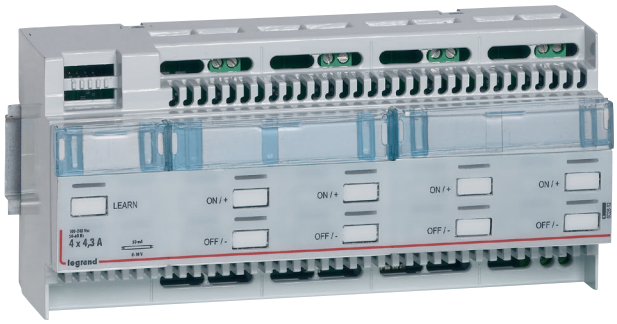
Connection of 1 motor load:



M = roller shutter motor

Connection of 2 ON/OFF loads:

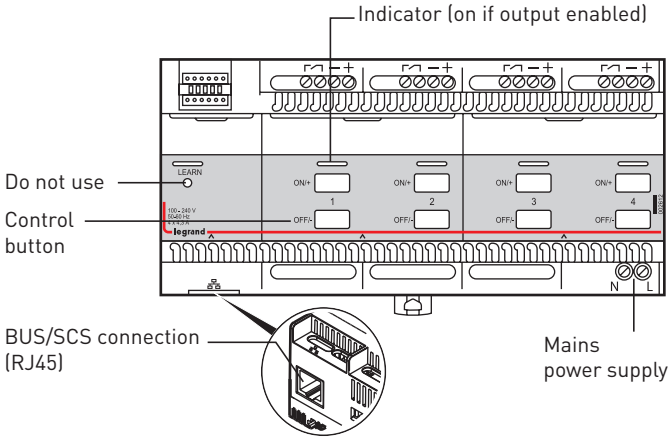




0 026 12 OR BMDI1002: ACTUATOR/DIMMER WITH 4 X 1-10 V CIRCUITS

This dimmer has 4 independent channels for controlling lamps with 1-10 V ballast. The device incorporates the function which allows it to control energy-saving lamps as well as the zero current synchronisation function and status memory function.
It is powered at 230 V.

Technical characteristics



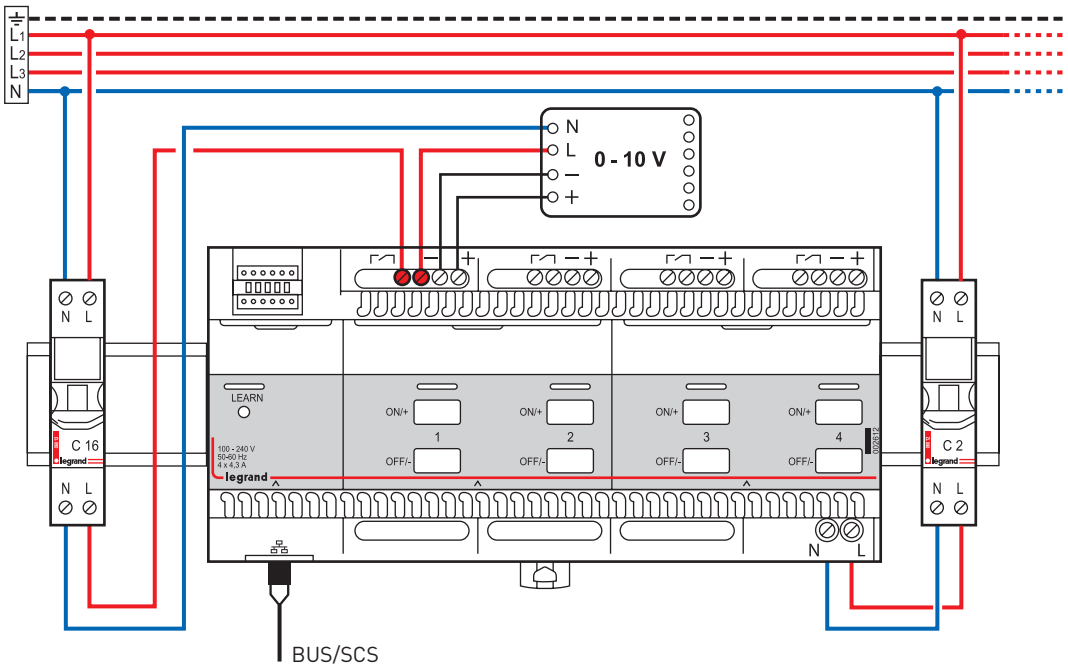
Number of supply terminal blocks	1
Number of load terminals	4
Connection terminals	
Terminal type	Screw
Terminal capacity	2 x 2.5 mm^2
Type of contact	Normally open 4.3 A monostable relay
Number of RJ45s	1
Mains voltage	100-240 V~
Frequency	50/60 Hz
Location category	Indoors
Degree of protection	
Penetration of solid bodies and liquids	IP 20 (installed in an enclosure)
Impact resistance	IK 04
Number of modules	10
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C
No-load power consumption	1.9 W
BUS consumption	5 mA
Zero current breaking	yes

Max. control current 0 - 10 V (sum of the currents provided by the ballasts): 200 mA
Maximum inrush current on contact closing at 230 V~: 120 A - 20 ms

① Fluorescent tubes
② Halogen lamp
③ Compact fluorescent lamps
④ 1-10 V ballast

	①④		②④		③④	
230 V~	4 x 1000 VA	4 x 4.3 A	4 x 1000 VA	4 x 4.3 A	4 x 1000 VA	4 x 4.3 A
110 V~	4 x 500 VA		4 x 500 VA		4 x 500 VA	

Connection

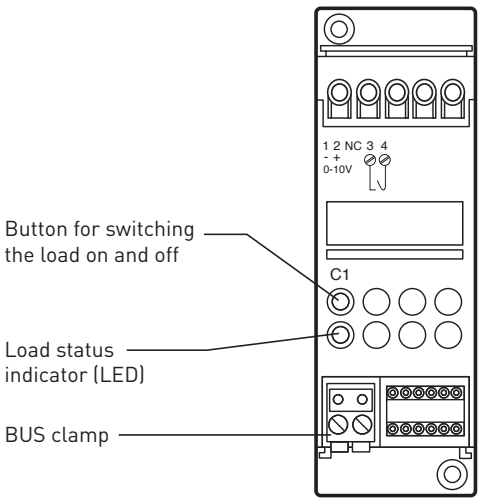


IMPORTANT: This product must be used on a single phase to comply with zero current synchronisation. The output contacts use the same supply phase.

F413N: ACTUATOR/DIMMER WITH 1 X 1-10 V CIRCUIT

This dimmer has 1 channel for controlling lamps with 1-10 V ballast. The peripheral is powered by the BUS. It is possible to set the minimum level. It is compatible with fluorescent or LED type energy-saving lamps.

Technical characteristics



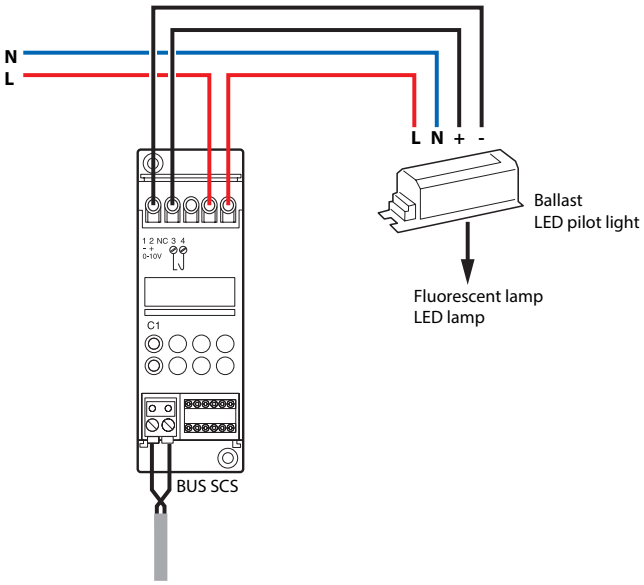
Power supply via BUS/SCS	12 - 27 V
Consumption	30 mA
Type of contact	Normally open 2 A monostable relay
Dissipated power with max. load	1 W
No. of modules	2
Degree of protection	
Penetration of solid bodies and liquids	IP 20 (installed in an enclosure)
Impact resistance	IK 04
Operating temperature range	-5°C to +45°C
Storage temperature	-20°C to +70°C

⚠ Product compatible from 19W01

① Fluorescent tubes
② Halogen lamp
③ Compact fluorescent lamp
④ LED
⑤ 1-10 V ballast (10 ballasts max.)

	① ⑤		② ⑤		③ ⑤		④ ⑤	
230 V~	460 VA	2 A	460 VA	2 A	460 VA	2 A	460 VA	2 A
110 V~	230 VA		230 VA		230 VA		230 VA	

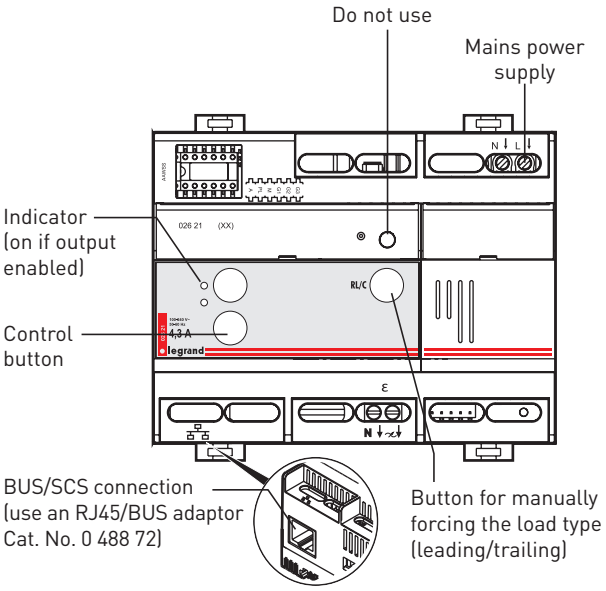
Connection


N
L
L N + -
Ballast
LED pilot light
Fluorescent lamp
LED lamp
1 2 NC 3 4
- + 0-10V
C1
BUS SCS

F416U1: ACTUATOR/DIMMER WITH 1 X 1000 W CIRCUIT FOR ALL LOADS

This dimmer for all loads has 1 channel for controlling halogen, LV and ELV loads. It incorporates the zero current synchronisation function, which is particularly suitable for controlling energy-saving lamps, and the status memory function. It is powered at 230 V.

Technical characteristics



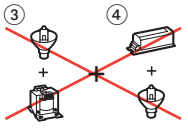
Number of supply terminal blocks	1
Number of load terminals	1
Connection terminals	
Terminal type	Screw
Terminal capacity	2 x 2.5 mm²
Type of contact	Normally open 4.3 A monostable relay
Number of RJ45s	1
Mains voltage	100-240 V~
Frequency	50/60 Hz
Location category	Indoors
Degree of protection	
Penetration of solid bodies and liquids	IP 20 (installed in an enclosure)
Impact resistance	IK 04
Number of modules	6
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C
No-load power consumption	0.3 W
BUS consumption	5 mA
Zero current breaking	Yes

① Incandescent lamp
② Halogen lamp
③ Halogen lamp with ferromagnetic transformer
④ Halogen lamp with separate electronic transformer

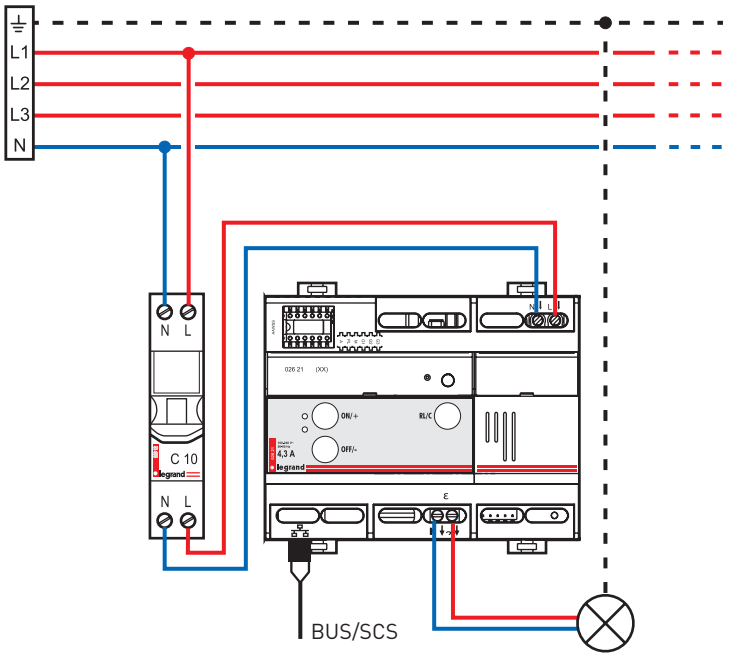
	①		②		③		④	
230 V~	1000 W	4.3 A	1000 W	4.3 A	1000 VA	4.3 A	1000 VA	4.3 A
110 V~	500 W		500 W		500 VA		500 VA	

Use only transformers designed for use with an electronic switch.

CAUTION:
On same channel



Connection



Earth connection for class I luminaires

F418U2: UNIVERSAL DIMMER 2 X 300 W/1 X 600 W

Dimmer with 2 channels for controlling dimmable LED and compact fluorescent lamps (CFLs), halogen lamps and electronic transformers.
The device is able to set a maximum load of 300 W for each channel or a single maximum load of 600 W if both channels have been configured in parallel.
Configurable via the HRCS (Hotel Room Controller software); the main functions available are:
- Dimming brightness
- Selection of the mode: 2 channels of 300 W or 1 channel of 600 W
- Manual selection of the load type
- Configuring the minimum dimming level

After connecting the device to the BUS/SCS and the load, it is possible to control loads from any control device which is part of the system, provided that it has been correctly configured.
It is also possible to control loads locally by using the buttons available on the device: press quickly to activate/deactivate the load; keep pressing with a finger to dim.

Technical characteristics

Power supply via BUS/SCS	18-27 V⎓
BUS consumption	18 mA (ON loads)
Degree of protection	
Penetration of solid bodies and liquids	IP 20 (installed in an enclosure)
Impact resistance	IK 04
Operating temperature range	0°C to +40°C
Storage temperature	-20°C to +70°C
Number of modules	4
Connection terminals	
Terminal type	Screw
Terminal capacity	2 x 2.5 mm²

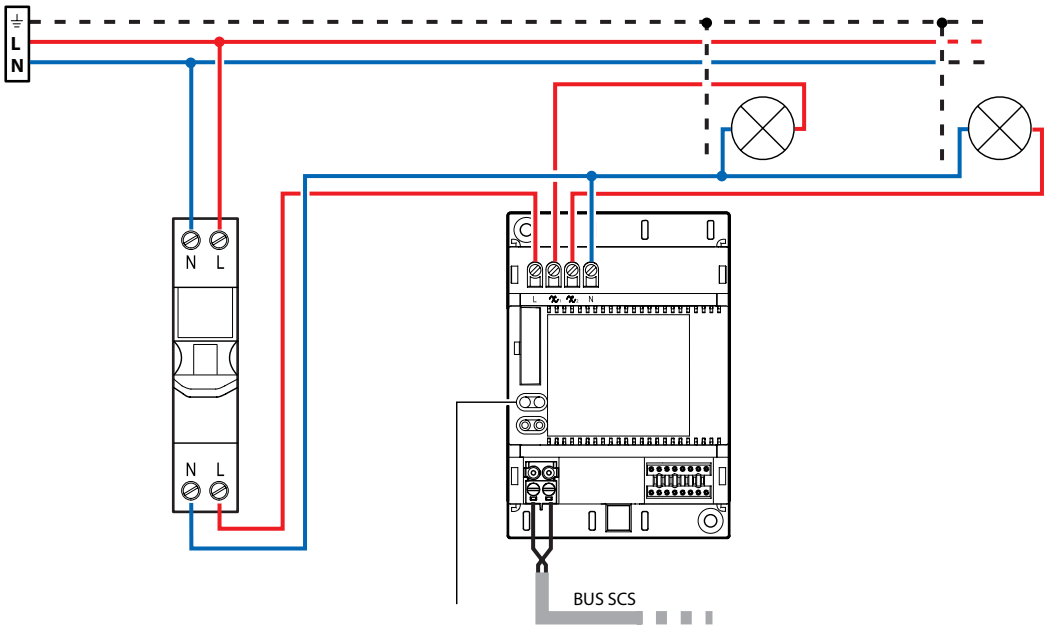
Product compatible from 18W26

Power/Consumption of controlled loads:

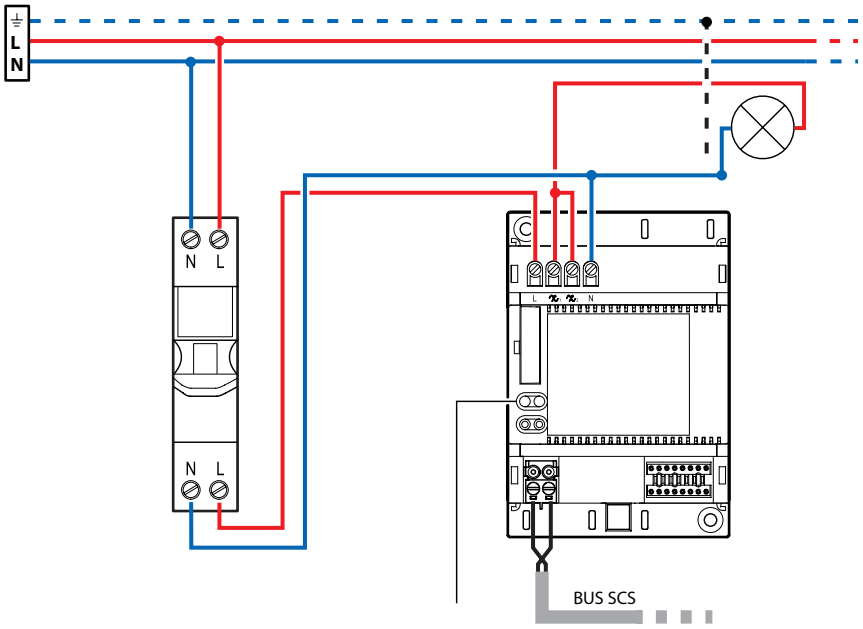
50 and 60 Hz	Incandescent lamps Halogen lamps	Dimmable LED lamps * Dimmable compact fluorescent lamps Halogen lamps with magnetic/ electronic transformers
Separate channels	2 x 300 W	2 x 300 VA
	2 x 150 W	2 x 150 VA
Parallel channels	600 W	600 VA
	300 W	300 VA

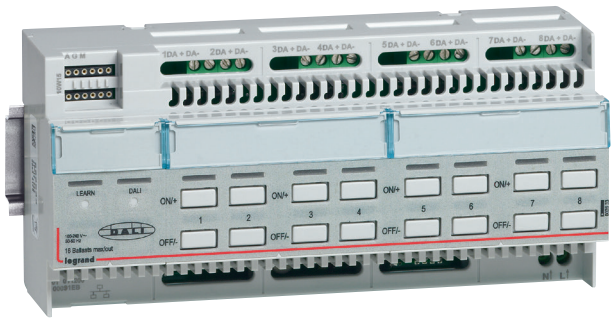
NB (*): For the most common dimmable LED lamps and commercially-available compact fluorescent lamps, the power rating 300 VA corresponds to approximately 200 W.

Connection - 2 channels of 300 W max



Connection - 1 channel of 600 W max

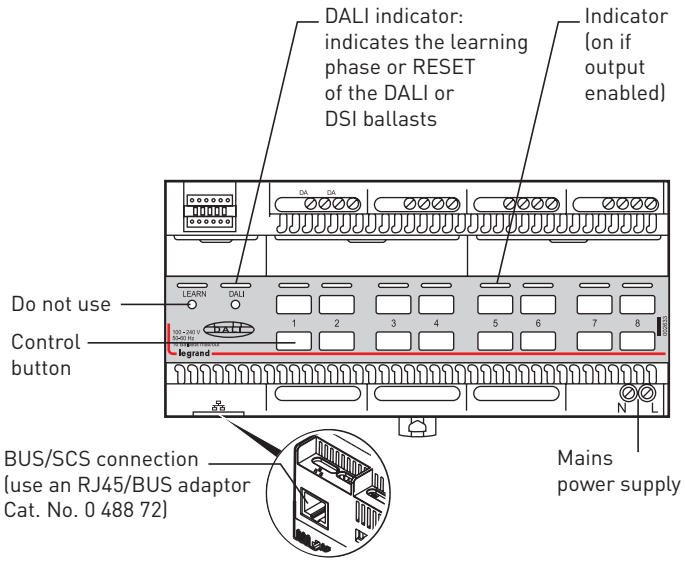




0 026 33 OR BMDI1100: DIMMER WITH 8 DALI CIRCUITS

This dimmer has 8 independent channels (16 ballasts max./channel) for controlling DALI or DSI lighting loads in broadcast mode (all luminaires connected to an output should be controlled as a group; it is not possible to re-assign a luminaire to a different output by software programming, it will need to be connected to a new output). The device incorporates the status memory function. It is powered at 230 V.

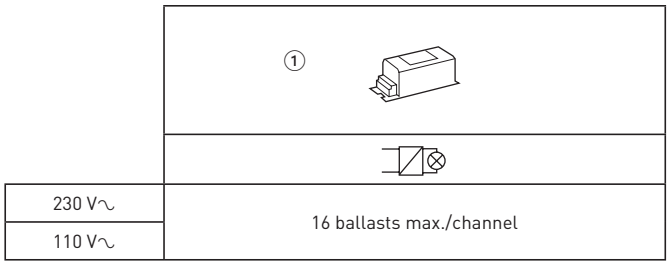
Technical characteristics



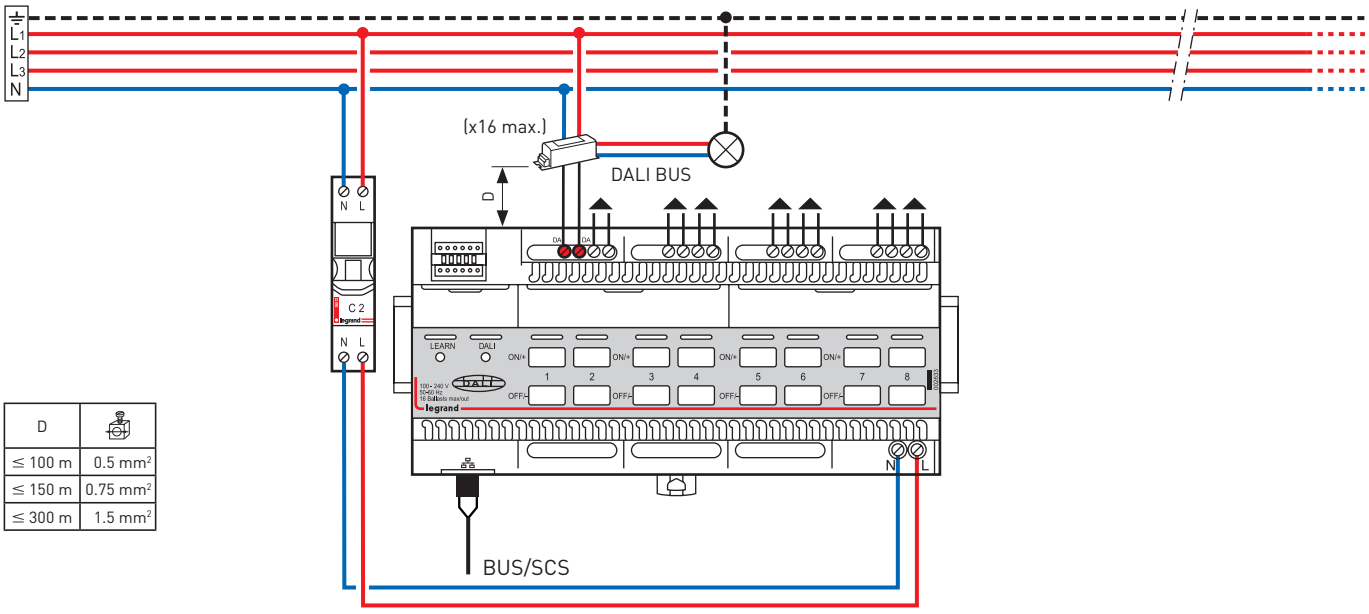
Number of supply terminal blocks	1
Number of load terminals	8
Connection terminals	
Terminal type	Screw
Terminal capacity	2 x 2.5 mm^2
DALI load terminal capacity	⩽ 1.5 mm^2
Number of RJ45s	1
Mains voltage	100-240 V~
Frequency	50/60 Hz
Location category	Indoors
Degree of protection	
Penetration of solid bodies and liquids	IP 20 (installed in an enclosure)
Impact resistance	IK 04
Number of modules	10
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C
No-load power consumption	0.8 W
Type of DALI protocol	Broadcast mode*
BUS consumption	5 mA

*DALI Broadcast mode:
all the luminaires connected to one channel are controlled as a single group (no address for each luminaire)

① DALI ballast



Connection



D	
≤ 100 m	0.5 mm²
≤ 150 m	0.75 mm²
≤ 300 m	1.5 mm²

DALI learning procedure:

Once all the luminaires are connected, a DALI learning phase is necessary to program the ballasts. The controller will control the lights once learning is complete.

Short press followed by a long press (approximately 10 s) on the DALI button, until the DALI LED flashes.
Check that the loads gradually switch off (random order). Once the procedure is complete, the DALI LED goes off.

⚠ If a lamp stays on, there is a fault. Check the wiring.

F430/2: HVAC ACTUATOR WITH 2 INDEPENDENT RELAYS

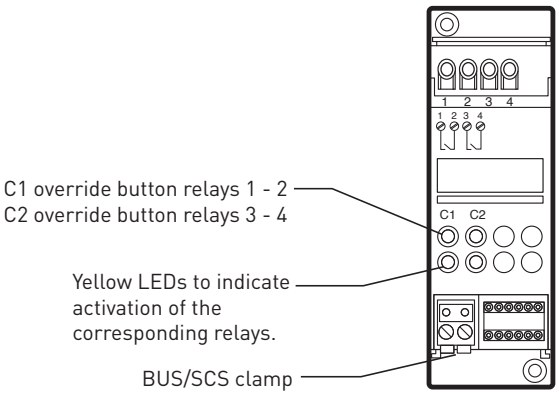
This actuator has 2 independent relays (ON/OFF function, Open/Close function) for controlling loads (relief valves or motorised valves, pumps and electric radiators).

This actuator can control:
- up to 2 ON/OFF valves for a water radiator
- up to 2 electric radiators
- up to 2 electric underfloor heating systems (add one contactor per output if the load is more than 6 A)
- up to 2 electric radiant panel heaters (add one contactor per output if the load is more than 6 A)
- up to 2 pumps for underfloor heating
- 1 valve with open and close command

To manage Open/Close type loads, wire up contact C1 for the open command and contact C2 for the close command.

This HVAC actuator is powered by the BUS and should be combined with a thermostat.

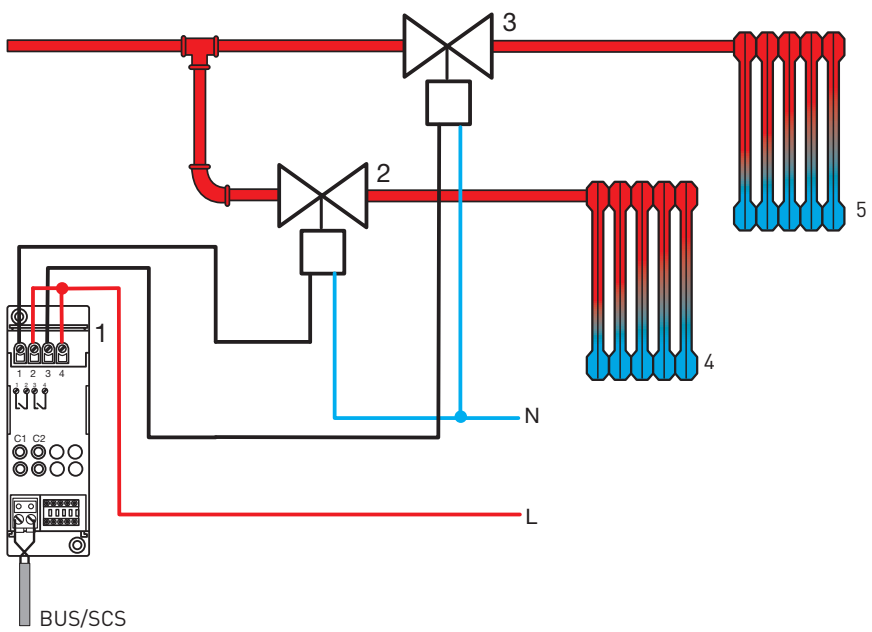
Technical characteristics



Power supply via BUS/SCS	18-27 V⎓
Max. consumption (relays activated individually)	25.5 mA
Consumption (relays activated with interlocking)	14 mA
Consumption in standby mode	9 mA
Breaking capacity of each relay	6 A (resistive) Eg: electric radiators 2 A (inductive) Eg: solenoid valves, pumps
Max. dissipated power	1.7 W
Operating temperature range	from 5°C to 40°C
Connection terminals Terminal type Terminal capacity	 Screw 2 x 2.5 mm^2
Degree of protection Penetration of solid bodies and liquids Impact resistance	 IP 20 (installed in an enclosure) IK 04
Number of modules	2
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C

Connection

ON/OFF valves for radiator

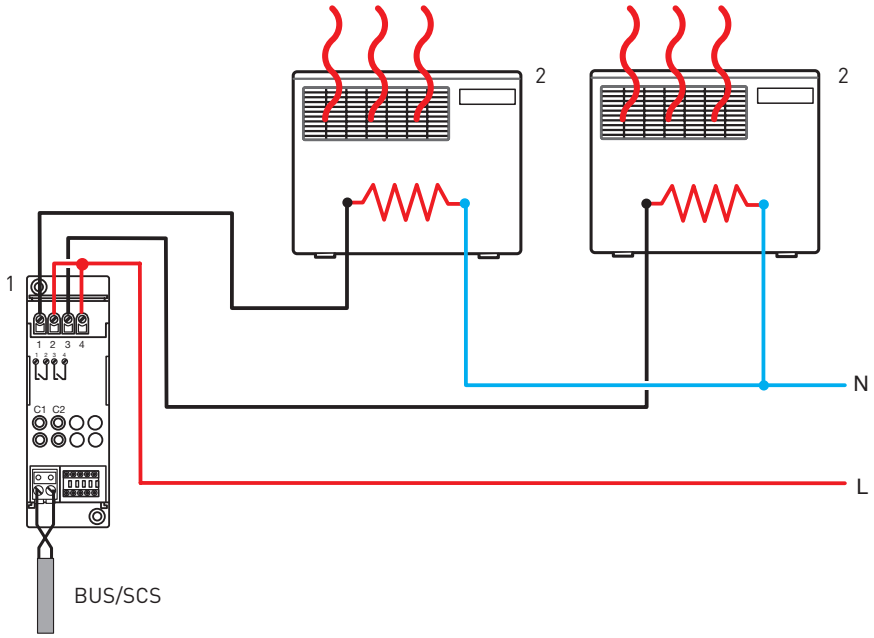


Key
1. Actuator
2. ON/OFF solenoid valve
3. ON/OFF solenoid valve
4. Zone 1 radiator
5. Zone 2 radiator

F430/2: HVAC ACTUATOR WITH 2 INDEPENDENT RELAYS (CONTINUED)

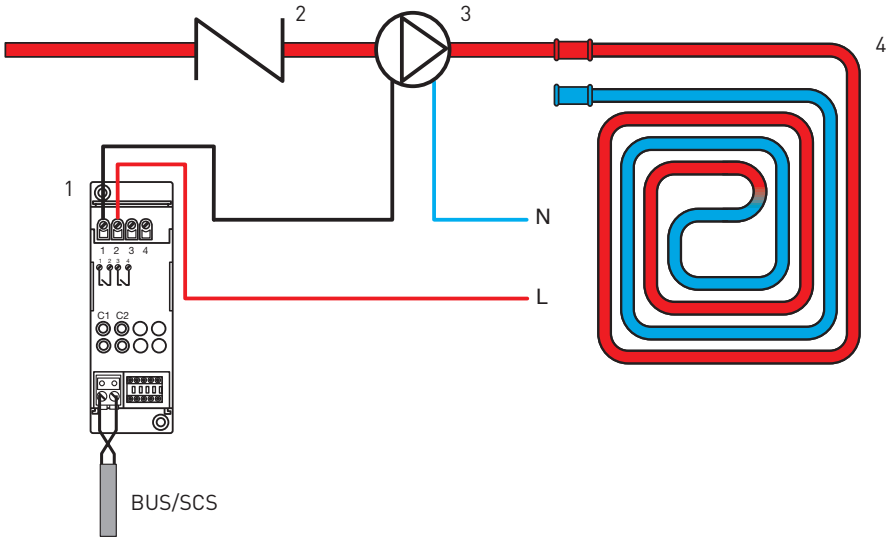
Connection (continued)

Electric radiators/electric underfloor heating/electric radiant panel heaters



Key
1. Actuator
2. Electric radiators

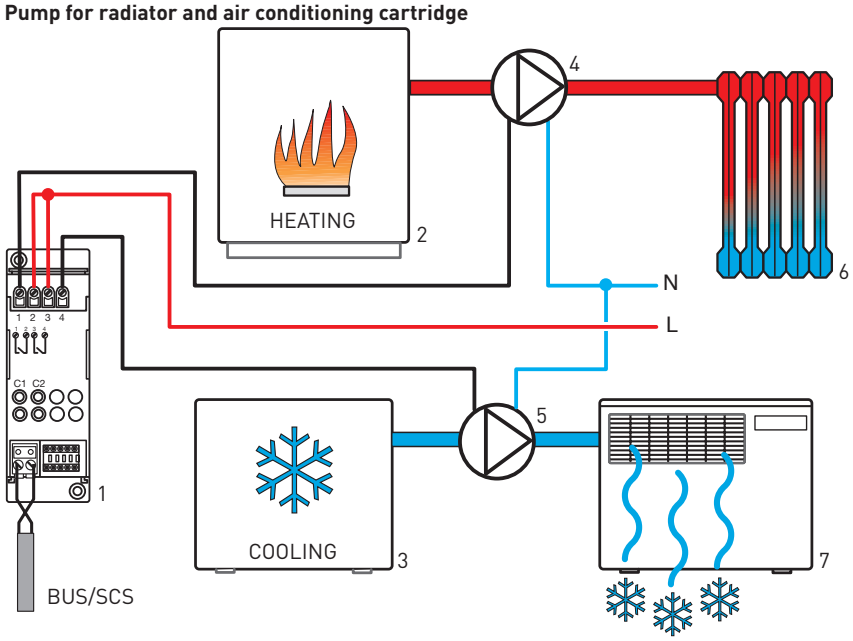
Pump for underfloor heating



Key
1. Actuator
2. Non-return valve
3. Pump
4. Radiant panel heater

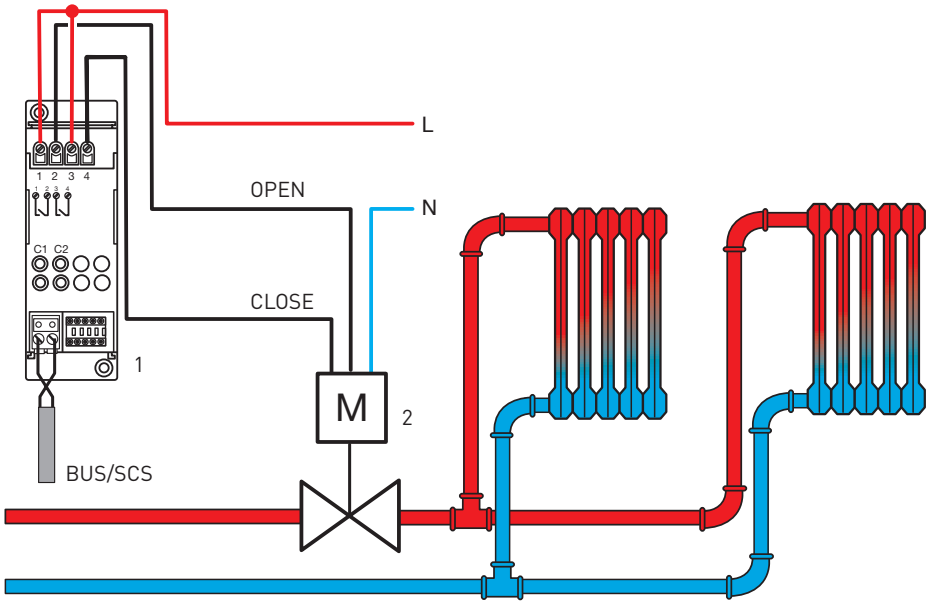
Connection (continued)

Pump for radiator and air conditioning cartridge



Key
1. Actuator
2. Boiler
3. Chiller
4. Heating circuit circulating pump
5. Cooling circuit circulating pump
6. Radiator
7. Air conditioning cartridge

Valve with open and close command



Key
1. Actuator
2. Solenoid valve with open and close command

F430/4: HVAC ACTUATOR WITH 4 INDEPENDENT RELAYS

This actuator has 4 independent relays (ON/OFF function, Open/Close function) for controlling HVAC loads (fan coil units with 3 speeds, relief valves or motorised valves, pumps and electric radiators).
This actuator can control:

- up to 4 ON/OFF valves for a water radiator
- up to 4 electric radiators
- up to 4 electric underfloor heating systems (add one contactor per output if the load is more than 4 A)
- up to 4 electric radiant panel heaters (add one contactor per output if the load is more than 4 A)
- up to 4 pumps for underfloor heating
- 2 valves with open and close command
- 1 x 2-pipe fan coil unit with ON/OFF valve

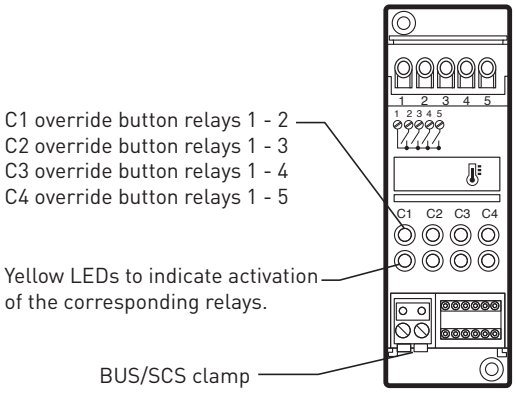
To manage Open/Close type loads, wire up contact C1 for the open command and contact C2 for the close command.

To control a fan coil unit: contact C1 is ON/OFF type and controls the relief valve or valve, contacts C2, C3 and C4 control the ventilation minimum, average and maximum speed respectively.

This HVAC actuator is powered by the BUS and should be combined with a thermostat.

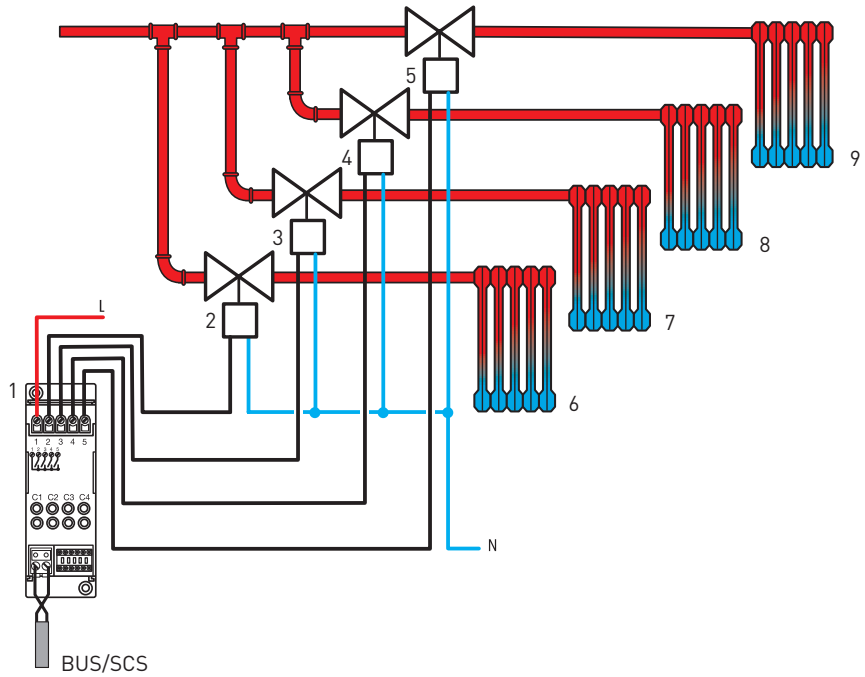
Technical characteristics

Power supply for operation on a BUS/SCS	18-27 V⎓
Max. consumption (relays activated individually)	37.5 mA
Consumption (relays activated with interlocking or fan coil unit control)	20.5 mA
Consumption in standby mode	9 mA
Breaking capacity of each relay	4 A (resistive) Eg: electric radiators 1 A (inductive) Eg: solenoid valves, pumps
Max. dissipated power	3.2 W
Connection terminals Terminal type Terminal capacity	 Screw 2 x 2.5 mm²
Degree of protection Penetration of solid bodies and liquids Impact resistance	 IP 20 (installed in an enclosure) IK 04
Number of modules	2
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C



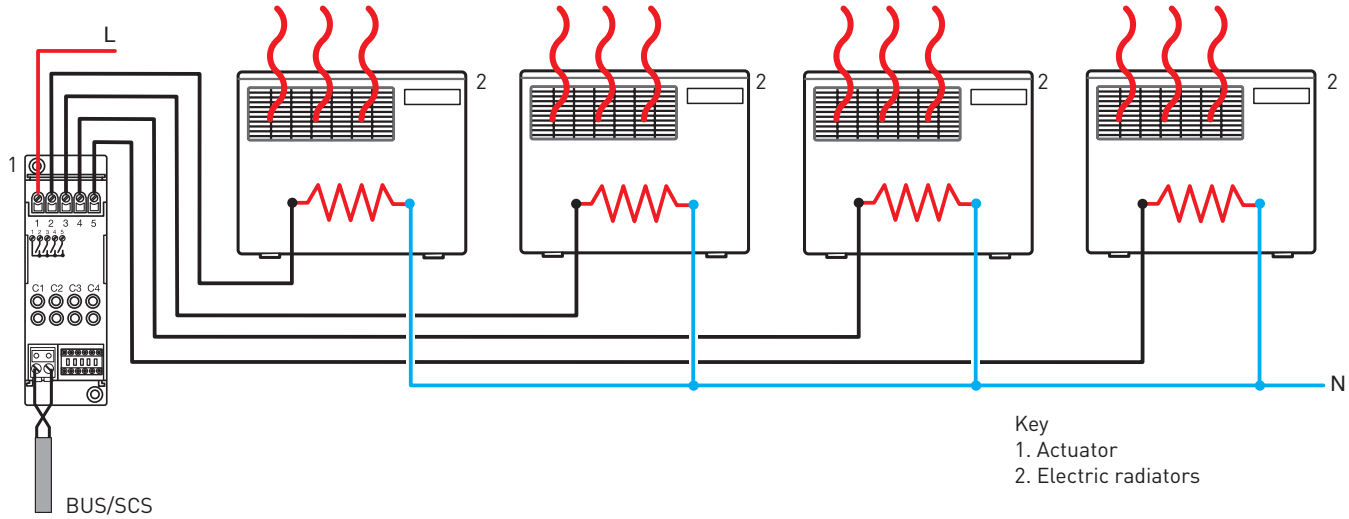
Connection

ON/OFF valve for radiator



Key
1. Actuator
2 to 5. ON/OFF solenoid valve
6 to 9. Radiator

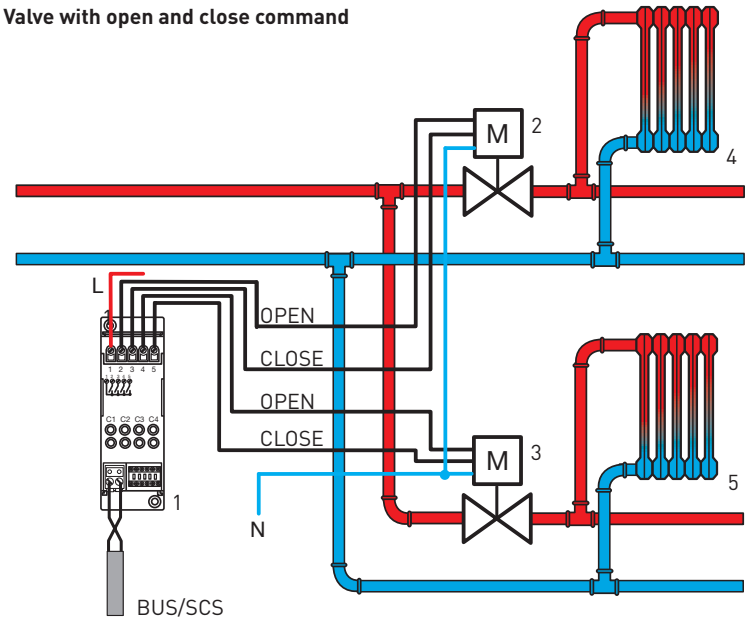
Electric radiators/electric underfloor heating/electric ceiling panel heaters



Key
1. Actuator
2. Electric radiators

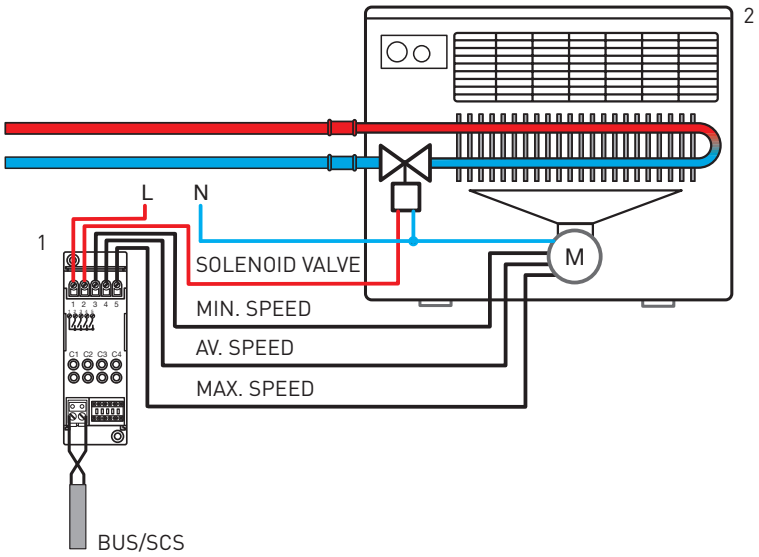
F430/4: HVAC ACTUATOR WITH 4 INDEPENDENT RELAYS (CONTINUED)

Valve with open and close command



Key
1. Actuator
2 and 3. Solenoid valve with open and close command
4 and 5. Radiator

2-pipe fan coil unit with ON/OFF valve



Key
1. Actuator
2. 2-pipe, 3-speed fan coil units

Note
When using a fan coil unit in a heating installation, avoid operating the fan when the water is cold, as this would result in cooling the room rather than heating it. Some fan coil units have a water temperature sensor to perform this function. If you are using a fan coil unit without a sensor, an effective solution would be to use a thermostat (or electrical heating element) on the water return pipe. The thermostat contact controls a contactor, to which the fan coil unit power supplies are connected.

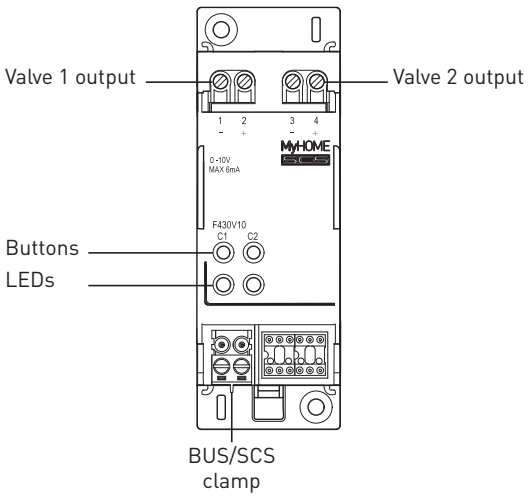
F430V10: HVAC ACTUATOR WITH 2 X 0-10 V OUTPUTS

This actuator has 2 x 0-10 V outputs for controlling 0-10 V proportional solenoid valves on thermoregulation installations. As well as two 0-10 V outputs, it has two control buttons for manually opening/closing each valve and the corresponding status indicators.

This actuator can control:
- up to two 0-10 V valves

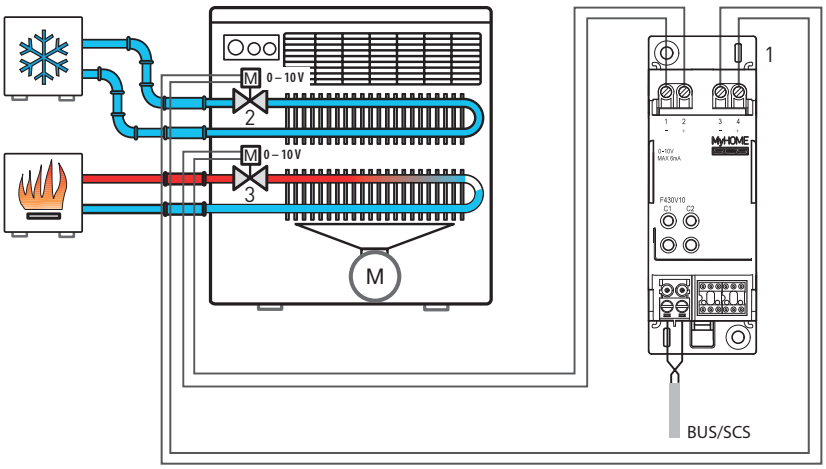
This HVAC actuator is powered by the BUS. It must be used with a thermostat.

Technical characteristics

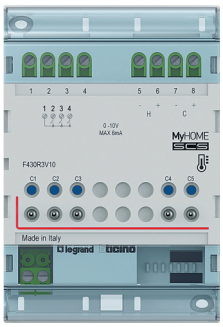


BUS/SCS power supply	18-27 V⎓
Standby consumption	19 mA
Maximum consumption	25 mA
Outputs	2 x 0-10 V
Maximum current provided by each output	1 mA
Connection terminals	
Terminal type	Screw
Terminal capacity	2 x 2.5 mm²
Degree of protection	
Penetration of solid bodies and liquids	IP 20 (installed in an enclosure)
Impact resistance	IK 04
Number of modules	2
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C

Connection



Key
1. Actuator
2 and 3. 0-10 V thermostatic valve



F430R3V10: HVAC ACTUATOR WITH 3 INDEPENDENT RELAYS AND 2 X 0-10 V OUTPUTS

This actuator has 3 independent relays and 2 x 0-10 V outputs for controlling 2- and 4-pipe fan coil units, with 3 speeds and controlling 0-10 V valves.

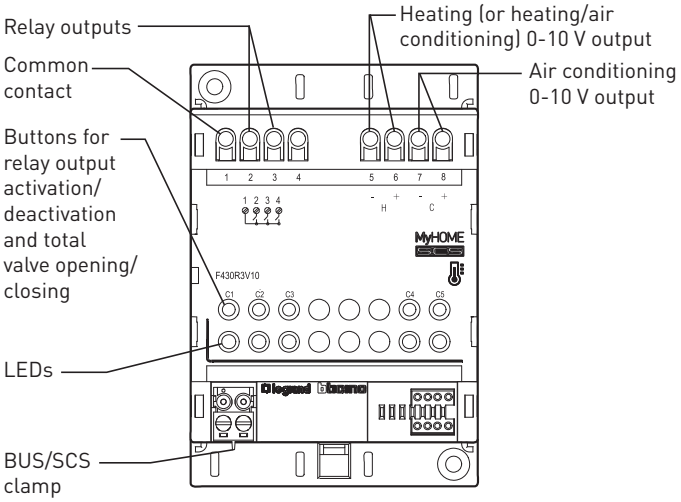
The LEDs are used to indicate the state of the corresponding outputs (relay and 0-10 V).

This actuator can control:

- 1 x 2-pipe fan coil unit with 0-10 V valve
- 1 x 4-pipe fan coil unit with 0-10 V valve

This HVAC actuator is powered by the BUS and should be combined with a thermostat.

Technical characteristics

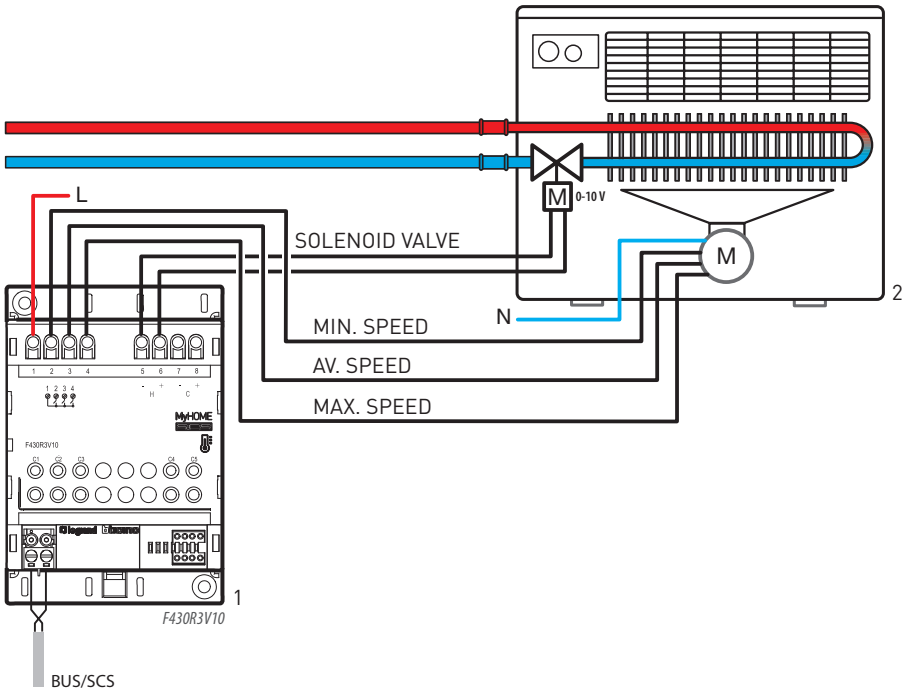


BUS/SCS power supply	18-27 VDC
Standby consumption	20 mA
Maximum consumption	60 mA
Maximum current provided by each 0-10 V output	1 mA
Maximum power which can be controlled for relays	4 A (resistive); 1 A (inductive)
Connection terminals	
Terminal type	Screw
Terminal capacity	2 x 2.5 mm^2
Degree of protection	
Penetration of solid bodies and liquids	IP 20 (installed in an enclosure)
Impact resistance	IK 04
Number of modules	2
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C

Product compatible from production batch 16W09 onwards.

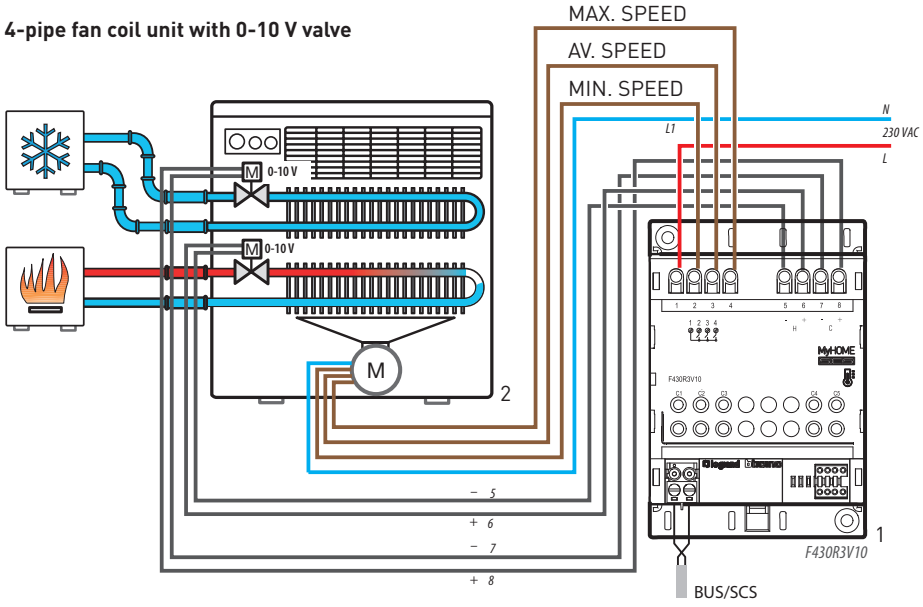
Connection

2-pipe fan coil unit with 0-10 V valve

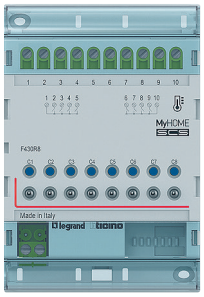


Key
1. Actuator
2. 2-pipe fan coil unit with 0-10 V valve

4-pipe fan coil unit with 0-10 V valve



Key
1. Actuator
2. 4-pipe fan coil unit with 0-10 V valve



F430R8: HVAC ACTUATOR WITH 8 INDEPENDENT RELAYS

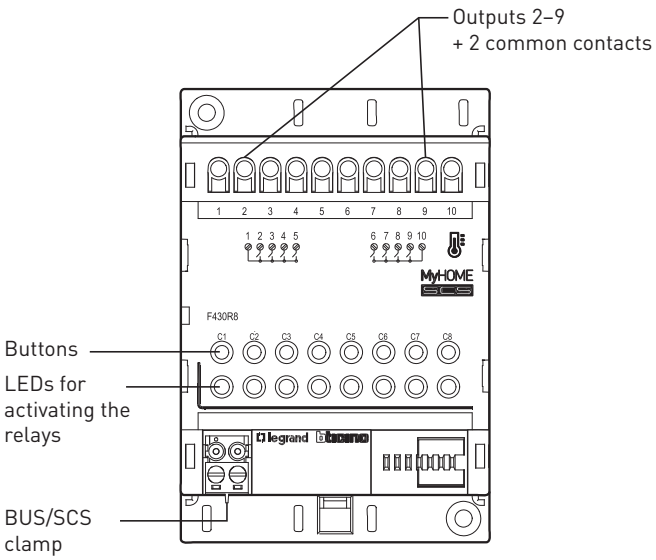
This actuator has 8 independent relays (ON/OFF function, Open/Close function) for controlling HVAC loads (fan coil units with 3 speeds, relief valves or motorised valves, pumps and electric radiators).

This actuator can control:
- up to 8 ON/OFF valves for a water radiator
- up to 4 valves with open and close command
- up to 4 x 3-way valves
- up to 2 x 2-pipe fan coil units with ON/OFF valves (4+4 relays)
- 1 x 2-pipe fan coil unit with 3-way valves (5 relays)
- 1 x 4-pipe fan coil unit with 2 ON/OFF valves (5 relays)
- 1 x 4-pipe fan coil unit with 2 x 3-way valves (7 relays)

This HVAC actuator is powered by the BUS and should be combined with a thermostat.

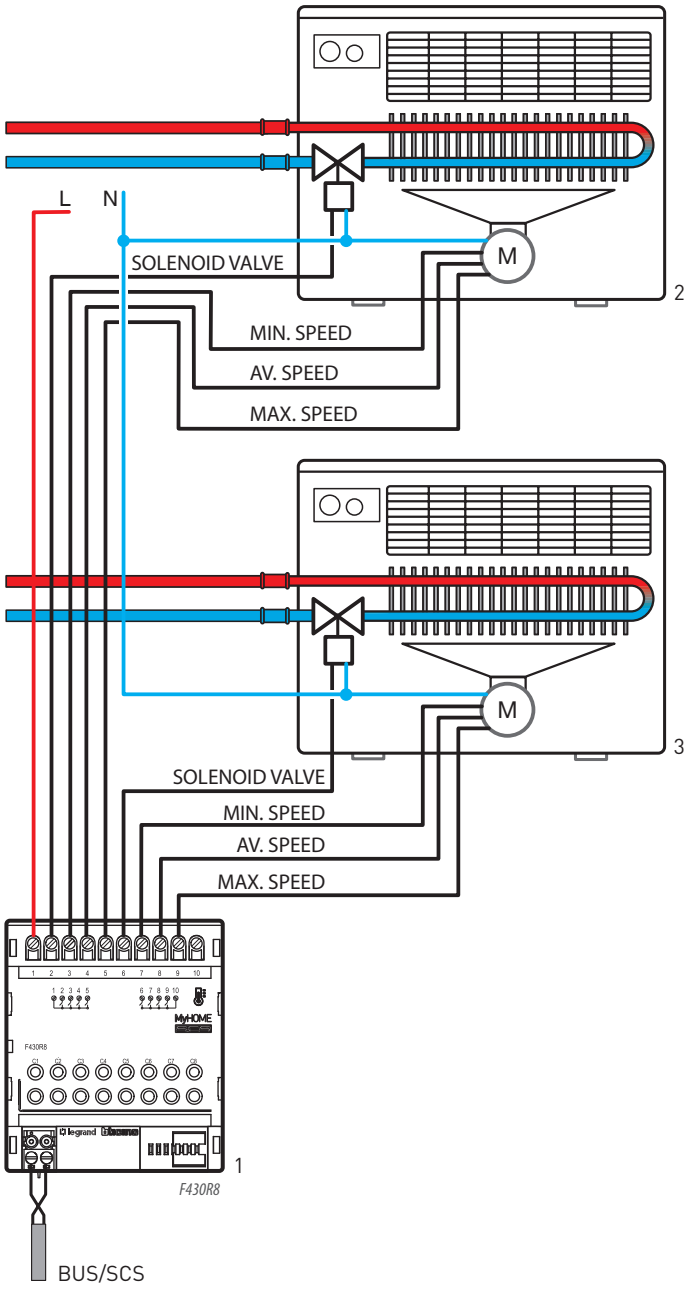
Technical characteristics

Power supply via BUS/SCS	18-27 V⎓
Consumption in standby mode	15 mA
Maximum consumption	100 mA
Working temperature	5°C to 40°C
Maximum power which can be controlled	4 A (resistive); 1 A (inductive)
Size	4 DIN modules
Connection terminals	
Terminal type	Screw
Terminal capacity	2 x 2.5 mm^2
Degree of protection	
Penetration of solid bodies and liquids	IP 20 (installed in an enclosure)
Impact resistance	IK 04
Number of modules	2
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C

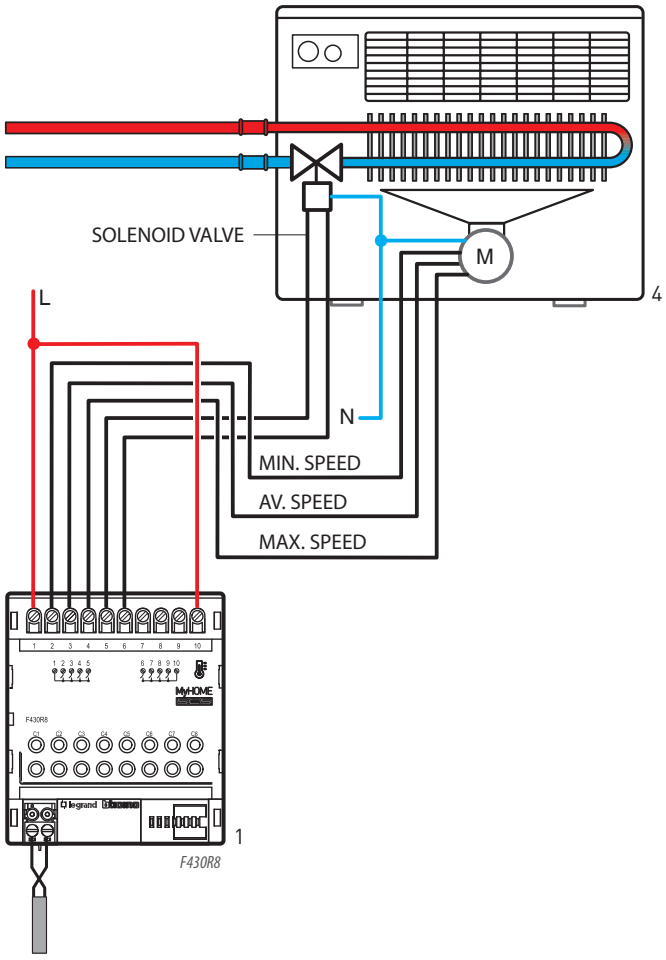


Connection

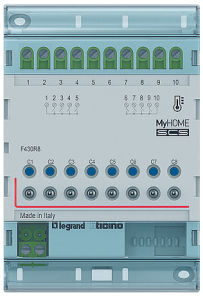
2 x 2-pipe fan coil units with ON/OFF valve



2-pipe fan coil units with 3-way valve



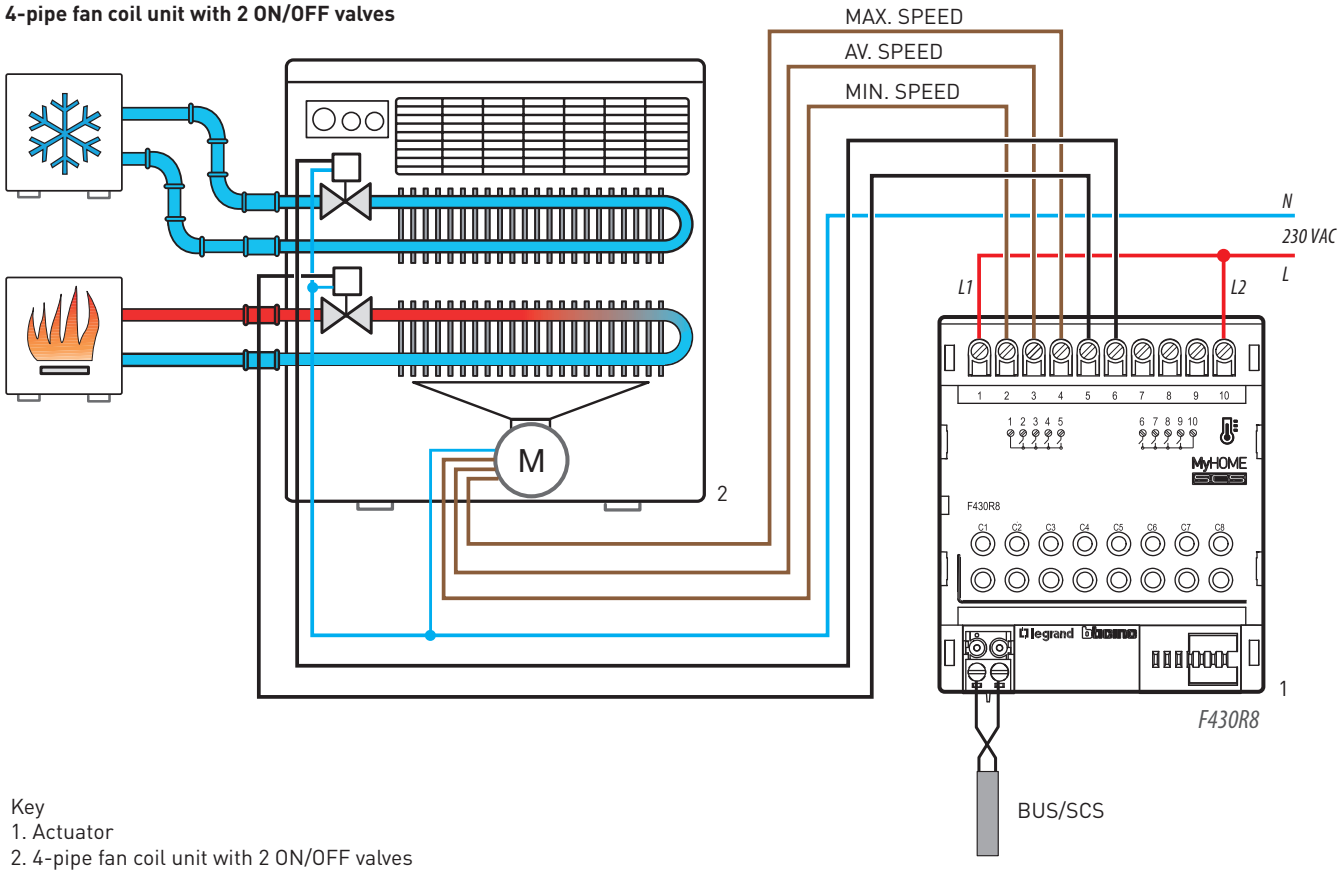
Key
1. Actuator
2 and 3. 2-pipe fan coil unit with ON/OFF valve
4. 2-pipe fan coil unit with 3-way valve



F430R8: HVAC ACTUATOR WITH 8 INDEPENDENT RELAYS (CONTINUED)

Connection

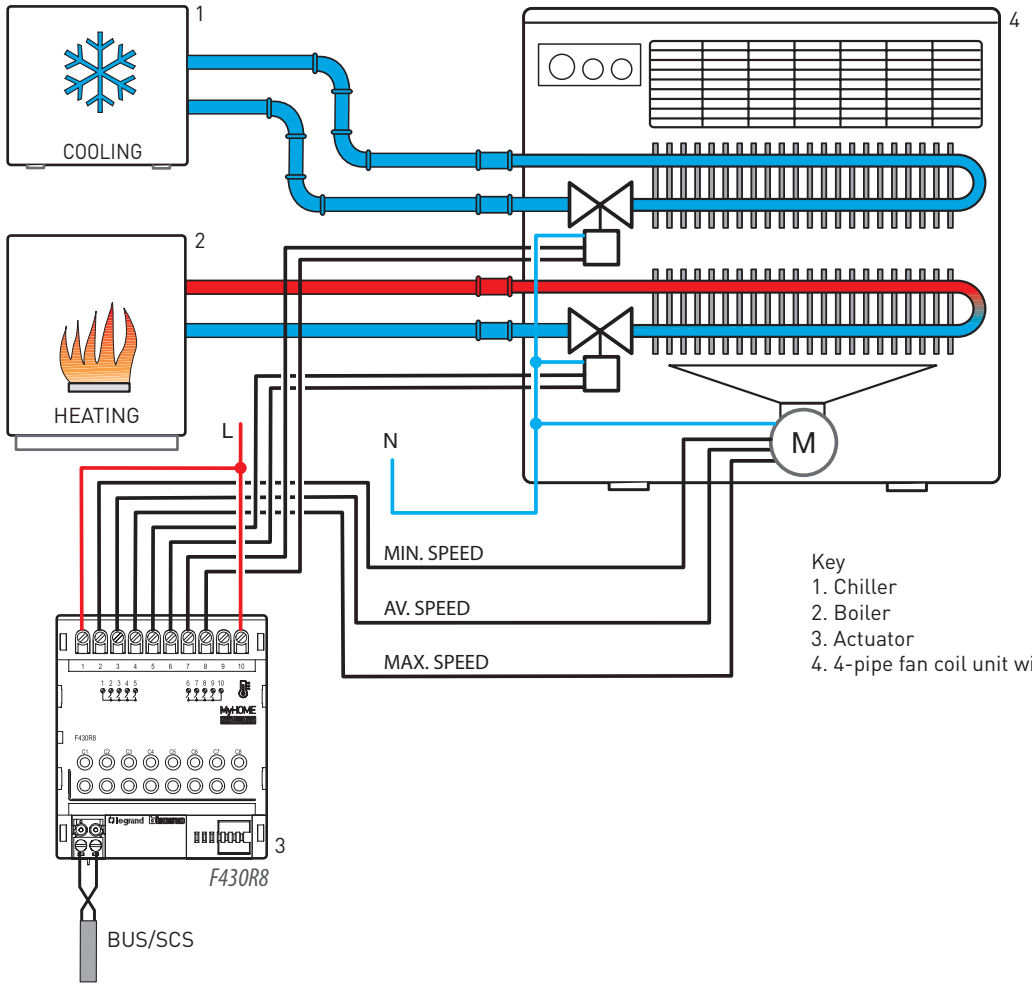
4-pipe fan coil unit with 2 ON/OFF valves



Key
1. Actuator
2. 4-pipe fan coil unit with 2 ON/OFF valves

Connection

4-pipe fan coil unit with 3-way valve



Key
1. Chiller
2. Boiler
3. Actuator
4. 4-pipe fan coil unit with 3-way valves

0 674 59: THERMOSTAT WITH SCREEN

EQUIVALENCE	
Cat. No.	**Range**
0 674 59	Arteor
H4691	Axolute
LN4691	Livinglight

This thermostat has a screen for controlling the ambient temperature on thermoregulation installations.

It has 4 buttons which can be used to select the desired temperature and the various operating modes and, when used with a fan coil unit, to control the fan speed.

The thermostat can manage different operating modes: automatic and manual, and setting values for Eco, Comfort, Frost guard/ thermal overload and OFF modes.

It can also be used on mixed heating/air-conditioning installations in cases where both functions would be available simultaneously on the same installation.

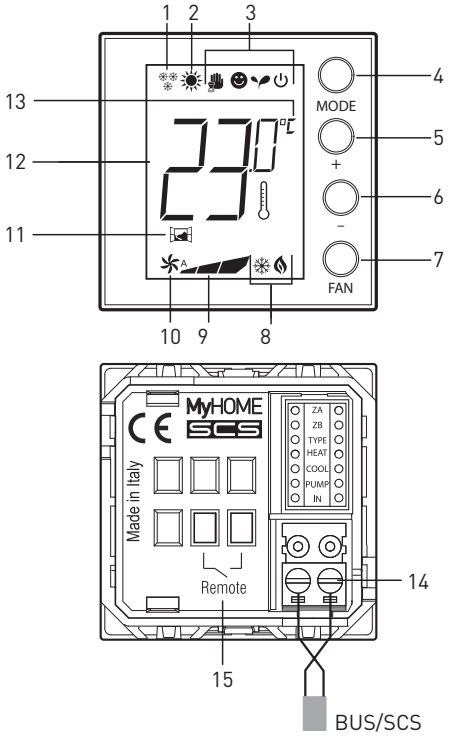
It can be used to control an actuator locally or control a centralised HVAC system via the IP network.

It is powered by the BUS.

An HVAC control loop can have up to 9 actuators + 9 pumps and up to 10 thermostats (1 master thermostat + 9 slave thermostats).

The system can have up to 4 independent control loops.

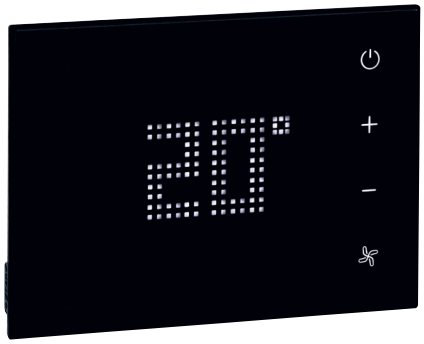
Technical characteristics



Key
1. Heating function
2. Air conditioning function
3. Operating mode icons
4. MODE button: pressing briefly changes the device mode; a longer press changes the function.
5. + button: increases the programmed value
6. – button: decreases the programmed value
7. FAN button: pressing briefly sets the fan speed of the fan coil unit to one of 3 levels + automatic; a longer press accesses the user setting menu
8. Heating/air conditioning indicator enabled
9. Fan speed indicator (3 levels)
10. Fan operating in automatic mode indicator
11. Window indicator: local contact active depending on programming
12. Measured temperature (thermometer symbol on)/set temperature (thermometer symbol off) indicator
13. Unit of measurement: °C or °F
14. BUS/SCS connection
15. Do not use

Technical characteristics (continued)

BUS power supply	18-27 VDC
Consumption	30 mA (maximum back-light when pressing the buttons)
	16 mA (backlight on standby)
	13 mA (backlight switched off)
Unit of measurement	°C or °F
Operating temperature	0°C-40°C
Storage temperature	-20°C to +70°C
Size	For mounting in a 1-gang box
Loads controllable by an actuator	• On/Off, Open/Close, 3-way or 0-10 V valves • 2 or 4-pipe fan coil unit with On/Off, 3-way or 0-10 V valves • 2 and 4-pipe fan coil unit with 0-10 V valve and 0-10 V speed control • Radiators (ON/OFF) • Centralised air-conditioning system IP gateway



0 487 73 OR FL4654/FL4654W: UX TOUCH THERMOSTAT

The thermostat is dedicated to hotels and is equally suitable for heating and/or air-conditioning installations. It can be used to display and set the setpoint temperature, fan speed, and switch ON with thermal overload protection.

The screen displays the measured ambient temperature or the setpoint temperature.

The control & management software is used to view and control the thermostat.

The thermostat must be installed on a wall at a height of about 150 cm from the floor, unless otherwise specified by the applicable standards.

An HVAC control loop can have up to 9 actuators + 9 pumps and up to 10 thermostats (1 master thermostat + 9 slave thermostats).

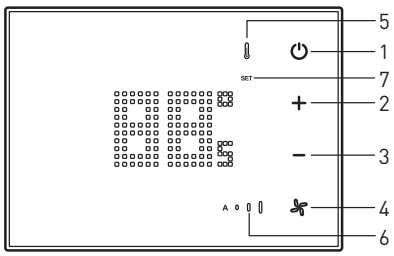
The system can have up to 4 independent control loops.

It has a proximity sensor: when the device detects an approach, it switches from standby state to active state. The LED brightness level (on standby and active) and the time delay before switching from standby to active can be set by configuration.

This product is supplied without its support Cat. No. 0 487 79.

DEFAULT VALUES		
	Heating	**Air conditioning**
Setting interval	3-40°C	3-40°C
Comfort	21°C	25°C
Economy	18°C	28°C
Frost guard	7°C	
Thermal overload		35°C

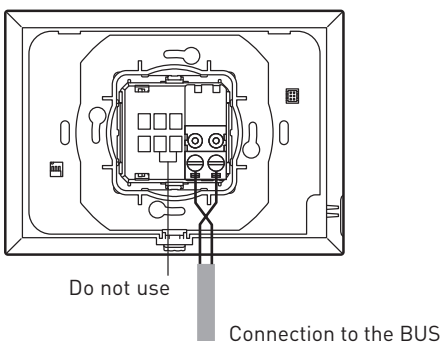
Front view



Key

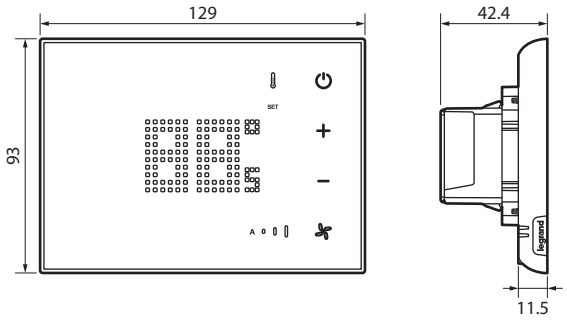
1. MODE button: pressing briefly changes from normal mode (ON) to protection mode (frost guard or thermal overload).
   A longer press changes the function (heating/air conditioning/ automatic) according to the configuration.
2. + button: increases the temperature value
3. – button: decreases the temperature value
4. FAN button: sets the fan speed (3 levels + automatic)
5. Heating enabled indicator (red). Air conditioning enabled indicator (blue)
6. Fan speed indicator (3 levels) + automatic
7. Measured temperature (SET off) or setpoint temperature (SET on) indicator

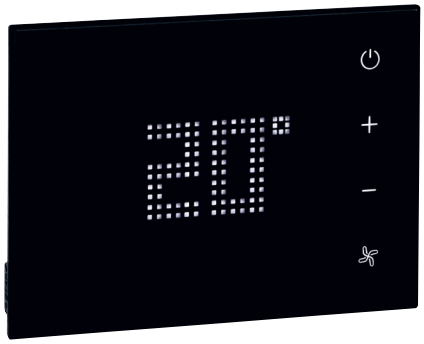
Rear view



Technical characteristics

BUS/SCS power supply	18-27 VDC
Consumption with screen off	8 mA
Consumption with ultra-bright screen	25 mA
Operating temperature	0°C to +40°C
Storage temperature	-20°C to +70°C
Unit of measurement	°C or °F
Loads controllable by an actuator	• On/Off, Open/Close, 3-way or 0-10 V valves • 2 or 4-pipe fan coil unit with On/Off, 3-way or 0-10 V valves • 2 and 4-pipe fan coil unit with 0-10 V valve and 0-10 V speed control • Radiators (ON/OFF) • Centralised air-conditioning system IP gateway
Protection index	IP 20, IK 04
Plate and surround colour (standard)	Black Cat. No. 0 487 73/ FL4654 or White Cat. No. FL4654W
Size	For mounting in a 1-gang box

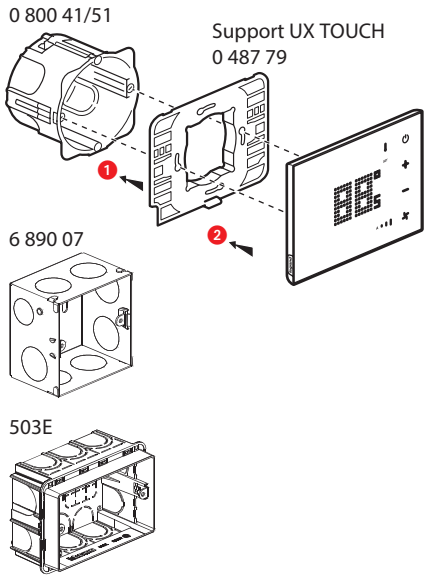




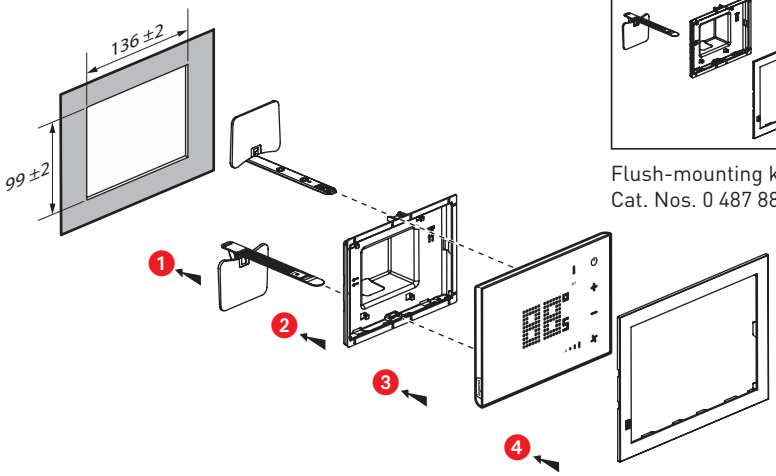
0 487 73 OR FL4654/FL4654W: UX TOUCH THERMOSTAT (CONTINUED)

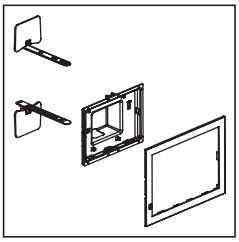
Technical characteristics (continued)

Surface-mounted installation



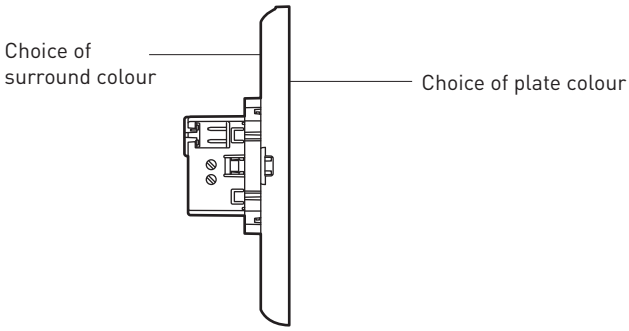
Flush-mounted installation





Flush-mounting kit
Cat. Nos. 0 487 88/0 487 89

Configured Cat. No. 0 487 83 or FL4664

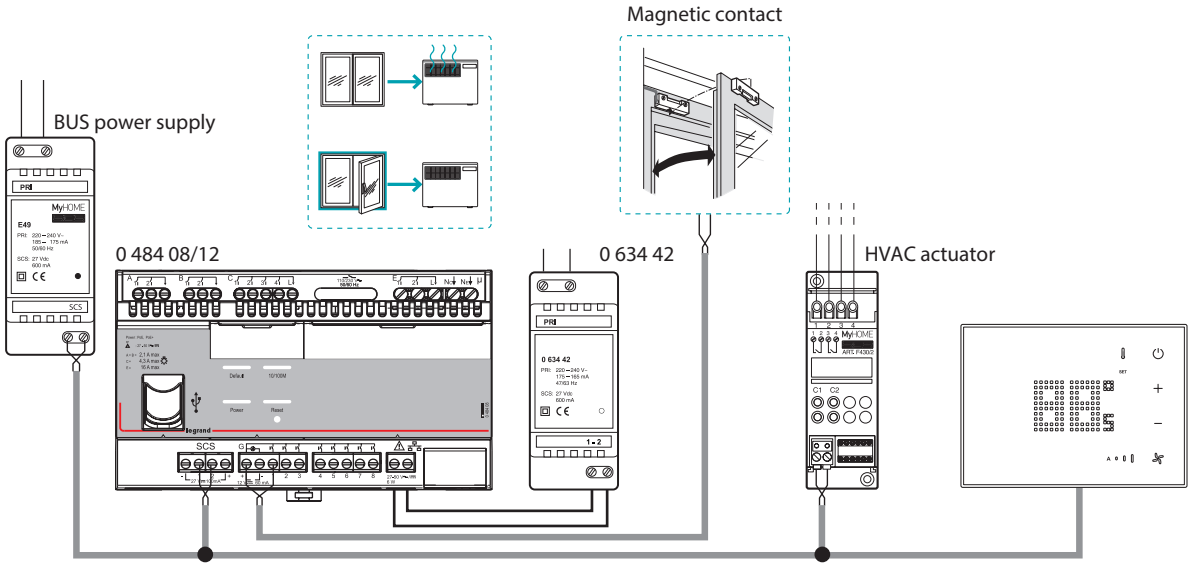


Options (predefined position):
- Hotel logo

The configurator is available on the following website: www.uxforupscalehotel.legrand.com.
The list of colour options (plate and surround) can be accessed via the configurator.

Technical characteristics (continued)

Example of installation for hotel room



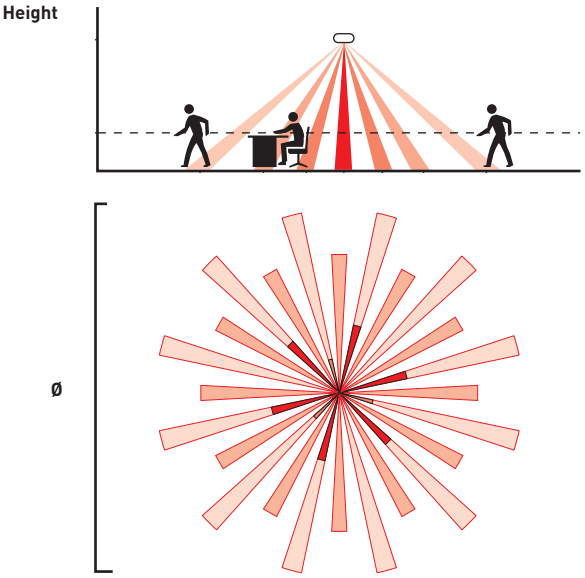
NB: The window contact must be connected to the controller.

0 488 20 OR BMSE3001: CEILING-MOUNTED MOTION SENSOR (SWEEPING MOVEMENTS)

This device allows an output or controller scenario to be controlled automatically in its surveillance zone.
Motion sensor with 360° detection angle.
Detection type: infrared (PIR)
Mounting type: ceiling
It is powered by the BUS.

Technical characteristics

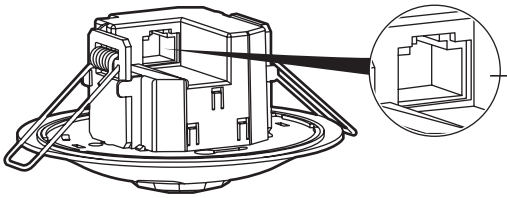
- Supply voltage: 27 V⎓
- No-load power consumption: 12 mA
- Connection between sensor and controller: BUS SCS connection
  (use an RJ45/BUS adaptor Cat. No. 0 488 72)
- Flush-mounting diameter: 65 mm without flush-mounting box, 68 mm with flush-mounting box
- Impact resistance: IK 04
- Protection index: IP 20
- Operating temperature: -5°C to 45°C
- Storage temperature: -20°C to +70°C



		Sensitivity Low (25%)		Sensitivity Medium (50%)	
		Ø (m)	Area (m²)	Ø (m)	Area (m²)
Height (m)	2.5	4	15	6	25
	3	5.5	25	6.5	35
	4	6.5	35	7.5	45
	5	6	30	10.5	90
	6	4	15	5.5	25

		Sensitivity High (75%)		Sensitivity Very high (100%)	
		Ø (m)	Area (m²)	Ø (m)	Area (m²)
Height (m)	2.5	6.5	30	8	50
	3	8.5	60	11.5	100
	4	12.5	125	14	155
	5	12	115	16.5	215
	6	8.5	60	12.5	125

Connection



BUS/SCS connection
(use an RJ45/BUS
adaptor Cat. No. 0 488 72)

0 488 22 OR BMSE3003: CEILING-MOUNTED MOTION SENSOR (SMALL MOVEMENTS)

This device allows an output or controller scenario to be controlled automatically in its surveillance zone.

Motion sensor with 360° detection angle.

Detection type: infrared (PIR) and ultrasound (US)

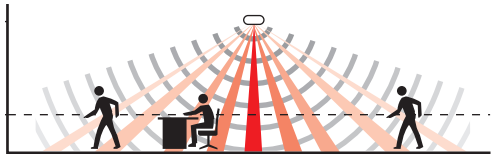
Mounting type: ceiling

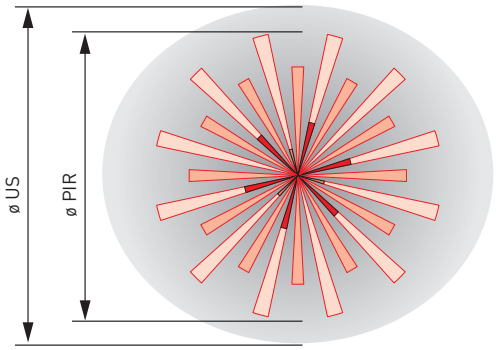
It is powered by the BUS.

Technical characteristics

- Supply voltage: 27 V⎓
- No-load power consumption: 17 mA
- Connection between sensor and controller: BUS SCS connection
  (use an RJ45/BUS adaptor Cat. No. 0 488 72)
- Flush-mounting diameter: 65 mm without flush-mounting box, 68 mm with flush-mounting box
- Impact resistance: IK 04
- Protection index: IP 20
- Operating temperature: -5°C to 45°C
- Storage temperature: -20°C to +70°C

Height





- PIR detection

		Sensitivity Low (25%)		Sensitivity Medium (50%)	
		Ø (m)	Area (m²)	Ø (m)	Area (m²)
Height (m)	2.5	4	15	6	25
	3	5.5	25	6.5	35
	4	6.5	35	7.5	45
	5	6	30	10.5	90
	6	4	15	5.5	25

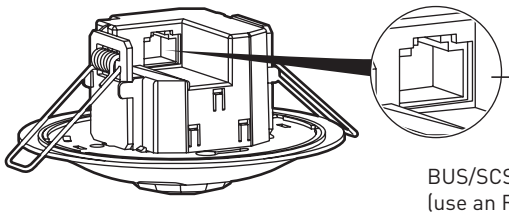
		Sensitivity High (75%)		Sensitivity Very high (100%)	
		Ø (m)	Area (m²)	Ø (m)	Area (m²)
Height (m)	2.5	6.5	30	8	50
	3	8.5	60	11.5	100
	4	12.5	125	14	155
	5	12	115	16.5	215
	6	8.5	60	12.5	125

- US detection

		Sensitivity Low (25%)		Sensitivity Medium (50%)	
		Ø (m)	Area (m²)	Ø (m)	Area (m²)
Height (m)	2.5	4	15	4	15
	3	6	30	6	30
	4	6	30	6	30
	5	6	30	6	30
	6	0	0	6	30

		Sensitivity High (75%)		Sensitivity Very high (100%)	
		Ø (m)	Area (m²)	Ø (m)	Area (m²)
Height (m)	2.5	6	30	11	95
	3	8	50	13	150
	4	10	80	13	150
	5	10	80	13	130
	6	10	80	13	130

Connection



BUS/SCS connection
(use an RJ45/BUS
adaptor Cat. No. 0 488 72)

5 740 96: FLUSH/WALL-MOUNTED MOTION SENSOR

EQUIVALENCE									
Cat. No.	**Detection type**	**Finish**			**Cat. No.**	**Detection type**	**Finish**			**Range**
0 672 25	PIR	White 0 682 99	Titanium 0 685 99	Graphite 0 679 99	0 672 26	PIR + US	White 0 682 94	Titanium 0 685 94	Graphite 0 679 94	Céliane
5 740 46	PIR	White			5 740 48	PIR + US	White			Arteor
5 740 96	PIR	Magnesium			5 740 98	PIR + US	Magnesium			
0 784 85	PIR	White			0 784 86	PIR + US	White			Mosaic
HD4659	PIR	White			HD4658	PIR + US	White			Axolute
HC4659	PIR	Aluminium			HC4658	PIR + US	Aluminium			
HS4659	PIR	Anthracite			HS4658	PIR + US	Anthracite			
N4659N	PIR	White			N4658N	PIR + US	White			Livinglight
NT4659N	PIR	Tech			NT4658N	PIR + US	Tech			
L4659N	PIR	Anthracite			L4658N	PIR + US	Anthracite			

This device allows an output or controller scenario to be controlled automatically in its surveillance zone.

Presence sensor with 180° detection angle.

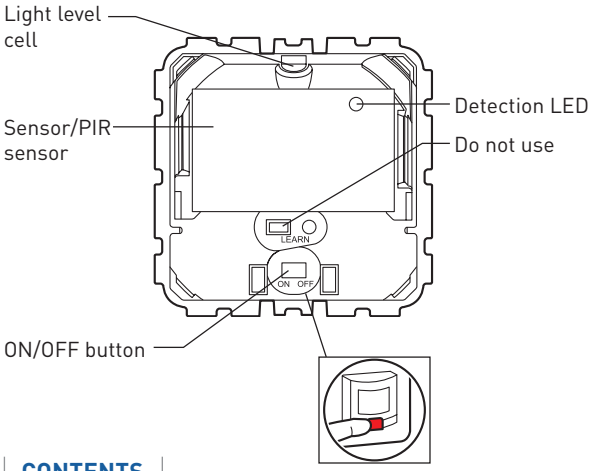
Detection type: infrared (PIR) or dual technology - infrared + ultrasonic (PIR + US)

Mounting type: wall flush-mounted

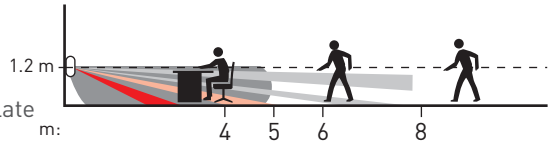
It is powered by the BUS.

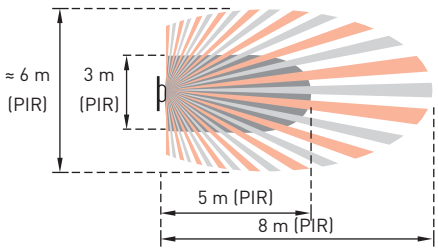
Technical characteristics

- Supply voltage: 27 V⎓
- No-load power consumption: 15 mA
- Wiring: BUS/SCS
- Impact resistance: IK 04
- Protection index: IP41 product installed with plate and rocker plate
- Operating temperature: -5°C to 45°C
- Storage temperature: -20°C to +70°C



Height





■ PIR detection (Walk-through)

Sensitivity	Ø (m)
Low (25%)	7
Medium (50%)	8
High (75%)	10
Very high (100%)	12

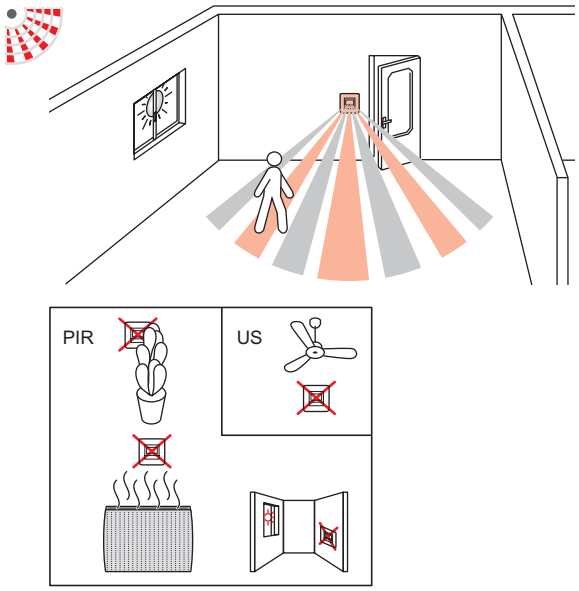
■ PIR detection (Small movements)

Sensitivity	Ø (m)
Low (25%)	1
Medium (50%)	2
High (75%)	4
Very high (100%)	5

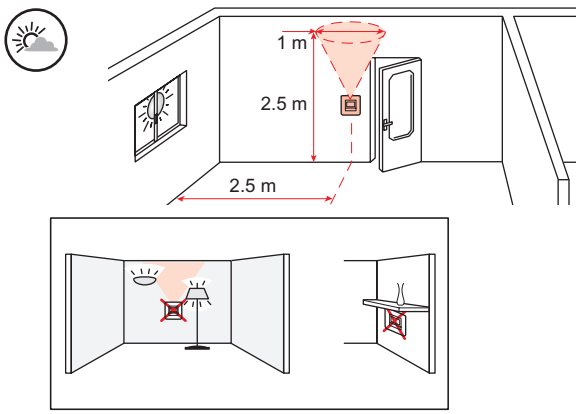
Technical characteristics (continued)

Installation

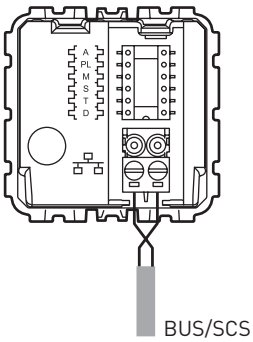
■ Positioning the sensor



■ Recommended light exposure



Connection



0 487 78: HOTEL MOTION SENSOR

This device allows an output or controller scenario to be controlled automatically in its surveillance zone.

Motion sensor with 360° detection angle. Several sensors can be wired on the same volt-free contact input (the sensors must be wired in parallel).

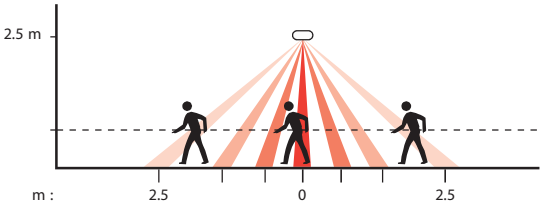
Detection type: infrared (PIR)

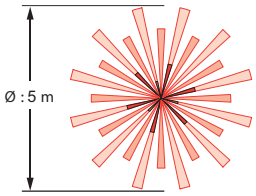
Mounting type: ceiling

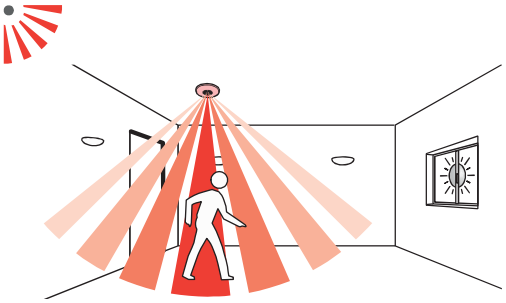
It is powered by the BUS.

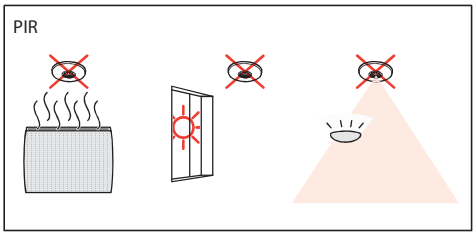
Technical characteristics

- Supply voltage: 8-30 VDC
- No-load power consumption: 9 mA
- Connection between sensor and controller: cable with 2 x 0.9 mm pairs
- Drilling diameter: 25 mm
- Impact resistance: IK 04
- Protection index: IP 20
- Operating temperature: -5°C to 45°C
- Storage temperature: -20°C to +70°C

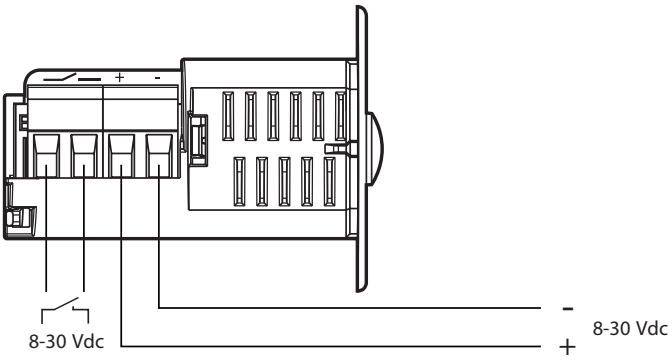


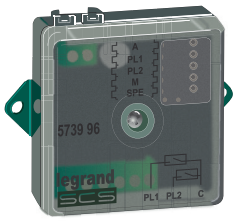






Connection





F428 OR 3477: VOLT-FREE CONTACT INTERFACE

This interface can be used to add contact inputs in order to integrate conventional control devices (switch, pushbutton, etc) in an installation with the BACnet Hotel RCU.

4 possible configurations: single switch, single pushbutton, double switch or double pushbutton.

The interface has 2 LEDs which can signal contact closing, programming/cancel and the status of control devices.

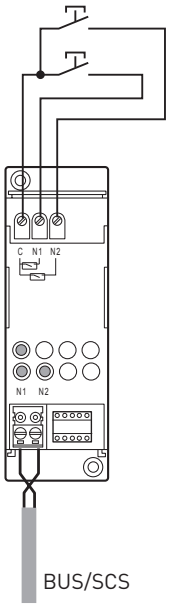
It is powered by the BUS.

Technical characteristics

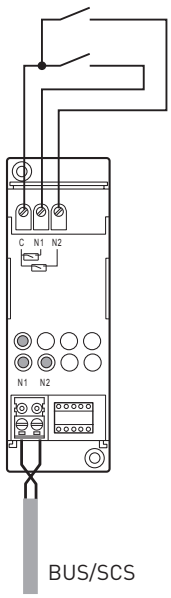
- Supply voltage: 18-27 V⎓
- Consumption: 9 mA
- Size: 2 DIN modules
- Wiring: BUS/SCS
- Impact resistance: IK 04
- IP: 20
- Operating temperature: -5°C to +45°C
- Storage temperature: -20°C to +70°C
- Connection terminal type: Screw
- Load terminal capacity: 2 x 2.5 mm^2

Connection

For 2 pushbuttons



For 2 switches



NB: In single pushbutton or single switch configuration, connect the product between C and N1 (Cat. Nos. 0 035 53 and F428) or between C and PL1 (Cat. No. 5 739 96).

5 722 35: KEYCARD READER

EQUIVALENCE					
Mech. Cat. No.	**Cover plate Cat. No.**	**Range**	**Finish**	**Reader**	**Illustration**
5 722 35	Cover plate provided	Arteor	White	Mechanical	
5 727 35			Magnesium		
5 722 36			White	RFID	
5 727 36			Magnesium		
0 675 65	0 682 09	Céliane	White	Mechanical	
	0 685 09		Titanium		
	0 679 09		Graphite		
0 675 66	0 682 09		White	RFID	
	0 685 09		Titanium		
	0 679 09		Graphite		
H4649	HD4547	Axolute	White	Mechanical	
	HC4547		Aluminium		
	HS4547		Anthracite		
H4648	HD4547		White	RFID	
	HC4547		Aluminium		
	HS4547		Anthracite		
LN4649	N4547	Livinglight	White	Mechanical	
	NT4547		Tech		
	L4547		Anthracite		
LN4648	N4547		White	RFID	
	NT4547		Tech		
	L4547		Anthracite		

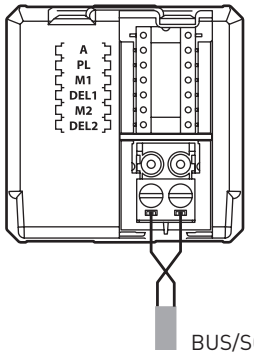
This indicates whether or not someone is inside the room. It can be used to launch an arrival scenario and a leaving scenario.

Available in 2 versions:
- Mechanical for keycard with dimensions between 45 mm and 54 mm (ISO)
- RFID (keycard frequency 13.56 MHz) (use keycard 0 767 11)

RFID keycard switches are compatible with RFID keycards Cat. Nos. 0 675 89/0 767 11/3547.

It is powered by the 2-module BUS.

Technical characteristics



Supply voltage	27 V⎓
Min. consumption	5 mA
Max. consumption	6 mA
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C
Size	2 modules

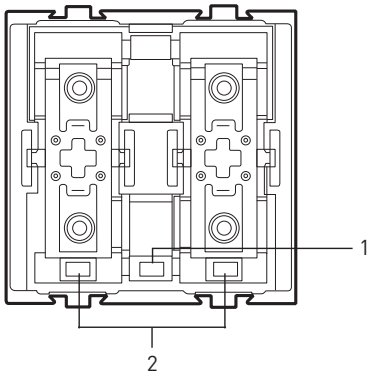
0 675 93: CONTROL FOR HOTEL ROOM EXTERNAL INDICATOR

EQUIVALENCE						
Mech. Cat. No.	**Cover plate Cat. No.**	**Range**	**Finish**	**Number of modules**	**Symbol**	**Illustration**
0 675 93	5 743 46	Arteor	White - round version	2	DO NOT DISTURB	
	5 743 47		Magnesium - round version			
	5 743 48		White - square version			
	5 743 49		Magnesium - square version			
	5 743 94		White - round version	2 × 1	1 x DO NOT DISTURB + 1 x PLEASE CLEAN THE ROOM	
	5 743 95		Magnesium - round version			
	5 743 96		White - square version			
	5 743 97		Magnesium - square version			
H4653	HD4915DD	Axolute	White	1	DO NOT DISTURB	
	HC4915DD		Aluminium			
	HS4915DD		Anthracite			
	HD4915M2DD		White	2		
	HC4915M2DD		Aluminium			
	HS4915M2DD		Anthracite			
	HD4915MR		White	1	MAKE UP ROOM	
	HC4915MR		Aluminium			
	HS4915MR		Anthracite			
LN4653	N4915DD	Livinglight	White	1	DO NOT DISTURB	
	NT4915DD		Tech			
	L4915DD		Anthracite			
	N4915M2DD		White	2		
	NT4915M2DD		Tech			
	L4915M2DD		Anthracite			
	N4915MR		White	1	MAKE UP ROOM	
	NT4915MR		Tech			
	L4915MR		Anthracite			

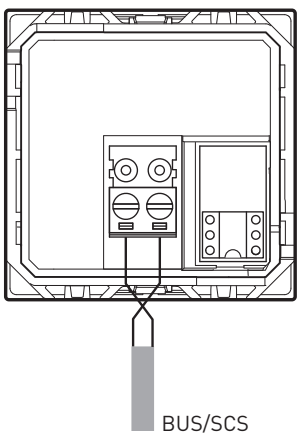
Control unit should be installed inside rooms for activating “Do Not Disturb” or “Make Up Room” services on the door and supervisor external indicator.

Technical characteristics

Front view



Rear view



Key
1. LED brightness control button
2. LEDs:
   AXOLUTE/ARTEOR: BLUE: service not active
   PINK: service active
   LIVINGLIGHT: GREEN: service not active
   ORANGE: service active

Supply voltage	27 V⎓
Max. consumption	7.5 mA
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C
Size	2 modules

0 487 71 OR FL4648/FL4648W: UX TOUCH RFID KEYCARD READER

General characteristics

This is an RFID keycard reader (13.56 MHz) located at the entrance to the room which can, by inserting an RFID keycard in the appropriate slot:
- indicate someone is in the room
- trigger a “welcome” scenario

And by removing it:
- indicate no one is in the room
- trigger a “goodbye” scenario

It indicates and can be used to activate the housekeeping information:
- Do Not Disturb
- Make Up Room
- Extra service (for example picking up laundry) (only available on configured version)

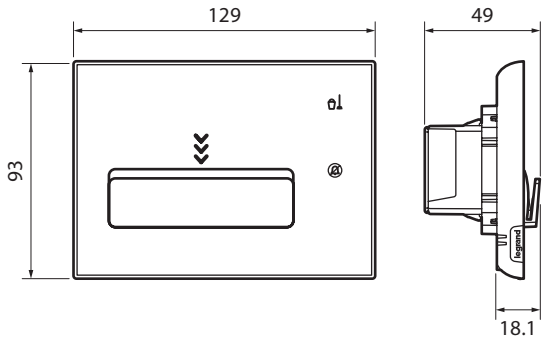
The card position is indicated by arrows (illuminated flashing path).

It has a proximity sensor: when the product detects an approach, it switches from standby state to active state. The LED brightness level (on standby and active) and the time delay before switching from standby to active can also be set by configuration.

This product is supplied without its support Cat. No. 0 487 79.

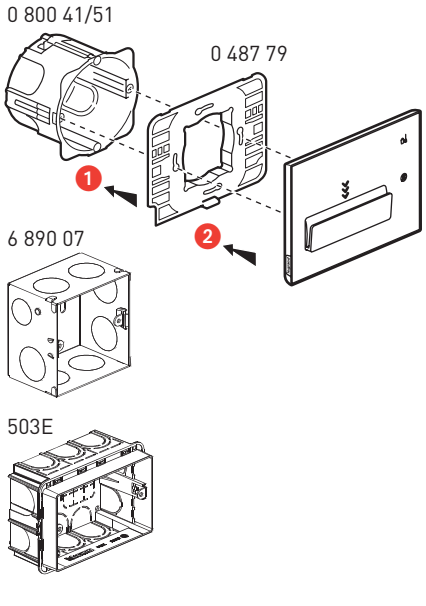
Technical characteristics

BUS/SCS power supply	18-27 VDC
Standby consumption	12 mA
On-load consumption	25 mA
RFID frequency	13.56 MHz
Operating temperature	0°C to +40°C
Storage temperature	-20°C to +70°C
Protection class	IP 20, IK 04
Size	For mounting in a 1-gang box

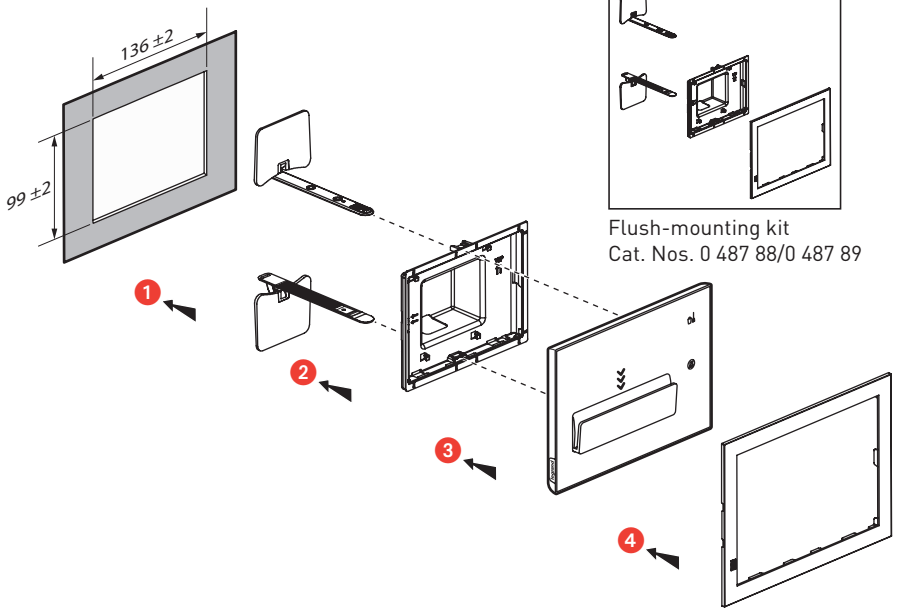


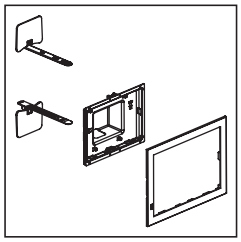
Technical characteristics (continued)

Surface-mounted installation



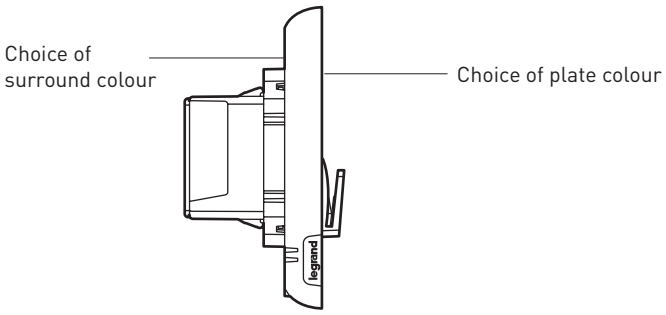
Flush-mounted installation





Flush-mounting kit
Cat. Nos. 0 487 88/0 487 89

Configured Cat. No. 0 487 81 or FL4658



Options (predefined position):
- Hotel logo

The configurator is available on the following website: www.uxforupscalehotel.legrand.com.
The list of pictogram and colour options (plate and surround) can be accessed via the configurator.

0 675 90: DOOR EXTERNAL INDICATOR

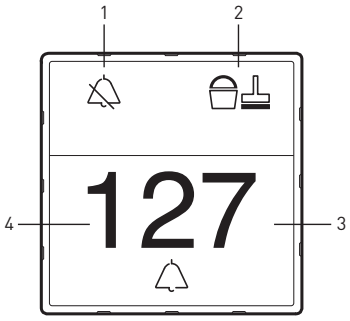
EQUIVALENCE	
Cat. No.	**Range**
0 675 90	Arteor
H4650	Axolute
LN4650	Livinglight

The indicator is located in the corridor. It is used to display the "Do Not Disturb" or "Make Up Room" sign. It has a button for the call bell function. If the DND function is active, the call button is disabled.

It is powered by the BUS.

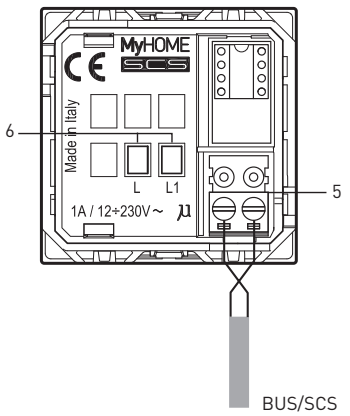
Technical characteristics

Front view



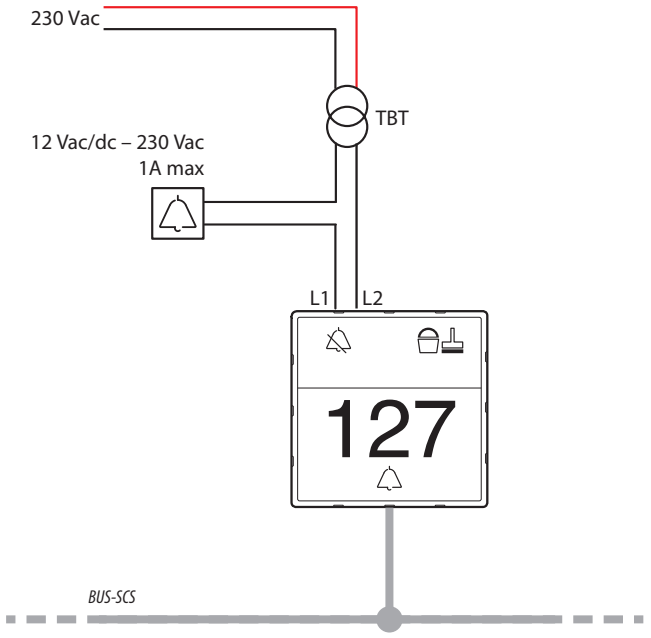
Key
1. DND indicator (red LED on = DO NOT DISTURB)
2. MUR indicator (green LED on = MAKE UP ROOM)
3. Call button
4. Zone which can be customised with backlighting for room number, with white sign: presence and absence in the room, alarm signal
5. BUS/SCS plug-in connector
6. NO contact for activating the bell. The contact is controlled by the button on the front

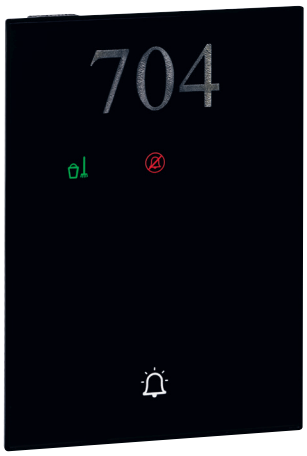
Rear view



Supply voltage	27 V⎓
Min. consumption	10 mA
Max. consumption	20 mA
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C
Size	2 modules

Door bell connection





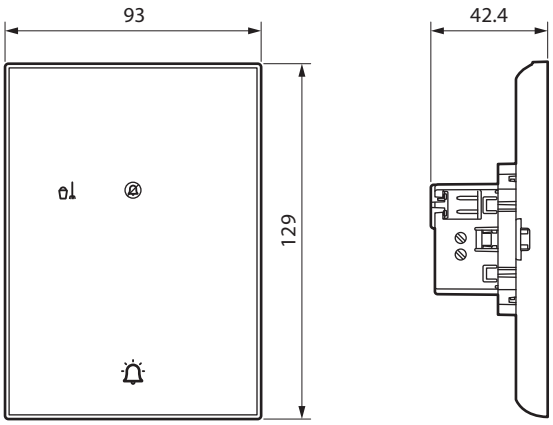
0 487 75 OR FL4650/FL4650W: UX TOUCH EXTERNAL INDICATOR DISPLAY

This is an indicator display panel located outside the room (in the corridor) displaying the housekeeping information:
- Do Not Disturb
- Make Up Room
- Extra service (for example picking up laundry) (only on configured version Cat. No. 0 487 85)

It also has a "call bell" touch-sensitive button which flashes for 3 s to show that the command has been recognised.
The "call bell" indicator status shows that someone is in the room when on or if no-one is present when off.
If the DND function is active, the "call bell" relay is disabled. When pressed, the DND LED flashes, but the "call bell" indicator does not flash.
This product is supplied without its support Cat. No. 0 487 79.

Technical characteristics

BUS/SCS power supply	18-27 VDC
Standby consumption	6 mA
On-load consumption	8 mA max
Relay contact (activated by button on the front)	230 VAC max. 1 A max.
Operating temperature	0°C to +40°C
Storage temperature	-20°C to +70°C
Protection class	IP 20, IK 04
Size	For mounting in a 1-gang box

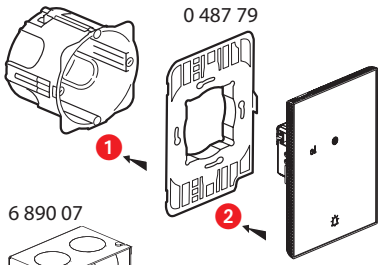


0 487 75 OR FL4650/FL4650W: UX TOUCH EXTERNAL INDICATOR DISPLAY (CONTINUED)

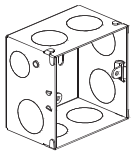
Technical characteristics (continued)

Surface-mounted installation

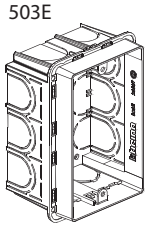
0 800 41/51



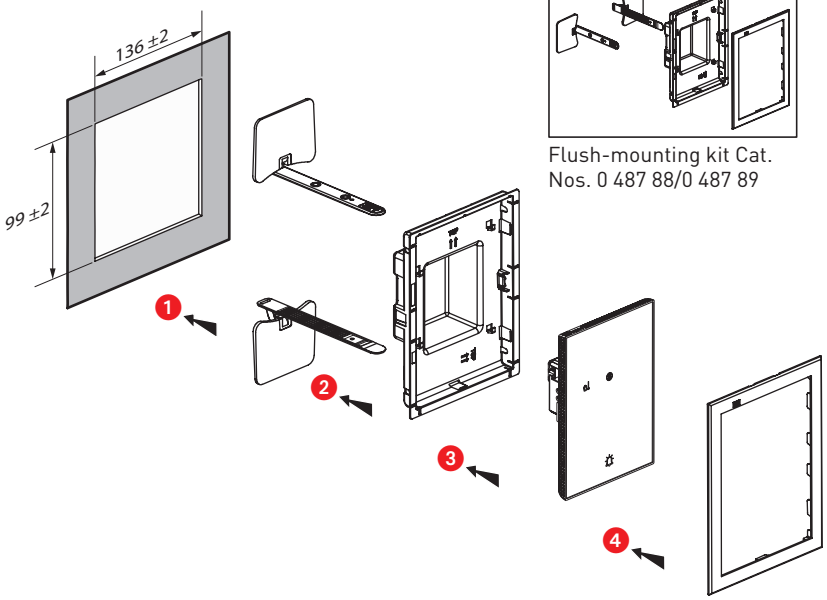
6 890 07

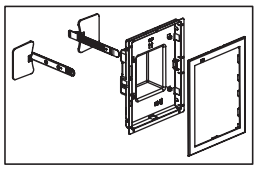


503E



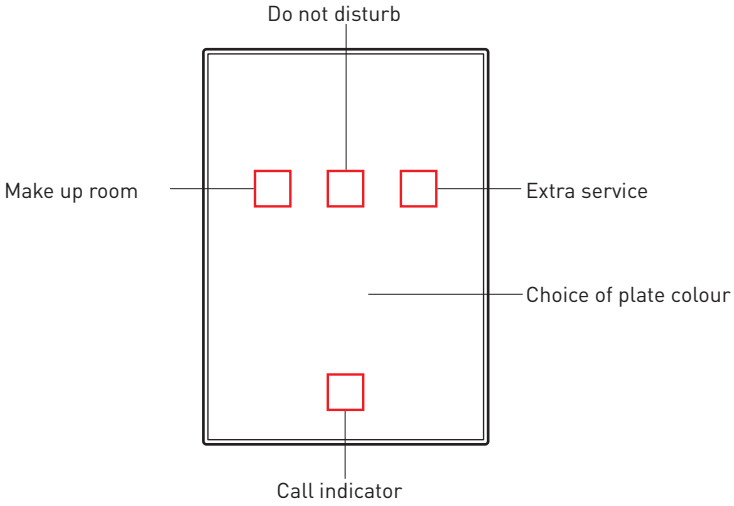
Flush-mounted installation

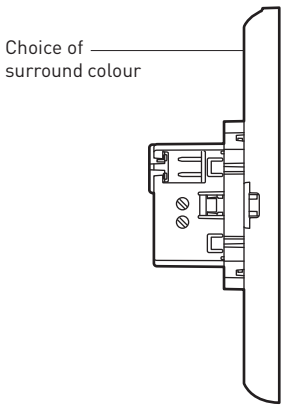




Flush-mounting kit Cat. Nos. 0 487 88/0 487 89

Configured Cat. No. 0 487 85 or FL4660

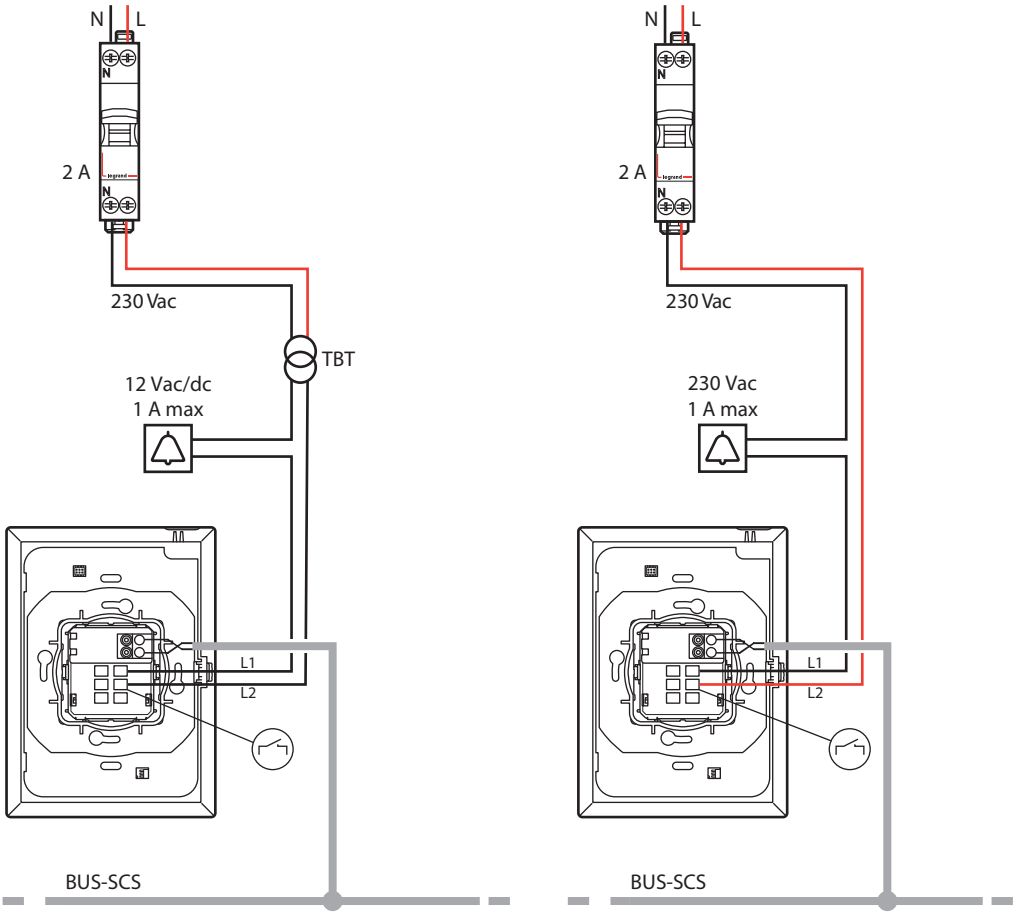




Options (predefined position):
- Hotel logo
- Room no. (alphanumeric)

The configurator is available on the following website: www.uxforupscalehotel.legrand.com.
The list of pictogram and colour options (plate and surround) can be accessed via the configurator.

Door bell connection

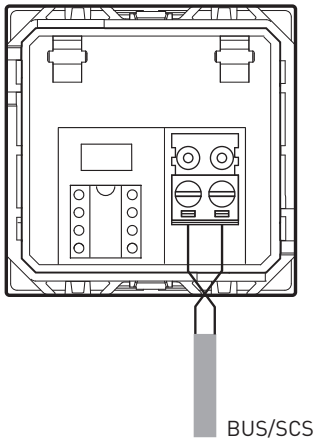


0 675 92: 4 OR 8-SCENARIO CONTROL

EQUIVALENCE					
Cat. No.	**Range**	**Finish**	**Number of buttons (presses)**	**Number of modules**	**Max. consumption**
0 675 92	Arteor		8	2	20 mA
H4652	Axolute		8	2	20 mA
LN4652	Livinglight		8	2	20 mA
0 672 17	Céliane	White	4	2	9 mA
0 672 18		Titanium	4	2	9 mA
0 784 78	Mosaic	White	4	2	9 mA
0 791 78		Aluminium	4	2	9 mA
5 739 02	Arteor	White - round version	4	2	9 mA
5 739 03		Magnesium - round version	4	2	9 mA
5 745 03		White - square version	4	2	9 mA
5 745 04		Magnesium - square version	4	2	9 mA
HD4680	Axolute	White	4	2	9 mA
HC4680		Aluminium	4	2	9 mA
HS4680		Anthracite	4	2	9 mA
N4680	Livinglight	White	4	2	9 mA
NT4680		Tech	4	2	9 mA
L4680		Anthracite	4	2	9 mA

Control which can launch one or more scenarios and control lighting and/or shutters with a single press or in toggle mode (cyclical alternation of 2 scenarios on the same button: scenario 1, scenario 2, scenario 1, scenario 2, etc).
Customisable labels (pictogram and/or text) can be used to define scenarios.

Technical characteristics



Supply voltage	BUS/SCS 18-27 V⎓
Max. consumption	See table below
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C
Size	See table below

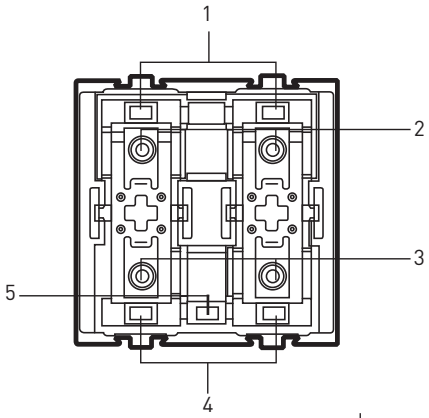
0 675 52: MULTIFUNCTION CONTROL

EQUIVALENCE					
Mech. Cat. No.	**Range**	**Finish**	**Number of buttons (presses)**	**Number of modules**	**Max. consumption**
0 784 71	Mosaic	White	2 presses at top/bottom	2	8.5 mA
0 791 71		Grey			
0 784 73		White	4 presses at top/bottom	2	8.5 mA
0 791 73		Grey			
0 784 75		White	1 press at bottom	2	7.5 mA
0 791 75		Grey			
0 784 72		White	2 presses at bottom	2	7.5 mA
0 791 72		Grey			
0 675 52	Céliane/Arteor	To be fitted with cover plates	1 to 4 presses	2	8.5 mA
H4652/2	Axolute				6 mA
L4652/2	Livinglight				8.5 mA
0 675 53	Céliane/Arteor		1 to 4 presses	2	7.5 mA
H4651/M2	Axolute				6 mA
L4651/M2	Livinglight				8.5 mA
0 675 54	Céliane/Arteor		1 to 6 presses	3	9 mA
H4652/3	Axolute				
L4652/3	Livinglight				

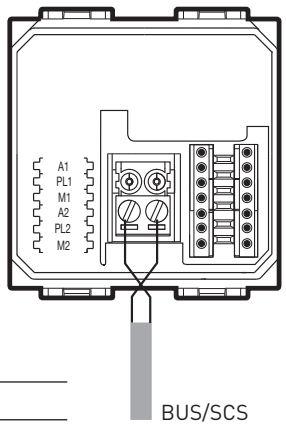
These controls can launch one or more scenarios and control lighting and/or shutters with a single press (pushbutton mode), press at top/bottom (switch mode) or in toggle mode (cyclical alternation of 2 scenarios on the same button: scenario 1, scenario 2, scenario 1, scenario 2, etc).
Non-Mosaic controls should be fitted with cover plates.

Technical characteristics

Front view of 0 675 52



Rear view of 0 675 52



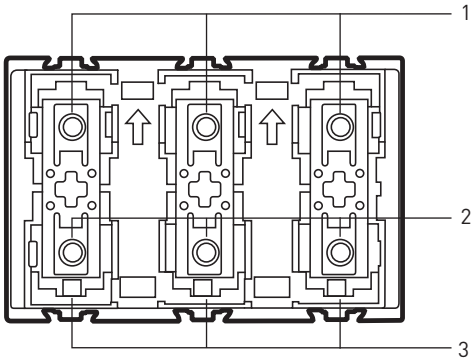
Key
1. LEDs
2. Top pushbuttons
3. Bottom pushbuttons
4. LEDs
5. Pushbutton for setting/disabling the LED

Supply voltage	BUS/SCS 18-27 V⎓
Max. consumption	See table below
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C
Size	See table below

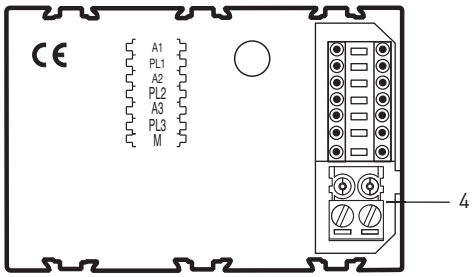
0 675 52: MULTIFUNCTION CONTROL (CONTINUED)

Technical characteristics (continued)

Front view of 0 675 54



Rear view of 0 675 54



Key
1. Top pushbuttons
2. Bottom pushbuttons
3. LEDs
4. BUS

COMPATIBLE COVER PLATES BY WIRING ACCESSORY RANGE							
Mech. Cat. No.	**Cover plate Cat. No.**	**Range**	**Finish**	**Number of modules**	**Mounting**	**Symbol**	**Illustration**
0 675 52/ 0 675 53/ 0 675 54	0 680 00 + 0 682 03	Céliane	White	1	Mounted on left or right	Unmarked	
	0 683 00 + 0 685 03		Titanium				
	0 648 00 + 0 648 03		Graphite				
	0 680 00 + 0 682 69		White		Mounted on left or right	For roller shutters	
	0 683 00 + 0 685 69		Titanium				
	0 648 00 + 0 648 69		Graphite				
	0 680 00 + 0 681 48		White	1	Mounted on left	Lighting	
	0 683 00 + 0 684 48		Titanium				
	0 648 00 + 0 648 48		Graphite				
	0 680 00 + 0 681 49		White		Mounted on right		
	0 683 00 + 0 684 49		Titanium				
	0 648 00 + 0 648 49		Graphite				
	0 680 00 + 0 682 80		White		Mounted on left	ON/OFF	
	0 683 00 + 0 685 80		Titanium				
	0 648 00 + 0 648 80		Graphite				
	0 680 00 + 0 682 81		White		Mounted on right		
	0 683 00 + 0 685 81		Titanium				
	0 648 00 + 0 648 81		Graphite				
	0 680 00 + 0 681 77		White		Mounted on left	Dimming	
	0 683 00 + 0 684 77		Titanium				
	0 648 00 + 0 648 77		Graphite				
	0 680 00 + 0 681 78		White		Mounted on right		
	0 683 00 + 0 684 78		Titanium				
	0 648 00 + 0 648 78		Graphite				
	0 680 00 + 0 681 55		White		Mounted on left	GEN/ON/OFF	
	0 683 00 + 0 684 55		Titanium				
	0 648 00 + 0 648 55		Graphite				

COMPATIBLE COVER PLATES BY WIRING ACCESSORY RANGE							
Mech. Cat. No.	**Cover plate Cat. No.**	**Range**	**Finish**	**Number of modules**	**Mounting**	**Symbol**	**Illustration**
0 675 52/ 0 675 53/ 0 675 54	0 680 00 + 0 681 56	Céliane	White	1	Mounted on right	GEN/ON/OFF	
	0 683 00 + 0 684 56		Titanium				
	0 648 00 + 0 648 56		Graphite				
	0 680 00 + 0 682 02		White	2	-	Unmarked	
	0 683 00 + 0 685 02		Titanium				
	0 648 00 + 0 648 02		Graphite				
	0 680 00 + 0 682 59		White			For roller shutters	
	0 683 00 + 0 685 59		Titanium				
	0 648 00 + 0 648 59		Graphite				
	0 680 00 + 0 681 42		White			Lighting	
	0 683 00 + 0 684 42		Titanium				
	0 648 00 + 0 648 42		Graphite				
	0 680 00 + 0 681 44		White			ON/OFF dimming	
	0 683 00 + 0 684 44		Titanium				
	0 648 00 + 0 648 44		Graphite				
	0 680 00 + 0 681 88		White			ON/OFF	
	0 683 00 + 0 684 88		Titanium				
	0 648 00 + 0 679 88		Graphite				
	0 680 00 + 0 681 76		White			Dimming	
	0 683 00 + 0 684 76		Titanium				
	0 648 00 + 0 648 76		Graphite				
	0 680 00 + 0 681 58		White			GEN/ON/OFF	
	0 683 00 + 0 684 58		Titanium				
	0 648 00 + 0 648 58		Graphite				
	0 680 00 + 0 681 80		White			GEN	
	0 683 00 + 0 684 80		Titanium				
	0 648 00 + 0 650 80		Graphite				
	5 745 05	Arteor	White - round version	1	Mounted on left	Lighting and dimming	
	5 745 06		Magnesium - round version				
	5 745 07		White - round version		Mounted on right		
	5 745 08		Magnesium - round version				
	5 744 87		White - square version		Mounted on left or right		
	5 744 86		Magnesium - square version				
	5 745 37		White - round version	2	-		
	5 745 38		Magnesium - round version				
	5 744 89		White - square version				
	5 744 88		Magnesium - square version				
	5 745 17		White - round version	1	Mounted on left or right	Lighting	
	5 745 18		Magnesium - round version				

0 675 52: MULTIFUNCTION CONTROL (CONTINUED)

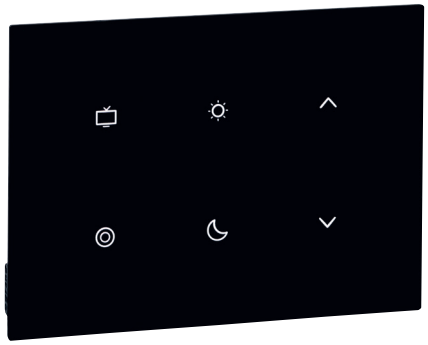
COMPATIBLE COVER PLATES BY WIRING ACCESSORY RANGE							
Mech. Cat. No.	**Cover plate Cat. No.**	**Range**	**Finish**	**Number of modules**	**Mounting**	**Symbol**	**Illustration**
0 675 52/ 0 675 53/ 0 675 54	5 744 75	Arteor	White - square version	1	Mounted on left or right	Lighting	
	5 744 74		Magnesium - square version				
	5 745 43		White - round version	2			
	5 745 44		Magnesium - round version				
	5 744 77		White - square version				
	5 744 76		Magnesium - square version				
	5 745 20		White - round version	1	Mounted on left	Dimming	
	5 745 22		Magnesium - round version				
	5 745 19		White - round version		Mounted on right		
	5 745 21		Magnesium - round version				
	5 744 69		White - square version		Mounted on left or right		
	5 744 68		Magnesium - square version				
	5 745 41		White - round version	2	-		
	5 745 42		Magnesium - round version				
	5 744 71		White - square version				
	5 744 70		Magnesium - square version				
	5 745 15		White - round version	1	Mounted on left or right	Up/down	
	5 745 16		Magnesium - round version				
	5 744 93		White - square version				
	5 744 92		Magnesium - square version				
	5 745 35		White - round version	2	-		
	5 745 36		Magnesium - round version				
	5 744 95		White - square version				
	5 744 94		Magnesium - square version				
	5 745 39		White - round version	2	-	GEN	
	5 745 40		Magnesium - round version				
	5 744 73		White - square version				
	5 744 72		Magnesium - square version				
	5 745 24		White - round version	1	Mounted on left	GEN/ON/OFF	
	5 745 26		Magnesium - round version				
	5 745 23		White - round version		Mounted on right		
	5 745 25		Magnesium - round version				
	5 744 83		White - square version		Mounted on left or right		
	5 744 82		Magnesium - square version				
	5 745 31		White - round version	2	-		
	5 745 32		Magnesium - round version				
	5 744 85		White - square version				
	5 744 84		Magnesium - square version				
	5 745 28		White - round version	1	Mounted on left	ON/OFF	
	5 745 30		Magnesium - round version				
	5 745 27		White - round version		Mounted on right		
	5 745 29		Magnesium - round version				
	5 744 79		White - square version		Mounted on left or right		
	5 744 78		Magnesium - square version				

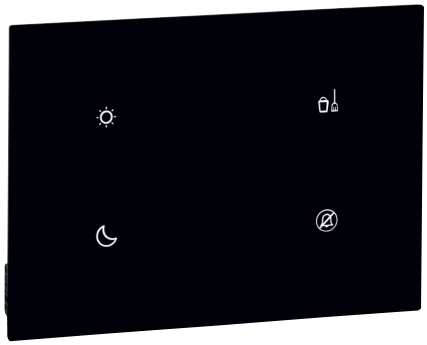
COMPATIBLE COVER PLATES BY WIRING ACCESSORY RANGE							
Mech. Cat. No.	**Cover plate Cat. No.**	**Range**	**Finish**	**Number of modules**	**Mounting**	**Symbol**	**Illustration**
0 675 52/ 0 675 53/ 0 675 54	5 745 33	Arteor	White - round version	2	-	ON/OFF	
	5 745 34		Magnesium - round version				
	5 744 81		White - square version				
	5 744 80		Magnesium - square version				
	5 745 09		White - round version	1	Mounted on left or right	Unmarked	
	5 745 10		Magnesium - round version				
	5 744 65		White - square version				
	5 744 64		Magnesium - square version				
	5 745 13		White - round version	2	-		
	5 745 14		Magnesium - round version				
	5 744 67		White - square version				
	5 744 66		Magnesium - square version				
H4652/2, H4651M2 H4652/3	HD4915	Axolute	White	1	Pushbutton type	Unmarked	
	HC4915		Aluminium				
	HS4915		Anthracite				
	HD4915M2		White	2			
	HC4915/2		Aluminium				
	HS4915/2		Anthracite				
	HD4911		White	1	Toggle type		
	HC4911		Aluminium				
	HS4911		Anthracite				
	HD4911M2		White	2			
	HC4911/2		Aluminium				
	HS4911/2		Anthracite				
	HD4915BA		White	1	Pushbutton type	Light symbol	
	HC4915BA		Aluminium				
	HS4915BA		Anthracite				
	HD4915M2BA		White	2			
	HC4915/2BA		Aluminium				
	HS4915/2BA		Anthracite				
	HD4911BA		White	1	Toggle type		
	HC4911BA		Aluminium				
	HS4911BA		Anthracite				
	HD4911M2BA		White	2			
	HC4911/2BA		Aluminium				
	HS4911/2BA		Anthracite				
	HD4911AH		White	1	Toggle type	Up-down symbol	
	HC4911AH		Aluminium				
	HS4911AH		Anthracite				
	HD4911M2AH		White	2			
	HC4911/2AH		Aluminium				
	HS4911/2AH		Anthracite				

0 675 52: MULTIFUNCTION CONTROL (CONTINUED)

COMPATIBLE COVER PLATES BY WIRING ACCESSORY RANGE							
Mech. Cat. No.	**Cover plate Cat. No.**	**Range**	**Finish**	**Number of modules**	**Mounting**	**Symbol**	**Illustration**
H4652/2, H4651M2 H4652/3	HD4911AF	Axolute	White	1	Toggle type	GEN/ON/OFF	OFF GEN ON
	HC4911AF		Aluminium				
	HS4911AF		Anthracite				
	HD4911M2AF		White	2			
	HC4911/2AF		Aluminium				
	HS4911/2AF		Anthracite				
	HD4911AG		White	1	Toggle type	ON/OFF	OFF ON
	HC4911AG		Aluminium				
	HS4911AG		Anthracite				
	HD4911M2AG		White	2			
	HC4911/2AG		Aluminium				
	HS4911/2AG		Anthracite				
	HD4911AD		White	1	Toggle type	+ and -	+ −
	HC4911AD		Aluminium				
	HS4911AD		Anthracite				
	HD4915M2BB		White	2	Pushbutton type	Bell symbol	
	HC4915/2BB		Aluminium				
	HS4915/2BB		Anthracite				
	HD4915AC		White	1	Pushbutton type	GEN	GEN
	HC4915AC		Aluminium				
	HS4915AC		Anthracite				
	HD4915M2AC		White	2			
	HC4915/2AC		Aluminium				
	HS4915/2AC		Anthracite				
L4652/2, L4651M2 L4652/3	N4915LN	Livinglight	White	1	Pushbutton type	Unmarked	
	NT4915N		Tech				
	L4915N		Anthracite				
	N4915M2LN		White	2			
	NT4915M2N		Tech				
	L4915M2N		Anthracite				
	N4911N		White	1	Toggle type		
	NT4911N		Tech				
	L4911N		Anthracite				
L4652/2, L4651M2 L4652/3	N4911M2N	Livinglight	White	2			
	NT4911M2N		Tech				
	L4911M2N		Anthracite				
	N4915AN		White	1	Pushbutton type	Light symbol	
	NT4915AN		Tech				
	L4915AN		Anthracite				
	N4915M2AN		White	2			
	NT4915M2AN		Tech				
	L4915M2AN		Anthracite				

COMPATIBLE COVER PLATES BY WIRING ACCESSORY RANGE							
Mech. Cat. No.	**Cover plate Cat. No.**	**Range**	**Finish**	**Number of modules**	**Mounting**	**Symbol**	**Illustration**
L4652/2, L4651M2 L4652/3	N4915DN	Livinglight	White	1	Pushbutton type	Bell symbol	
	NT4915DN		Tech				
	L4915DN		Anthracite				
	N4915M2DN		White	2			
	NT4915M2DN		Tech				
	L4915M2DN		Anthracite				
	N4915FN		White	1	Pushbutton type	Key symbol	
	NT4915FN		Tech				
	L4915FN		Anthracite				
	N4915M2FN		White	2			
	NT4915M2FN		Tech				
	L4915M2FN		Anthracite				
	N4911AHN		White	1	Toggle type	Up-down symbol	
	NT4911AHN		Tech				
	L4911AHN		Anthracite				
	N4911M2AHN		White	2			
	NT4911M2AHN		Tech				
	L4911M2AHN		Anthracite				
	N4911AFN		White	1	Toggle type	GEN/ON/OFF	
	NT4911AFN		Tech				
	L4911AFN		Anthracite				
	N4911M2AFN		White	2			
	NT4911M2AFN		Tech				
	L4911M2AFN		Anthracite				
	N4911AGN		White	1	Toggle type	ON/OFF	
	NT4911AGN		Tech				
	L4911AGN		Anthracite				
	N4911M2AGN		White	2			
	NT4911M2AGN		Tech				
	L4911M2AGN		Anthracite				
	N4911ADN		White	1	Toggle type	+ and -	
	NT4911ADN		Tech				
	L4911ADN		Anthracite				





0 487 74 OR FL4652/FL4652W - 0 487 77 OR FL4655/FL4655W: UX TOUCH CONTROLS

Cat. No.	Number of buttons (presses)
0 487 74	6
FL4652	
FL4652W	
0 487 77	4
FL4655	
FL4655W	

This control has 4 or 6 buttons which can be used to control the lighting, roller shutters and scenarios (wake up/sleep).

It indicates and can also be used to activate the housekeeping information:
- Do Not Disturb
- Make Up Room

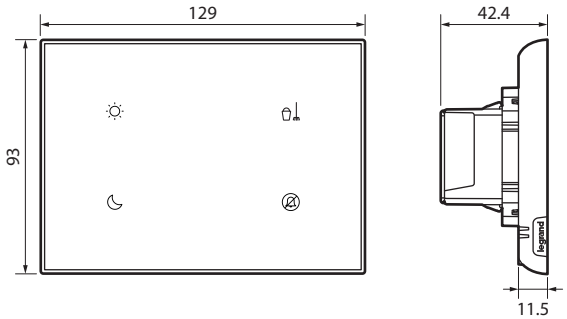
In configured version, scenarios can be assigned to the 4 or 6 buttons. It is also possible to only use 2 buttons.

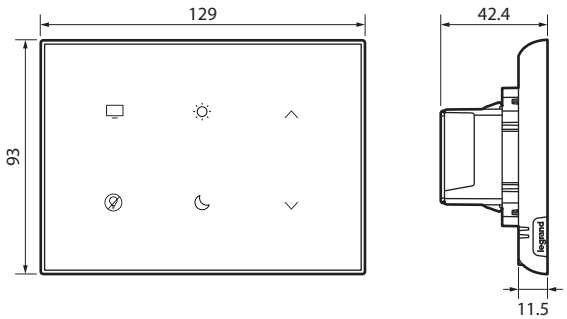
In standard version:
- The 4-button version has 2 scenario buttons (wake up and sleep) and 2 housekeeping buttons (do not disturb and make up room).
- The 6-button version has 4 scenario buttons (wake up and sleep, TV and night light) and 2 raise/lower buttons for shutters/curtains.

It has a proximity sensor: when the device detects an approach, it switches from standby state to active state.
The LED brightness level (on standby and active) and the time delay before returning to standby state can also be set by configuration.

Technical characteristics

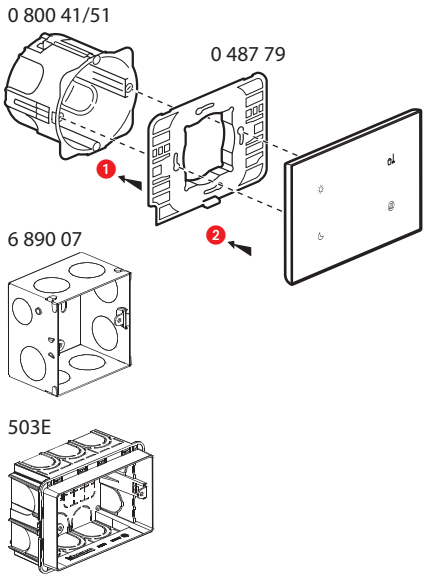
BUS/SCS power supply	18-27 VDC
Consumption with screen off	8 mA
Consumption with ultra-bright screen	15 mA (4 buttons) 20 mA (6 buttons)
Operating temperature	0°C to +40°C
Storage temperature	-20°C to +70°C
Protection class	IP 20, IK 04
Plate and surround colour (standard)	Black Cat. Nos. 0 487 77/ FL4655 and 0 485 74/FL4632 or White Cat. Nos. FL4655W/ FL4652W
Size	For mounting in a 1-gang box



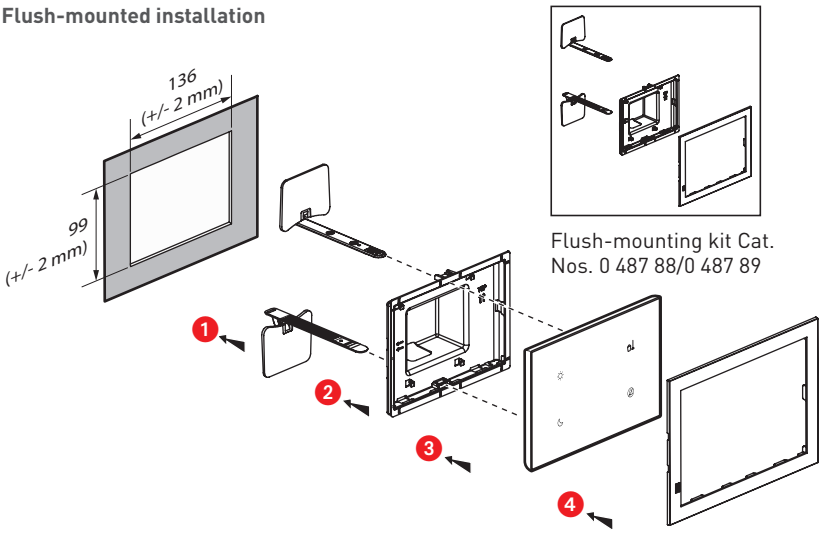


Technical characteristics (continued)

Surface-mounted installation



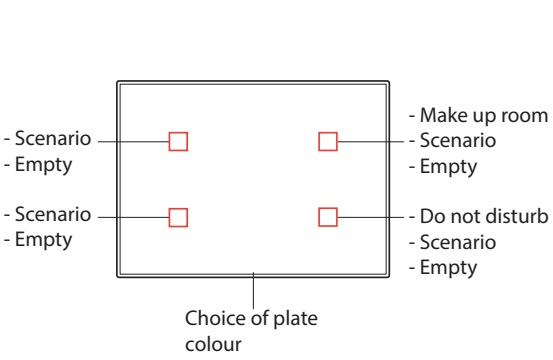
Flush-mounted installation

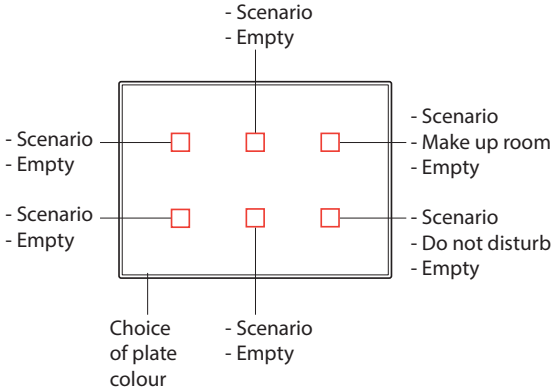


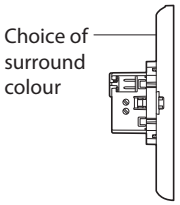
Flush-mounting kit Cat. Nos. 0 487 88/0 487 89

Configured Cat. No. 0 487 84 or FL4662/0 487 87 or FL4665

Cat. No.	Number of buttons (presses)
0 487 84	6
FL4662	
0 487 87	4
FL4665	







Options (predefined position):
- Hotel logo
- Flush-mounted version

The configurator is available on the following website: www.uxforupscalehotel.legrand.com.
The list of pictogram and colour options (plate and surround) can be accessed via the configurator.

0 487 72 OR FL4653/FL4653W: UX TOUCH BEDSIDE PANEL

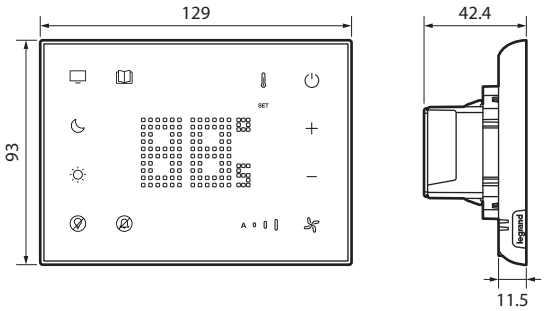
The bedside panel is dedicated to hotels. It has a thermostat function which can be used on heating and/or air conditioning installations, 5 scenario controls and a "Do not disturb" housekeeping function. It is possible to display and set the setpoint temperature, fan speed, and switch ON with thermal overload protection.

The screen displays the measured ambient temperature or the setpoint temperature (set during configuration).

It indicates and can be used to activate the housekeeping information:
- Do Not Disturb
- Make up room: only available on configured version.

It has a proximity sensor: when the device detects an approach, it switches from standby state to active state. The LED brightness level (on standby and active) and the time delay before returning to standby state can also be set by configuration.

The control & management software is used to view and control the thermostat.

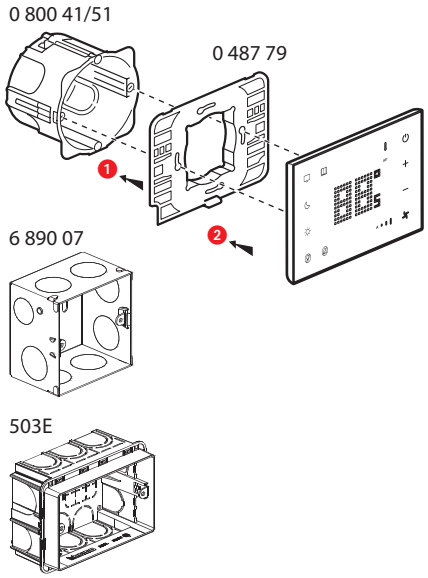


Technical characteristics

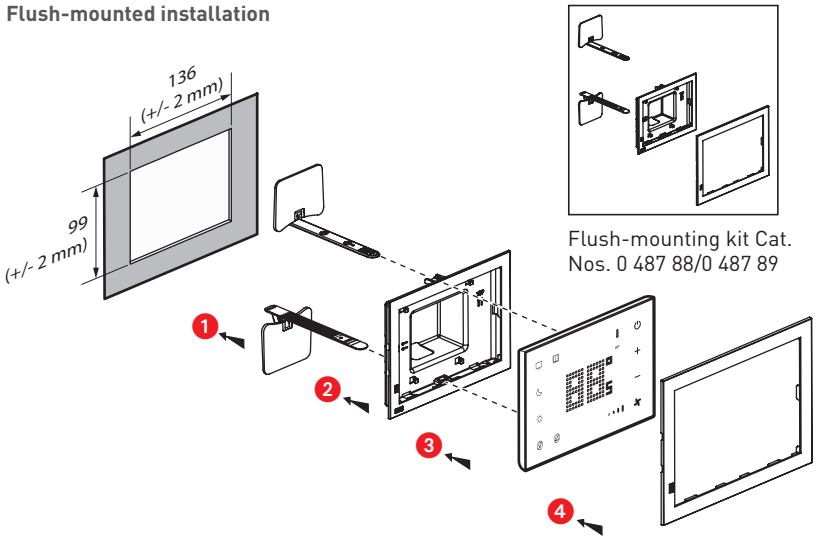
BUS/SCS power supply	18-27 VDC
Consumption with screen off	8 mA
Consumption with ultra-bright screen	30 mA
Operating temperature	0°C to +40°C
Storage temperature	-20°C to +70°C
Unit of measurement	°C or °F
Loads controllable by an actuator	On/Off Open/closed 2-pipe fan coil unit with On/Off valve Centralised air-conditioning system IP gateway 2-pipe fan coil unit with proportional valve 4-pipe fan coil unit with On/Off valve 4-pipe fan coil unit with proportional valve Proportional valve 2-pipe fan coil unit with proportional speed control 4-pipe fan coil unit with proportional speed control
Protection class	IP 20, IK 04
Plate and surround colour (standard)	Black Cat. No. 0 487 72/ FL4653 or White Cat. No. FL4653W
Size	For mounting in a 1-gang box

Technical characteristics (continued)

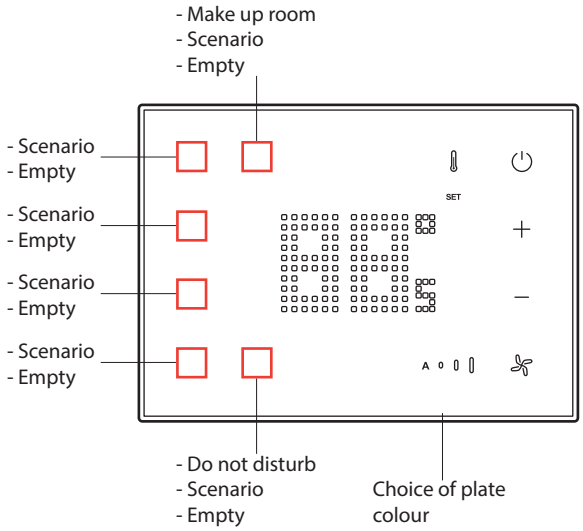
Surface-mounted installation

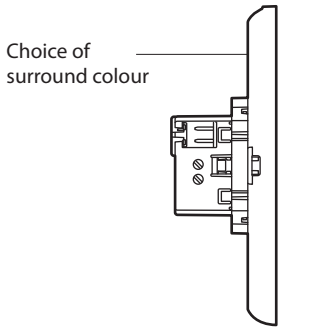


Flush-mounted installation



Configured Cat. No. 0 487 82 or FL4663





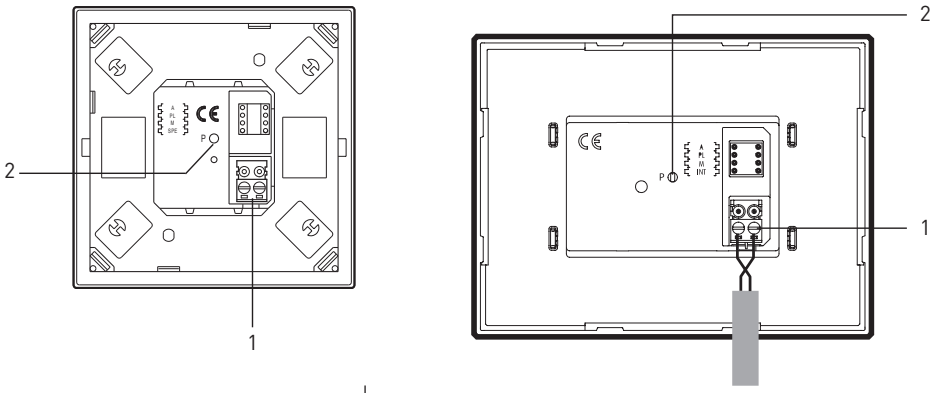
The configurator is available on the following website: www.uxforupscalehotel.legrand.com.
The list of pictogram and colour options (plate and surround) can be accessed via the configurator.

5 739 04: TOUCH CONTROL

EQUIVALENCE						
Cat. No.	**Range**	**Finish**	**Number of buttons (presses)**	**Grid**	**Icons which can be customised on request**	**Max. consumption**
5 739 04	Arteor	White	4	British or French	Yes	25 mA
5 739 05		Black			Yes	25 mA
5 739 12		White	6	-	Yes	35 mA
5 739 13		Black		-	Yes	35 mA
5 740 89		White	4		No (wake up/sleep/TV/rest)	25 mA
5 745 89		Black			No (wake up/sleep/TV/rest)	25 mA
0 672 43	Céliane	Kaolin glass	4	French	Yes	25 mA
0 672 45		Piano glass			Yes	25 mA
0 672 93		Kaolin glass			No (wake up/sleep/TV/rest)	25 mA
0 672 95		Piano glass			No (wake up/sleep/TV/rest)	25 mA
0 672 73		Kaolin glass			No (wake up/sleep/open/close)	25 mA
0 672 75		Piano glass			No (wake up/sleep/open/close)	25 mA
HD4657M3	Axolute	White	6	-	Yes	20 mA
HC4657M3		Whice		-	Yes	20 mA
HS4657M3		Nighter		-	Yes	20 mA
HD4657M4		White	8	-	Yes	25 mA
HC4657M4		Whice		-	Yes	25 mA
HS4657M4		Nighter		-	Yes	25 mA

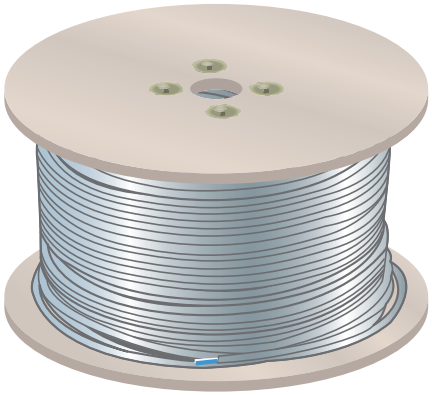
Control which can launch one or more scenarios and control lighting and/or shutters with a single press or in toggle mode (cyclical alternation of 2 scenarios on the same button: scenario 1, scenario 2, scenario 1, scenario 2, etc).
Customisable labels (pictograms) can be used to define scenarios.

Technical characteristics



Key
1. BUS clamp
2. LED brightness control button

Supply voltage	18-27 V⎓
Max. consumption	See table below
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C



0 492 72/0 492 75: BUS CABLE

Halogen-free BUS/SCS cable used to connect communicating products in the system. Wound on a drum.

Sheath colour: white

- Outer diameter: max. 5 mm
- Number of wires: 2 flexible twisted wires (white, blue)
- Wire cross-section: 0.5 mm²
- Electrical resistance: less than 72 Ω/km
- Operating temperature: -15°C to +70°C
- Length:
  - Cat. No. 0 492 72: 200 m
  - Cat. No. 0 492 75: 500 m

5 732 85: LIGHTING CONTROL

EQUIVALENCE						
Cat. No.	**Finish**	**Function**	**Number of modules**	**Number of buttons (presses)**	**Symbol**	**Version**
5 732 85	White	2-way switch	2	2	MASTER	Round
5 737 85	Magnesium	2-way switch	2	2		
5 732 87	White	Pushbutton	2	1		
5 737 87	Magnesium	Pushbutton	2	1		
5 732 95	White	2-way switch	2	4	Bedside lamps	
5 737 95	Magnesium	2-way switch	2	4		
5 732 97	White	Pushbutton	2	2		
5 737 97	Magnesium	Pushbutton	2	2		
5 732 84	White	2-way switch	2	2	MASTER	Square
5 737 84	Magnesium	2-way switch	2	2		
5 732 86	White	Pushbutton	2	1		
5 737 86	Magnesium	Pushbutton	2	1		
5 732 94	White	2-way switch	2	4	Bedside lamps	
5 737 94	Magnesium	2-way switch	2	4		
5 732 96	White	Pushbutton	2	2		
5 737 96	Magnesium	Pushbutton	2	2		
5 730 13	White	2-way switch	1 module on left	2	Unmarked	Round
5 731 13	Magnesium	2-way switch	1 module on left	2		
5 730 15	White	2-way switch	1 module on right	2		
5 731 15	Magnesium	2-way switch	1 module on right	2		
5 730 61	White	2-way switch	2 modules	2		
5 731 61	Magnesium	2-way switch	2 modules	2		
5 720 05	White	2-way switch	1 module	2		Square
5 725 05	Magnesium	2-way switch	1 module	2		
5 720 35	White	2-way switch	2 modules	2		
5 725 35	Magnesium	2-way switch	2 modules	2		
5 730 00	White	Pushbutton	1 module on left	1		Round
5 731 00	Magnesium	Pushbutton	1 module on left	1		
5 730 02	White	Pushbutton	1 module on right	1		
5 731 02	Magnesium	Pushbutton	1 module on right	1		
5 730 50	White	Pushbutton	2 modules	1		
5 731 50	Magnesium	Pushbutton	2 modules	1		
5 720 00	White	Pushbutton	1 module	1		Square
5 725 00	Magnesium	Pushbutton	1 module	1		
5 720 30	White	Pushbutton	2 modules	1		
5 725 30	Magnesium	Pushbutton	2 modules	1		

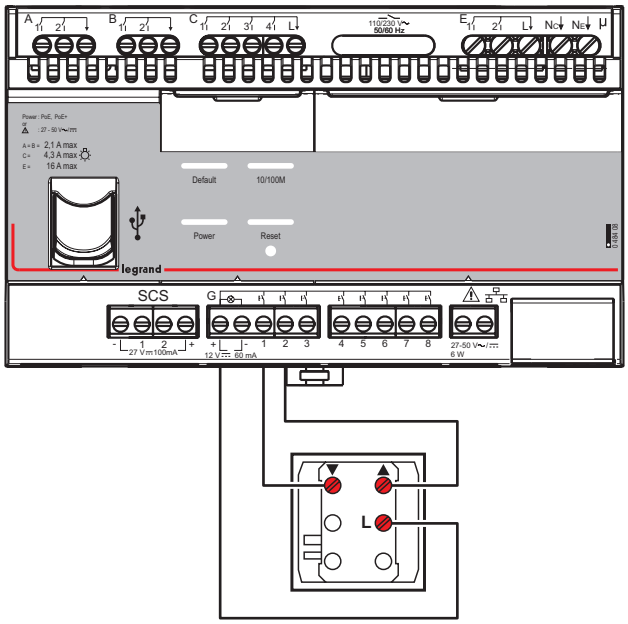
Technical characteristics

Supply voltage	250 V~	Storage temperature	-20°C to +70°C
Operating temperature	-5°C to +45°C	Size	2 modules

5 732 25: ROLLER SHUTTER CONTROL

EQUIVALENCE					
Cat. No.	**Finish**	**Function**	**Number of buttons (presses)**	**Symbol**	**Version**
5 732 25	White	Pushbutton	2	Up/down/stop	Round
5 737 25	Magnesium	Pushbutton	2		
5 732 24	White	Pushbutton	2	Up/down/stop	Square
5 737 24	Magnesium	Pushbutton	2		

Technical characteristics

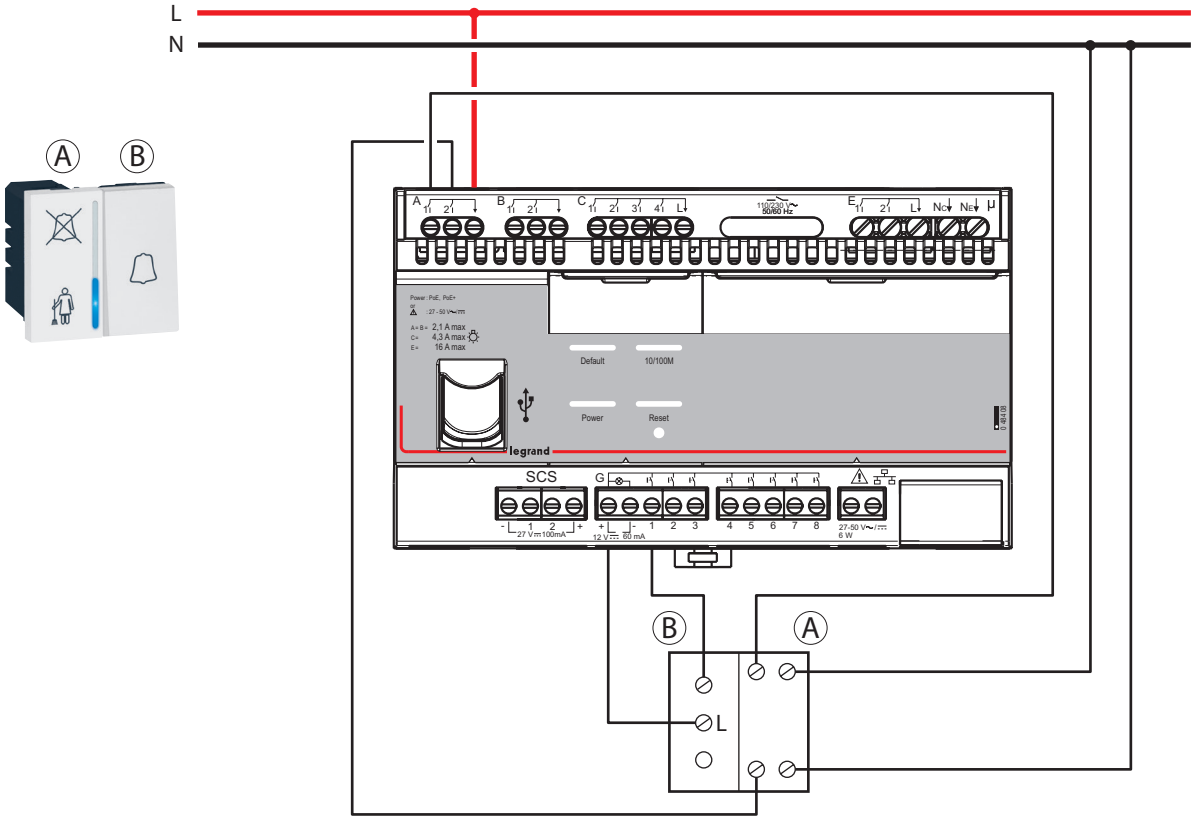


Supply voltage	250 V~
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C
Size	2 modules

5 720 67: DOOR EXTERNAL INDICATOR

EQUIVALENCE					
Cat. No.	**Finish**	**Function**	**Number of buttons (presses)**	**Symbol**	**Version**
5 720 67	White	Pushbutton	1	1 x DO NOT DISTURB + 1 x MAKE UP ROOM + bell	Round
5 725 67	Magnesium	Pushbutton	1		
5 720 57	White	Pushbutton	1		Square
5 725 57	Magnesium	Pushbutton	1		

Technical characteristics

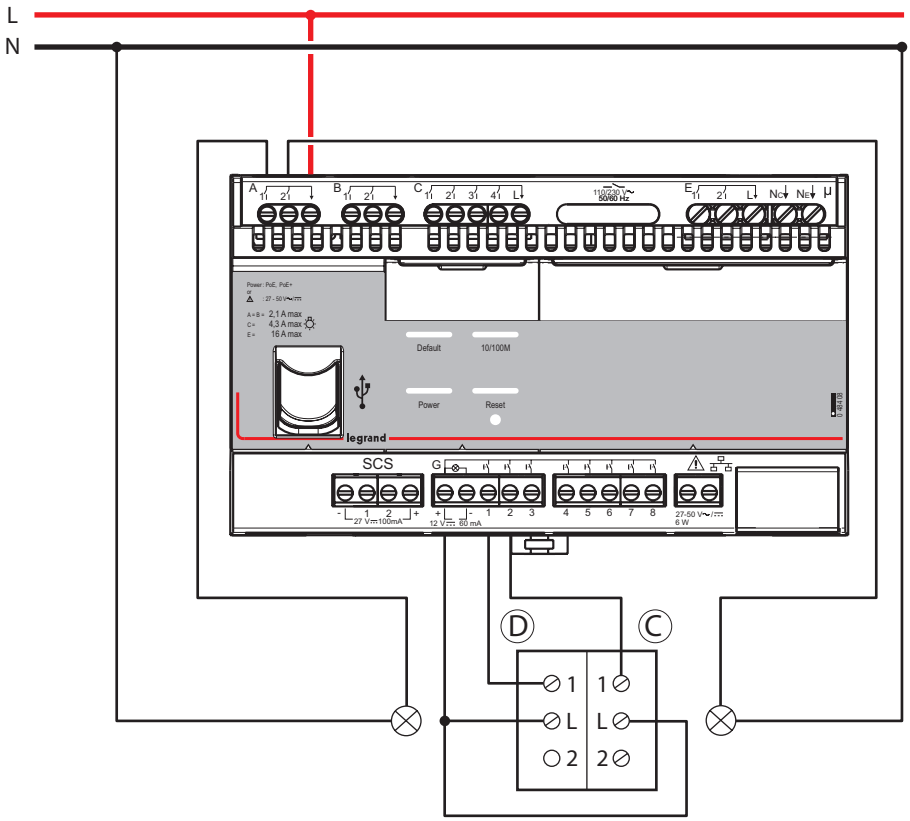


Supply voltage	250 V~
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C
Size	2 modules

5 720 74: CONTROL FOR HOTEL ROOM EXTERNAL INDICATOR

EQUIVALENCE					
Cat. No.	**Finish**	**Function**	**Number of buttons (presses)**	**Symbol**	**Version**
5 720 74	White	Switch	2	1 x DO NOT DISTURB + 1 x MAKE UP ROOM + STOP	Round
5 725 74	Magnesium	Switch	2		
5 720 54	White	Switch	2		Square
5 725 54	Magnesium	Switch	2		

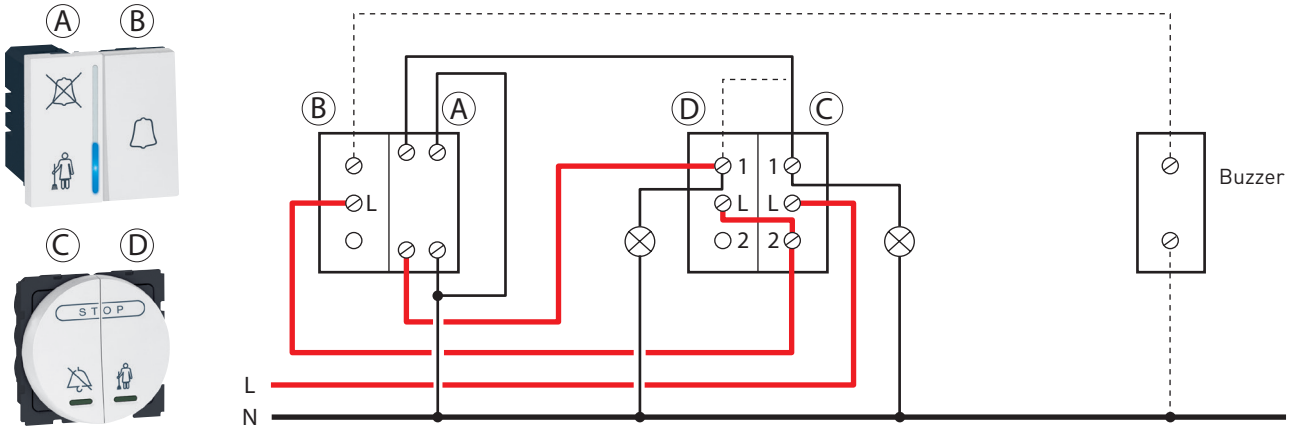
Technical characteristics



Supply voltage	250 V~
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C
Size	2 modules

5 720 67 + 5 720 74: CONTROL + DOOR EXTERNAL INDICATOR

Schematic diagram for mounting without connection to the controller



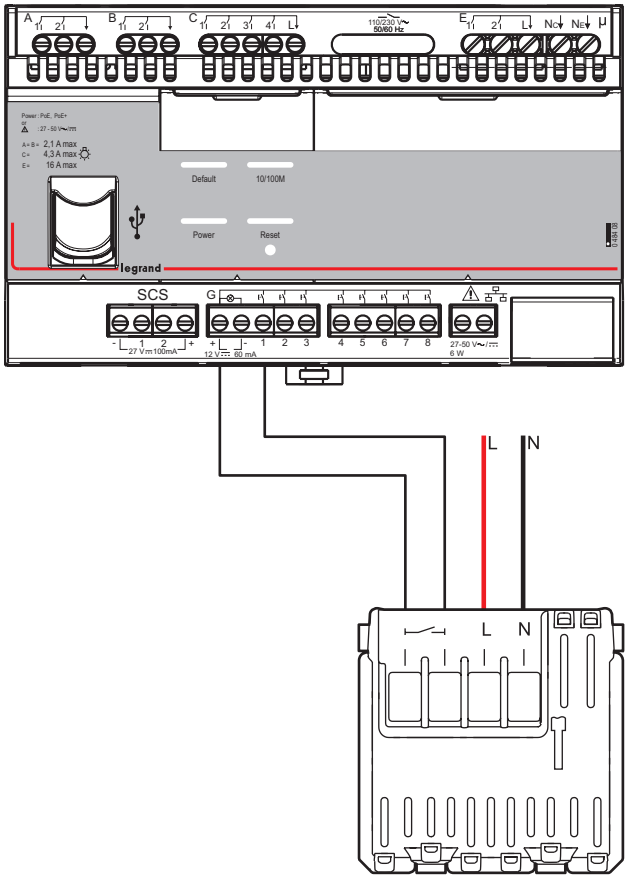
Recommended solution in areas with frequent power cuts.

5 722 30: KEYCARD SWITCH

EQUIVALENCE			
Cat. No.	**Finish**	**Reader**	**Keycard**
5 722 30	White	Mechanical	Standard or ISO keycards Cat. Nos. 5 722 59, 5 727 59, 0 767 11, 3547 or 0 675 89
5 727 30	Magnesium		
5 722 53	White	RFID	ISO only Cat. Nos. 0 767 11, 3547 or 0 675 89
5 727 53	Magnesium		

Can be used to send a welcome scenario when the keycard is inserted and send a leave scenario when the keycard is removed, with a time delay of approximately 30 s.

Technical characteristics



Supply voltage	250 V~
Operating temperature	-5°C to +45°C
Storage temperature	-20°C to +70°C
Size	2 modules

PRESENTATION AND INSTALLATION OF ART D'ARNOULD DEVICES

ART D'ARNOULD: LUXURY WIRING ACCESSORY RANGE (MADE-TO-ORDER)

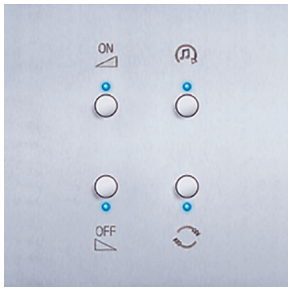
The ART d'Arnould range is a custom-made range. It is therefore possible to ask for products not available in the catalogue. Each request will be considered by the ART Design office. Apart from some catalogue numbers which have already been created (see Legrand catalogue), each request should be sent to:

- The Customer Care Centre (for France) – tel: +33(0) 810 48 48 48.
- Your branch/your sales contact.

Several button designs are available depending on type:

- Conventional controls: conventional (or mechanical) controls have 2 types of button
  - Lever (see design for each universe) (1 or 2 levers for a 1-gang peripheral)
  - Button (1 or 2 buttons for a 1-gang peripheral)

- BUS controls: BUS controls are only available with buttons (1, 2, 3 or 4 buttons for a 1-gang peripheral)

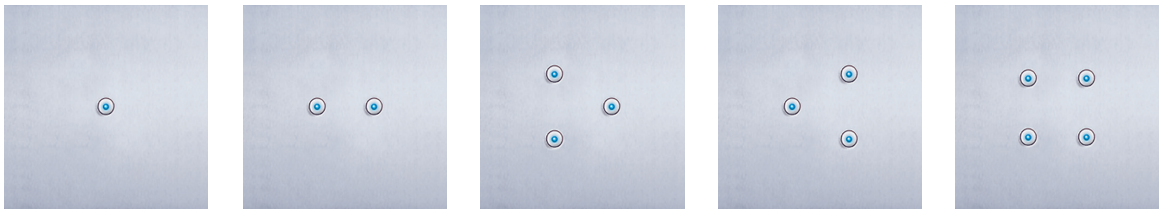


List of compatible mechanisms

- On 230 V mechanical peripheral:
  - Single pushbutton (lever - push down) – 1 or 2 levers in a 1-gang peripheral
  - Double pushbutton (lever - push down and push up) – 1 or 2 levers in a 1-gang peripheral
  - Single switch (2-position lever) – 1 or 2 levers in a 1-gang peripheral
  - Double switch (3-position lever) – 1 or 2 levers in a 1-gang peripheral

With possibility of combining mechanisms on the same plate (for example: 1 single pushbutton & 1 double pushbutton in a 1-gang peripheral)

- On mechanical peripheral with 24 V LEDs: 1 to 4 pushbuttons on a 1-gang plate

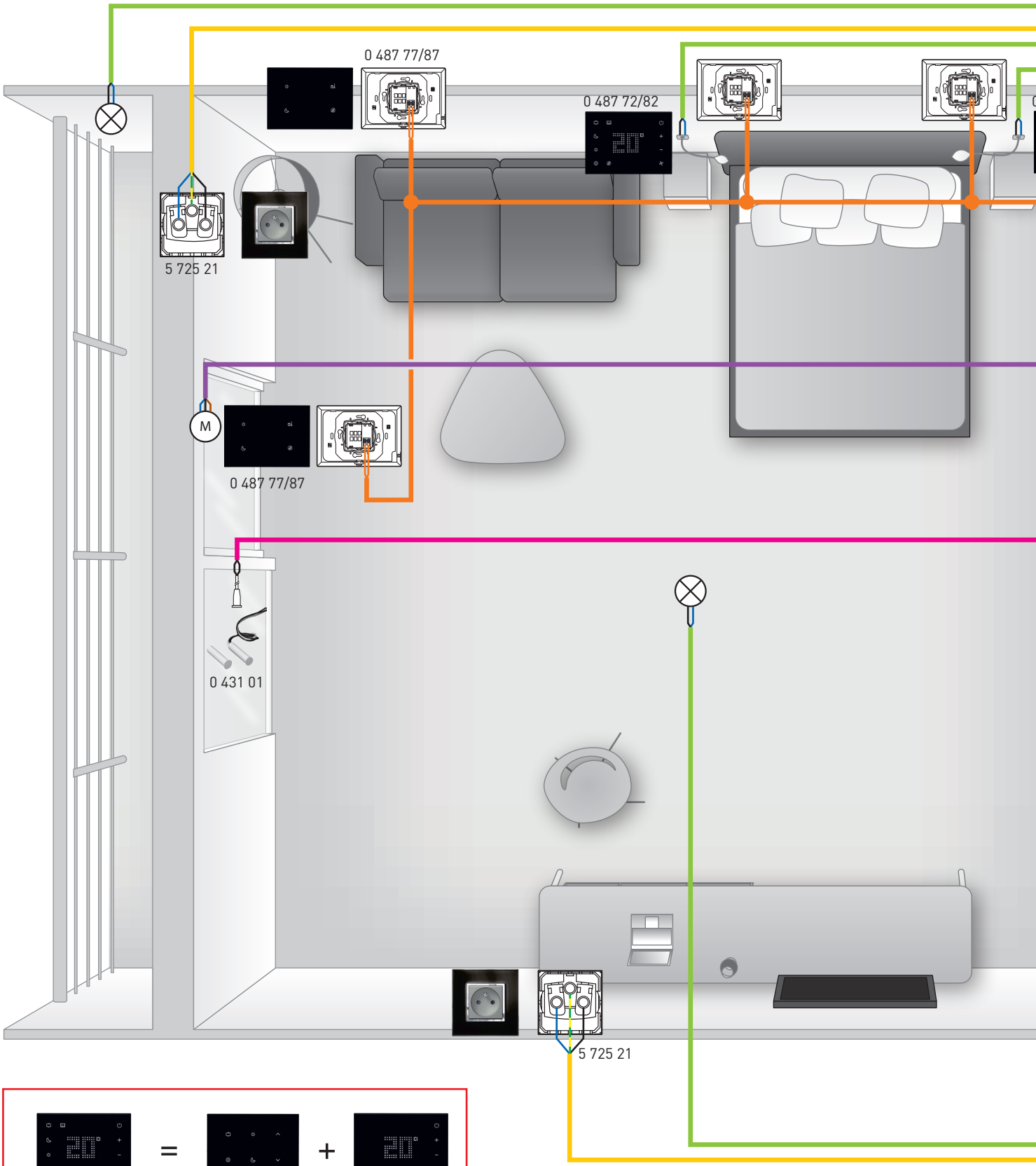


- On BUS peripheral:
  - 4-button pushbutton (possibility of choosing 1, 2, 3 or 4 buttons in a 1-gang peripheral)
  - Arteor thermostat Cat. No. 0 674 59
  - 8-scenario control Cat. No. 0 675 92

For hotel functions (corridor indicator/keycard reader/DND-MUR control), UX TOUCH peripherals should be used.

- On UX TOUCH peripheral:
  UX TOUCH peripherals (standard and configured) in flush-mounted version are compatible with ART.

SCHEMATIC DIAGRAM FOR A ROOM WITH UX TOUCH CONTROLS



Bedside panel
Cat. Nos. 0 487 72/82

=

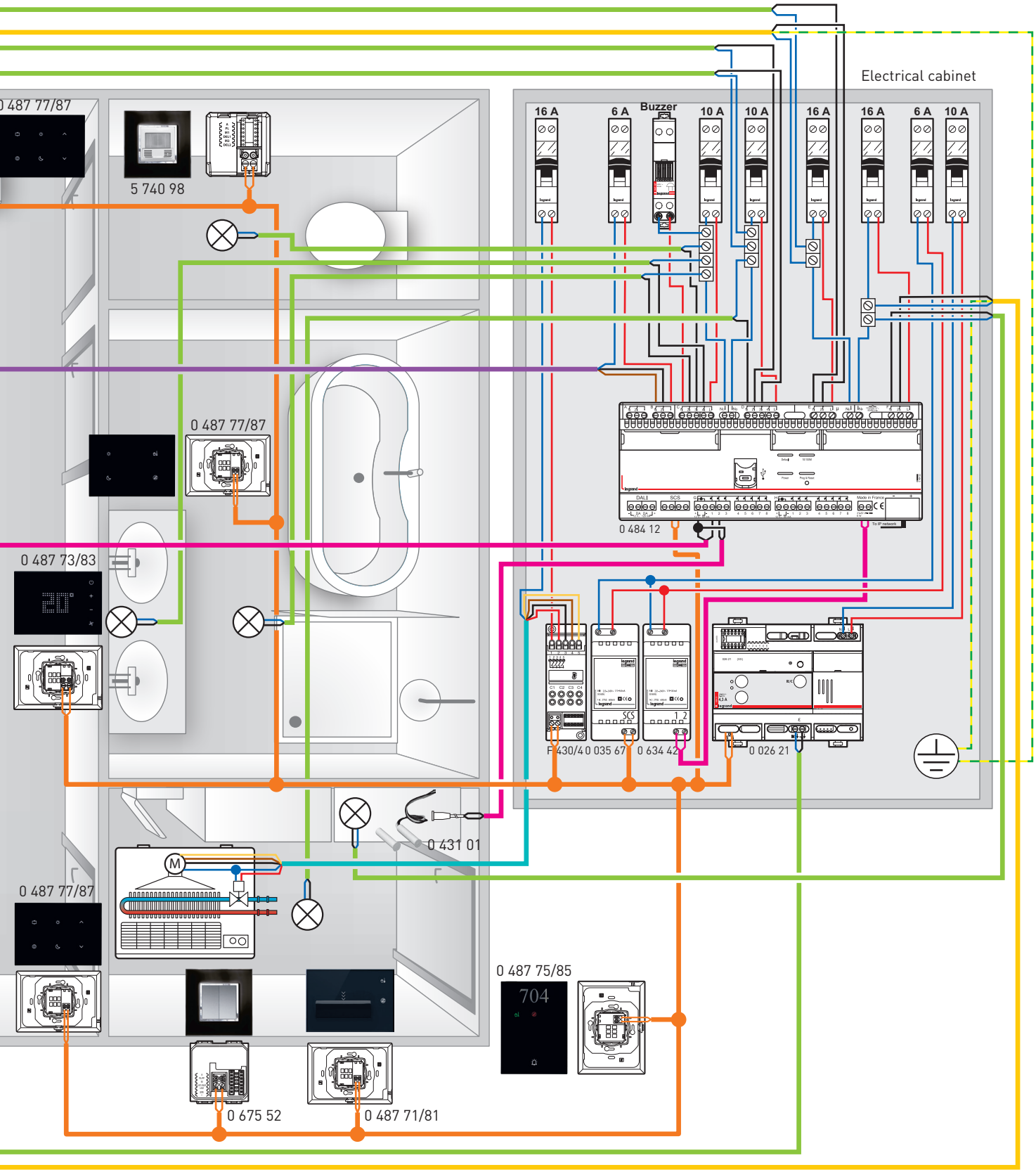
6-scenario control
Cat. Nos. 0 487 74/84

+

Thermostat
Cat. Nos. 0 487 73/83

Bedside panel to be installed near the bedside table

NB: Controller power supply (RCU): use Cat. No. 0 634 42 or 346020
BUS power supply: use Cat. No. 0 035 67 (or E49)
BUS power supply: or Cat. No. 0 035 60 (or E46ADCN)
BUS power supply: (specific impedance for BUS)

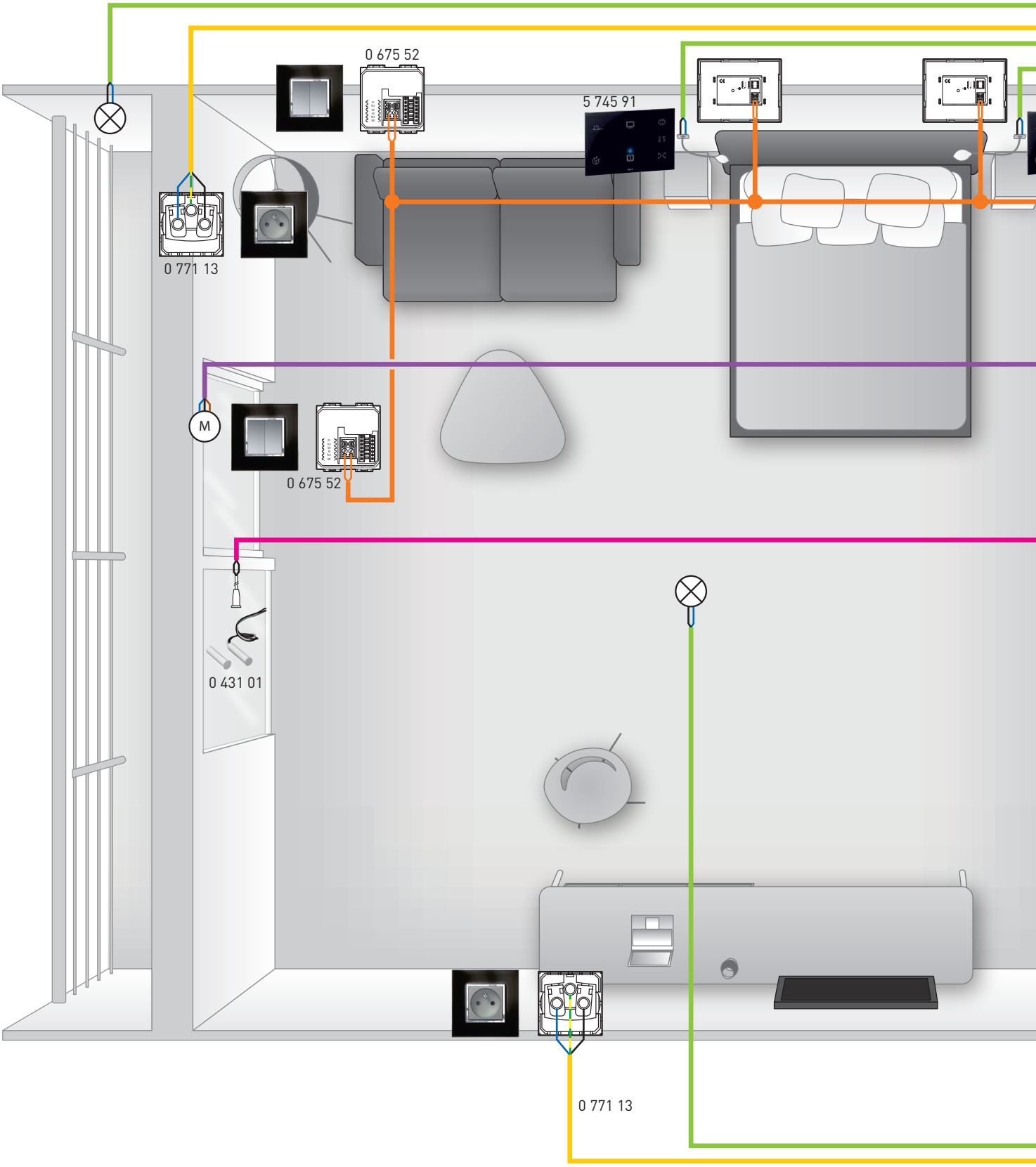


BUS cable
1 pair Cat. No. 0 492 72 or 0 492 75
Star wiring possible

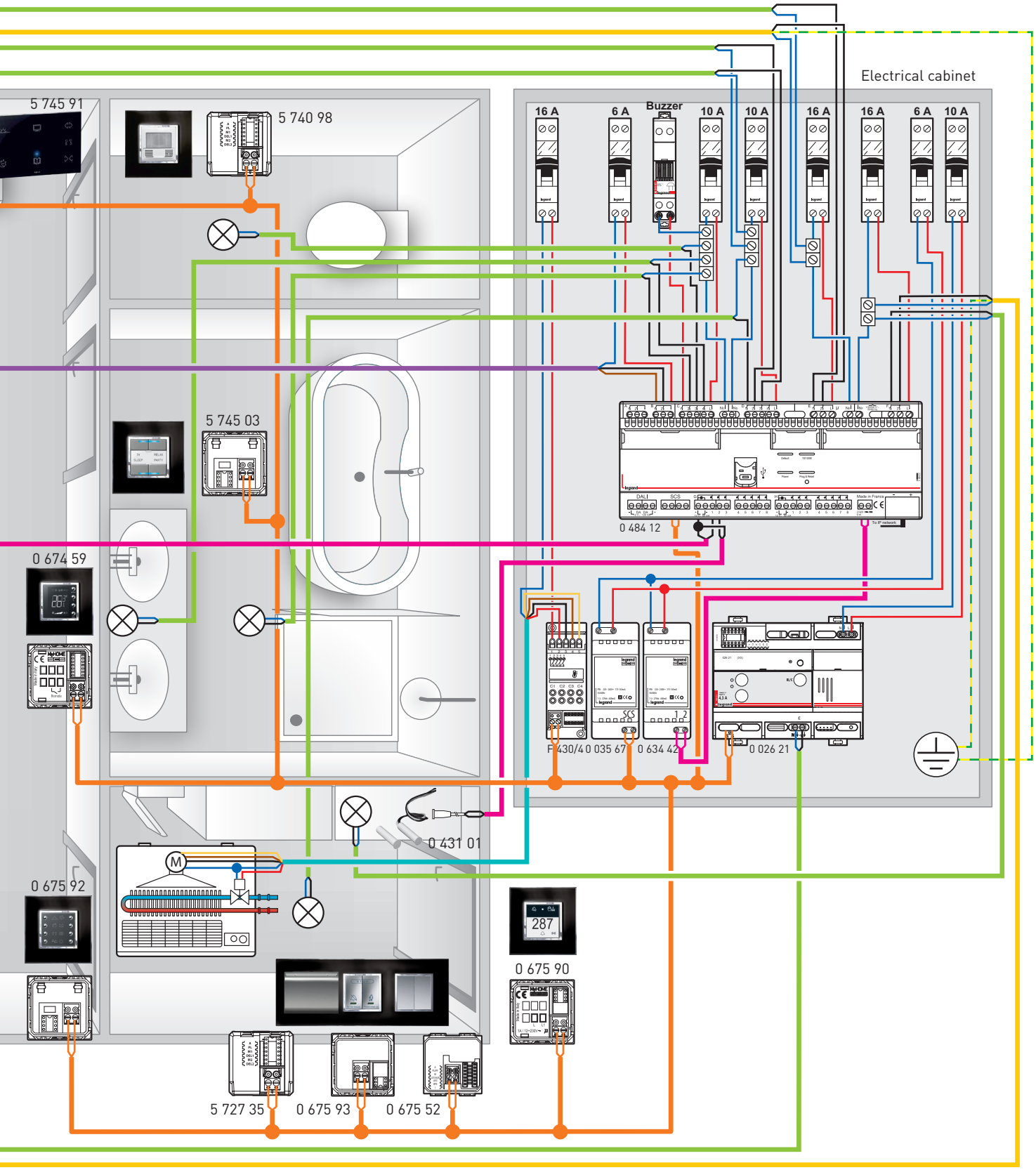
2.5 mm² 3G cable
1.5 mm² 5G cable
1.5 mm² 2G cable if class II luminaire
1.5 mm² 3G cable if class I luminaire

1-pair 0.9 mm² SYT cable
1.5 mm² 3G cable

SCHEMATIC DIAGRAM FOR A ROOM WITH BUS CONTROLS



NB: Controller power supply (RCU): use Cat. No. 0 634 42 or 346020
BUS power supply: use Cat. No. 0 035 67 (or E49) or 0 035 60 (or E46ADCN) (specific impedance for BUS)

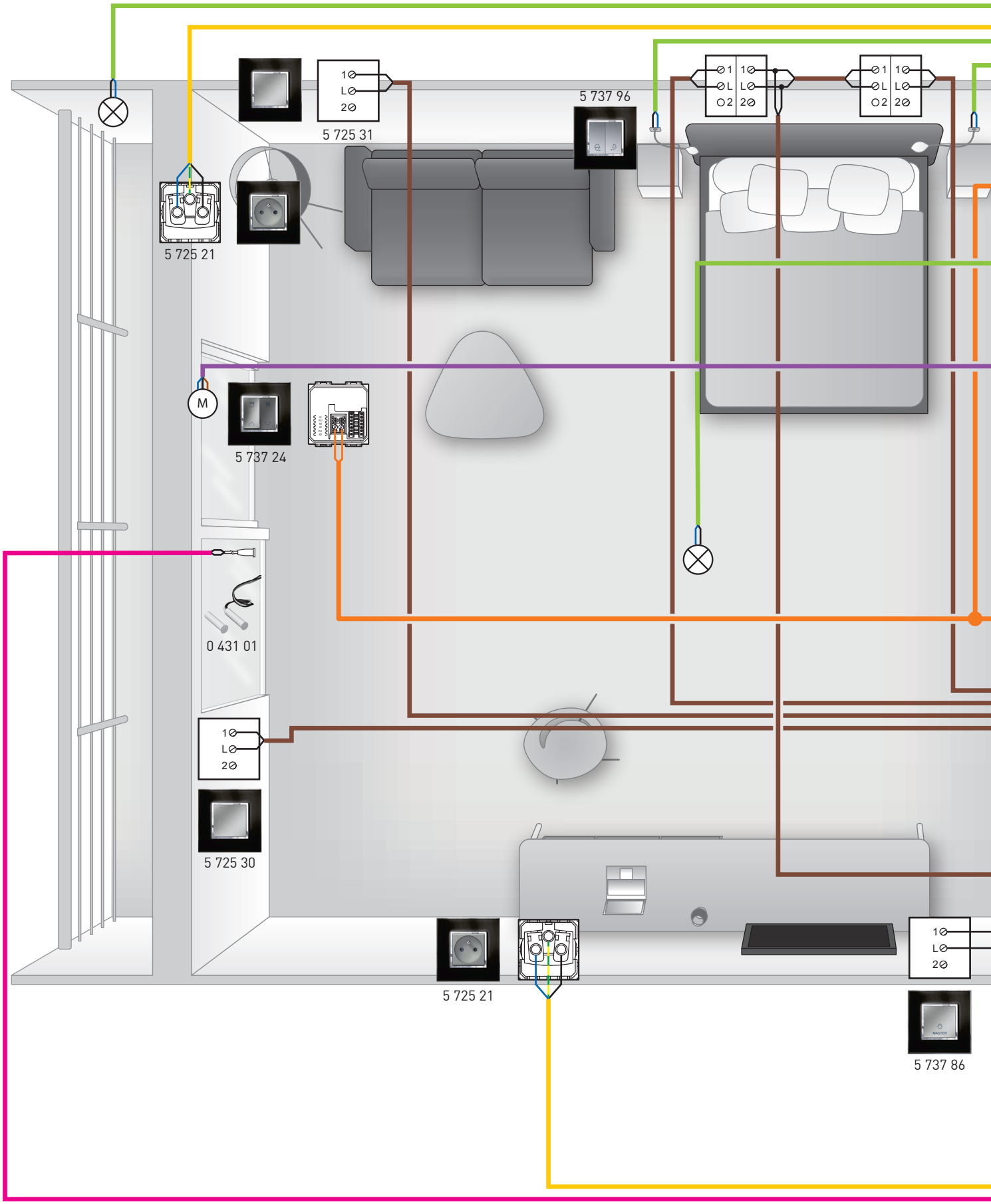


BUS cable
1 pair Cat. No. 0 492 72 or 0 492 75
Star wiring possible

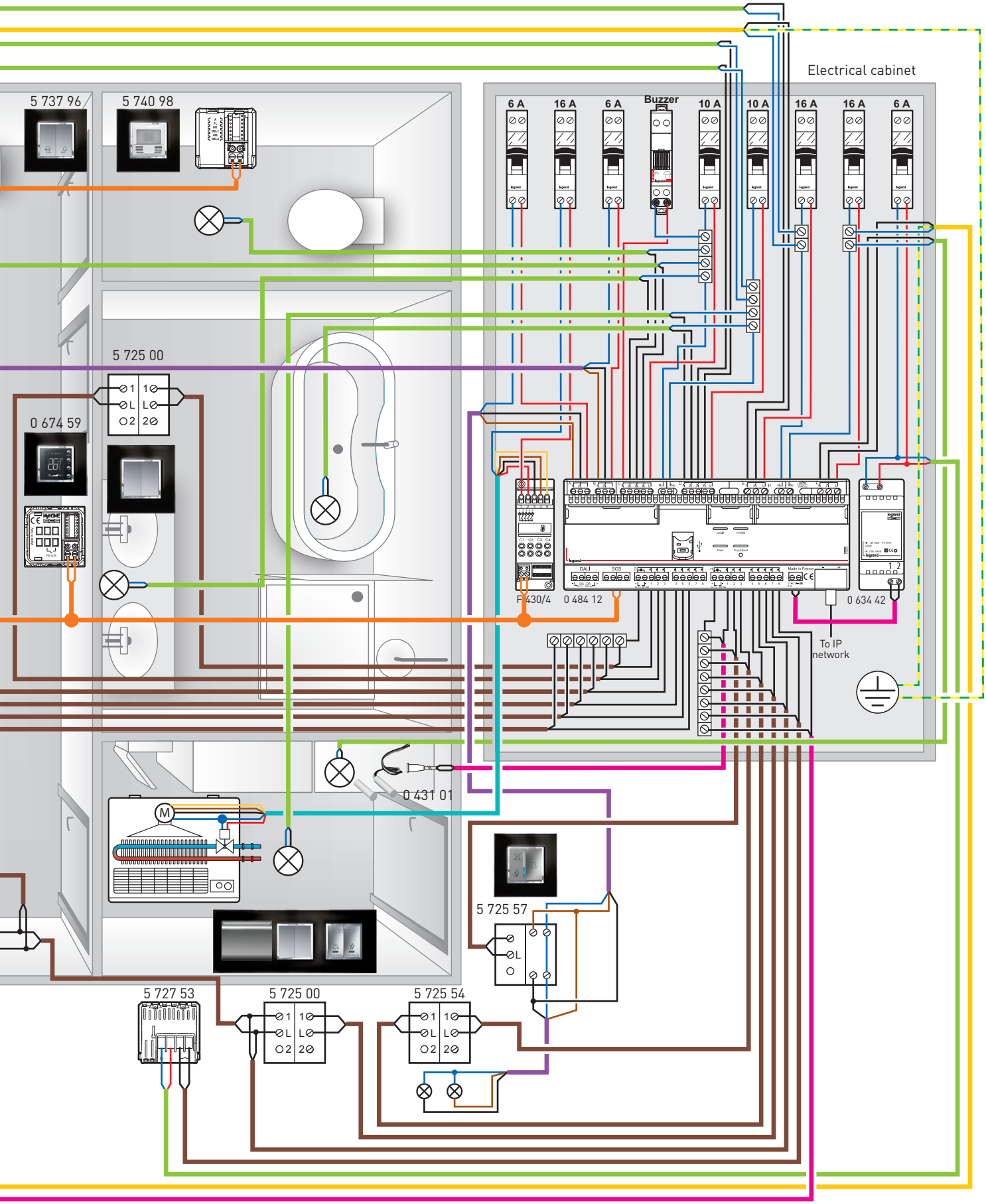
2.5 mm² 3G cable
1.5 mm² 5G cable
1.5 mm² 2G cable if class II luminaire
1.5 mm² 3G cable if class I luminaire

1-pair 0.9 mm² SYT cable
1.5 mm² 3G cable

SCHEMATIC DIAGRAM FOR A ROOM
WITH CONVENTIONAL CONTROLS



NB: Controller power supply (RCU): use Cat. No. 0 634 42 or 346020
BUS power supply: use Cat. No. 0 035 67 (or E49) or 0 035 60 (or E46ADCN) (specific impedance for BUS)


Electrical cabinet
6 A
16 A
6 A
Buzzer
10 A
10 A
16 A
16 A
6 A
5 737 96
5 740 98
5 725 00
0 674 59
F430/4
0 484 12
0 634 42
To IP network
0 431 01
5 725 57
5 727 53
5 725 00
5 725 54
BUS cable
1 pair Cat. No. 0 492 72 or 0 492 75
Star wiring possible
2.5 mm² 3G cable
1.5 mm² 5G cable
1.5 mm² 2G cable if class II luminaire
1.5 mm² 3G cable if class I luminaire
1-pair 0.9 mm² SYT cable
1.5 mm² 3G cable
1.5 mm² 2G cable

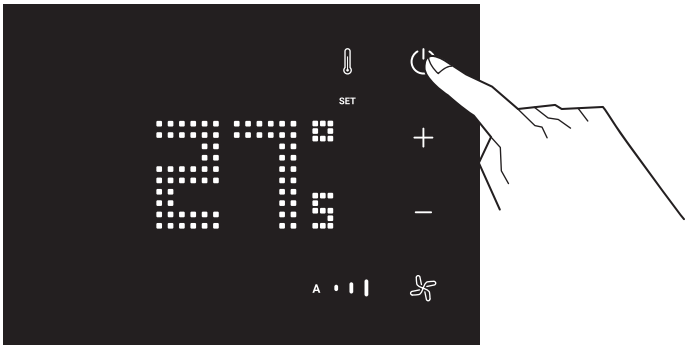
OPERATING MODES
AND LOCAL PROGRAMMING OF THE THERMOSTAT

FUNCTIONS AND OPERATING MODES

Heating and air conditioning function

The purpose of the thermostat is to manage four different functions according to the type of installation being created:
- Heating function (only the heating is active)
- Air conditioning function (only the air conditioning is active)
- Air conditioning function in summer/heating in winter

0 487 73



0 674 59

A long press (>7 seconds) on the ⏻ button is used to change function.

Heating function

If the measured temperature is lower than the setpoint value, the heating system is activated and the corresponding symbol is displayed on-screen.
When the temperature is reached, the thermostat deactivates the heating system and the icon disappears.

Air conditioning function

If the measured temperature is higher than the setpoint value, the air-conditioning system is activated and the corresponding symbol is displayed on-screen.
When the temperature is reached, the thermostat deactivates the air-conditioning system and the icon disappears.

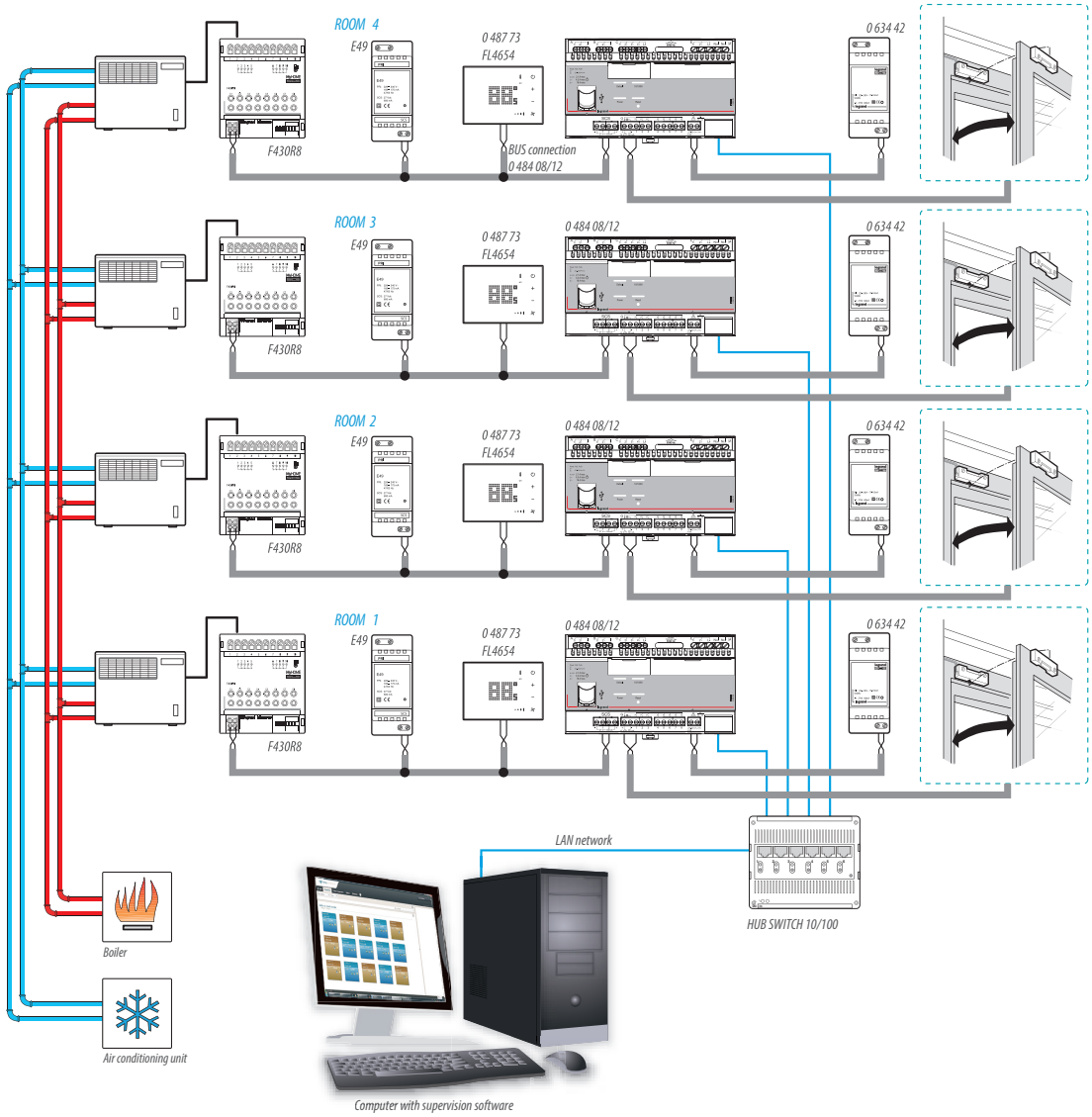
Summer/winter function

It is possible to use the thermostat for heating (heating function) and for air conditioning (air conditioning function).
Switching from one function to the other should be done manually by pressing the ⏻ button for 7 seconds or by the supervisor.
The icons which appear on-screen are identical to those described above.

FUNCTIONS AND OPERATING MODES (CONTINUED)

Example of installation diagram in Hotel Room Controller software configuration

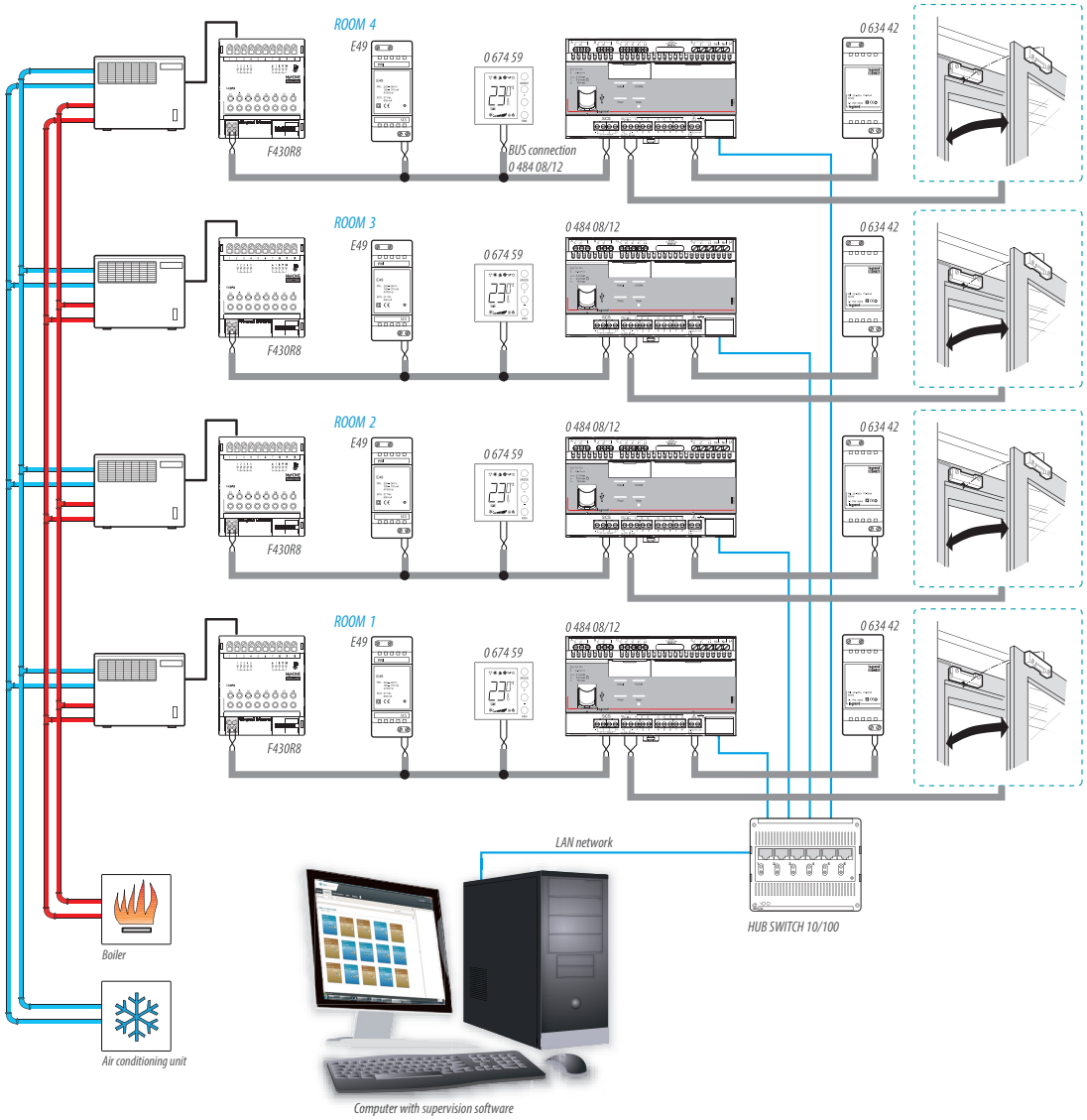
Installation with 4 zones with 4-pipe fan coil units for heating and air-conditioning system with window contact.



FUNCTIONS AND OPERATING MODES (CONTINUED)

Example of installation diagram in Hotel Room Controller software configuration

Installation with 4 zones with 4-pipe fan coil units for heating and air-conditioning system with window contact.



Operating modes

The thermostat can work in the following modes:

Comfort: 2 customisable setting values: ideal heating and air-conditioning temperature (by default 21-25°C).

Eco: 2 customisable setting values: heating and air-conditioning economy temperature (by default 18-28°C).

Frost guard: minimum safe temperature (by default 7°C).

Thermal protection: maximum safe temperature (by default 35°C).

Off: zone switched off.

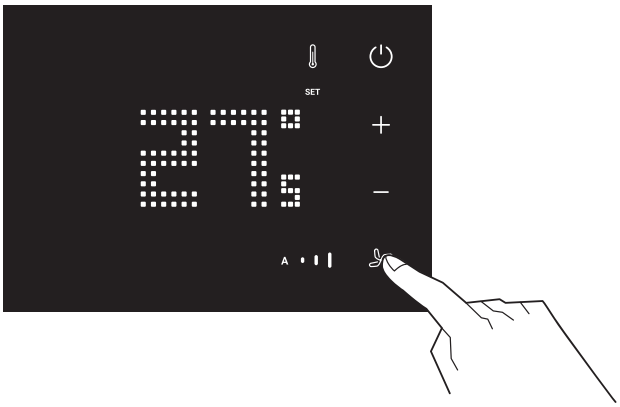
By pressing briefly (no longer than 3 seconds) on the button, the thermostat switches to thermal protection or frost guard mode.
Pressing again returns the thermostat to the previous setting.

During software configuration it is possible, when the setpoint is reached, to choose whether the thermostat switches off the fan (for maximum economy) or leaves the fan running (in this case, it is possible to switch on the fan even when the system is producing neither hot nor cold air).

Fan coil unit speed

If the thermostat is configured for managing a fan coil type load, pressing the button can change the fan speed cyclically, by choosing one of the following values.
It is also possible to disable the automatic speed function via the software.

0 487 73



0 674 59

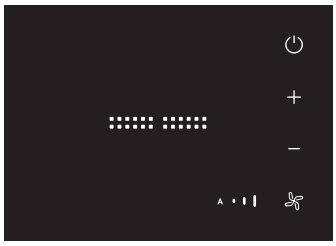
Press the button to set the fan speed to the desired level.

Off	• 0 0	Speed 1
Off	• ▮ 0	Speed 2
Off	• ▮ ▮	Speed 3
	A 0 0	Automatic operation

FUNCTIONS AND OPERATING MODES (CONTINUED)

Screen displays

0 487 73



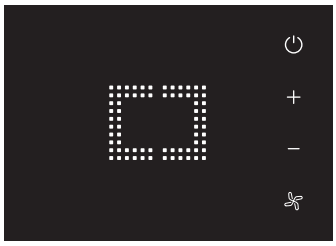
0 674 59

Protection mode

With a short press on the ⏻ button, the thermostat switches to protection mode, and the "- -" symbol is displayed.

To return to the previous state, press the "on" or "+" and "-" buttons.

0 487 73



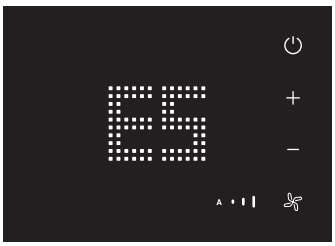
0 674 59

No configuration

The "[ ]" symbol flashes quickly to indicate that the thermostat has not been configured.

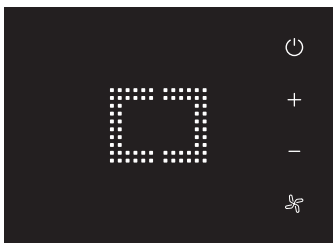
Temperature calibration (if activated by configuration)

With a long press (> 7 seconds) on the + and - buttons, the temperature flashes to indicate that the calibration procedure is in progress.



Error condition

The screen displays the message "E" followed by a number (from 1 to 5 to indicate an error condition).
See the end of the guide for more details.

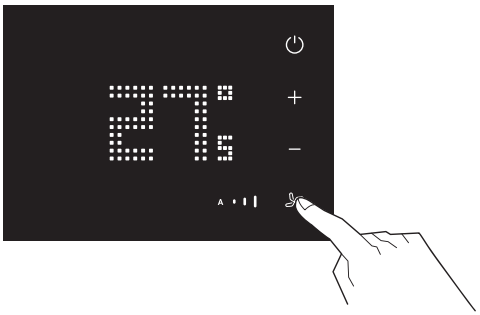


Configuration/test in progress

The "[ ]" symbol flashes slowly to indicate that a remote configuration/test session is in progress.

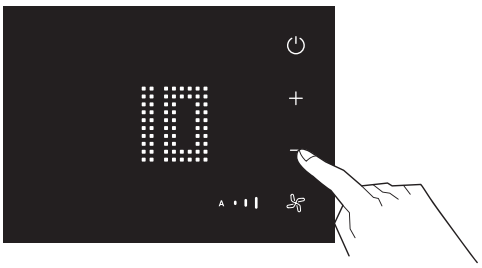
Brightness control

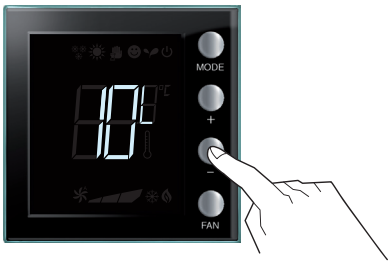
0 487 73



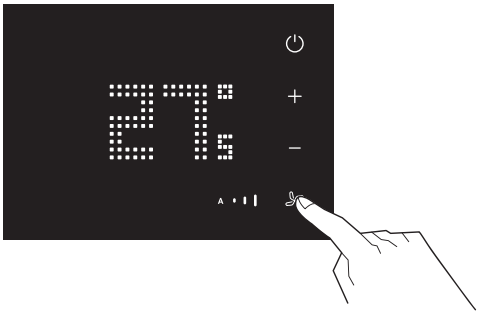
0 674 59

The screen brightness can be set to one of 10 levels.
Press the button for at least 7 seconds.





The current brightness level is displayed on-screen.
Use the + and – buttons to increase or decrease the brightness.

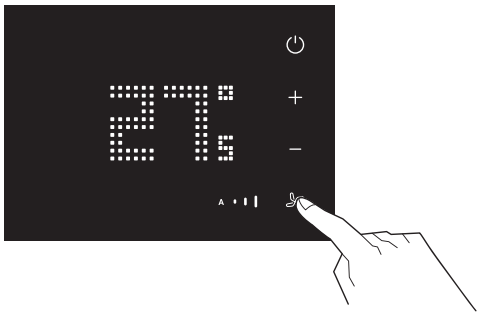


Press the button twice to confirm and exit the function.

FUNCTIONS AND OPERATING MODES (CONTINUED)

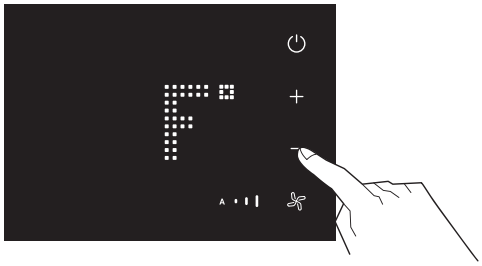
Setting the temperature measurement unit

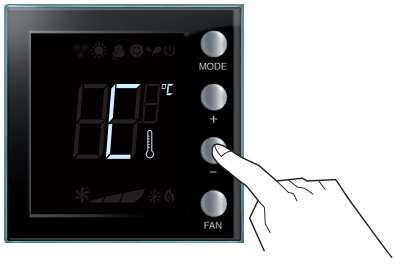
0 487 73



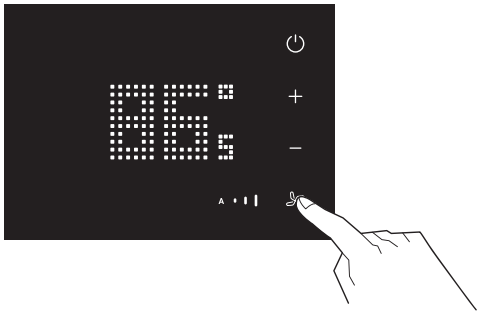
0 674 59

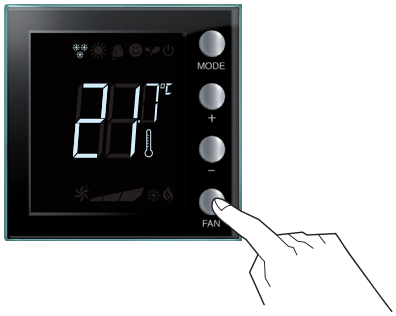
A decision can be made to set the device to the temperature scale expressed in degrees °C or in degrees °F.
Press the button for at least 7 seconds.





Press the button again.
Use the + and – buttons to switch from a temperature unit in °C to a temperature in °F.





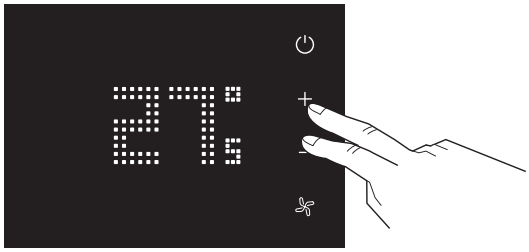
Press the button to confirm and exit the function.

Calibrating the measured temperature

By pressing the + and – buttons simultaneously, it is possible to calibrate the measured temperature. This function should be activated by means of the dedicated software.

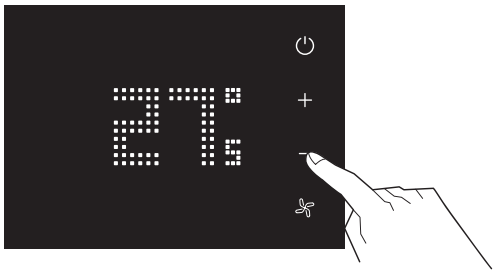
NOTE: After the initial installation, wait for at least 5 hours before performing calibration.

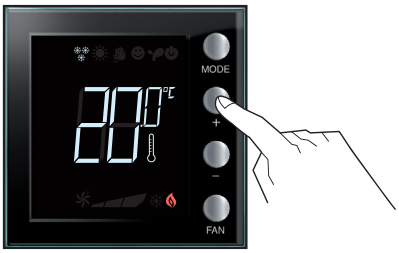
0 487 73



0 674 59

Press the + and – buttons (> 7 seconds) simultaneously; the temperature starts to flash.
Release the buttons.





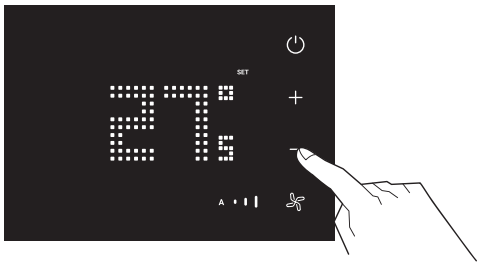
After releasing the buttons, it is possible to increase or decrease the measured temperature using the + and – buttons.
If neither the + or – button is pressed for 5 seconds, the calibration is automatically validated.

NOTE: To restore the default calibration, hold down the + and – buttons (> 7 seconds) simultaneously; the temperature starts to flash.
Hold down the buttons; after 7 extra seconds, the temperature stops flashing, the screen displays the temperature measured by the thermostat and manual calibration is cleared.
The thermometer default calibration is restored.

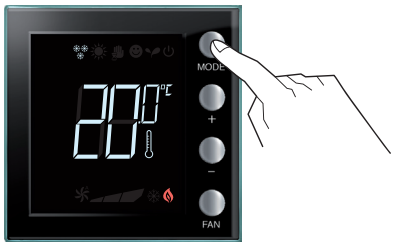
FUNCTIONS AND OPERATING MODES (CONTINUED)

Changing the setpoint temperature

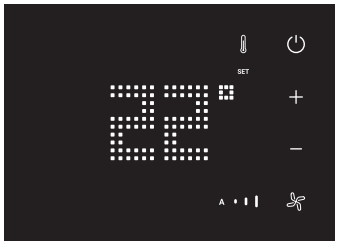
0 487 73

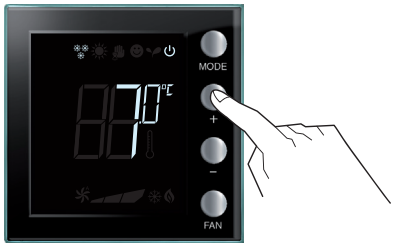


0 674 59



The “SET” message appears (only in instantaneous temperature display mode).
Release and change with + or -.





The screen displays the new programmed setting value.

After a few seconds, the thermostat reverts to the previous mode.

If the setpoint temperature display mode is activated, the screen continues to display the setpoint temperature with the "SET" message active (it does not display the instantaneous temperature).

VIRTUAL KEYCARD

The Virtual keycard function is based on an algorithm which uses detection of movement (via motion sensors) and a door contact (which gives the door open/door closed information). This algorithm is used to determine whether there is anyone in the room or not.

The Virtual keycard function can launch 3 scenarios:

- Door opening scenario
- Arrival scenario
- Leave scenario

How the Virtual keycard works

- When the door is opened, the system sends the door opening scenario. This scenario switches on the entrance hall light for a minute (adjustable time delay), allowing the person to enter the room and be detected without being in the dark.
  - If the person does not enter, the light goes out after the time delay.
  - If the person does enter, when they are detected, the system sends the arrival scenario and sends the Presence information in BACNET
    format over the IP network. The arrival scenario is a welcome scenario defined by the hotel proprietor. The system remains in presence mode until the door is next opened.

In the case of an installation equipped with PMS integrated with room management, the arrival scenario can be a welcome scenario when a new guest enters, and a Remember previous state scenario when a guest returns to their room (the Remember previous state scenario returns the room to the state in which the guest left it before leaving).

- When the door is next opened/closed, the system starts a time delay (called Vacancy time delay in the configuration software).
  - If presence is detected during the time delay, this means that the room has been booked by several people and at least one person is still there. In this case, the system does nothing...the room remains in presence mode until the door is next opened.
  - If no presence is detected during the time delay, the system sends the leave scenario and sends the Absence information in BACNET format over the IP network. The leave scenario puts the room into ECO mode (all the lights switched off, heating in ECO mode, etc).
  - The system might launch the leaving scenario (the room goes into ECO mode), but then a person is detected without the door having been opened (for example the person was on the balcony and is detected when they come back into the room). In this case, the system immediately puts the room into Presence mode.

In the case of an installation equipped with access control that discriminates between keycard holders (guest/staff), the arrival scenario will be specific to the type of keycard (which allows a scenario to be defined to optimise cleaning: switches on all the lights, opens the curtains/shutters, disables controls so they can be cleaned without sending commands, etc).

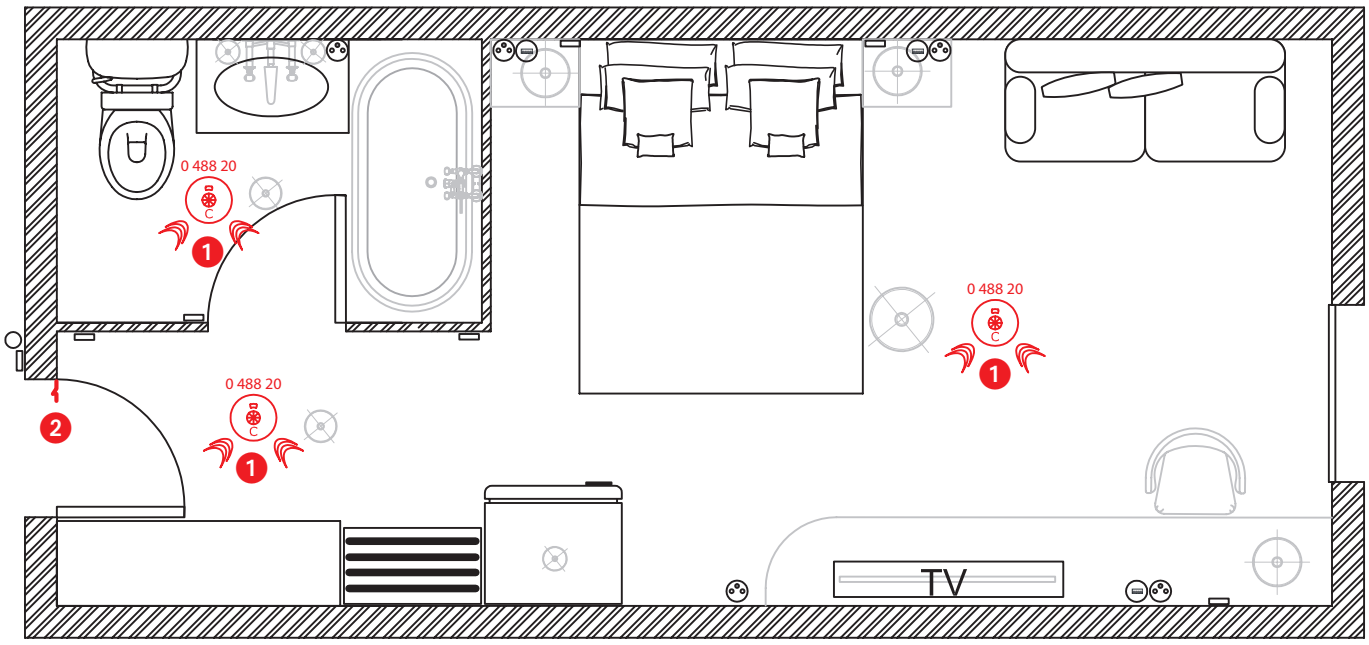
INSTALLING THE VIRTUAL KEYCARD

Installing the Virtual keycard

To ensure the Virtual keycard system works correctly, we recommend covering all areas in the room. In other words, put a sensor in every room, making sure that the areas where the guest is likely to stay still (seat, bed, etc) are within range of the sensors.

It is possible to put a number of sensors (BUS sensors Cat Nos. 0 488 20 or BMSE3001/0 488 22 or BMSE3003 - up to 10) or alternatively a self-contained sensor with volt-free contact indicating detection (or not) Cat No. 0 487 78 (no limit, because sensors can be wired in parallel on the same input).

The door contact(s) must be connected to a volt-free contact input on the controller. In the case of an installation with a centralised access control system, the door open/door closed information can be sent to the controller via BACNET.



Example of a room with 3 separate spaces (Room/Entrance/Bathroom) => 3 sensors 1 + a door contact 2

Why have time delays?

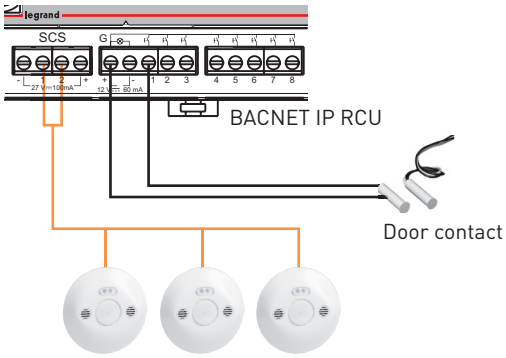
As yet, there is no such thing as a commercially-available presence sensor, only motion sensors are available.

People may stay still for a period of time, so a time delay has to be associated with the motion sensor to allow the system time to detect presence (given that people cannot stay immobile for long).

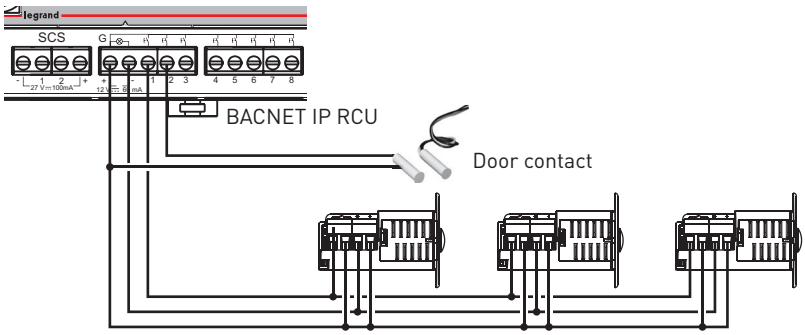
In the case of the Virtual keycard, a long time delay must be set to allow the system time to detect presence or not, if another person is still in the room after the door has been opened. It is also necessary to cover all areas of the room (all rooms...toilet/bathroom/entrance, etc), especially areas where the guest is likely to stay still (bed/desk/armchair, etc).

Wiring diagrams

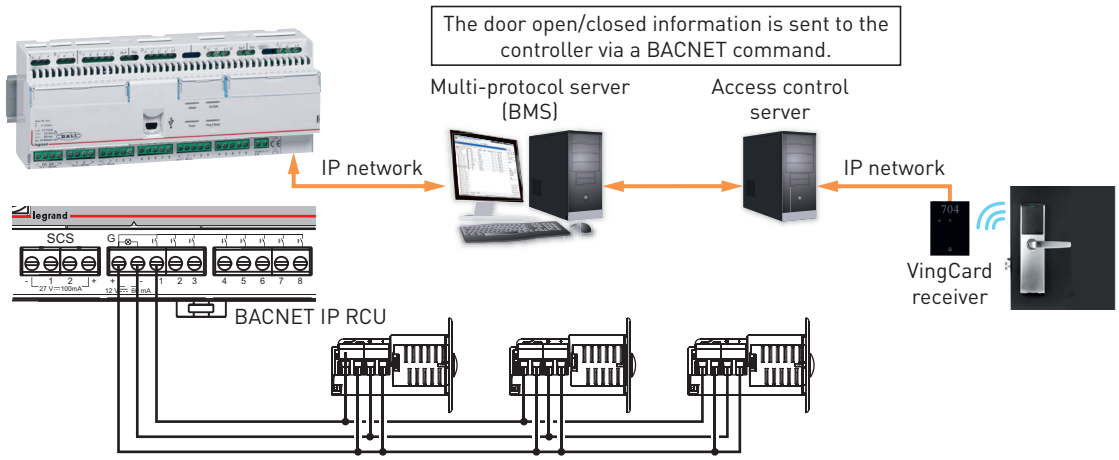
■ Wiring diagram with BUS sensor



■ Wiring diagram with volt-free contact sensor



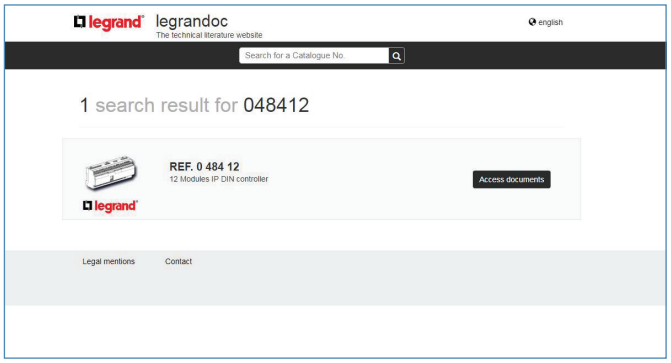
■ Wiring diagram with volt-free contact sensor + centralised access control



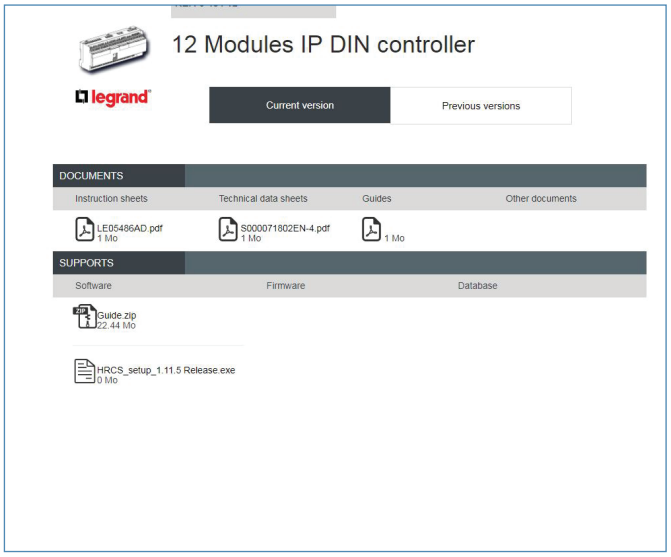
INSTALLING THE SOFTWARE

a. Download the HRC configuration software from www.legrandoc.com

Type in reference 0 484 12 or 0 484 08.



Go to “Access documents”.



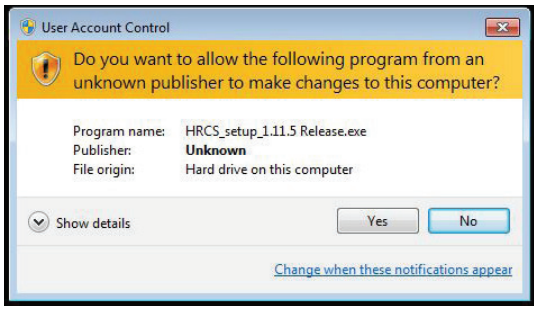
Download the HRCS_setup_x.xx Release.exe program.

To install and use the program, you must be logged on as administrator.
If something goes wrong during installation, check the anti-virus and firewall protection level.

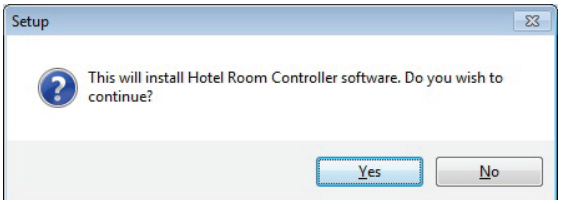
b. Install the software

Once the file has downloaded onto the computer, right-click on the program icon and select "Run as administrator".

Click Yes.

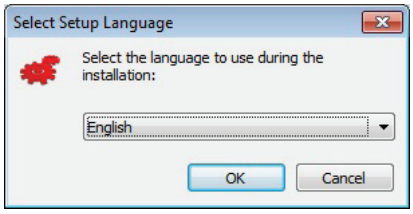


Click Yes.



b. Install the software (continued)

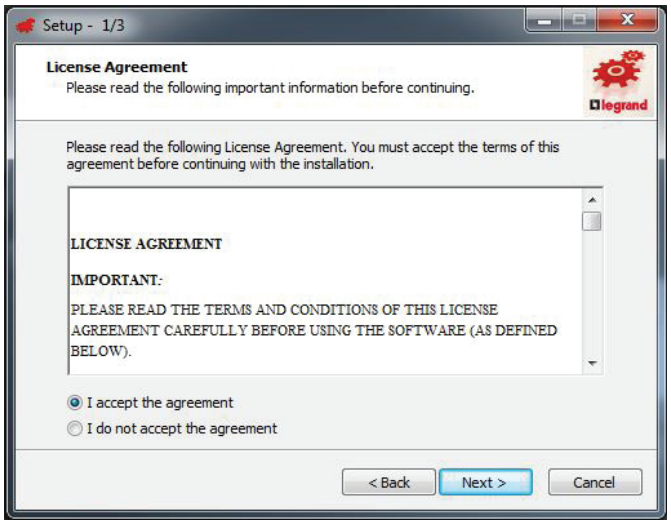
Choose the language.



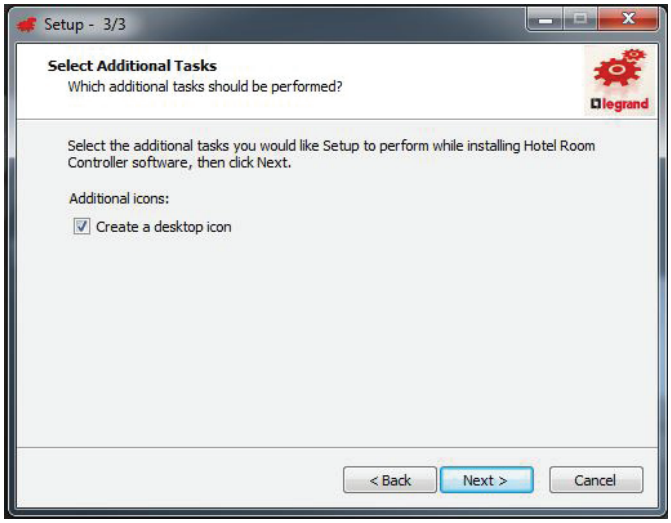
Click Next.

b. Install the software (continued)

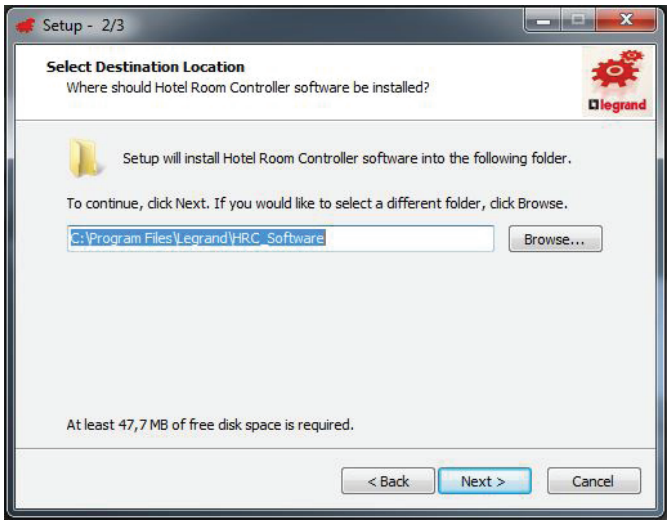
Accept the terms of the contract and click Next.



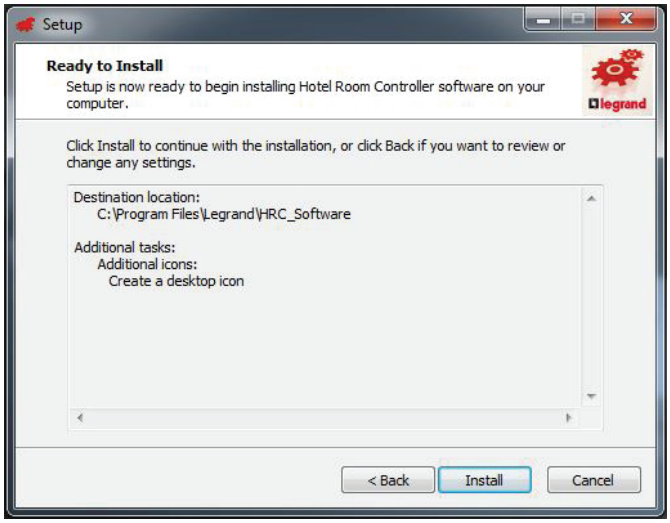
Choose whether to create an icon on the desktop and click Next.



Select the destination folder and click Next.



And start installation by clicking Install.



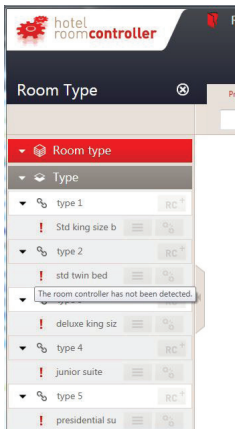
We recommend that OFFline programming is done in the office.
It is advisable to check the cabling and programming on one room first before duplicating across the whole site.

PROGRAMMING ROOM TYPES

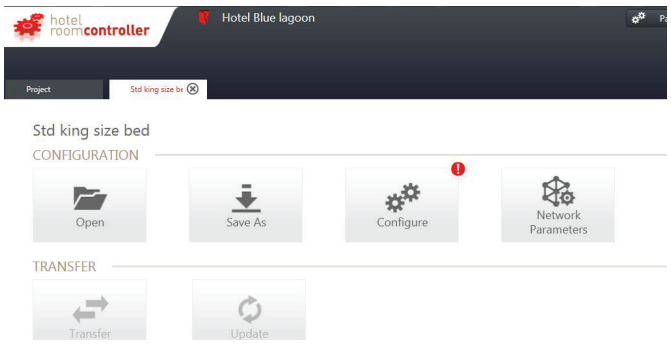
1. Creating each room type

Open a new project.

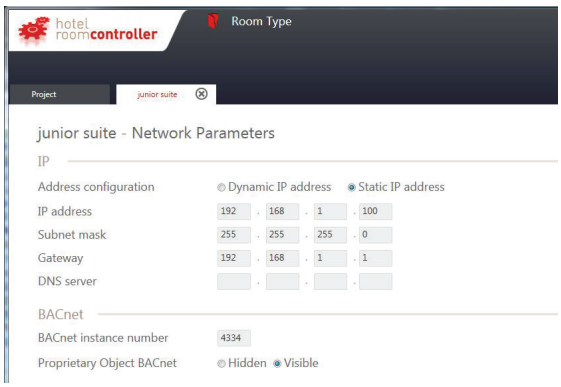
b. Create a tree structure containing one of each room type.



c. Go into a room type and configure it.



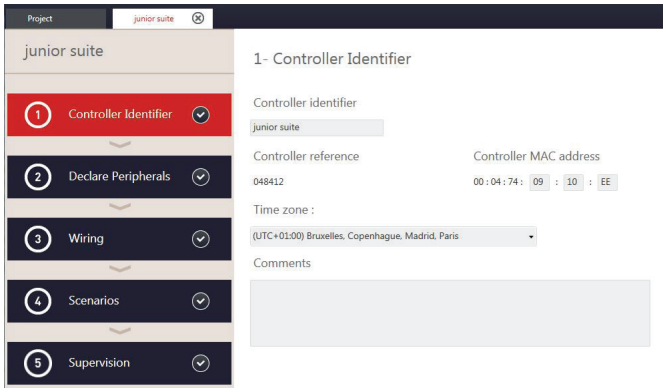
d. Go to "Network parameters" and enter the information as per the hotel construction progress follow-up file.



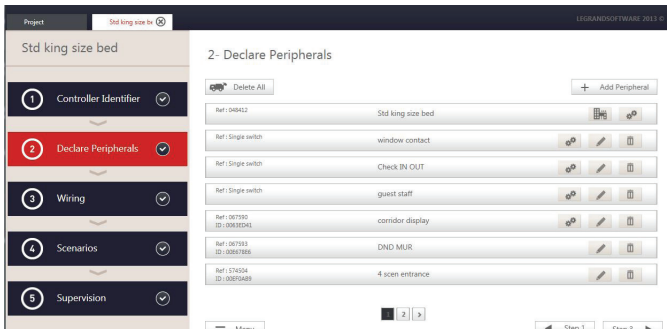
If the data has not yet been received, enter a fixed IP with a local address (192.168.1.xx/255.255.255.0) then return to the modules screen by clicking Ok.

e. Go to "Configure".

f. Step 1: Enter the MAC address as per the "Hotel construction progress follow-up" file. It is possible to name the controller, choose the time zone and record any comments if necessary.
Then go to step 2.



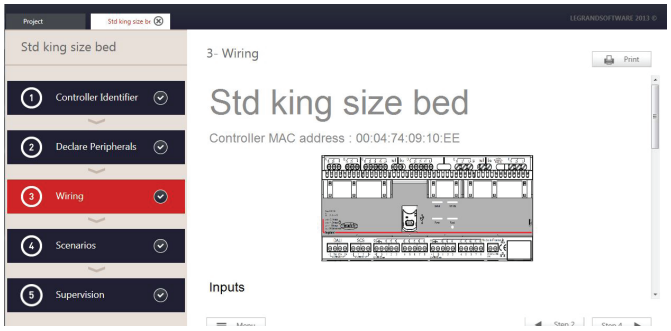
g. Step 2: Add the controller peripherals (additional actuators/ dimmers, BUS and mechanical controls including door/ window contacts, as well as hotel functions such as the virtual keycard function, time scenario, "check in"/"check out" scenario and external scenarios).



For more information, please refer to the "Presentation of the configuration software" section.

Go to step 3.

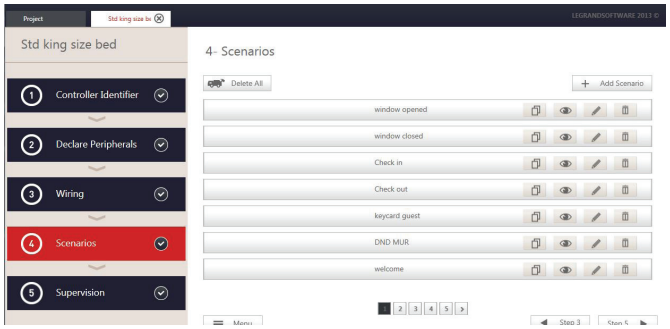
h. Step 3: Opportunity to check the list of added peripherals.



For more information, please refer to the "Presentation of the configuration software" section.

Go to step 4.

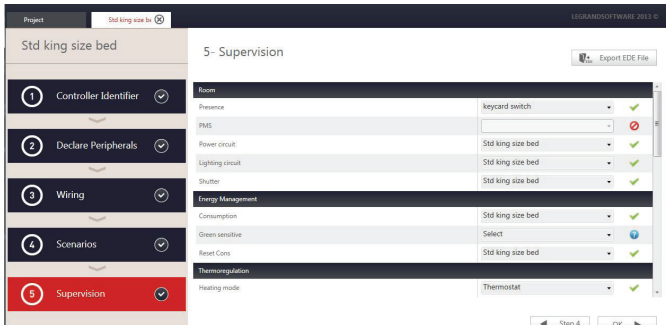
i. Step 4: Create the scenarios.



For more information, please refer to the "Presentation of the configuration software" section.

Go to step 5.

j. Step 5: If linked to a supervisor/BMS, this step can be used to associate the room hotel functions with the BACnet objects.



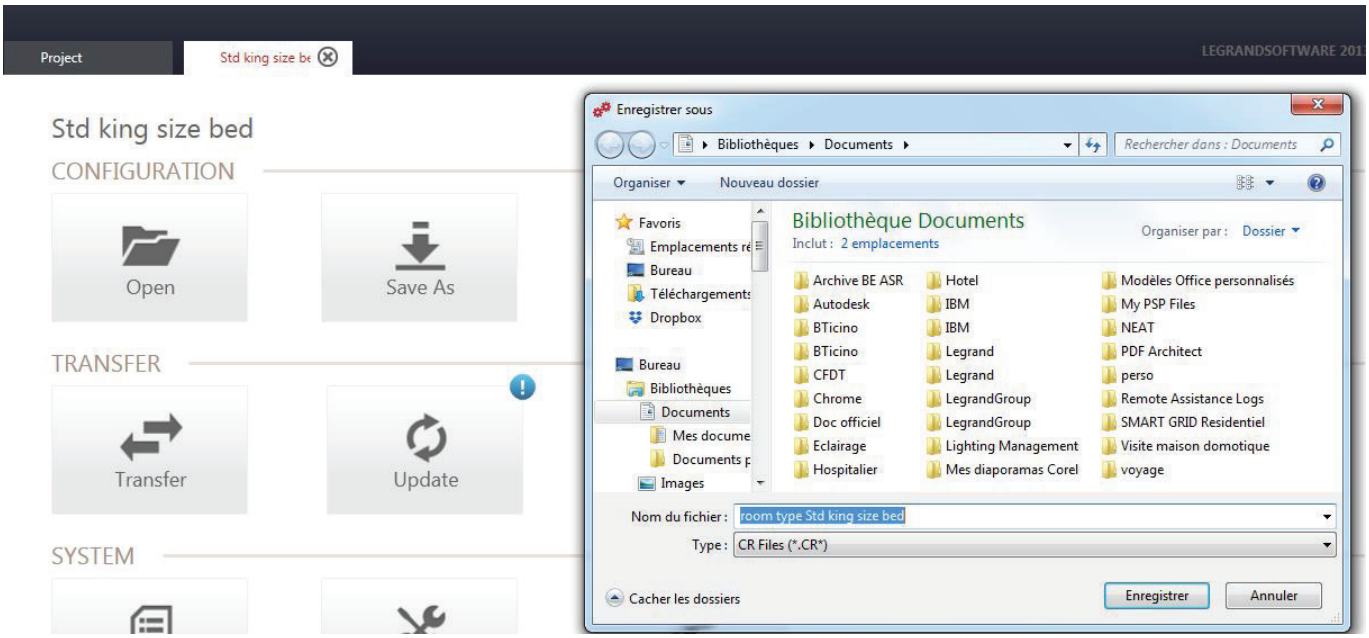
For more information, please refer to the "Presentation of the configuration software" section.

Return to the modules screen by clicking Ok.

PROGRAMMING ROOM TYPES (CONTINUED)

1. Creating each room type (continued)

k. Save the room type configuration with the name "room type.cr".



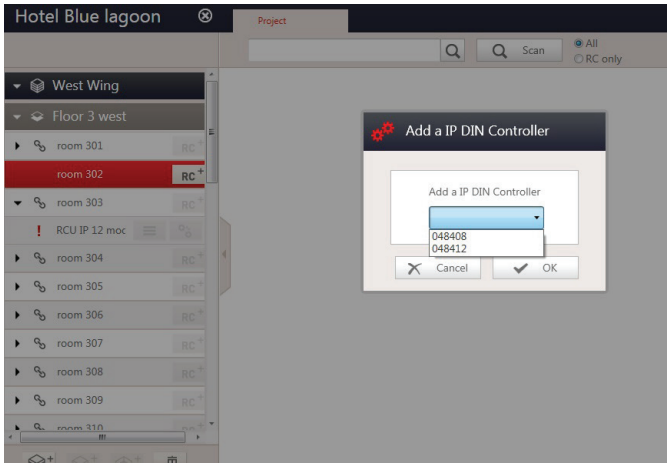
l. Repeat the operation for all the room types.

PROGRAMMING THE HOTEL PROJECT

2. Creating the hotel project

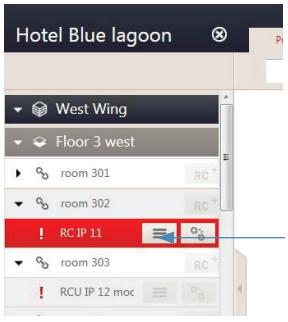
a. Create a new hotel project.

b. Create the hotel architecture as per the "Hotel construction progress follow-up" file.



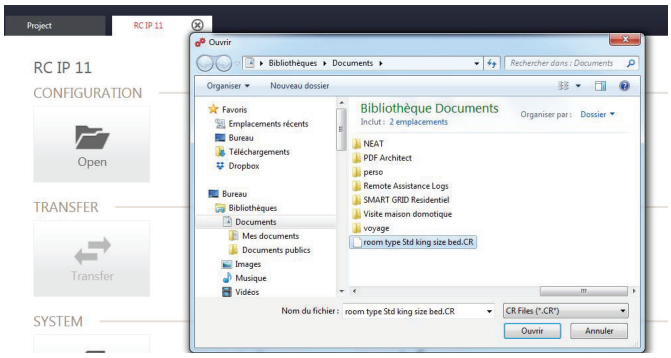
Then add one IP controller per room.

c. Go to the room to be configured.

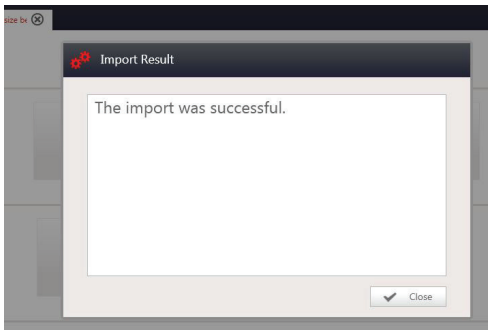


Click on

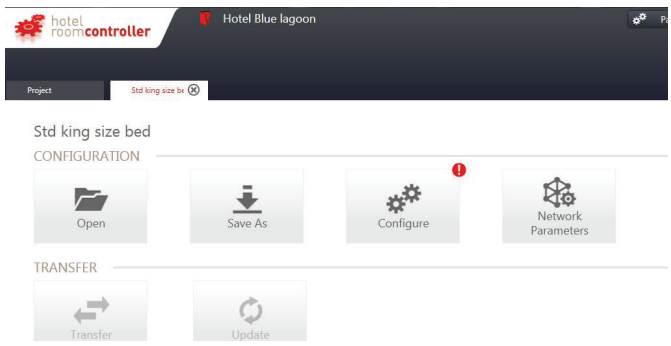
d. Open the configuration corresponding to the room type for that room.



A message appears, stating that the import was successful.



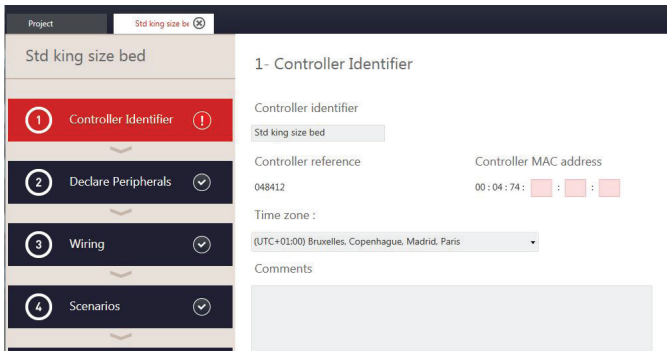
e. Go to "Configure".



PROGRAMMING THE HOTEL PROJECT (CONTINUED)

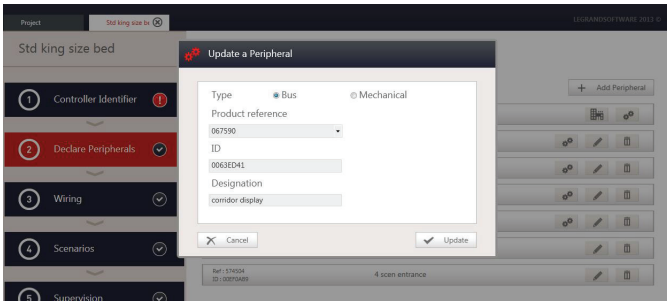
2. Creating the hotel project (continued)

f. Update the MAC address as per the "Hotel construction progress follow-up" file.



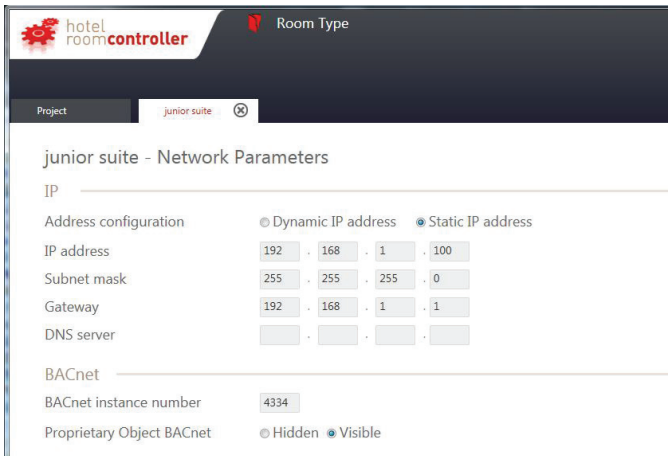
Go to step 2.

g. Update all the ID numbers of the BUS peripherals.



Click on the pencil and change the ID as per the "Hotel construction progress follow-up" file.
Repeat the operation for all the BUS peripherals.

h. Go to "Network parameters" and update the IP address as per the "Hotel construction progress follow-up" file.



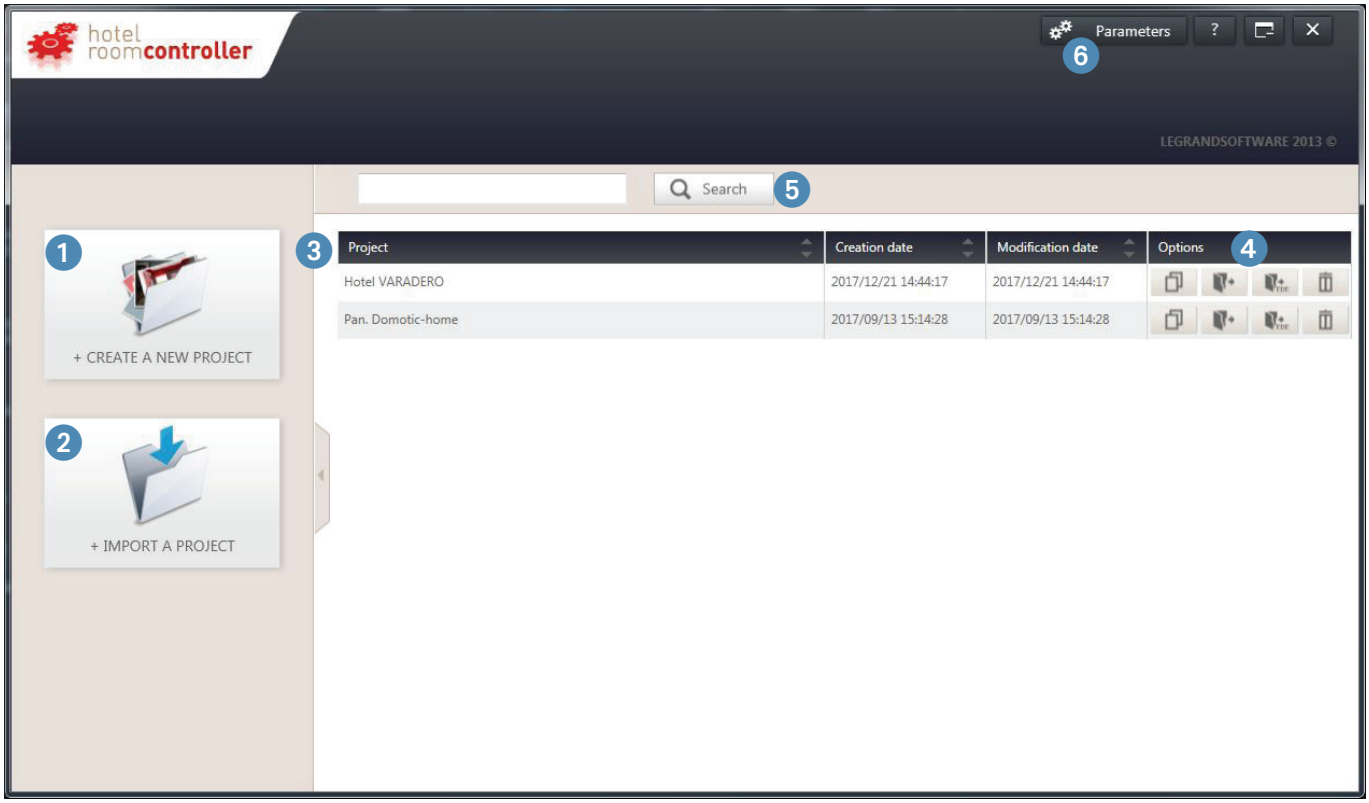
i. Repeat the operation for every room.

PRESENTATION OF THE CONFIGURATION SOFTWARE

Launch the **Hotel Room Controller Software**.

- ONline function: function which only works when the software is connected to the controller.
- OFFline function: works without a connection.

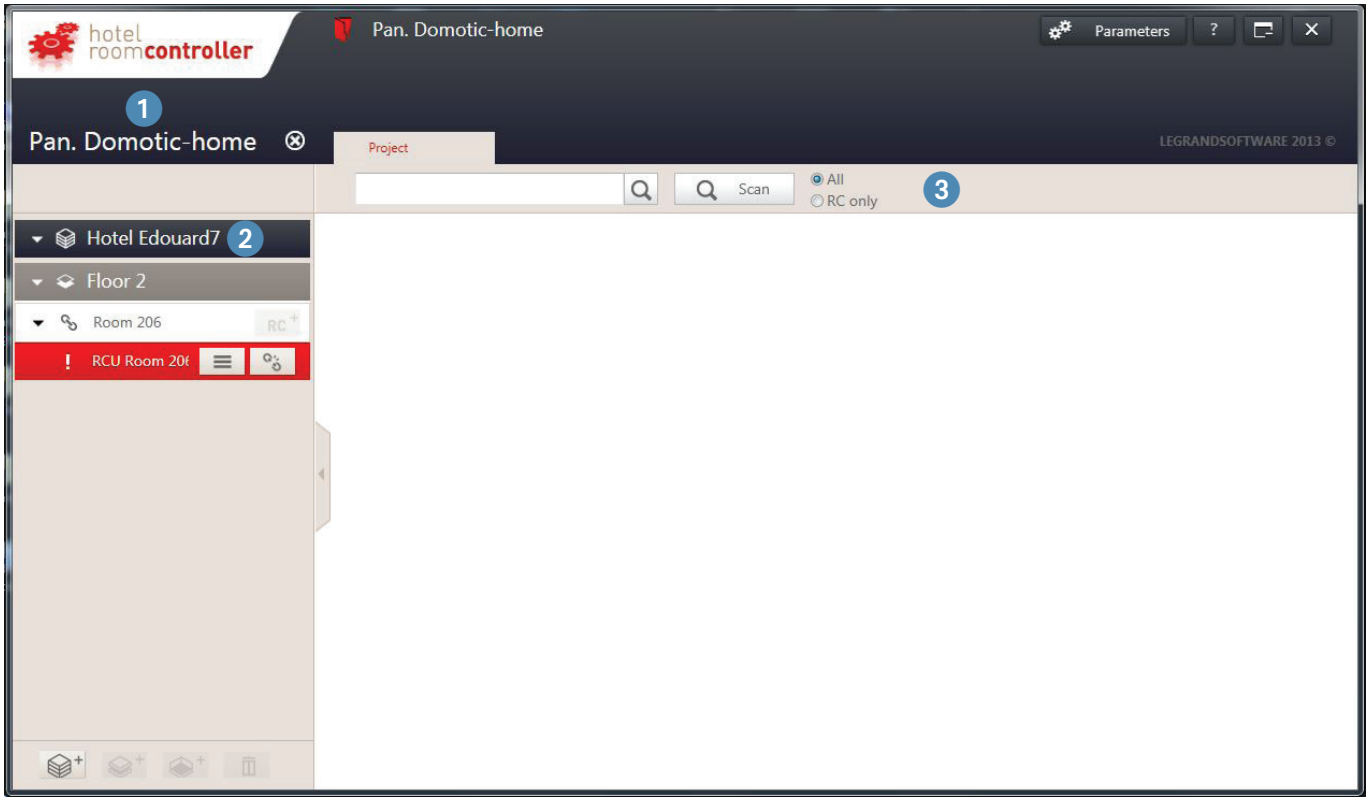
WELCOME SCREEN



1. **New Project button**: creates a new hotel project.
2. **Import a Project button**: used to import an existing hotel project.
3. **Overview screen**: lists all previously-handled hotel projects.
4. **Project options**: a set of project options: copying/saving/exporting in EDE format*/deleting.
5. **Search field**: this field is used to filter projects by searching on the Project name.
6. **Parameters**: application parameters used to change the language and the network connection interface (network card).

* EDE format: file format containing the project BACNET objects.

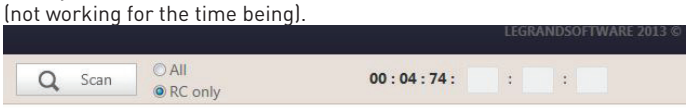
PROJECT SCREEN



1 **Project name**: double-click on this to change the project name.

2 **Project tree**: displays the list of buildings/floors/rooms in the project. Double-click on the building/zone/room name to change it.

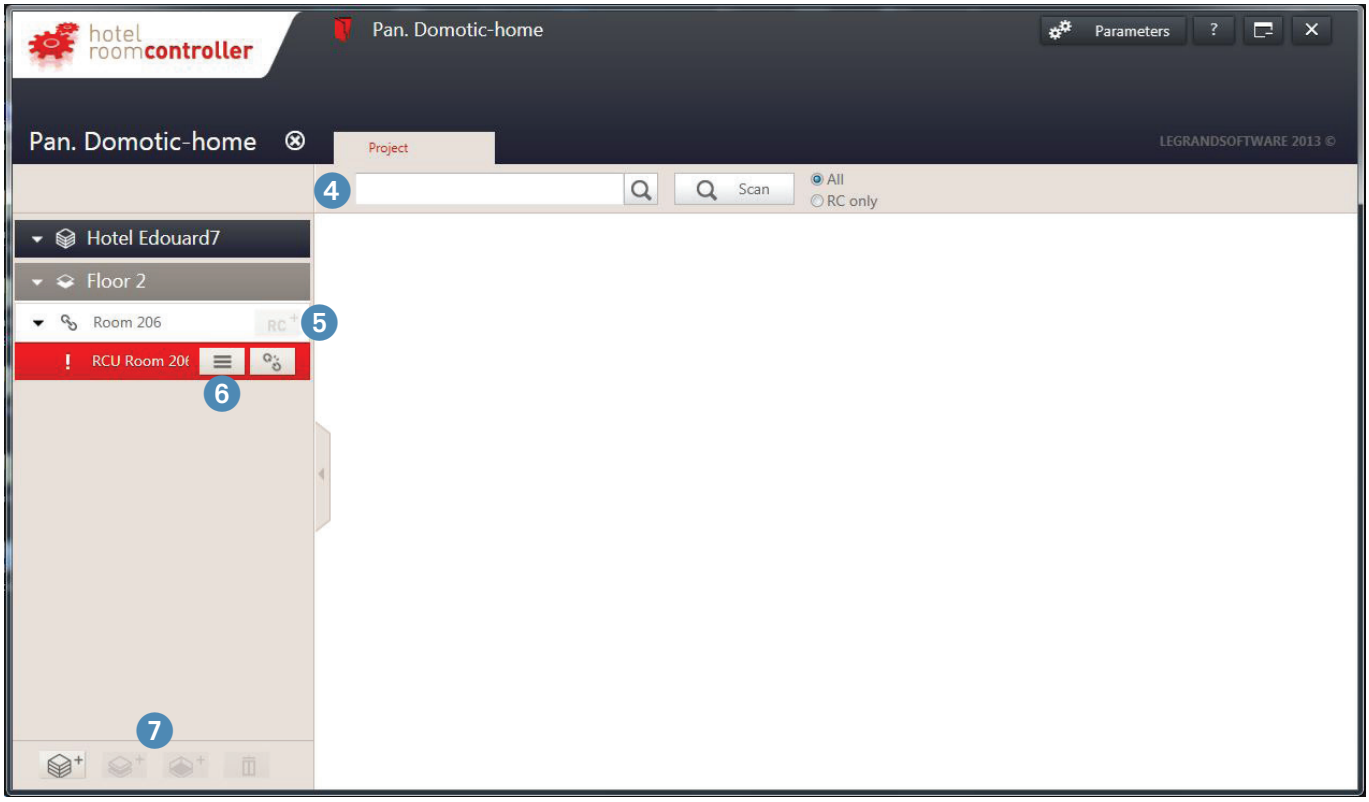
3 **Scan button (ONline function)**: *All*: used to scan the network to detect any connected controllers.
RC only: used to scan for a dedicated controller via its MAC address (not working for the time being).



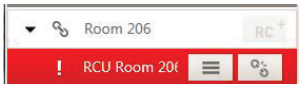
Scan result:

Index	RC	IP	MAC ADDRESS	Instance	Reference	Version	Link	Menu
1	RC IP 1	169.254.254.169	00:04:74:09:10:EE	4334	048412	0.4.10		

PROJECT SCREEN (CONTINUED)



4 Search field: if several controllers are detected on the network, this field is used to filter the results by searching on the controller name. The controller can then be dragged into the desired room (ONline function):



- The controller name appears in the room tree structure
- The room name appears in the scan link column.

or a controller can be added manually (see 5).

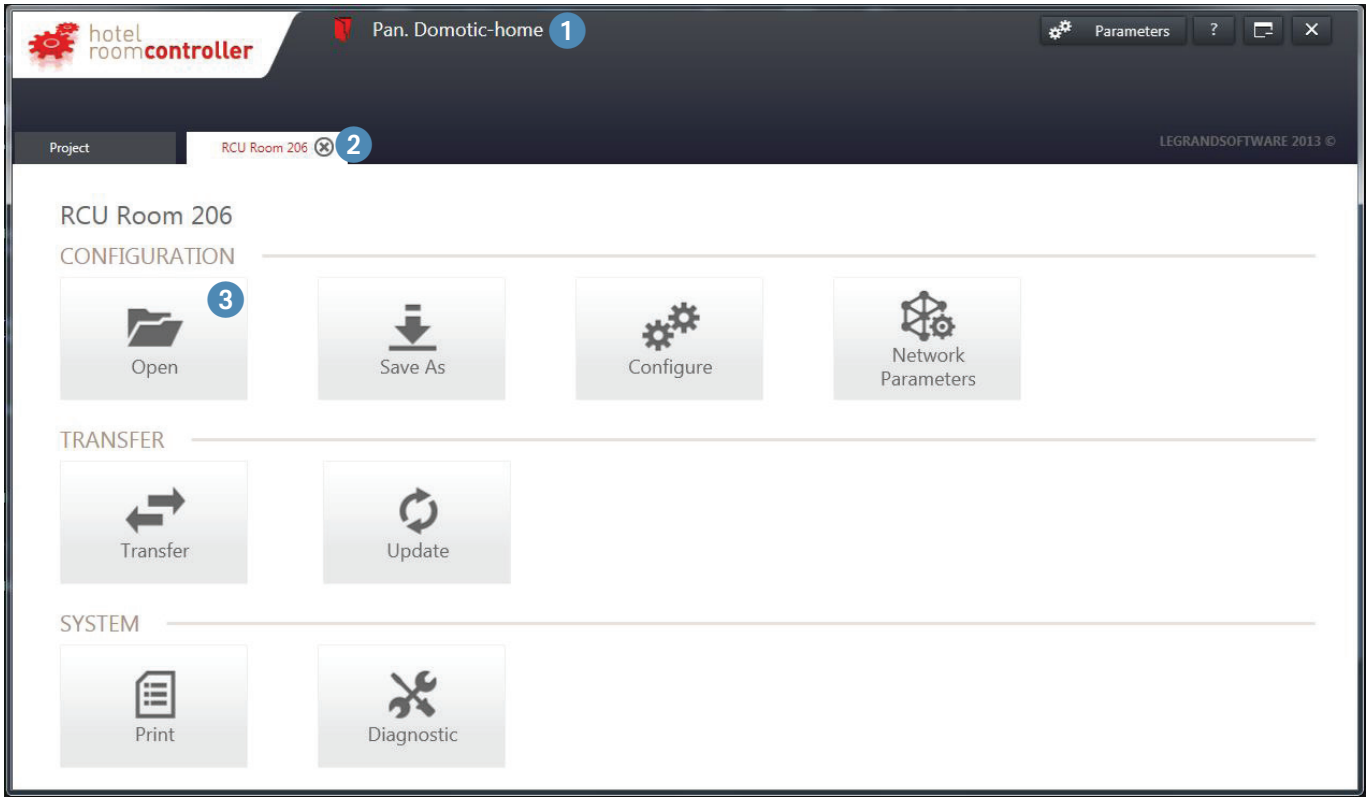
5 Add a controller: RC+ used to add a controller manually (OFFline function).

6 Controller action buttons:

- Configuration button : used to access the controller configuration interface.
- Detach button : used to detach a controller from a room.

7 Add/Delete buttons: this set of buttons can be used to add or delete a building, floor, or room in the project.

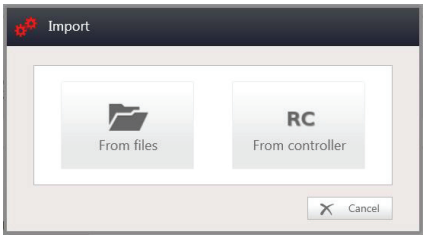
MODULES SCREEN



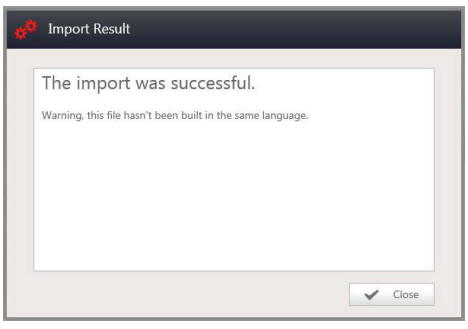
1 **Project name**: the name can be changed in the project screen (previous screen).

2 **Controller name**: the name can be changed in the "configure" module (5).

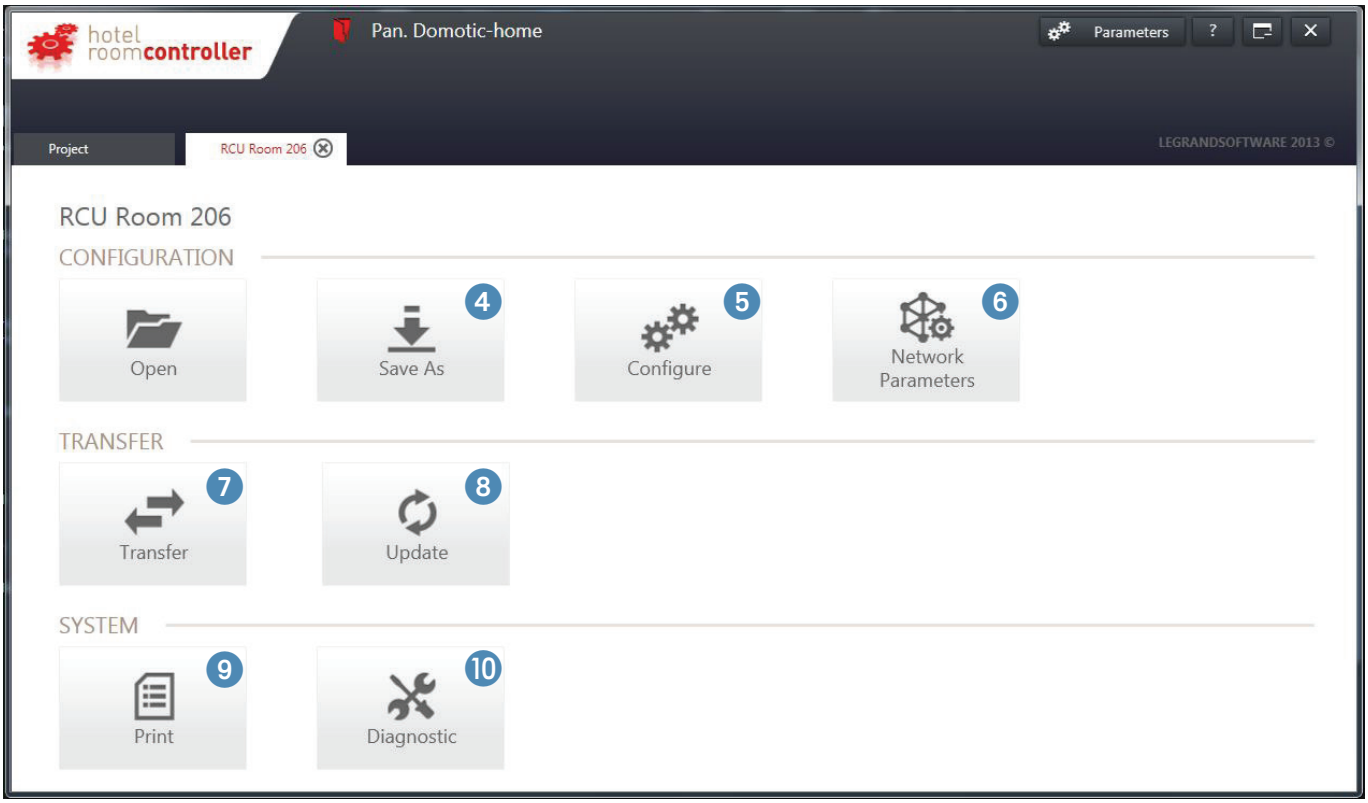
3 **Open**: used to load an existing controller configuration file (.CR extension).
ONline function: When the controller has been added to the room after a scan, it is possible either to load an existing controller configuration file (.CR extension), or to load the existing configuration into a controller (when importing a configuration, the software will automatically delete the controller MAC address in order to prevent username conflicts).



Transfer confirmation message:



CONFIGURATOR

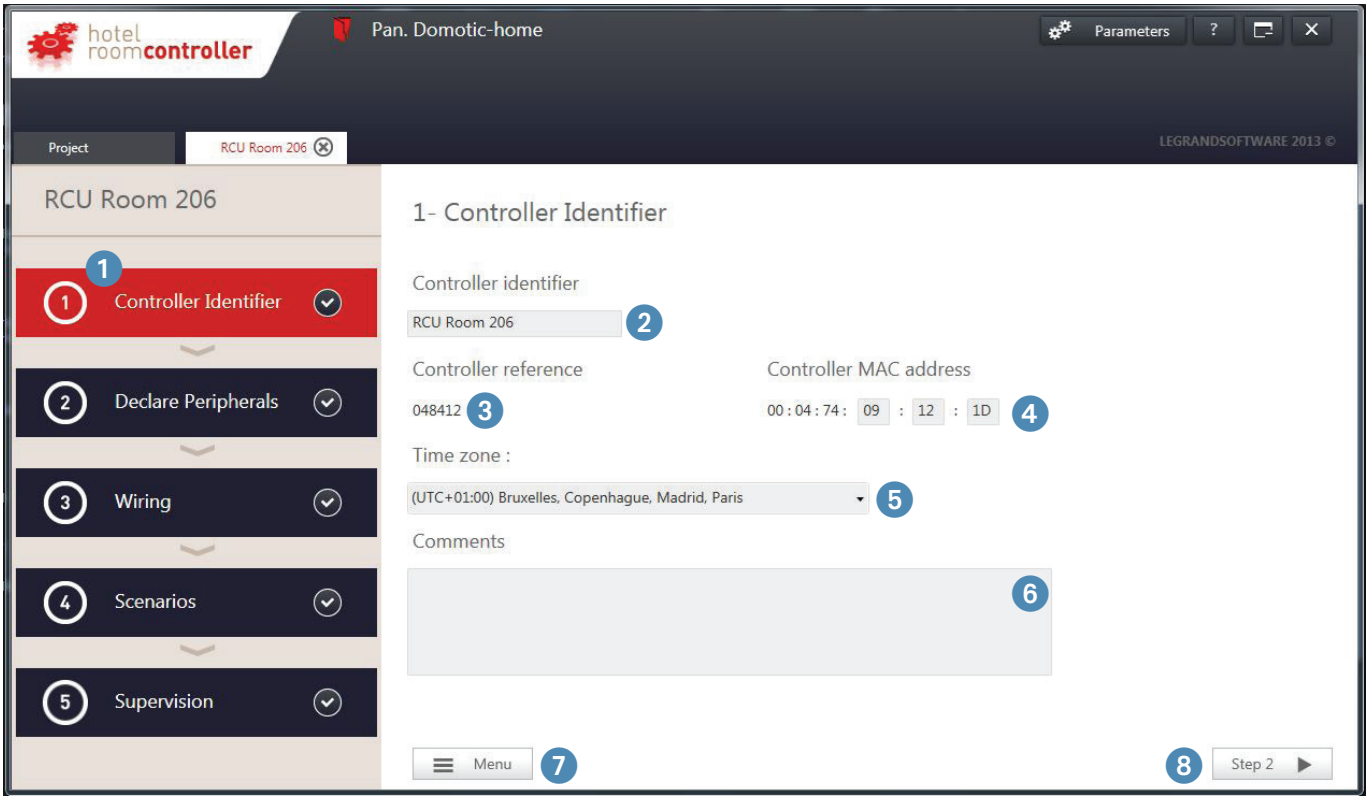


4 **Save As**: used to save the controller configuration (.CR extension).
5 **Configure**: used to configure the room management system (Legrand product).
6 **Network Parameters**: used to configure the controller network parameters.
7 **Transfer**: used to transfer the configuration to the controller and its accessories.
8 **Update**: used to update the controller when new firmware is available.
9 **Print**: used to print or export the controller configuration in pdf format.
10 **Diagnostic**: used to check the wiring and test that the room is working (ONLINE function).

Click Configure 

Configuration consists of 5 steps.

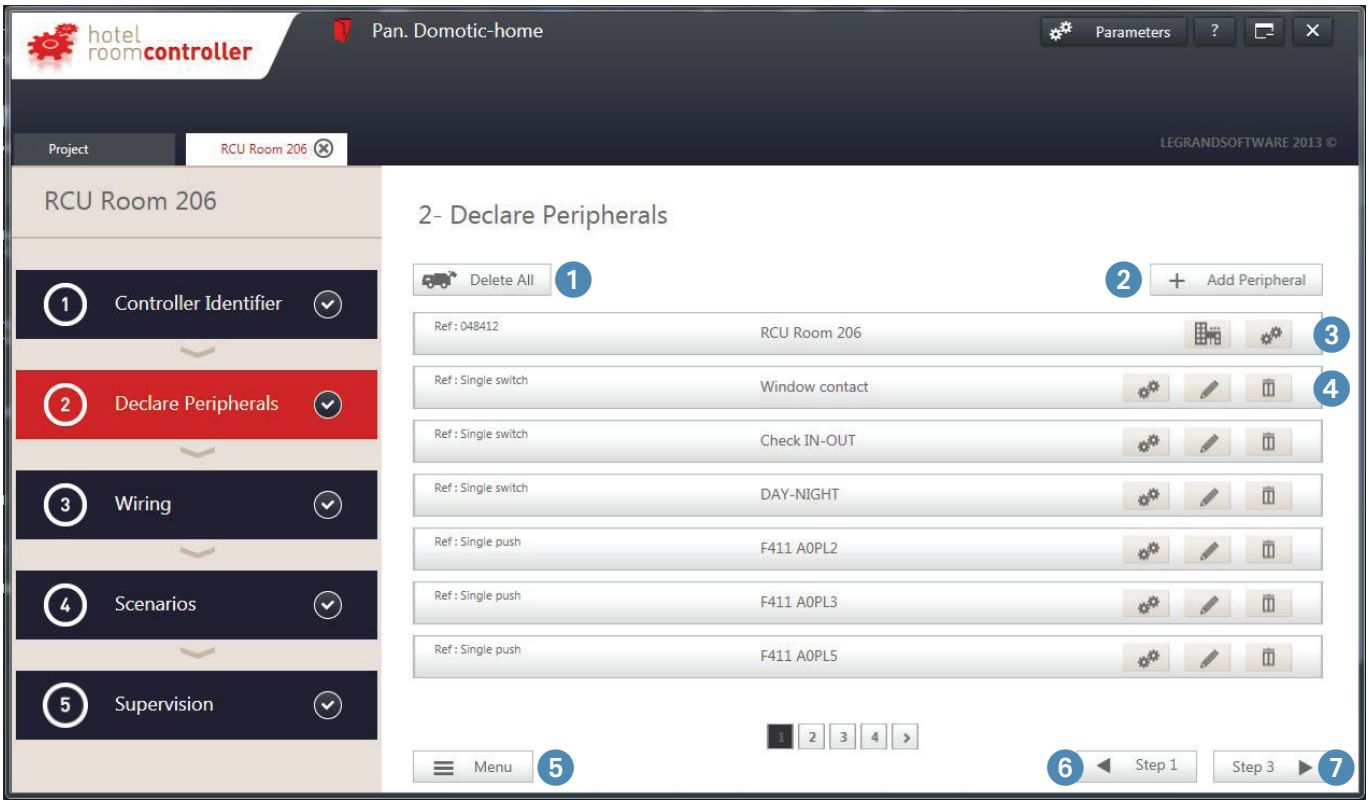
■ Step **1**: Identify the controller.



1 **Sequence of 5 steps**.
2 **Controller identifier**: used to name the controller (room identifier). Special characters are not permitted.
3 **Controller reference**: controller model used.
4 **Controller MAC address**: the address is unique and recorded on the controller label in the format 00:04:74:XX:XX:XX.
If the address format is incorrect, the field will appear in red.
5 **Time zone**: used to set the project time zone for scenarios involving time.
6 **Comments**: used to leave a comment about the controller and the room environment.
7 **Menu**: return to the modules screen.
8 **Step 2**: go to the next step (Declare Peripherals).

CONFIGURATOR (CONTINUED)

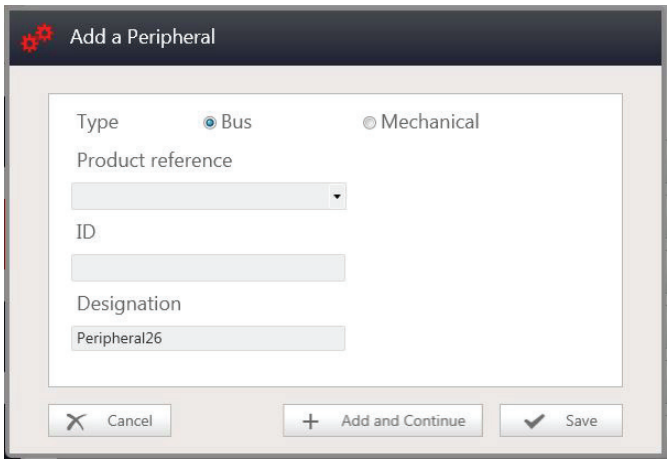
■ Step **2**: Declare Peripherals

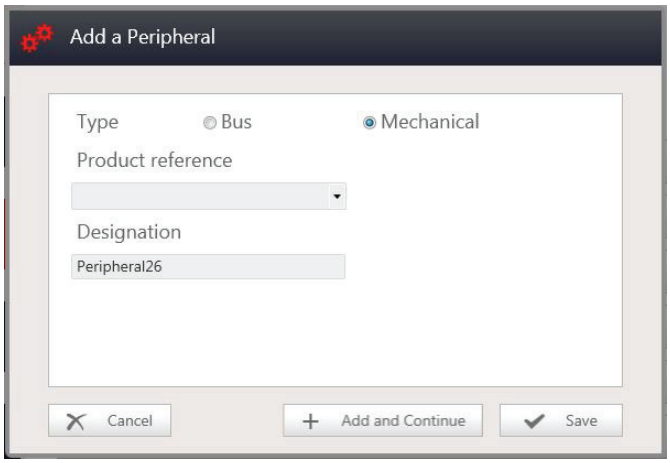


1. **Delete All**: used to delete all the peripherals. Does not delete the controller.
2. **Add Peripheral**: used to add a peripheral connected to the controller (bus or mechanical peripheral).
3. **Controller**: used to access the controller output configuration and special functions.
4. **List of peripherals connected to the controller**: used to access the peripheral configuration (bus) or configure the controller input to which the peripheral is connected (mechanical peripheral).
5. **Menu**: return to the modules screen.
6. **Step 1**: return to the previous step (Controller Identifier).
7. **Step 3**: go to the next step (Wiring).

Step 2: Declare Peripherals (continued)

Add a Peripheral 2





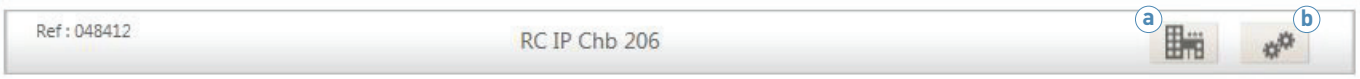
Bus: choose the reference from the dropdown menu, add its ID number (found on the product label – an 8-character string in hexadecimal format – it is unique and the field will appear in red until the correct format has been entered), and choose its designation.

Mechanical peripheral: choose the type of control from the dropdown menu and choose its designation.

There are 2 possible options:

- Add and Continue: used to save the peripheral and opens the window for adding another peripheral.
- Save and close: used to save the peripheral and closes the window.

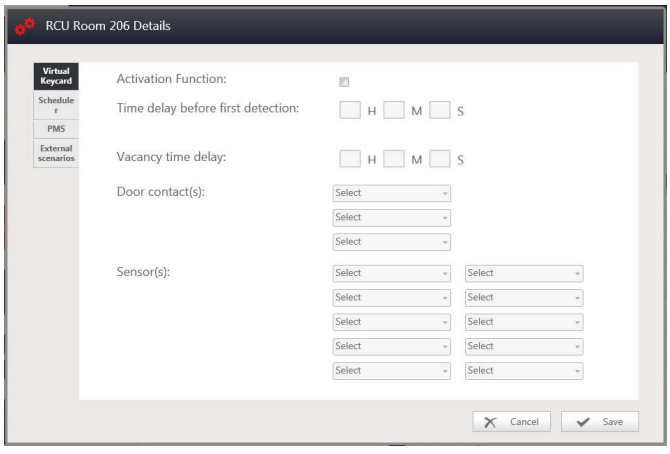
Configure the outputs and hotel application 3



Hotel application configuration (a)

Function: the virtual keycard is an application for determining whether or not someone is in the room, based on an algorithm which uses data such as door opening and detection of movement.

- Set waiting times before first detection.
- Set the waiting time after last detection.
- Choose door contacts (can be data provided by another system in BACNET format).
- Choose sensors (bus or volt-free contact sensor).



CONFIGURATOR (CONTINUED)

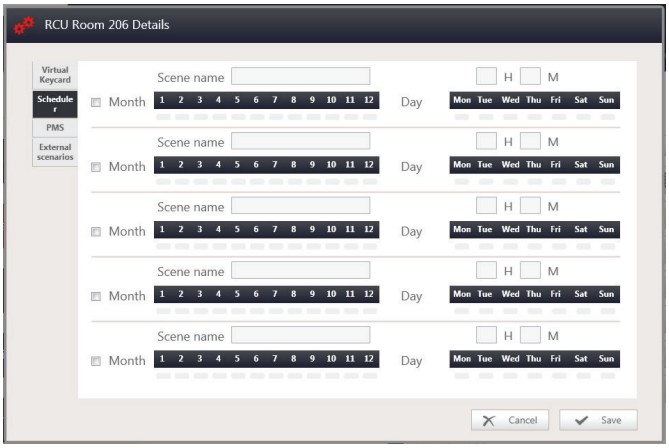
■ Step **2**: Declare Peripherals (continued)

Configure the outputs and hotel application 3 (continued)

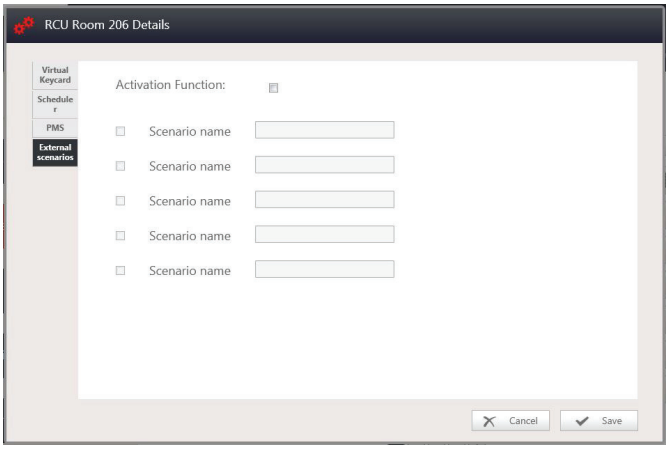
Hotel application configuration a (continued)

Scheduler function: used to launch scenarios triggered at a particular time.

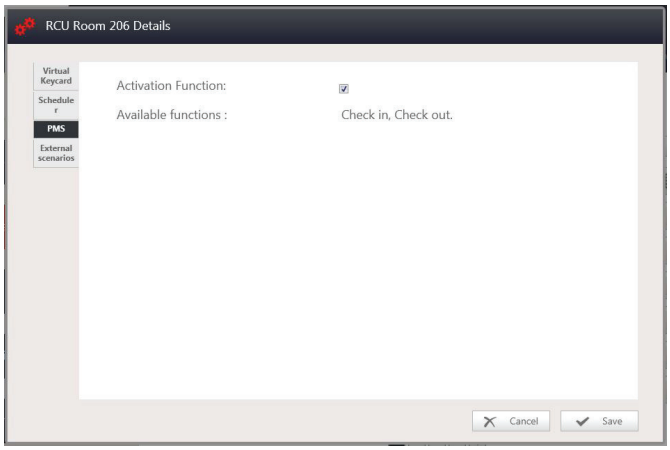
- Enter the scenario designation.
- Enter time/day/month when the scenario needs to be launched.



External scenarios function: used to launch scenarios from an external peripheral via the BACNET protocol (supervisor/gateway type, etc).



PMS function: used to obtain room reserved/free information from the reservation software (PMS) (such as Fidelio Opera, etc).

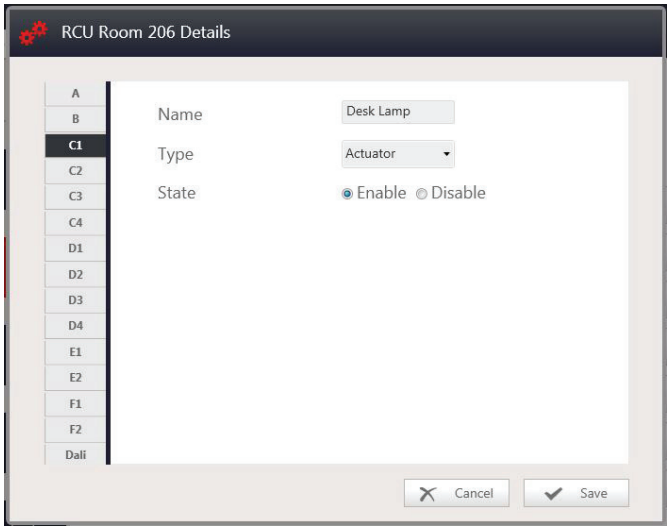


Step 2: Declare Peripherals (continued)

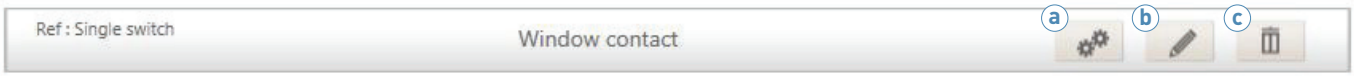
Configure the outputs and hotel application 3 (continued)

Controller output configuration (b)

- Each controller output can be given a name
- Used to define the output type
- The output can be enabled/disabled



Configure peripherals 4



(a) **Configure peripheral**: depends on each peripheral. See next section.
(b) **Update peripheral**: change the bus reference or controller input.
(c) **Delete the peripheral**.

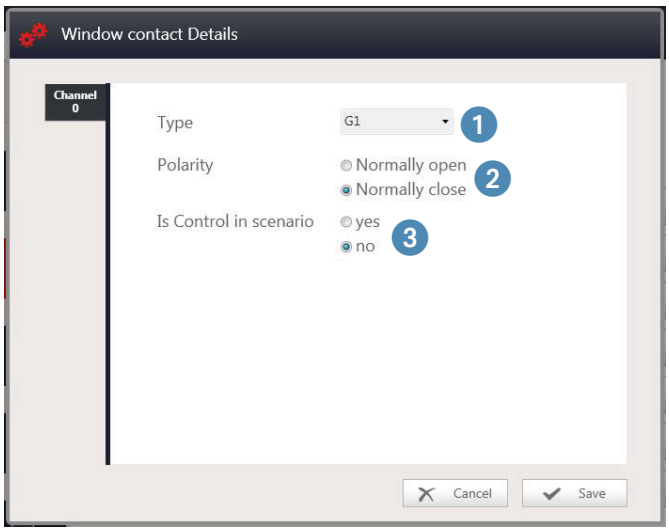
CONFIGURATOR (CONTINUED)

■ Step **2**: Declare Peripherals (continued)

Configuring the peripheral according to type

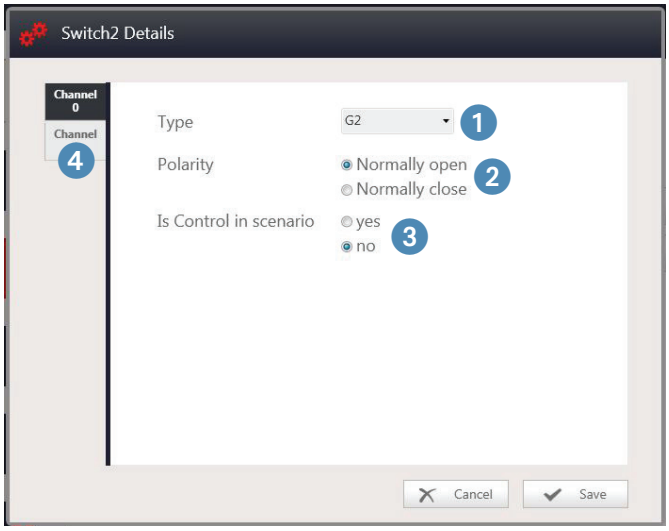
Mechanical peripheral

• Single switch/single pushbutton



1. Select controller contact input.
2. Select contact type.
3. Used to add the control to a scenario in order to be able to enable/disable it.

• Double switch/double pushbutton



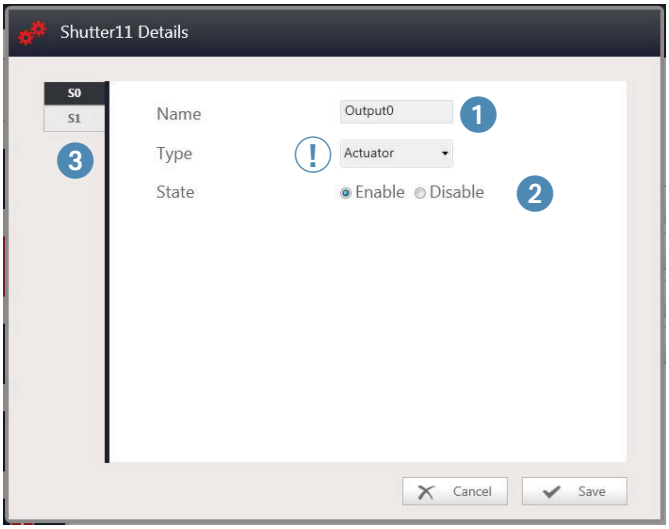
1. Select controller contact input.
2. Select contact type.
3. Used to add the control to a scenario in order to be able to enable/disable it.
4. Similar window for each of the 2 channels.

■ Step **2**: Declare Peripherals (continued)

Configuring the peripheral according to type (continued)

Bus

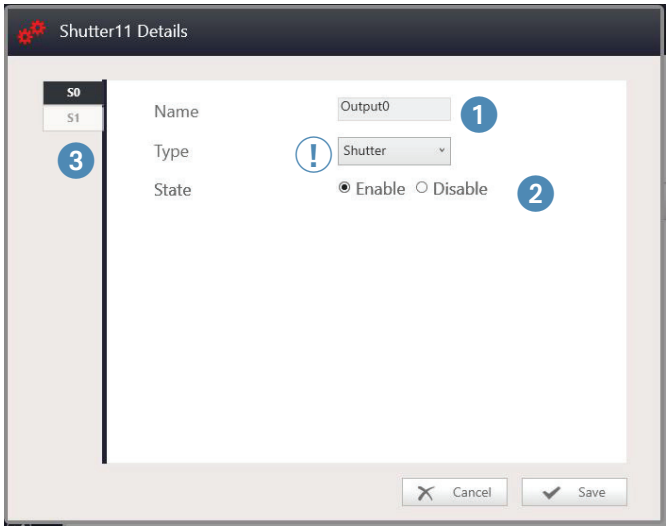
• Actuator with 2 ON/OFF outputs or 1 shutter output (F411U2).



Actuator mode (!)

1. Give the output a name.
2. Enable/disable the state.
3. Similar window for each of the 2 channels.

• Actuator with 2 ON/OFF outputs or 1 shutter output (F411U2).



Roller shutter mode (!)

1. Give the output a name.
2. Enable/disable the state.
3. The 2nd channel is greyed-out (inaccessible).

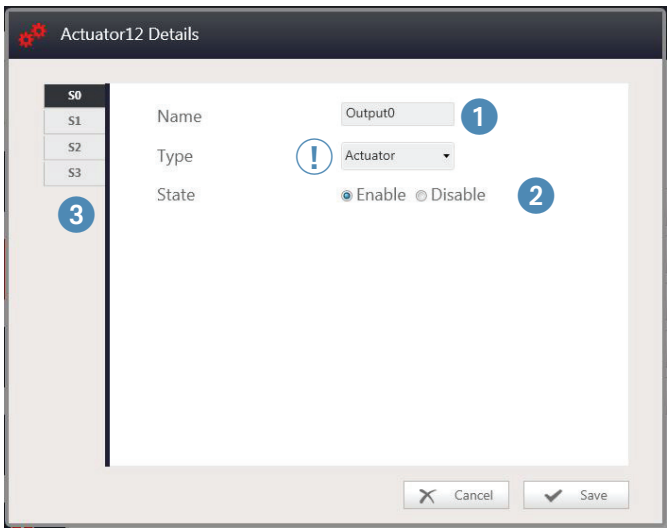
CONFIGURATOR (CONTINUED)

■ Step **2**: Declare Peripherals (continued)

Configuring the peripheral according to type (continued)

Bus (continued)

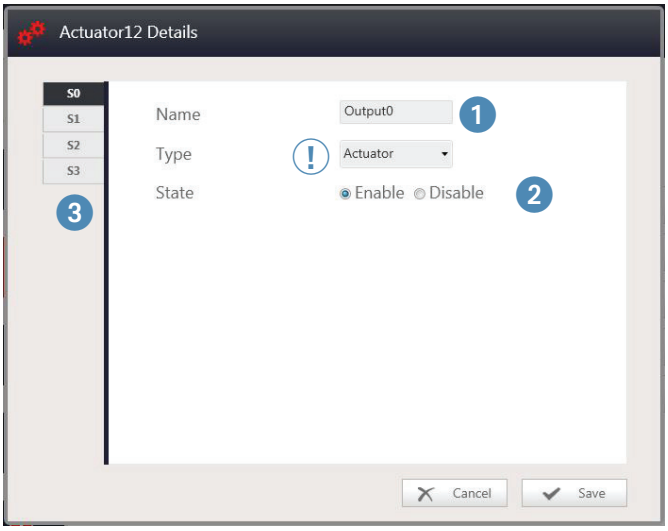
• ON/OFF actuator with 4 outputs (0 026 02, BMSW1003, F411/4).



Actuator mode (!)

1. Give the output a name.
2. Enable/disable the state.
3. Similar window for each of the 4 channels.

• Roller shutter actuator with 2 outputs (F411/4).



Roller shutter mode (!)

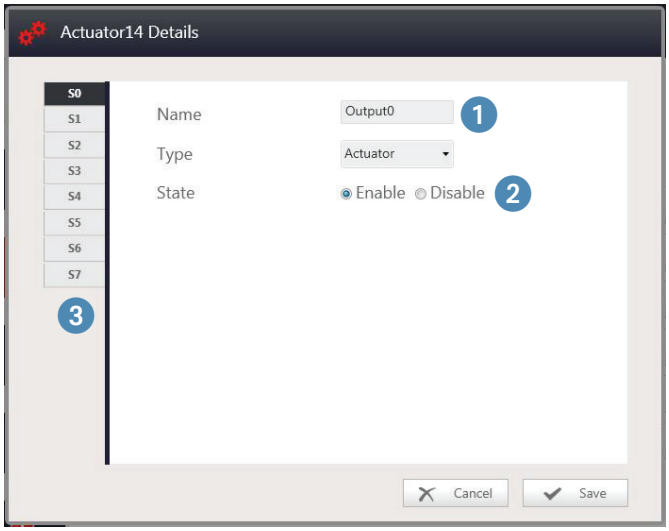
1. Give the output a name.
2. Enable/disable the state.
3. S1 and S3 are greyed-out (inaccessible).

■ Step **2**: Declare Peripherals (continued)

Configuring the peripheral according to type (continued)

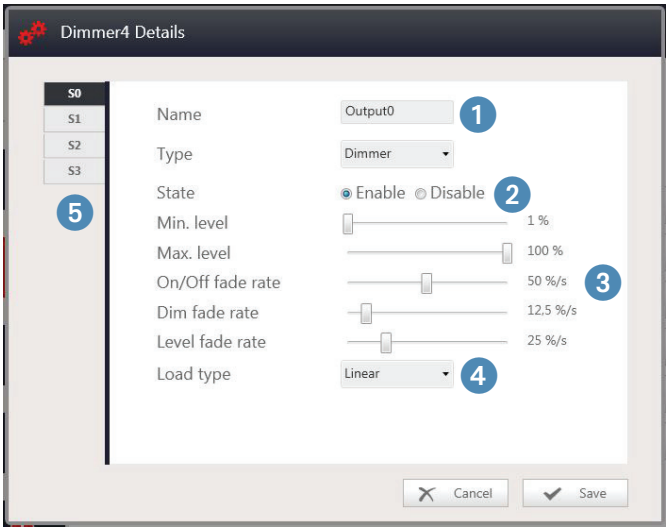
Bus

• ON/OFF actuator with 8 outputs (0 026 04, BMSW1005).



1. Give the output a name.
2. Enable/disable the state.
3. Similar window for each of the 8 channels.

• 0-10 V dimmer with 4 outputs (0 026 12, BMDI1002).



1. Give each output a name.
2. Enable/disable the status memory after a mains failure.
3. Dimming parameters:
   - On/Off fade rate: how quickly the light comes ON
   - Dim fade rate: manual dimming speed
   - Level fade rate: how quickly the light reaches a set level (scenario)
4. Load type: set the 0-10 V dimmer to linear mode.
5. Similar window for each of the 4 channels.

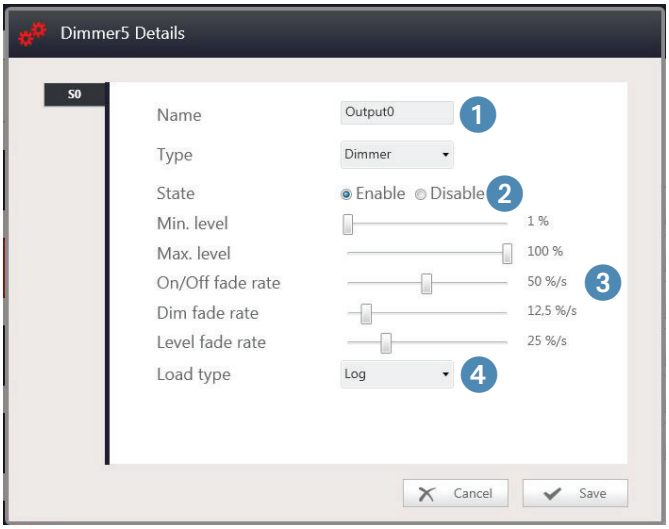
CONFIGURATOR (CONTINUED)

■ Step **2**: Declare Peripherals (continued)

Configuring the peripheral according to type (continued)

Bus (continued)

• Dimmer for all loads, 0-10 V dimmer with 1 output (F413N), F416U1, F418U2 - 1 output.



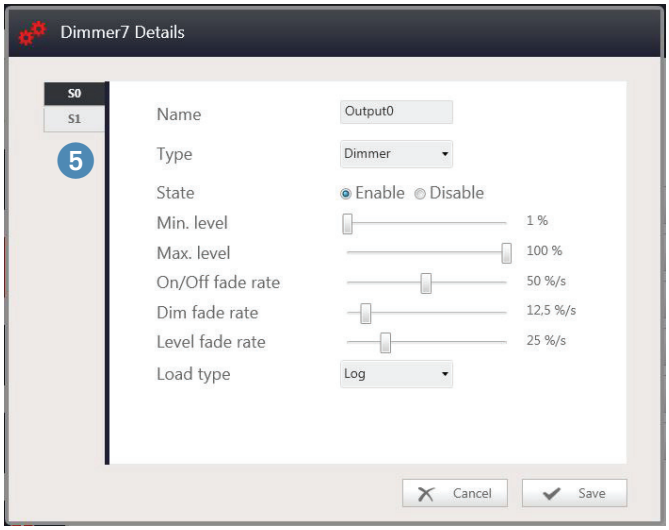
1 Give each output a name.

2 Enable/disable the status memory after a mains failure.

3 Dimming parameters:
- On/Off fade rate: how quickly the light comes ON
- Dim fade rate: manual dimming speed
- Level fade rate: how quickly the light reaches a set level (scenario)

4 Load type: set the dimmer for all loads to log mode.

• Dimmer for all loads, (F418U2 - 2 outputs).



1 to 4: see above window

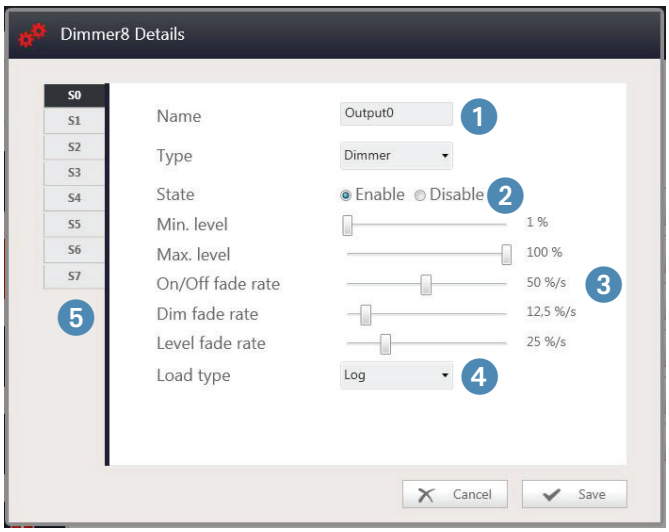
5 For dimmer with 2 outputs, similar window for each of the 2 channels

■ Step **2**: Declare Peripherals (continued)

Configuring the peripheral according to type (continued)

Bus (continued)

• DALI dimmer with 8 outputs (0 026 33, BMDI1100).



1. Give each output a name.
2. Enable/disable the status memory after a mains failure.
3. Dimming parameters:
   - On/Off fade rate: how quickly the light comes ON
   - Dim fade rate: manual dimming speed
   - Level fade rate: how quickly the light reaches a set level (scenario)
4. Load type: set the DALI dimmer to log mode.
5. Similar window for each of the 8 channels.

• HVAC actuator (F430V10, F430R3V10, F430/2, F430/4, F430R8)
HVAC (heating, air conditioning, ventilation control) actuators do not have a configuration page. Settings are entered in the thermostat configuration page.

• Contact interface (3477, F428)
Volt-free contact interfaces do not have a configuration page, the type of connected peripheral should be chosen according to the control's design: single pushbutton/double pushbutton/single switch/double switch.

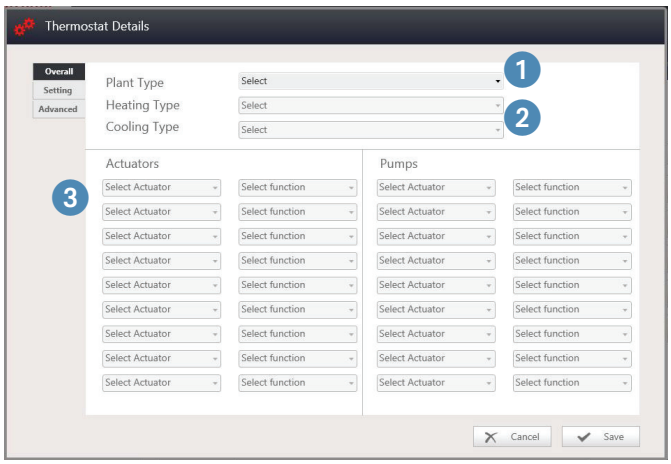
CONFIGURATOR (CONTINUED)

■ Step **2**: Declare Peripherals (continued)

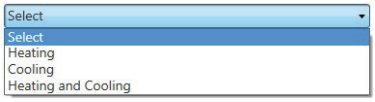
Configuring the peripheral according to type (continued)

Bus (continued)

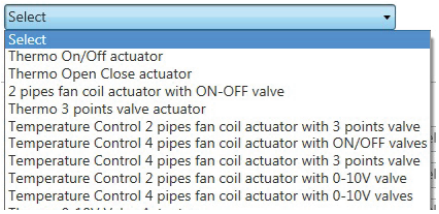
• Thermostat (0 674 59, H4691, LN4691, 0 487 72, 0 487 73, 0 487 82, 0 487 83, FL4653, FL4653W, FL4654, FL4654W, FL4663, FL4664) in master mode.



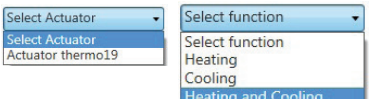
1 Plant type.



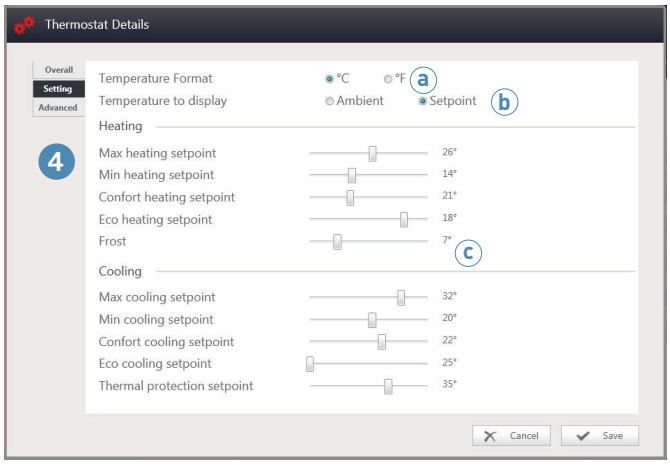
2 Heating & cooling type.



3 Select Actuator and pump



• Thermostat (0 674 59, H4691, LN4691, 0 487 72, 0 487 73, 0 487 82, 0 487 83, FL4653, FL4653W, FL4654, FL4654W, FL4663, FL4664) in master mode.



4 Access the temperature setting page

(a) Select temperature format.

(b) Select the thermostat display type.

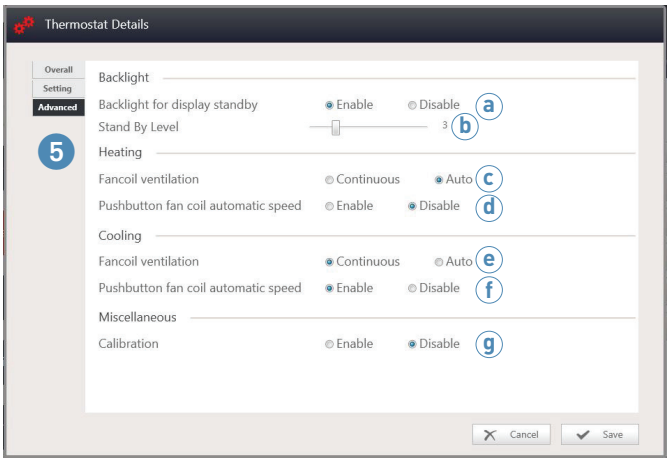
(c) Temperature settings in heating/cooling mode.

■ Step **2**: Declare Peripherals (continued)

Configuring the peripheral according to type (continued)

Bus (continued)

- Thermostat (0 674 59, H4691, LN4691, 0 487 72, 0 487 73, 0 487 82, 0 487 83, FL4653, FL4653W, FL4654, FL4654W, FL4663, FL4664) in master mode.



5 Access the advanced settings page

a Activation/deactivation of adjustment of the thermostat backlighting luminosity level.

b If setting active, can be adjusted from 0 to 10.

NOTE: - If the setting has been deactivated, the standby level is set to 5

- The value 0 corresponds to the backlighting being off

(In the case of UX Touch thermostats and UX Touch bedside panels, the a and b parameters do not appear.)

For heating system with fan

c Continuous: when the setpoint is reached, the fan continues to run. Possible to control the fan speeds when the valve is closed.

Auto: when the setpoint is reached, the fan stops. Not possible to control the fan speeds when the valve is closed.

NOTE: AUTO mode is an energy-saving mode

d Possible to have an automatic speed or not

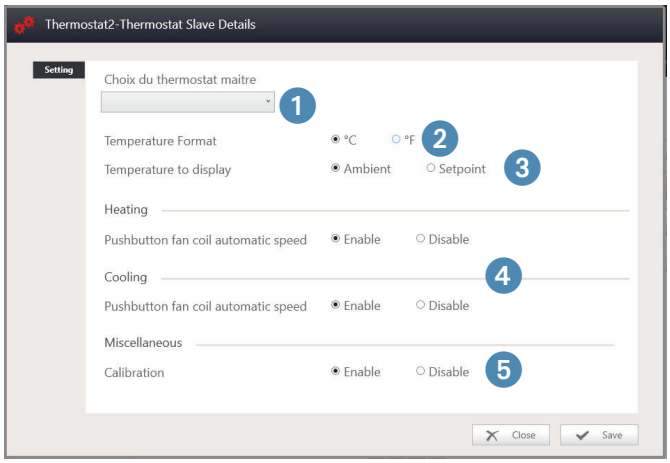
For air-conditioning system with fan

e Same as c

f Same as d

g Possible to authorise or deny changing the thermostat calibration (this procedure is described in the "operating modes and local programming of the thermostat" section)

- Thermostat (0 674 59, H4691, LN4691, 0 487 72, 0 487 73, 0 487 82, 0 487 83, FL4653, FL4653W, FL4654, FL4654W, FL4663, FL4664) in slave mode.



1 Select master thermostat

2 Select temperature format

3 Select the thermostat display type

4 Possible to have an automatic speed or not for heating mode and cooling mode

5 Possible to authorise or deny changing the thermostat calibration (this procedure is described in the "operating modes and local programming of the thermostat" section)

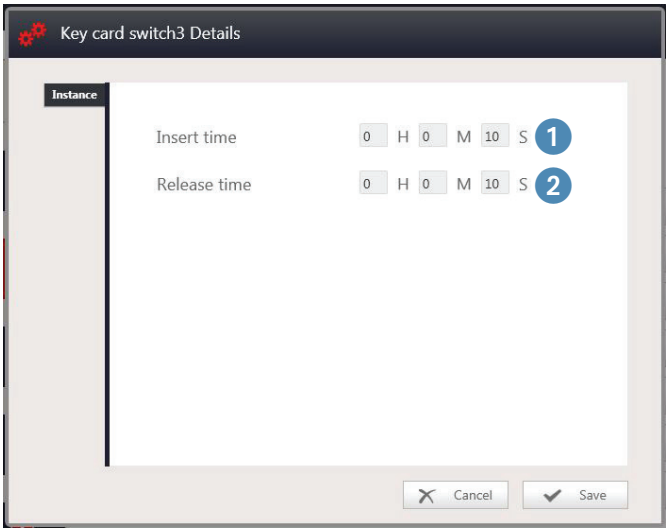
CONFIGURATOR (CONTINUED)

■ Step **2**: Declare Peripherals (continued)

Configuring the peripheral according to type (continued)

Bus (continued)

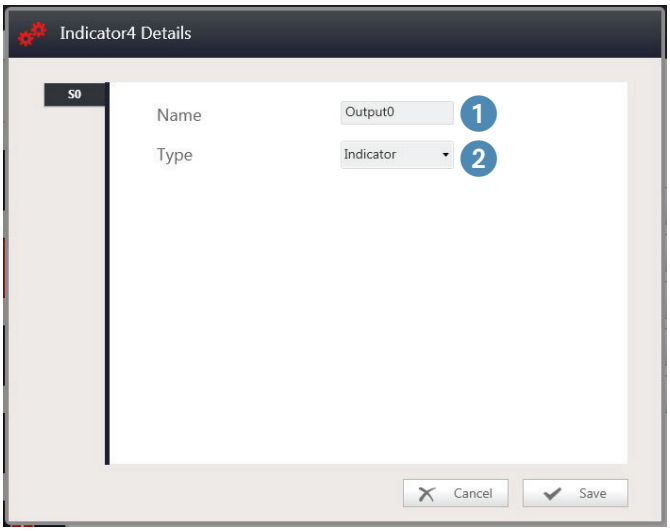
• Keycard switch (0 784 80, 0 675 65, 5 722 35, 5 727 35, H4649, L4649, LN4649, 0 675 66, 5 722 36, 5 727 36, H4648, L4648, LN4648, 0 487 71, 0 487 81, FL4648, FL4648W, FL4658)



1 Insert time: sends the presence information after the time delay specified for card insertion.

2 Release time: sends the end of presence information after the time delay specified for card removal.

• Corridor indicator display panel (0 675 90, H4650, LN4650, 0 487 75, 0 487 85, FL4650, FL4650W, FL4660)



1 Name: give the output a name.

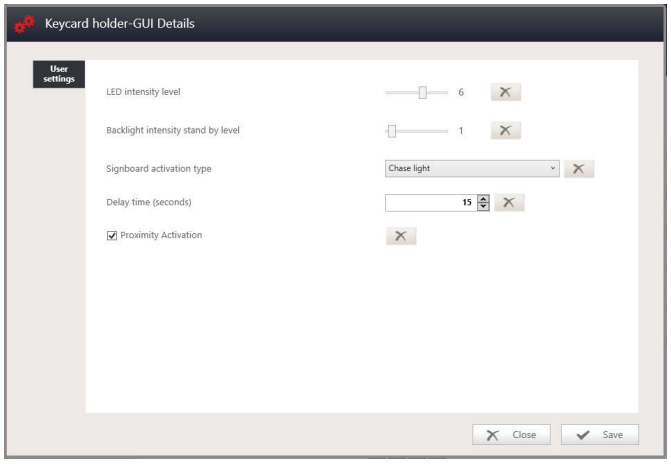
2 Type: select contact type.

■ Step **2**: Declare Peripherals (continued)

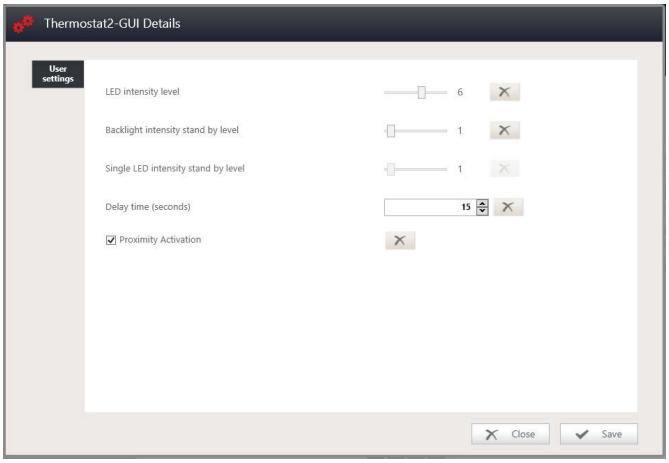
Configuring the peripheral according to type (continued)

Bus (continued)

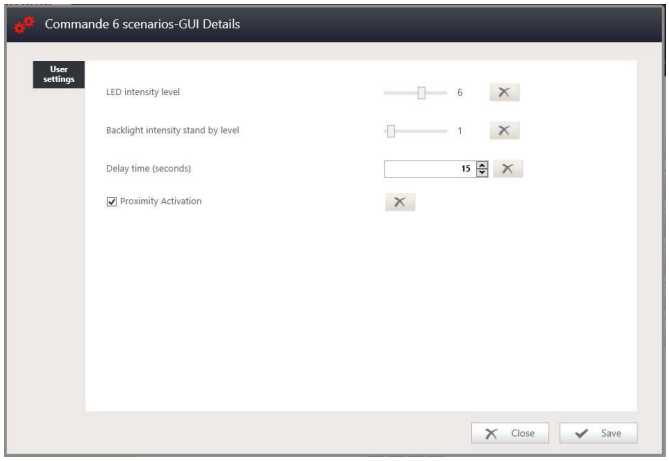
- GUI interface for UX Touch peripherals
  UX Touch controls have a configuration page for adjusting the brightness of icons.



0 487 71/0 487 81/FL4648/FL4648W/FL4658:
UX Touch keycard reader.



0 487 72/0 487 82/FL4653/FL4653W/FL4663: UX Touch bedside panel.
0 487 73/0 487 83/FL4654/FL4654W/FL4664: UX touch thermostat.



0 487 77/0 487 87/FL4655/FL4655W/FL4665: 4 UX Touch controls.
0 487 74/0 487 84/FL4652/FL4652W/FL4662: 6 UX Touch controls.

CONFIGURATOR (CONTINUED)

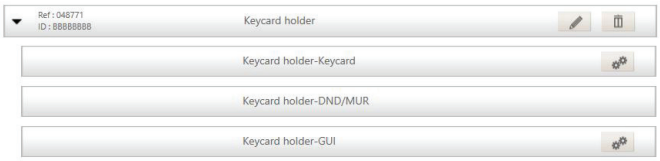
■ Step **2**: Declare Peripherals (continued)

Configuring the peripheral according to type (continued)

Bus (continued)

When a UX Touch peripheral is added, an arrow appears on the left 

This arrow can be used to scroll through the various peripheral functions, particularly the configuration page for adjusting the brightness of icons (GUI).



- Do Not Disturb (DND)/Make Up Room (MUR) control (067593, H4653, LN4653)
  DND/MUR controls do not have a configuration page.

- 8-scenario control (0 675 92, H4652, LN4652) and 4-scenario control (0 784 78, 0 791 78, 5 745 03, 5 745 04, HD4680, HS4680, HC4680, L4680, N4680, NT4680, 0 672 17, 0 672 18, 5 739 02, 5 739 03)
  Scenario controls do not have a configuration page.

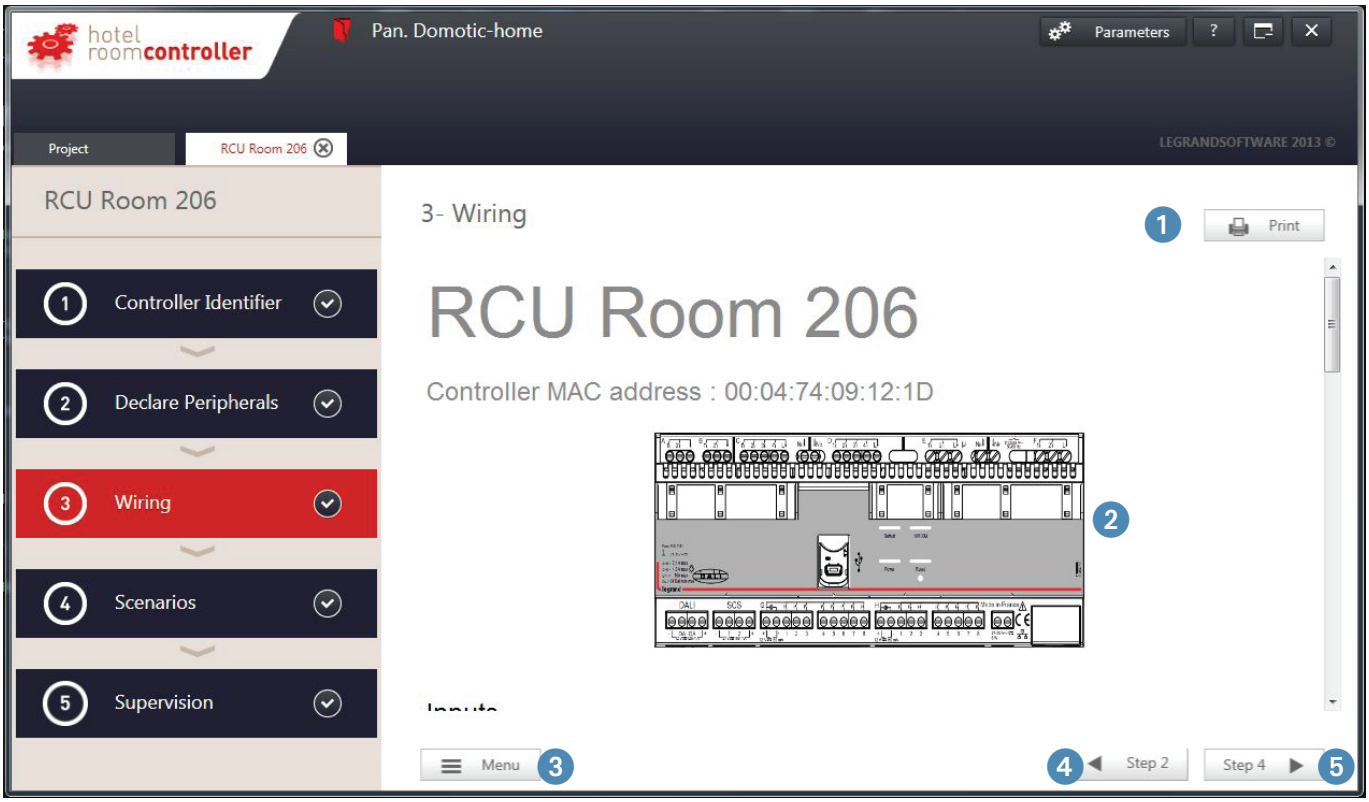
- 1, 2 and/or 3-way switch/pushbutton control (0 784 71, 0 791 71, 0 675 52, H4652/2, L4652/2, 0 784 73, 0 791 73, 0 675 54, H4652/3, L4652/3, 0 784 75, 0 791 75, 0 675 53, H4651M2, L4651M2, 0 784 72, 0 791 72)
  1, 2 and/or 3-way switch/pushbutton controls do not have a configuration page.

- 4, 6 or 8-scenario touch control (5 739 04, 5 739 05, 0 672 43, 0 672 45, 5 740 89, 5 745 89, 0 672 93, 0 672 95, 0 672 73, 0 672 75, 5 739 12, 5 739 13, HD4657M3, HC4657M3, HS4657M3, HD4657M4, HC4657M4, HS4657M4, 5 740 91, 5 745 91)
  4, 6 or 8-scenario touch controls do not have a configuration page.

CONFIGURATOR (CONTINUED)

■ Step **3**: Wiring

This step gives an overview of the wiring to be done on the controller



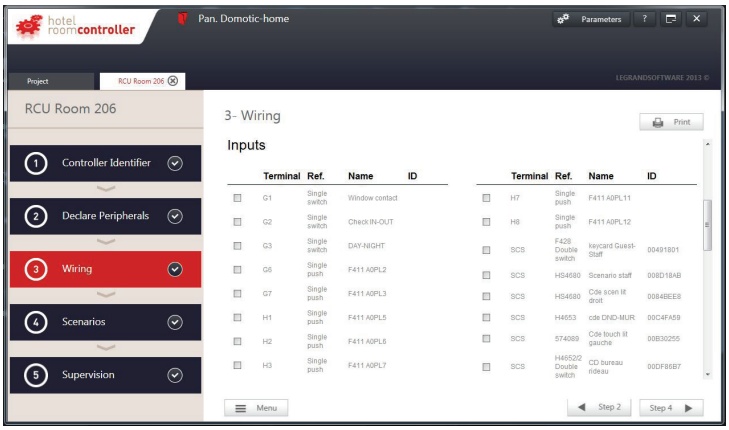
1 Print: used to create an equivalent file in pdf format.
2 Wiring: shows the controller, list of inputs, list of outputs and thermoregulation.
3 Menu: return to the modules screen.
4 Step 2: return to the previous step (Declare Peripherals).
5 Step 4: go to the next step (Scenarios) (see next page).

CONFIGURATOR (CONTINUED)

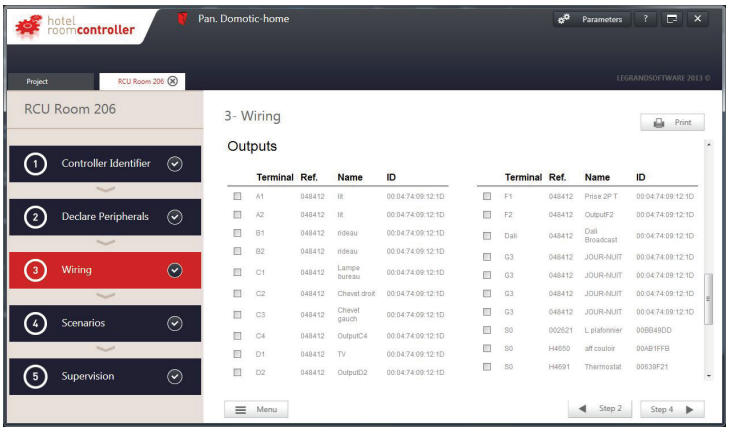
■ Step **3**: Wiring (continued)

2 Wiring: shows the controller, list of inputs, list of outputs and thermoregulation.

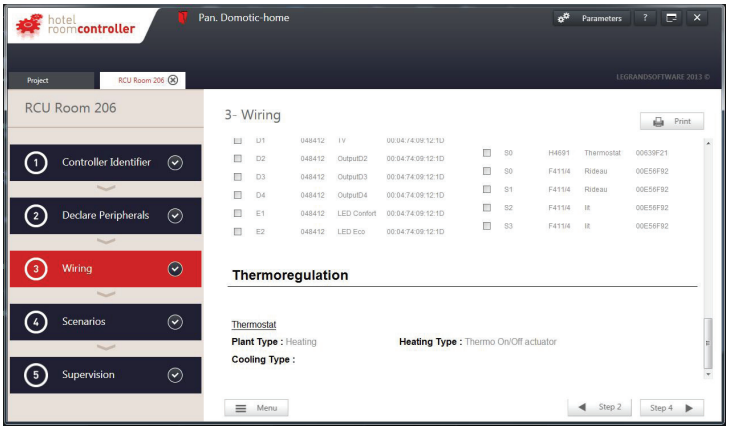
List of inputs:



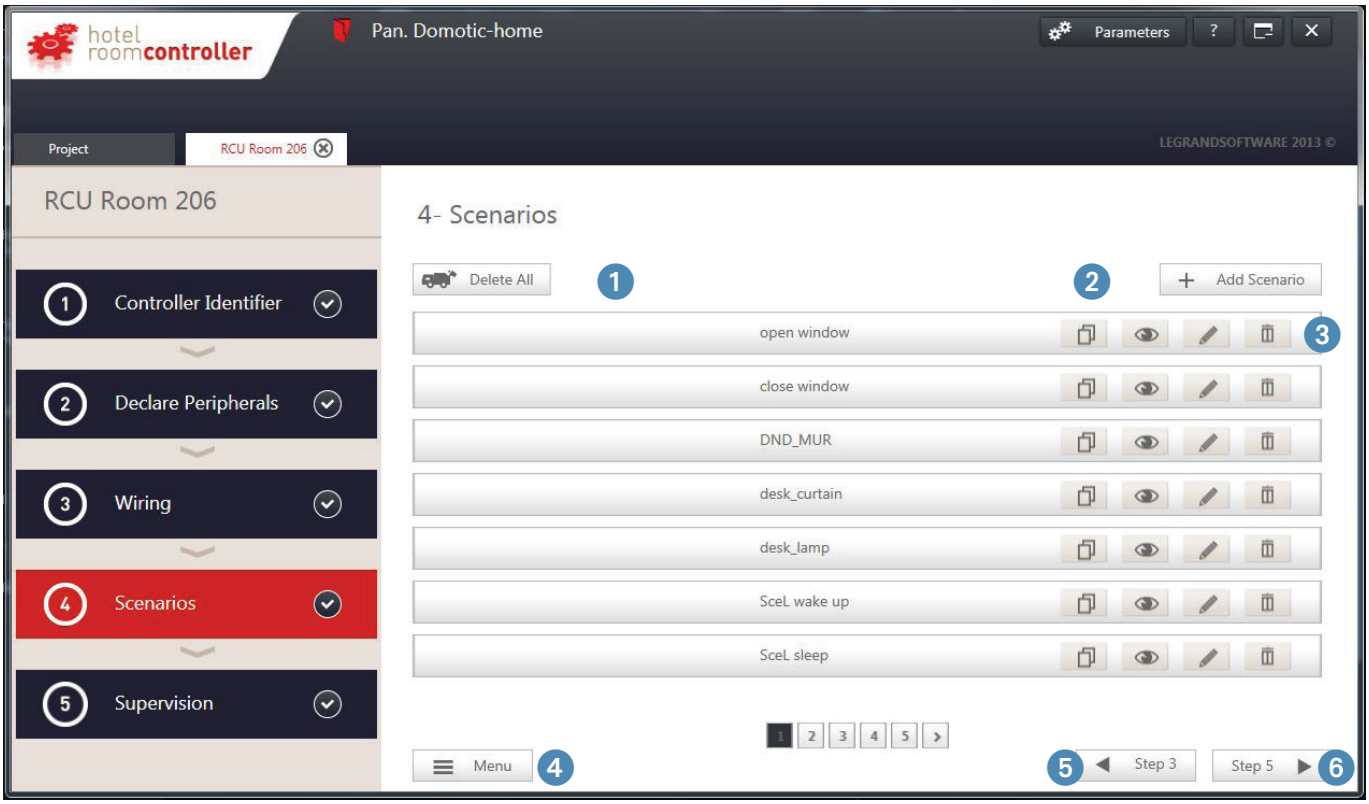
List of outputs:



Thermoregulation:



■ Step 4: Scenarios



1 Delete All: deletes all the scenarios.

2 Add Scenario: creates a new scenario (see next page).

3 List of scenarios: the scenario is the configuration of all actions that occur after a command is sent. The command can be sent either by a mechanical control, a volt-free contact input, an SCS control, a BACNET control, or a hotel application control unit.

4 Menu: return to the modules screen.

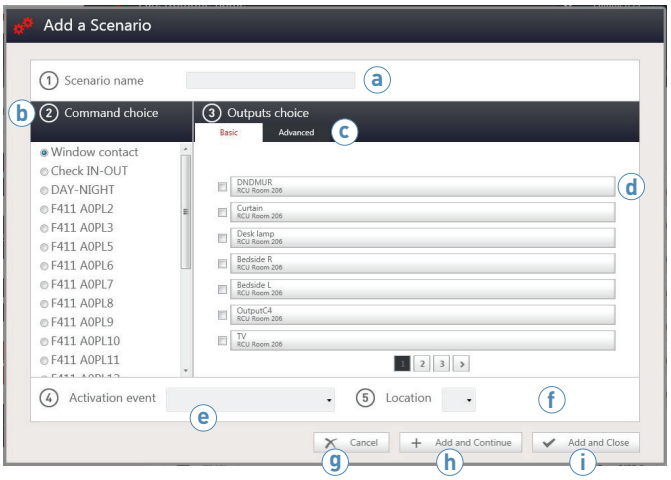
5 Step 3: return to the previous step (Wiring).

6 Step 5 : return to the previous step (Supervision).

CONFIGURATOR (CONTINUED)

■ Step 4: Scenarios (continued)

Add a scenario in standard mode 2



(a) Scenario name: give the scenario a name.

(b) Command choice: select which control to configure.

(c) Standard mode/custom mode: standard mode is used to program basic actions/custom mode is used to program advanced actions. Select standard mode.

(d) List of actions: in standard mode, select which outputs to control.

(e) Activation event: selects the design of the control. When there is no dropdown menu, this means that the control has not been selected, or that the location is already in use. If there are no suitable options in the dropdown menu, change the type of control. See (g) next page.

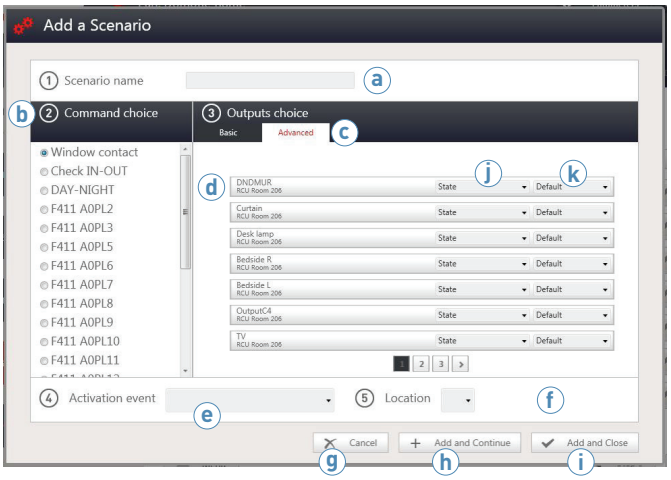
(f) Location: used to select the position of the activation event.

(g) Cancel: used to cancel scenario programming.

(h) Add and Continue: used to confirm, save the scenario and keep the window open for the next scenario. If it is a control with more than one button, the control will stay selected and another location will be suggested.

(i) Add and Close: used to confirm, save the scenario and close the window.

Add a scenario in custom mode 2



(a) Scenario name: give the scenario a name.

(b) Command choice: select which control to configure.

(c) Standard mode/custom mode: select custom mode.

(d) List of actions: in custom mode, you need to configure the state and priority level.

(e) Activation event: see next page.

(f) Location: used to select the position of the activation event.

(g) Cancel: used to cancel scenario programming.

(h) Add and Continue: used to confirm, save the scenario and keep the window open for the next scenario. If it is a control with more than one button, the control will stay selected and another location will be suggested.

(i) Add and Close: used to confirm, save the scenario and close the window.

(j) State: see next page.

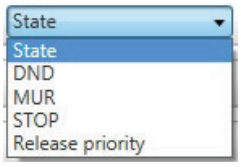
(k) Default: see next page.

■ Step 4: Scenarios (continued)

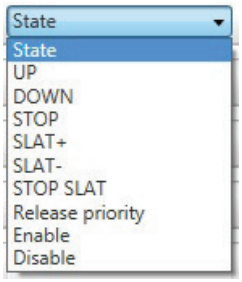
Add a scenario in custom mode 2 (continued)

ⓔ State: a dropdown menu gives the list of advanced actions available. The list depends on the type of peripheral or output selected.

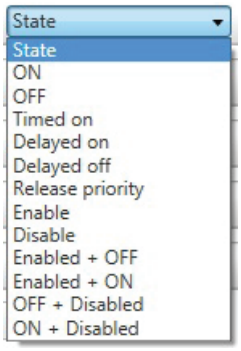
DND/MUR output



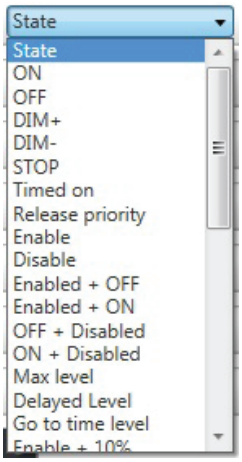
Roller shutter output



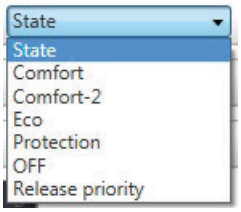
Actuator output



Dimmer output

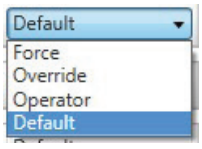


Thermostat output



ⓕ Default: used to manage different scenario levels according to users, create scene calls, create conditional scenarios.

(See explanations in Priority levels section)



ⓖ Activation event: selects the design of the control. When there is no dropdown menu, this means that the control has not been selected, or that the location is already in use. If there are no suitable options in the dropdown menu, change the type of control.

- Scenario control

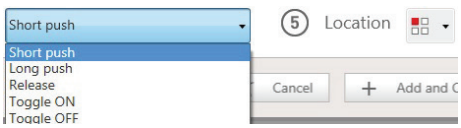
Pushbutton mode – standard prog.

1-button location

Switch mode – standard prog.

2-button location

Switch mode – custom prog.



CONFIGURATOR (CONTINUED)

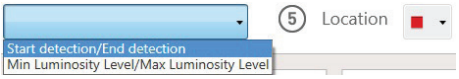
■ Step 4: Scenarios (continued)

Add a scenario in custom mode 2 (continued)

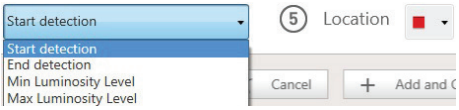
ⓖ Activation event (continued)

- sensor control

Standard prog.

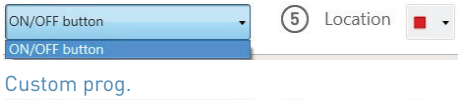


Custom prog.

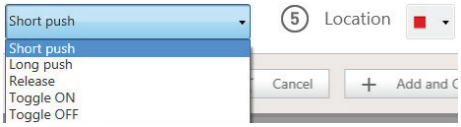


- Pushbutton control

Standard prog.

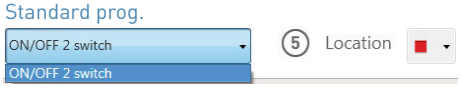


Custom prog.



- Switch control

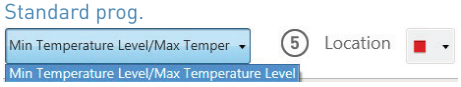
Standard prog.



Custom prog.

- Probe control

Standard prog.



Custom prog.

- Keycard switch control

Standard prog.

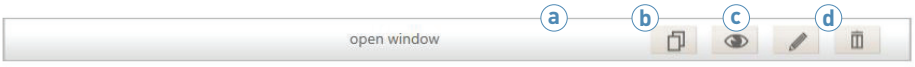
Custom prog.

- DND/MUR control

Standard prog.

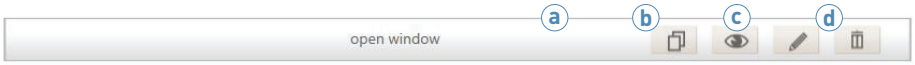
Custom prog.

Scenario actions 3 (continued)



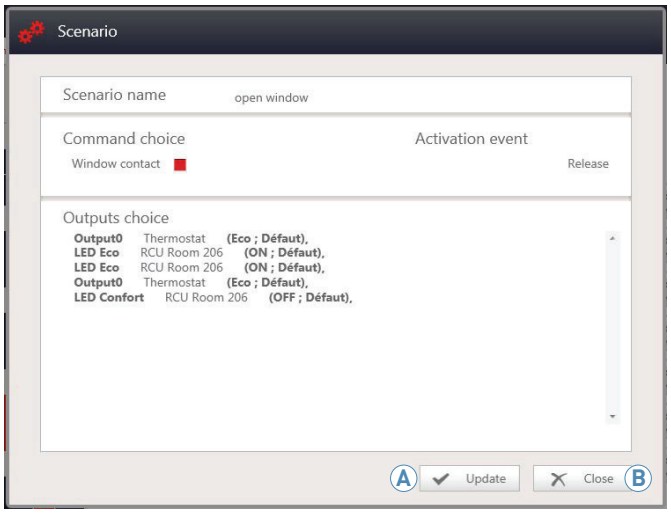
■ Step 4: Scenarios (continued)

Scenario actions 3 (continued)



ⓐ Copy button: used to copy a scenario in order to create another similar one.

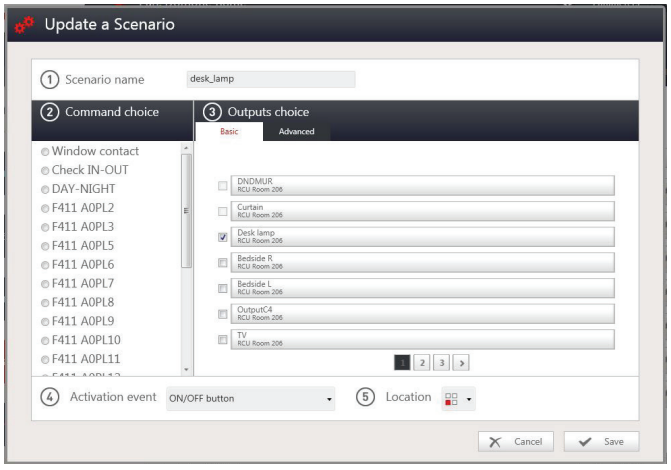
ⓑ Display button: used to display a scenario in detail.



Ⓐ Update button: used to open the Update Scenario window (similar window to Add Scenario 2).

Ⓑ Close button: used to close the display window.

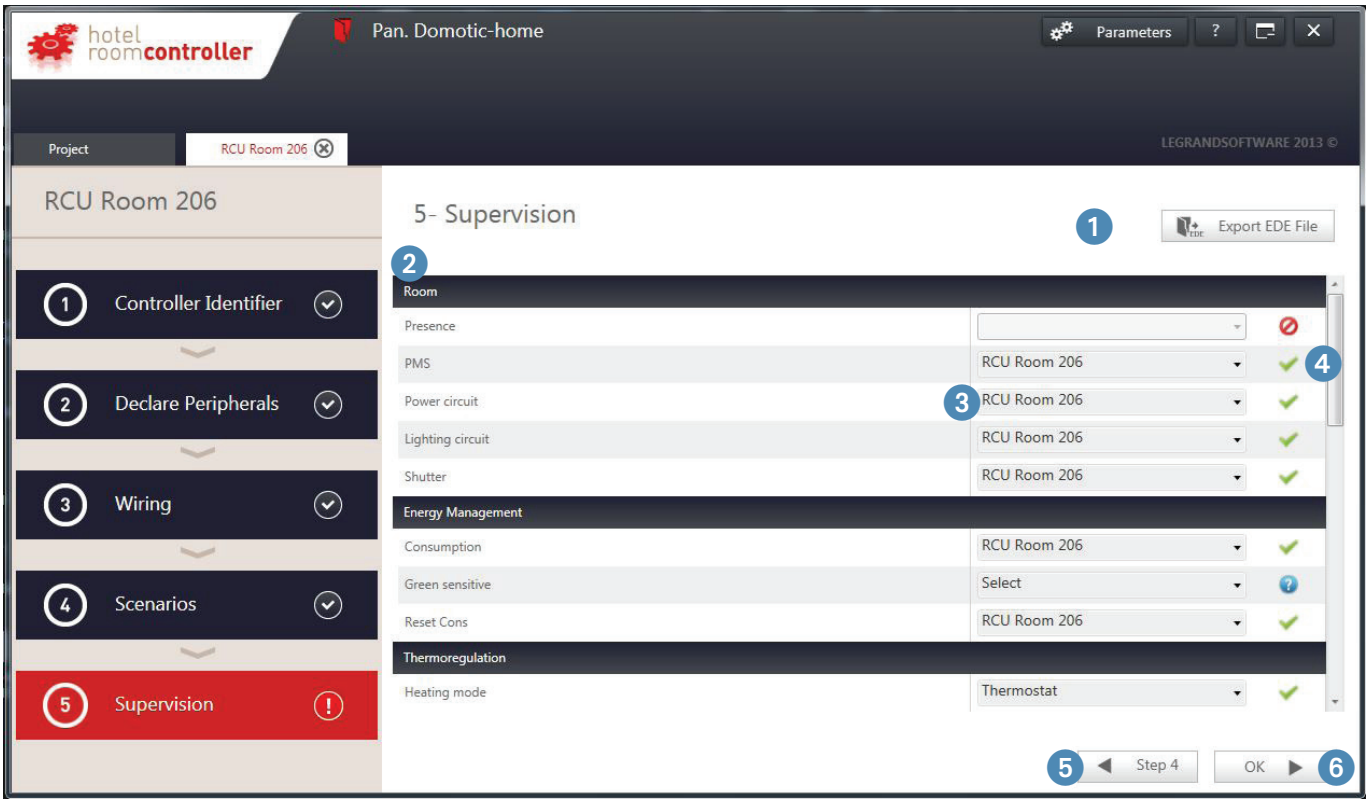
ⓒ Update button: used to change a scenario (similar window to Add Scenario 2).



ⓓ Delete scenario: used to delete the scenario.

CONFIGURATOR (CONTINUED)

■ Step **5**: Supervision



1. Export an EDE file: used to export an EDE file (file in .csv format containing the list of supervised BACNET objects).
2. List of supervised equipment: list of supervised equipment sorted by category (room/energy management/thermoregulation/housekeeping/scenarios/external scenarios).
3. Control device: dropdown list explaining which device is controlling the equipment.
4. Pictograms: used to indicate whether the equipment can be supervised:

   The equipment is supervised

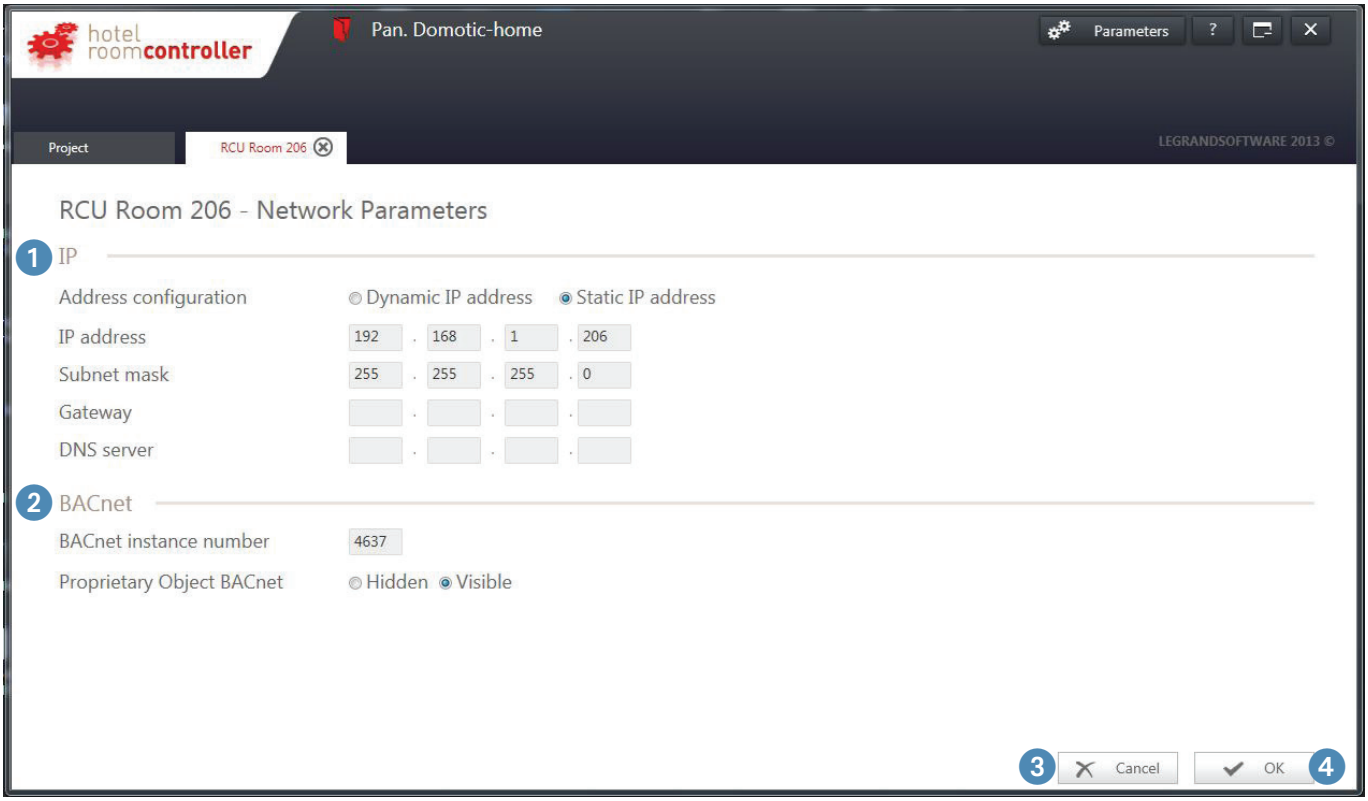
   The equipment can be supervised

   The equipment is not supervised

5. Step 4: return to the previous step (Scenarios).
6. OK: return to the modules screen.

NETWORK PARAMETERS

Click Network Parameters:



1 IP: used to configure the controller IP address. By default the controller is in dynamic IP mode (after a controller reset – return to factory settings – the controller reverts to dynamic IP).

In a commercial installation, Legrand recommends switching the controller to static IP for greater reliability of connection and/or setting the parameters of Supervisors/BMS/centralised HVAC/other systems, etc connected on the IP network and communicating with the controller.

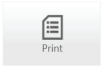
To set the controller IP parameters, retrieve the data from the site system administrator.

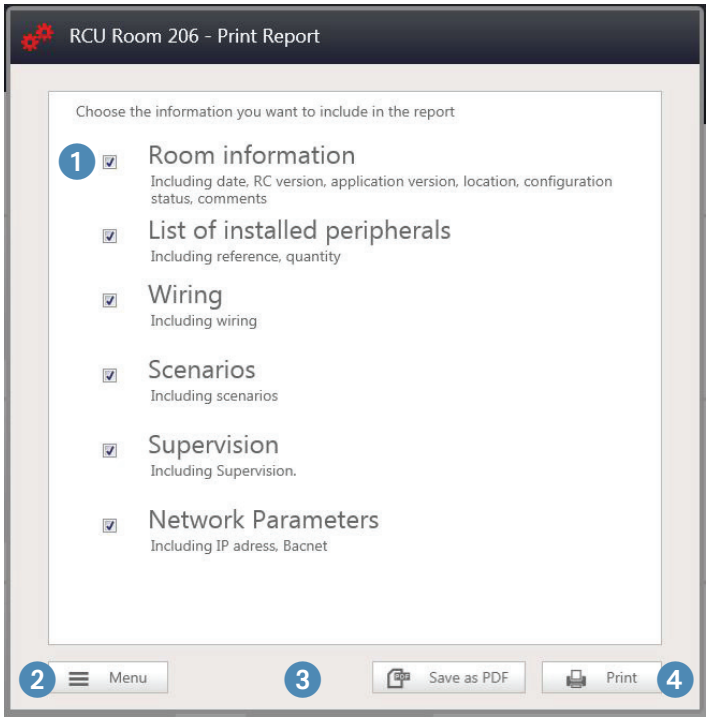
2 BACNET: used to configure the number of BACNET instances.
This instance number is auto-configured with the controller MAC address
and is used to hide/make visible proprietary BACNET objects (these are objects coming from non-standard SCS devices – hiding them means BACNET objects can be scanned more quickly).

3 Cancel: used to return to the modules screen without saving changes.

4 OK: used to return to the modules screen and save changes.

PRINTING

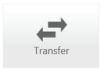
Click Print 

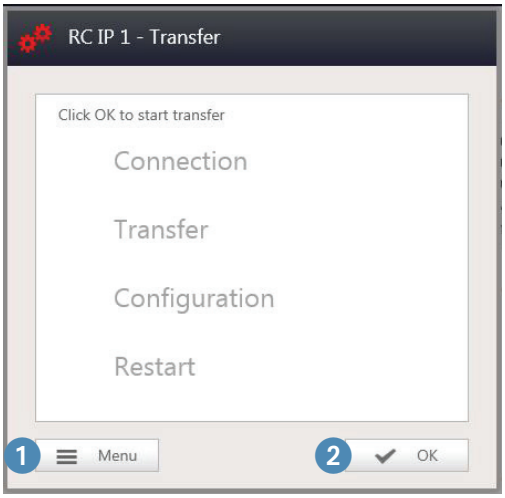


1. Topics: list of topics which can be printed (select desired topics).
2. Menu: return to the modules screen.
3. Save as PDF: saves the report directly in pdf format.
4. Print: exports the report in pdf format and opens the file without saving it.

TRANSFER (ONLINE FUNCTION)

When the controller configuration is complete, it should be transferred to the device.

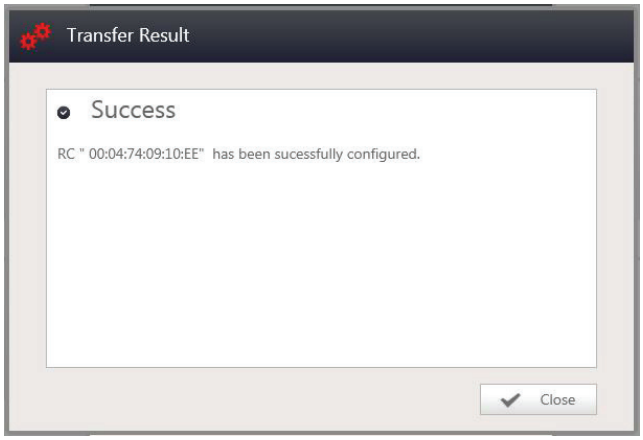
Click Transfer 



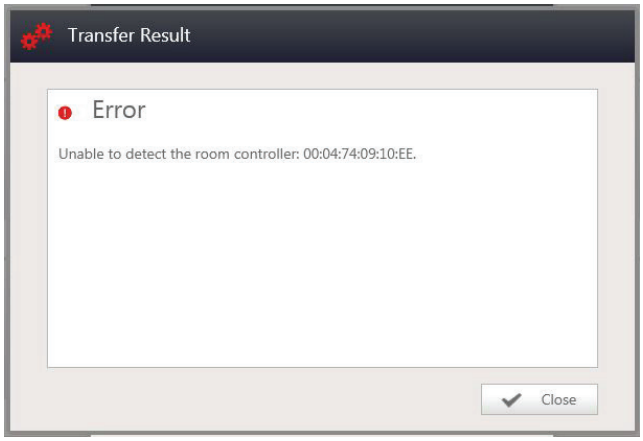
1 Menu: closes the window.

2 OK: sends data to the controller.

Once the configuration has been transferred, the program restarts the controller.



- The transfer was successful, the controller restarts, then the room can be used.
- Click Close and return to the modules screen.

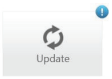


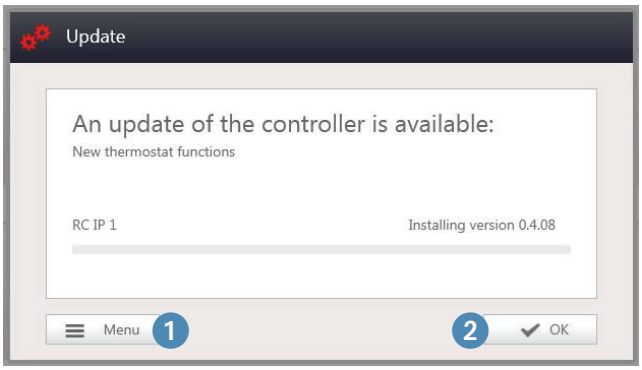
See Common errors page Ⓑ

UPDATE (ONLINE FUNCTION)

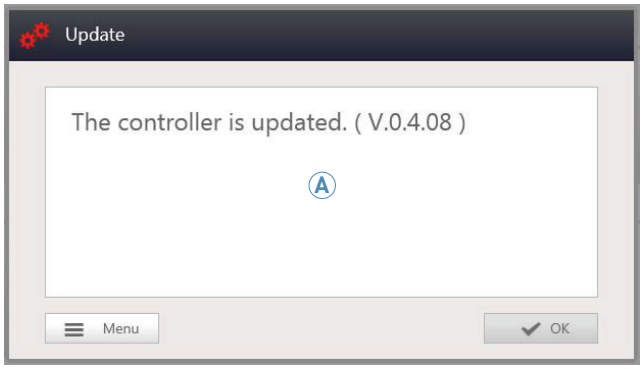
When the controller firmware is not up to date, a  appears on the Update module.

To update the firmware, click Update

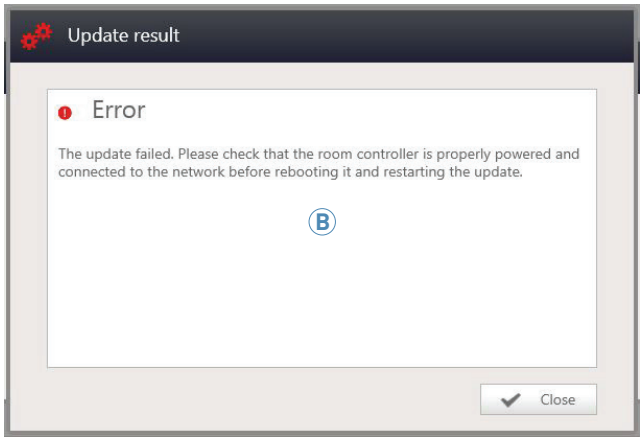




1 Menu: returns to the modules screen without updating.
2 OK: launches the controller firmware update.



Ⓐ Operation successful.



See Common errors page Ⓑ

SOFTWARE UPDATE

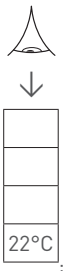
When a software update is available, this is displayed in the left-hand column on the home page.

PRIORITY LEVELS

The BACnet protocol offers the option to create complex scenarios using priority levels.
The default level is the conventional operating level (this is the level in which an action is written when a control is pressed).

There are 4 priority levels:

- Force (highest level)
- Override
- Operator
- Default (lowest level)



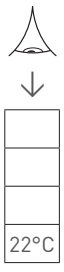
The system "looks at" the output state from the top down and executes the first value it comes to.

In a scenario in custom mode, it is possible to write an action in a given priority...
In another scenario in custom mode, the "release priority" command can clear the action of the given level...

Example: opening/closing a window (no priority)

The scenarios consist of changing the thermostat to ECO when the window is open **without using priorities** (the comfort temperature is 21°C)

① The guest is in their room, the thermostat is in comfort mode but the guest has altered the temperature, they have set 22°C. The system is at the default level.



② They open the window, and change the thermostat to ECO (18°C) with the default priority "ECO – Default".

③ They close the window, and change the thermostat back to comfort mode in default priority "COMFORT – Default", the thermostat reverts to 21°C.

Without any priority, the system loses the 22°C setting entered by the occupant.

Example: opening/closing a window (with priority)

The scenarios consist of changing the thermostat to ECO when the window is open **using priorities** (the comfort temperature is 21°C)

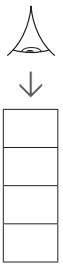
① The guest is in their room, the thermostat is in comfort mode but the guest has altered the temperature, they have set 22°C. The system is at the default level.

② They open the window, and change the thermostat to ECO (18°C) with Operator priority "ECO – Operator".

③ They close the window, and change the thermostat to its previous state of 22°C using the function "release priority – Operator" (the "release priority" function has cleared the Operator level value).

Priority allows the previous temperature to remain in the memory.

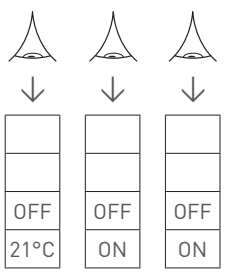
4 priority levels:
- Force (highest level)
- Override
- Operator
- Default (lowest level)



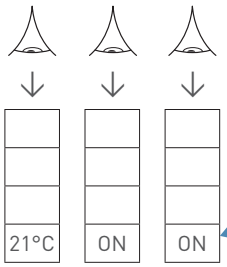
PRIORITY LEVELS

Example: Check In/Check Out

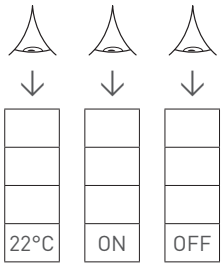
① The guest arrives at reception.
The system sends a welcome scenario at default level. The room stays OFF at Operator level. It is defined by the hotel proprietor: Thermostat in comfort mode 21°C, light A = ON, light B = ON.



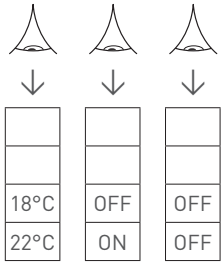
② The guest comes back to their room.
The room switches to default level (the system has cleared the Operator level values).



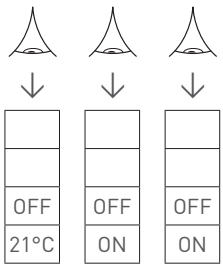
③ The guest is in their room.
They set the temperature to 22°C, leave light A ON and switch light B OFF.



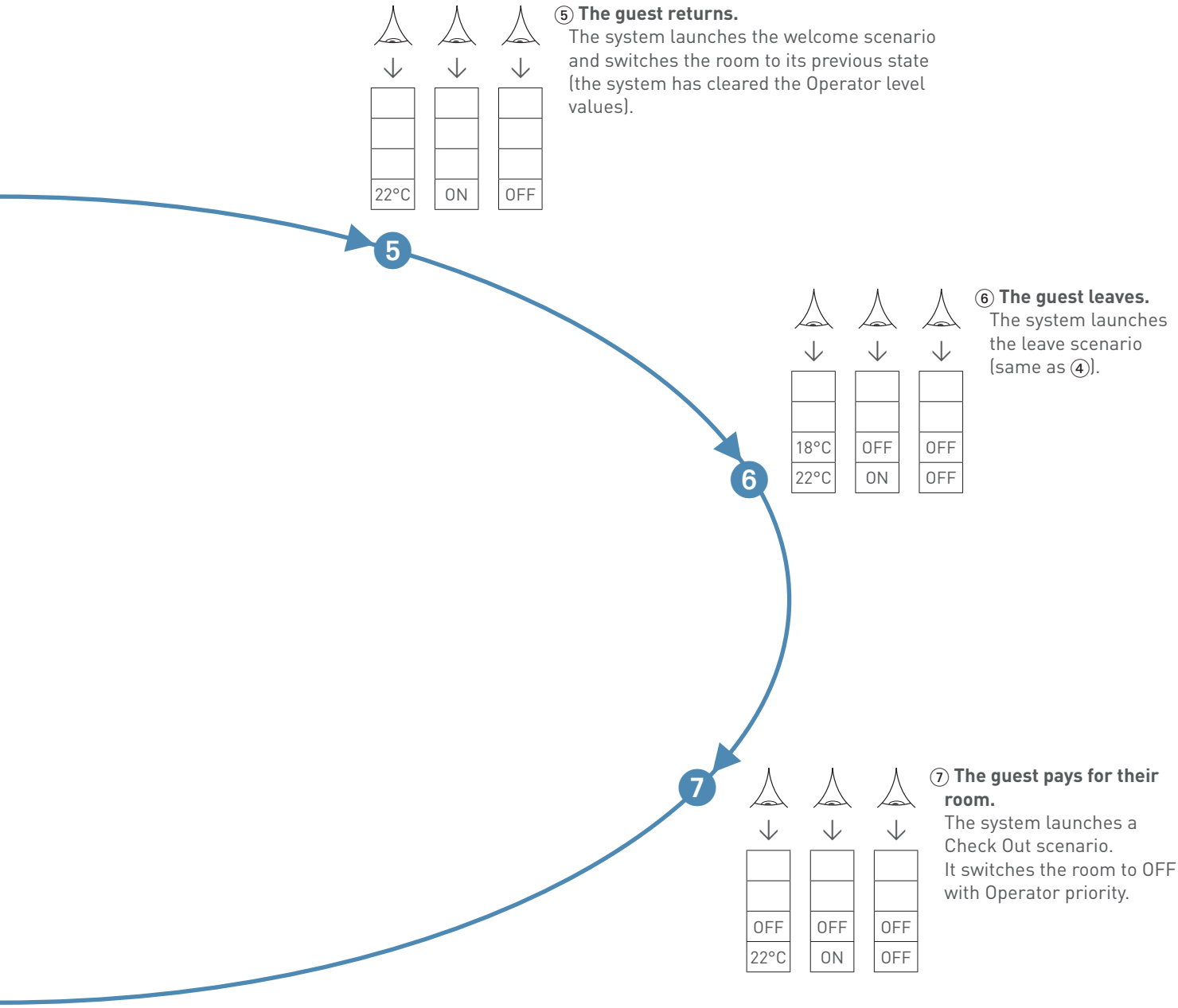
④ The guest leaves their room.
The system launches a leave scenario in order to save energy. It switches the thermostat to ECO, light A OFF and light B OFF with Operator priority.



⑧ The next guest arrives.
The system launches a welcome scenario (it resets the welcome scenario defined by the proprietor in Default priority).



Example: Check In/Check Out (continued)



⑤ **The guest returns.**
The system launches the welcome scenario and switches the room to its previous state (the system has cleared the Operator level values).

⑥ **The guest leaves.**
The system launches the leave scenario (same as ④).

⑦ **The guest pays for their room.**
The system launches a Check Out scenario.
It switches the room to OFF with Operator priority.

EXAMPLE OF A ROOM

In this example, the room controller is connected to a PMS and to an access control system with discrimination between keycard holders, via a BMS.
The link with the PMS and the access control system is simulated by two switches (check IN/OUT switch and a guest/staff switch).

List of installed peripherals

Ref.	Quantity	Ref.	Quantity	Ref.	Quantity	Ref.	Quantity
048412	X1	Single switch	X3	067590	X1	067593	X1
574504	X1	574089	X1	067459	X1	067592	X1
F430/4	X1	572736	X1				

View the wiring

Inputs

	Terminal	Ref.	Name	ID
☐	G1	Single switch	window contact	
☐	G2	Single switch	Check IN OUT	
☐	G3	Single switch	guest staff	
☐	SCS	067593	DND MJR	00E678E6

	Terminal	Ref.	Name	ID
☐	SCS	574504	4 scen entrance	00EF0AB9
☐	SCS	574089	TOUCH 4 scen	004FCCBA
☐	SCS	067592	8 scen	0063FB03
☐	SCS	572736	keycard holder	0073634C

Outputs

	Terminal	Ref.	Name	ID
☐	A1	048412	OutputA	00:04:74:09:13:BC
☐	A2	048412	OutputA	00:04:74:09:13:BC
☐	B1	048412	OutputB	00:04:74:09:13:BC
☐	B2	048412	OutputB	00:04:74:09:13:BC
☐	C1	048412	sensor	00:04:74:09:13:BC
☐	C2	048412	L entrance	00:04:74:09:13:BC
☐	C3	048412	L ceiling	00:04:74:09:13:BC
☐	C4	048412	Bedside L	00:04:74:09:13:BC
☐	D1	048412	Bedside R	00:04:74:09:13:BC
☐	D2	048412	L living roo	00:04:74:09:13:BC
☐	D3	048412	L corridor	00:04:74:09:13:BC
☐	D4	048412	OutputD4	00:04:74:09:13:BC

	Terminal	Ref.	Name	ID
☐	E1	048412	Led comfort	00:04:74:09:13:BC
☐	E2	048412	Led ECO	00:04:74:09:13:BC
☐	F1	048412	Socket 2P E	00:04:74:09:13:BC
☐	F2	048412	Socket USB	00:04:74:09:13:BC
☐	Dali	048412	Dali Broadcast	00:04:74:09:13:BC
☐	S0	067590	Sortie0	0063ED41
☐	S0	067459	Thermostat	08C414B1
☐	S0	F430/4	Sortie0	08C54020
☐	S1	F430/4	Sortie1	08C54020
☐	S2	F430/4	Sortie2	08C54020
☐	S3	F430/4	Sortie3	08C54020

Thermoregulation

Thermostat

Plant Type : Cooling

Refroidissment Type : 2-pipe fan coil unit with ON/OFF valve

View scenarios

1

Scenario name: window opened

Command choice: window contact

Activation event: Long push

Outputs choice:
- **Sortie0** Thermostat **(OFF ; Force),**
- **Led comfort** RCU IP 12 modules **(OFF ; Force),**
- **Led ECO** RCU IP 12 modules **(OFF ; Force),**

2

Scenario name: window closed

Command choice: window contact

Activation event: Release

Outputs choice:
- **Sortie0** Thermostat **(Release priority ; Force),**
- **Led comfort** RCU IP 12 modules **(Release priority ; Force),**
- **Led ECO** RCU IP 12 modules **(Release priority ; Force),**

3

Scenario name: Check in

Command choice: Check IN OUT

Activation event: Long push

Outputs choice:
- **L ceiling** RCU IP 12 modules **(ON ; Default),**
- **L living roo** RCU IP 12 modules **(ON ; Default),**
- **L corridor** RCU IP 12 modules **(ON ; Default),**
- **Led comfort** RCU IP 12 modules **(ON ; Default),**
- **Socket 2P E** RCU IP 12 modules **(ON ; Default),**
- **Socket USB** RCU IP 12 modules **(ON ; Default),**
- **Sortie0** external indicator **(STOP ; Default),**
- **sensor** RCU IP 12 modules **(OFF ; Default),**
- **Bedside L** RCU IP 12 modules **(OFF ; Default),**
- **Bedside R** RCU IP 12 modules **(OFF ; Default),**
- **Led ECO** RCU IP 12 modules **(OFF ; Default),**
- **Sortie0** Thermostat **(Comfort ; Default),**

4

Scenario name: Check out

Command choice: Check IN OUT

Activation event: Release

Outputs choice:
- **sensor** RCU IP 12 modules **(OFF ; Override),**
- **L entrance** RCU IP 12 modules **(OFF ; Default),**
- **L ceiling** RCU IP 12 modules **(OFF ; Override),**
- **Bedside L** RCU IP 12 modules **(OFF ; Override),**
- **Bedside R** RCU IP 12 modules **(OFF ; Override),**
- **L living roo** RCU IP 12 modules **(OFF ; Override),**
- **L corridor** RCU IP 12 modules **(OFF ; Override),**
- **Led comfort** RCU IP 12 modules **(OFF ; Override),**
- **Led ECO** RCU IP 12 modules **(OFF ; Override),**
- **Socket 2P E** RCU IP 12 modules **(OFF ; Override),**
- **Socket USB** RCU IP 12 modules **(OFF ; Override),**
- **Sortie0** external indicator **(Unoccupied ; Default),**
- **Sortie0** Thermostat **(OFF ; Override),**

5

Scenario name: keycard guest

Command choice: guest staff

Activation event: Long push

Outputs choice:
- **L entrance** RCU IP 12 modules **(ON ; Default),**
- **L ceiling** RCU IP 12 modules **(Release priority ; Operator),**
- **Bedside L** RCU IP 12 modules **(Release priority ; Operator),**
- **Bedside R** RCU IP 12 modules **(Release priority ; Operator),**
- **L living roo** RCU IP 12 modules **(Release priority ; Operator),**
- **L corridor** RCU IP 12 modules **(Release priority ; Operator),**
- **Sortie0** Thermostat **(Release priority ; Operator),**
- **sensor** RCU IP 12 modules **(Release priority ; Operator),**
- **Led comfort** RCU IP 12 modules **(ON ; Default),**
- **Led ECO** RCU IP 12 modules **(OFF ; Default),**

6

Scenario name: DND MUR

Command choice: DND MUR

Activation event: Do not disturb/Make my room

Outputs choice:
- **Sortie0** external indicator,

EXAMPLE OF A ROOM (CONTINUED)

View scenarios (continued)

7

Scenario name: welcome

Command choice: keycard holder

Activation event: Insert key card

Outputs choice:

L ceiling	RCU IP 12 modules	**(Release priority ; Override),**
Bedside L	RCU IP 12 modules	**(Release priority ; Override),**
Bedside R	RCU IP 12 modules	**(Release priority ; Override),**
L living roo	RCU IP 12 modules	**(Release priority ; Override),**
L corridor	RCU IP 12 modules	**(Release priority ; Override),**
Led comfort	RCU IP 12 modules	**(Release priority ; Override),**
Led ECO	RCU IP 12 modules	**(Release priority ; Override),**
Socket 2P E	RCU IP 12 modules	**(Release priority ; Override),**
Socket USB	RCU IP 12 modules	**(Release priority ; Override),**
Sortie0	external indicator	**(Occupied ; Default),**
Sortie0	Thermostat	**(Release priority ; Override),**
sensor	RCU IP 12 modules	**(Release priority ; Override),**

8

Scenario name: goodbye

Command choice: keycard holder

Activation event: Remove key card

Outputs choice:

sensor	RCU IP 12 modules	**(OFF ; Override),**
L entrance	RCU IP 12 modules	**(OFF ; Default),**
L ceiling	RCU IP 12 modules	**(OFF ; Override),**
Bedside L	RCU IP 12 modules	**(OFF ; Override),**
Bedside R	RCU IP 12 modules	**(OFF ; Override),**
L living roo	RCU IP 12 modules	**(OFF ; Override),**
L corridor	RCU IP 12 modules	**(OFF ; Override),**
Led comfort	RCU IP 12 modules	**(OFF ; Default),**
Led ECO	RCU IP 12 modules	**(ON ; Default),**
Socket 2P E	RCU IP 12 modules	**(OFF ; Override),**
Sortie0	external indicator	**(Unoccupied ; Default),**
Sortie0	Thermostat	**(Eco ; Override),**

9

Scenario name: keycard staff

Command choice: guest staff

Activation event: Release

Outputs choice:

sensor	RCU IP 12 modules	**(ON ; Operator),**
L entrance	RCU IP 12 modules	**(ON ; Default),**
L ceiling	RCU IP 12 modules	**(ON ; Operator),**
Bedside L	RCU IP 12 modules	**(ON ; Operator),**
Bedside R	RCU IP 12 modules	**(ON ; Operator),**
L living roo	RCU IP 12 modules	**(ON ; Operator),**
L corridor	RCU IP 12 modules	**(ON ; Operator),**
Socket 2P E	RCU IP 12 modules	**(ON ; Operator),**

10

Scenario name: 4scn ent entrance ON

Command choice: 4 scen entrance

Activation event: Short push

Outputs choice:

L entrance	RCU IP 12 modules	**(ON ; Default),**

11

Scenario name: 4scn ent entranc OFF

Command choice: 4 scen entrance

Activation event: Short push

Outputs choice:

L entrance	RCU IP 12 modules	**(OFF ; Default),**

12

Scenario name: 4scn ent master ON

Command choice: 4 scen entrance

Activation event: Short push

Outputs choice:

L entrance	RCU IP 12 modules	**(ON ; Default),**
L ceiling	RCU IP 12 modules	**(ON ; Default),**
L living roo	RCU IP 12 modules	**(ON ; Default),**
L corridor	RCU IP 12 modules	**(ON ; Default),**

13

Scenario name: 4scn ent master OFF

Command choice: 4 scen entrance

Activation event: Short push

Outputs choice:

sensor	RCU IP 12 modules	**(OFF ; Default),**
L entrance	RCU IP 12 modules	**(OFF ; Default),**
L ceiling	RCU IP 12 modules	**(OFF ; Default),**
Bedside L	RCU IP 12 modules	**(OFF ; Default),**
Bedside R	RCU IP 12 modules	**(OFF ; Default),**
L living roo	RCU IP 12 modules	**(OFF ; Default),**
L corridor	RCU IP 12 modules	**(OFF ; Default),**

SUPERVISOR (PROJECT MANAGER) whose job is to oversee the project	**INSTALLER** whose job is to pull the cables through, install the peripherals, connect the peripherals to the loads	**GRMS PROGRAMMER** whose job is to program rooms with the Hotel Room Controller Software (HRCS)	**SYSTEMS INTEGRATOR** whose job is to program the BMS (Netx for example) ... in order to integrate the GRMS with the other systems
1 Retrieve information from the hotel: - Room architecture - List of IP addresses - The mimic diagram of room types - Plan of room types			
2 Create the follow-up file: - "Construction progress follow-up" tab - "Room architecture" tab - "Network architecture" tab - "ID data" tab - Plan of room types for sticking labels onto (BUS peripherals + Room controller)			
1st rooms ready for the electrical installation (the sample room has already been validated upstream by the client and the prime contractor)			
5 Update the follow-up file - "ID data" tab.	3 Pull cables and install peripherals in the room types + stick ID labels for the BUS peripherals on the plans prepared by the supervisor + connect the room panel.	4 Configure the room types.	-
	Validation of the cabling in room types (level 1 diagnostics)		
Validation of room types (validation of scenarios) in presence of the client (investor/hotel manager/architect, etc) => Client validation in writing			
Duplication in the other rooms			
8 Update the follow-up file - "ID data" tab and "Construction progress follow-up" tab.	6 Pull cables and install peripherals in all the rooms + stick ID labels on the plans.	7 Program all the rooms.	-
	Validation of the cabling in all the rooms (level 1 diagnostics)		
Active IP network: network engineer + active peripheral present on site			
9 Update the follow-up file - "ID data" tab.	-	**Project validation Check BACnet ID duplicate and IP address duplicate (level 2 diagnostics)**	10 Program the BMS.
		Validate room operation once the other systems have been integrated	
Construction finished => Acceptance and compilation of the set of record drawings			

: Construction progress : Validation stages

All this information must be obtained before commissioning

INFORMATION TO BE OBTAINED

1. Building architecture

Information to be requested from the client or architect:
- List of buildings
- List of floors
- List of rooms with room No. and types

All this information must be exhaustive.

Example:

Hotel name:	0

Building	Floor	Room No.	Room type
West Wing	Floor 3	301	standard - twin beds
West Wing	Floor 3	302	standard - twin beds
West Wing	Floor 3	303	standard - king size bed
...	...	...	...
West Wing	Floor 3	335	standard - twin beds
West Wing	Floor 4	401	standard - king size bed
West Wing	Floor 4	402	standard - king size bed
West Wing	Floor 4	403	standard - twin beds
...	...	...	...
West Wing	Floor 4	432	standard - twin beds
West Wing	Floor 5	501	standard - king size bed
West Wing	Floor 5	502	standard - king size bed
West Wing	Floor 5	503	standard - king size bed
...	...	...	...
West Wing	Floor 5	525	junior suite
West Wing	...	...	...
Central building	Floor 3	340	deluxe - twin beds
Central building	Floor 3	341	deluxe - twin beds
Central building	Floor 3	342	standard - king size bed
...	...	...	...
Central building	Floor 3	370	junior suite
Central building	Floor 4	440	deluxe - twin beds
Central building	Floor 4	441	deluxe - twin beds
Central building	Floor 4	442	standard - king size bed
...	...	...	...
Central building	Floor 4	470	junior suite
Central building	Floor 5	540	deluxe - twin beds
Central building	Floor 5	541	deluxe - king size bed
Central building	Floor 5	542	deluxe - king size bed
Central building	Floor 5	543	deluxe - king size bed
...	...	...	...
Central building	Floor 5	570	Presidential Suite
...	...	...	...

2. IT network architecture

Information to be requested from the network or IT engineer

List of IP addresses

Caution: provide 20% of reserve in the IP address range compared to the number of rooms

IP address range - start list: 192.168.1.2
IP address range - end list: 192.168.1.210
Subnet mask: 255.255.255.0
IP address of the gateway: 192.168.1.1

Installation rules for the room IP network:
- 90 m max between the controller and the active peripheral in the cabinet
- The data link must be acceptance-tested
- Keep the power and data cables separate
- Etc

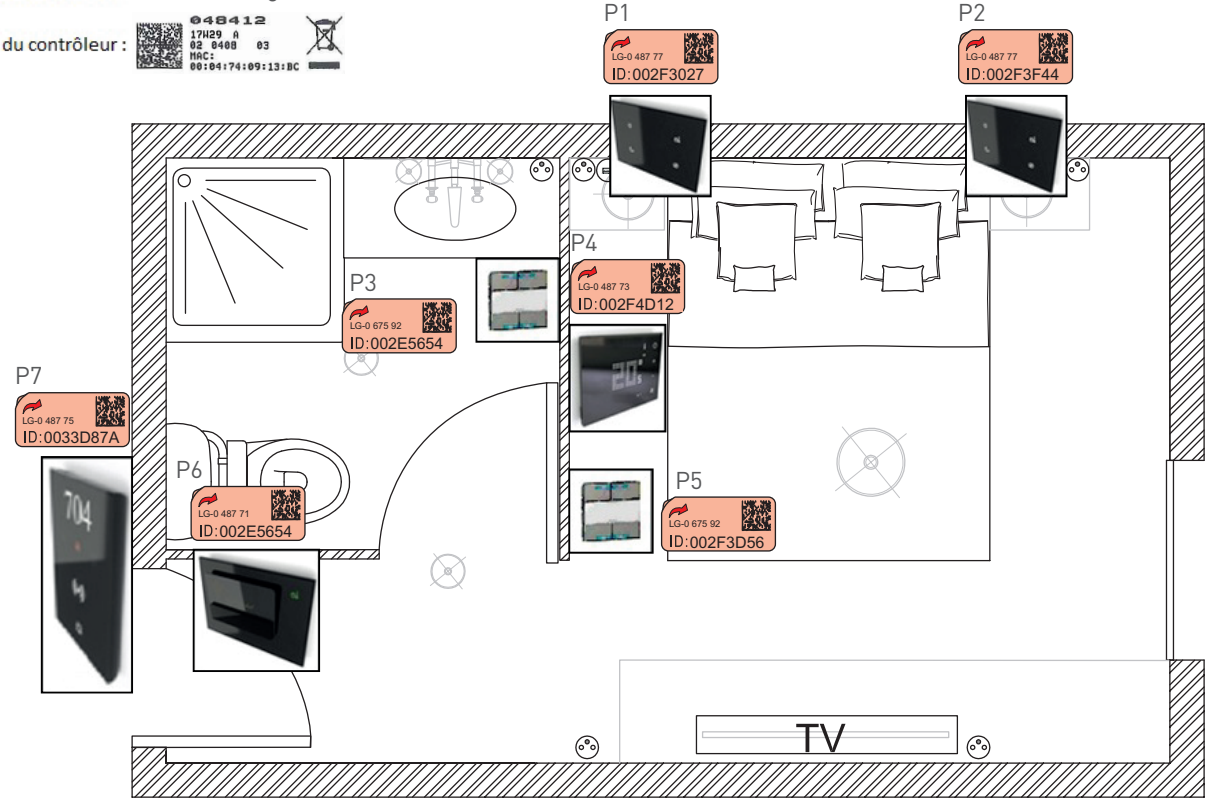
3. BUS peripheral identifiers

Create one document per room type to be given to the installer so they can stick on labels with the BUS peripheral ID nos. Every BUS peripheral has a label with a peel-off ID no. which can be stuck onto the plan (as shown below).

Numéro de chambre : 301

Type de chambre : Standard king size bed

Adresse MAC du contrôleur :



"HOTEL CONSTRUCTION PROGRESS FOLLOW-UP" FILE

All this information can be used to create a construction progress follow-up file (an example of this file is available for download from the www.legrandoc.com website).

Construction progress follow-up tab

This tab shows the room architecture and can be used to check construction progress step by step.

Hotel name:	

			Drawing ID	OFFLINE Programming	ONLINE Programming	Cabling validated	IP network validated
Building	Floor	Room No.	58%	48%	27%	18%	0%
West Wing	Floor 3	301	ok	ok	ok	ok	
West Wing	Floor 3	302	ok	ok	ok	ok	
West Wing	Floor 3	303					
...	...	...					
West Wing	Floor 3	335	ok				
West Wing	Floor 4	401	ok	ok	ok	ok	
West Wing	Floor 4	402	ok	ok			
West Wing	Floor 4	403					
...	...	...					
West Wing	Floor 4	432					
West Wing	Floor 5	501	ok	ok	ok	ok	
West Wing	Floor 5	502	ok	ok			
West Wing	Floor 5	503	ok	ok	ok		
...	...	...					
West Wing	Floor 5	525	ok				
West Wing	...	...					
central building	Floor 3	340	ok	ok			
central building	Floor 3	341	ok	ok	ok		
central building	Floor 3	342					
...	...	...					
central building	Floor 3	370	ok	ok	ok	ok	
central building	Floor 4	440	ok	ok	ok	ok	
central building	Floor 4	441	ok	ok			
central building	Floor 4	442	ok	ok			
...	...	...					
central building	Floor 4	470	ok	ok	ok		
central building	Floor 5	540					
central building	Floor 5	541	ok	ok			
central building	Floor 5	542	ok	ok			
central building	Floor 5	543					
...	...	...					
central building	Floor 5	570	ok				
...	...	...					

- OFFline programming: validated when all the rooms have been programmed with their definitive IDs in the configuration software.
- ONline programming: validated when the configuration has been sent to the peripherals without error.
- Cabling validated: validated after testing every room button and checking that the scenarios played out are correct (level 1 diagnostics).
- IP network validated: when the IP network is operational, it is essential to check that there are no duplicate IP addresses or duplicate
  BACnet IDs (level 2 diagnostics).

Hotel room architecture tab

This tab shows the room architecture with their associated type (data provided by the client (architect, etc).

Hotel name:	0

Building	Floor	Room No.	Room type
West Wing	Floor 3	301	standard - twin beds
West Wing	Floor 3	302	standard - twin beds
West Wing	Floor 3	303	standard - king size bed
...	...	...	...
West Wing	Floor 3	335	standard - twin beds
West Wing	Floor 4	401	standard - king size bed
West Wing	Floor 4	402	standard - king size bed
West Wing	Floor 4	403	standard - twin beds
...	...	...	...
West Wing	Floor 4	432	standard - twin beds
West Wing	Floor 5	501	standard - king size bed
West Wing	Floor 5	502	standard - king size bed
West Wing	Floor 5	503	standard - king size bed
...	...	...	...
West Wing	Floor 5	525	junior suite
West Wing	...	...	...
Central building	Floor 3	340	deluxe - twin beds
Central building	Floor 3	341	deluxe - twin beds
Central building	Floor 3	342	standard - king size bed
...	...	...	...
Central building	Floor 3	370	junior suite
Central building	Floor 4	440	deluxe - twin beds
Central building	Floor 4	441	deluxe - twin beds
Central building	Floor 4	442	standard - king size bed
...	...	...	...
Central building	Floor 4	470	junior suite
Central building	Floor 5	540	deluxe - twin beds
Central building	Floor 5	541	deluxe - king size bed
Central building	Floor 5	542	deluxe - king size bed
Central building	Floor 5	543	deluxe - king size bed
...	...	...	...
Central building	Floor 5	570	Presidential Suite
...	...	...	...

IP network architecture tab

This tab gives the range of IP addresses reserved by the room controllers (data provided by the hotel network administrator/client, etc).
We recommend allowing 20% reserve capacity in the IP address range compared to the number of rooms.

List of IP addresses

Caution: provide 20% of reserve in the IP address range compared to the number of rooms

IP address range - start list: 192.168.1.2
IP address range - end list: 192.168.1.210
Subnet mask: 255.255.255.0
IP address of the gateway: 192.168.1.1

DNS server address (if needed):

ID data tab

This tab gives the list of IP addresses, BACnet IDs, controller MAC addresses and IDs of the BUS peripherals for every room.

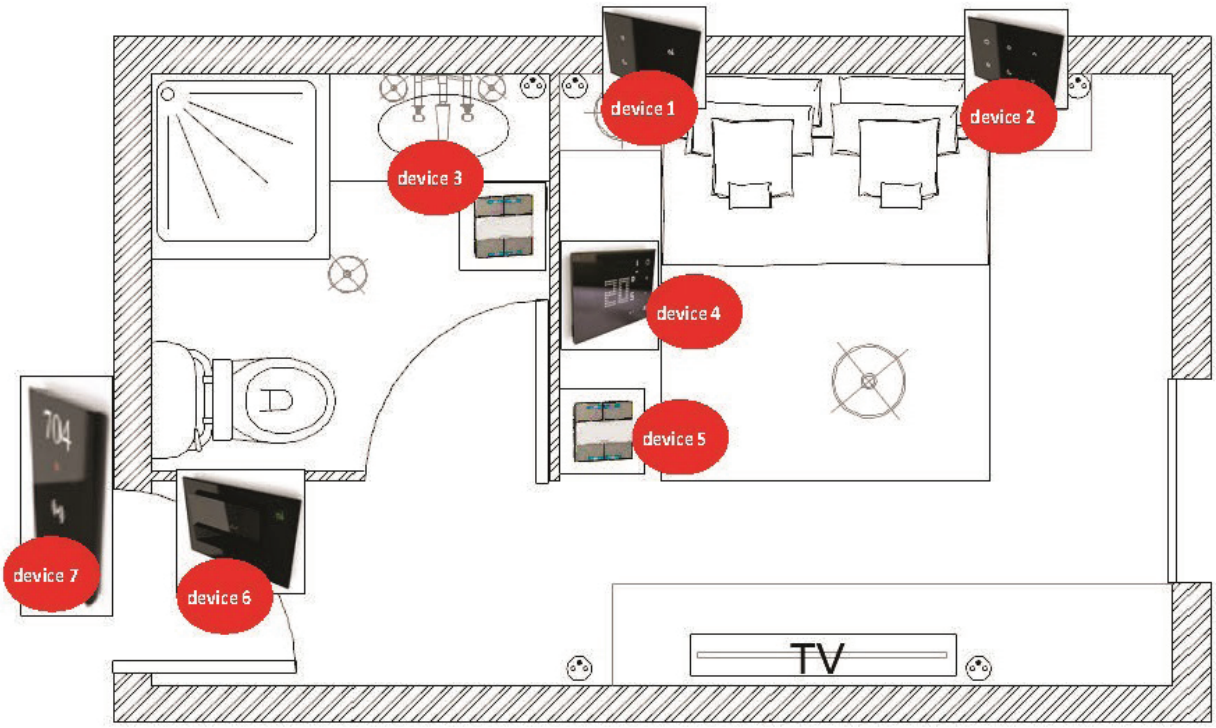
Building	Floor number	room number	room type	description	room data
West Wing	Floor 3	301	standard king size bed	MAC address	00:04:74:09:10:F1
West Wing	Floor 4	301	standard king size bed	ID BACNET	4337
West Wing	Floor 5	301	standard king size bed	IP Address	192.168.1.2
West Wing	Floor 6	301	standard king size bed	Sub MASK	255.255.255.0
West Wing	Floor 7	301	standard king size bed	IP gateway	192.168.1.1
West Wing	Floor 8	301	standard king size bed	ID SCS device 1	002F3D27
West Wing	Floor 9	301	standard king size bed	ID SCS device 2	002F3F44
West Wing	Floor 10	301	standard king size bed	ID SCS device 3	002E5654
West Wing	Floor 11	301	standard king size bed	ID SCS device 4	002F4D12
West Wing	Floor 12	301	standard king size bed	ID SCS device 5	002F3D56
West Wing	Floor 13	301	standard king size bed	ID SCS device 6	002E56DA
West Wing	Floor 14	301	standard king size bed	ID SCS device 7	0033D87A
West Wing	Floor 15	302	standard king size bed	MAC address	00:04:74:09:08:C6
West Wing	Floor 16	302	standard king size bed	ID BACNET	2246
West Wing	Floor 17	302	standard king size bed	IP Address	192.168.1.3
West Wing	Floor 18	302	standard king size bed	Sub MASK	255.255.255.0
West Wing	Floor 19	302	standard king size bed	IP gateway	192.168.1.1
West Wing	Floor 20	302	standard king size bed	ID SCS device 1	002F3D29
West Wing	Floor 21	302	standard king size bed	ID SCS device 2	002F4D34
West Wing	Floor 22	302	standard king size bed	ID SCS device 3	002E5A88
West Wing	Floor 23	302	standard king size bed	ID SCS device 4	002F3E19
West Wing	Floor 24	302	standard king size bed	ID SCS device 5	002E56FA
West Wing	Floor 25	302	standard king size bed	ID SCS device 6	002E2FD8
West Wing	Floor 26	302	standard king size bed	ID SCS device 7	0033DA93
West Wing	Floor 27	303	standard king size bed	MAC address	00:04:74:09:10:EE
West Wing	Floor 28	303	standard king size bed	ID BACNET	1774
West Wing	Floor 29	303	standard king size bed	IP Address	192.168.1.3
West Wing	Floor 30	303	standard king size bed	Sub MASK	255.255.255.0
West Wing	Floor 31	303	standard king size bed	IP gateway	192.168.1.1
West Wing	Floor 32	303	standard king size bed	ID SCS device 1	002F3AAC
West Wing	Floor 33	303	standard king size bed	ID SCS device 2	00EF34DE
West Wing	Floor 34	303	standard king size bed	ID SCS device 3	003EE538
West Wing	Floor 35	303	standard king size bed	ID SCS device 4	002F3E7C
West Wing	Floor 36	303	standard king size bed	ID SCS device 5	003E5665
West Wing	Floor 37	303	standard king size bed	ID SCS device 6	002F3D33
West Wing	Floor 38	303	standard king size bed	ID SCS device 7	0033D95E
...	...	...	...	...	...

"HOTEL CONSTRUCTION PROGRESS FOLLOW-UP" FILE (CONTINUED)

Plan of room type with standard king size bed

This tab (1 per room type) shows the layout plan of the BUS peripherals, which can be used to make the link between the plans with the labels provided by the installer and the "ID data" tab.

Room type: standard king size bed



You can find this template for the hotel construction progress follow-up file on www.legrandoc.com

ON-SITE COMMISSIONING

Once the programming file has been completed in the office, the configuration must be sent to the peripherals:

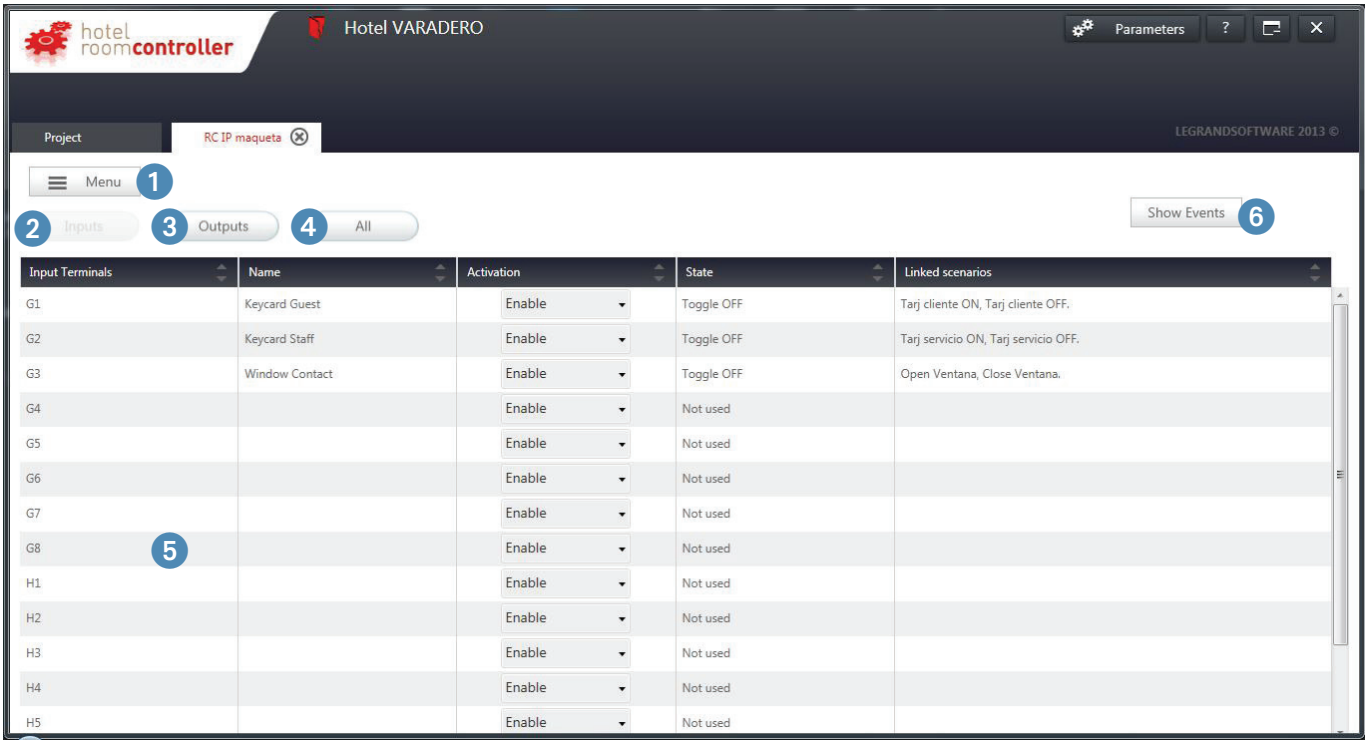
1. Obtain an IP router
2. Connect the 1st room controller and the computer to the router
3. Open the configuration file and go into the configuration for the room to which it is connected
4. Send the configuration to the peripherals:
   If an error message appears:
   - Check the ID number of the faulty peripheral on the peripheral, in the progress follow-up file and in the programming.
   - If the ID number is correct, check the BUS supply voltage and the wiring.
5. Check that the programmed scenarios have been implemented correctly by pressing every control in the room
   - In the event of an error: ask the installer to check the wiring (level 1 diagnostics can be used to identify wiring errors)
6. Repeat these operations for every room.
7. Run level 2 diagnostics to ensure that there are no duplicate IP addresses and BACNET ID numbers (see level 2 diagnostics)

LEVEL 1 DIAGNOSTICS (ONLINE FUNCTION)

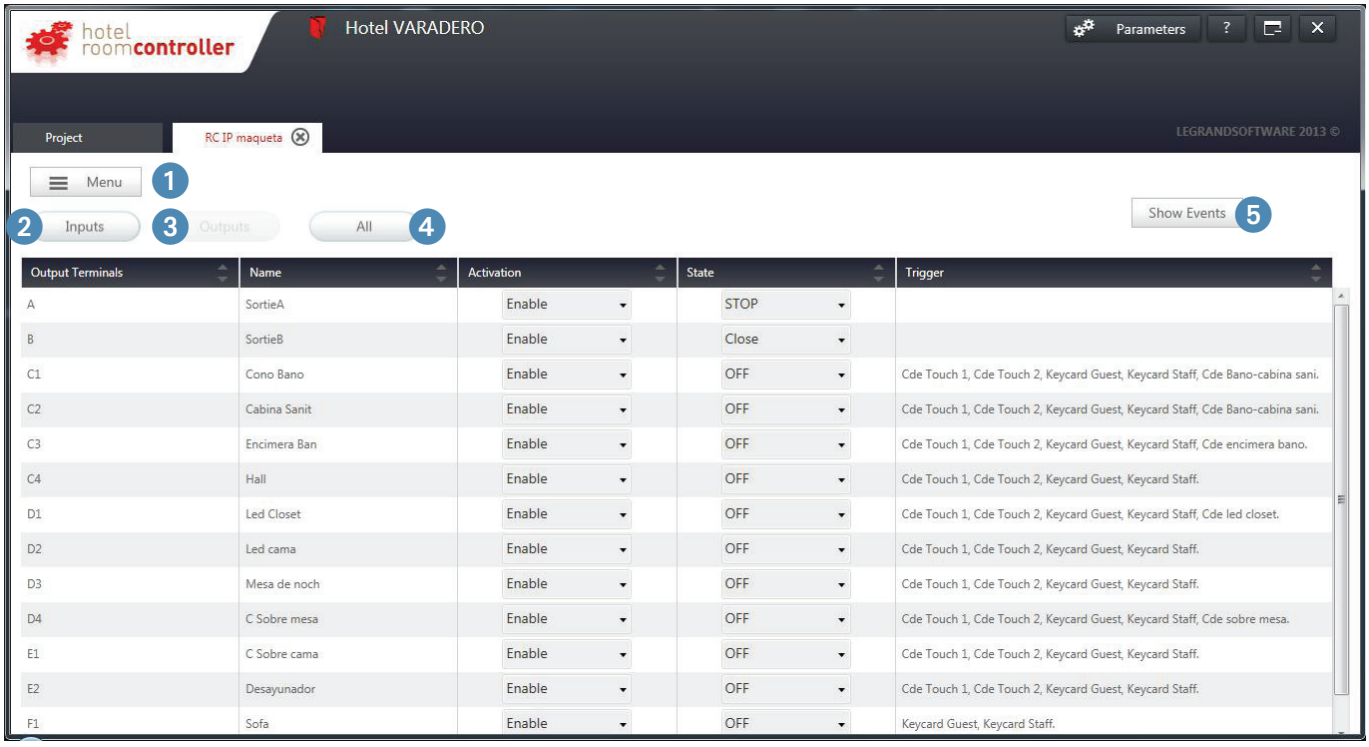
The purpose of level 1 diagnostics is to validate that the room is working (validation of cabling and validation of scenarios).

Click on Diagnostic 

To launch diagnostics, the device must be in fixed IP mode or the controller and the PC must be linked via a router.

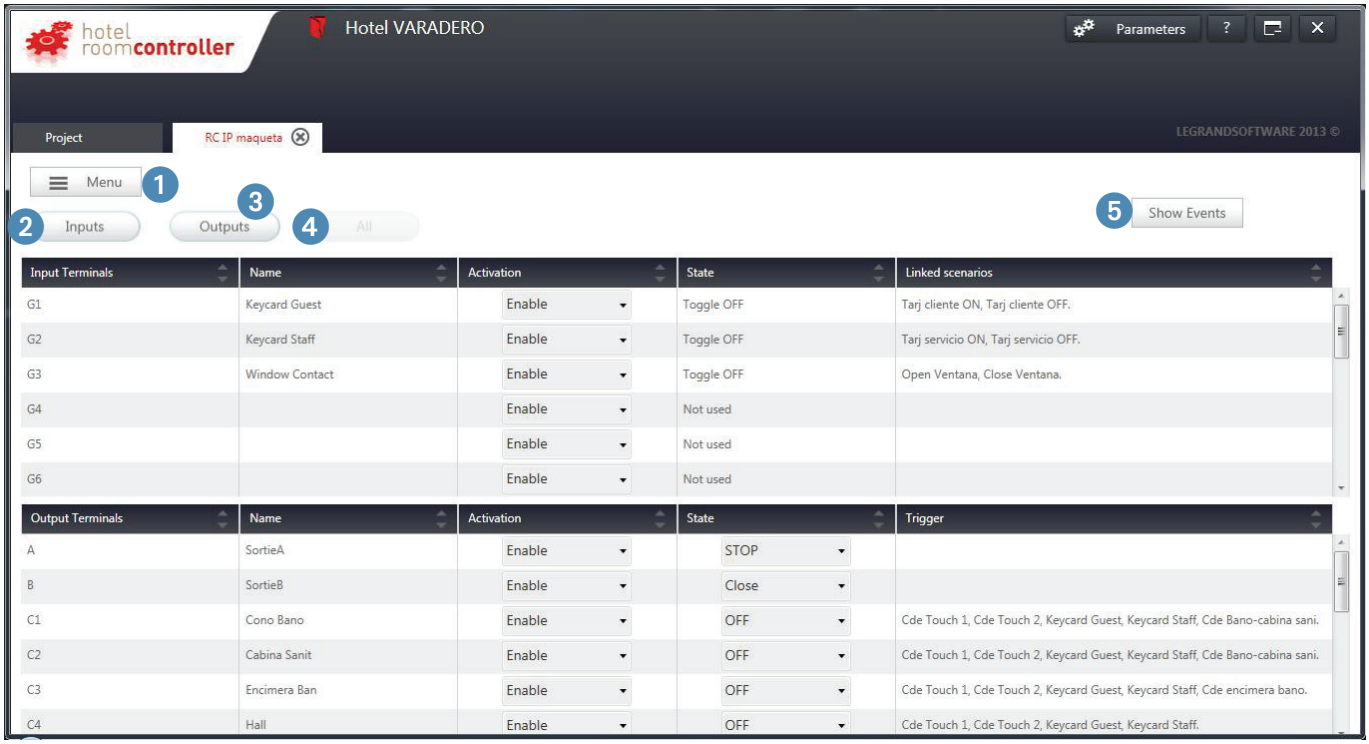


1 Menu: return to the modules screen.
2 Inputs: used to view the inputs.

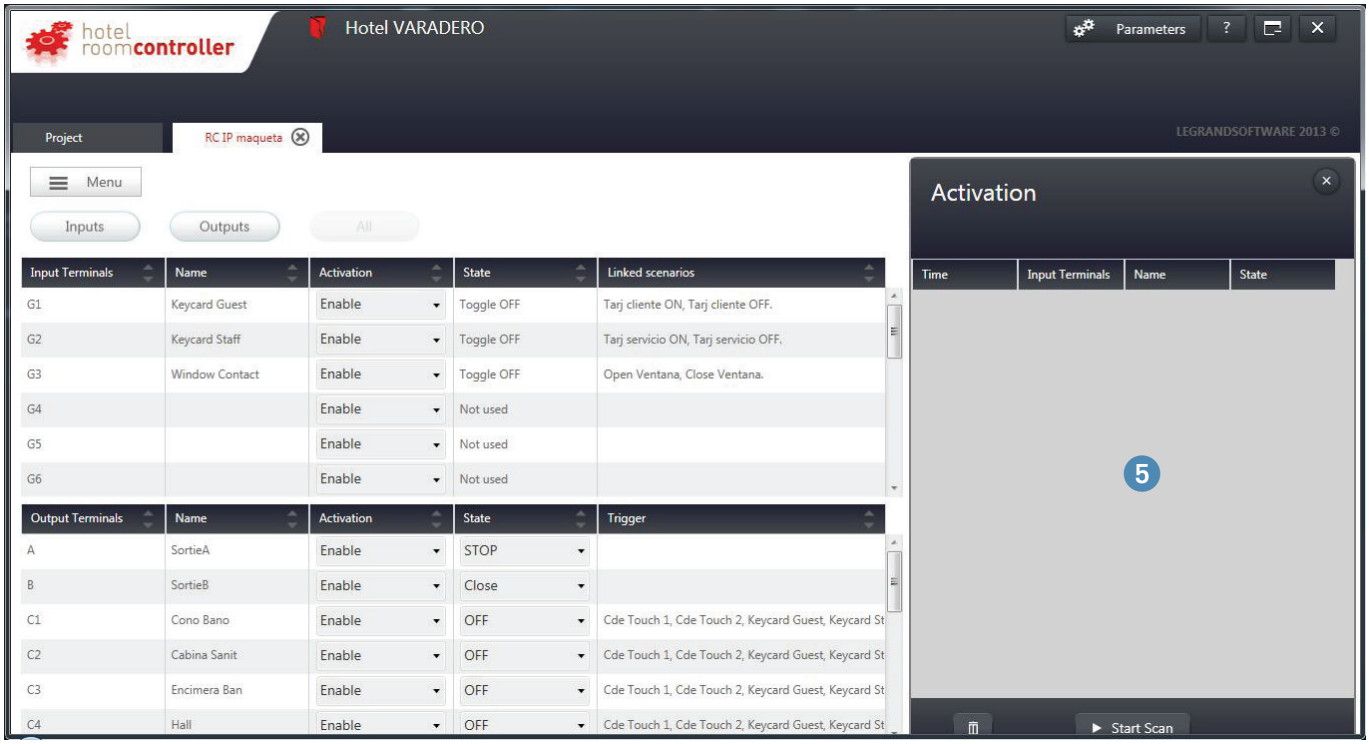


3 Outputs: used to display the outputs and change their state in order to check the wiring (see next page).

LEVEL 1 DIAGNOSTICS (ONLINE FUNCTION) (CONTINUED)

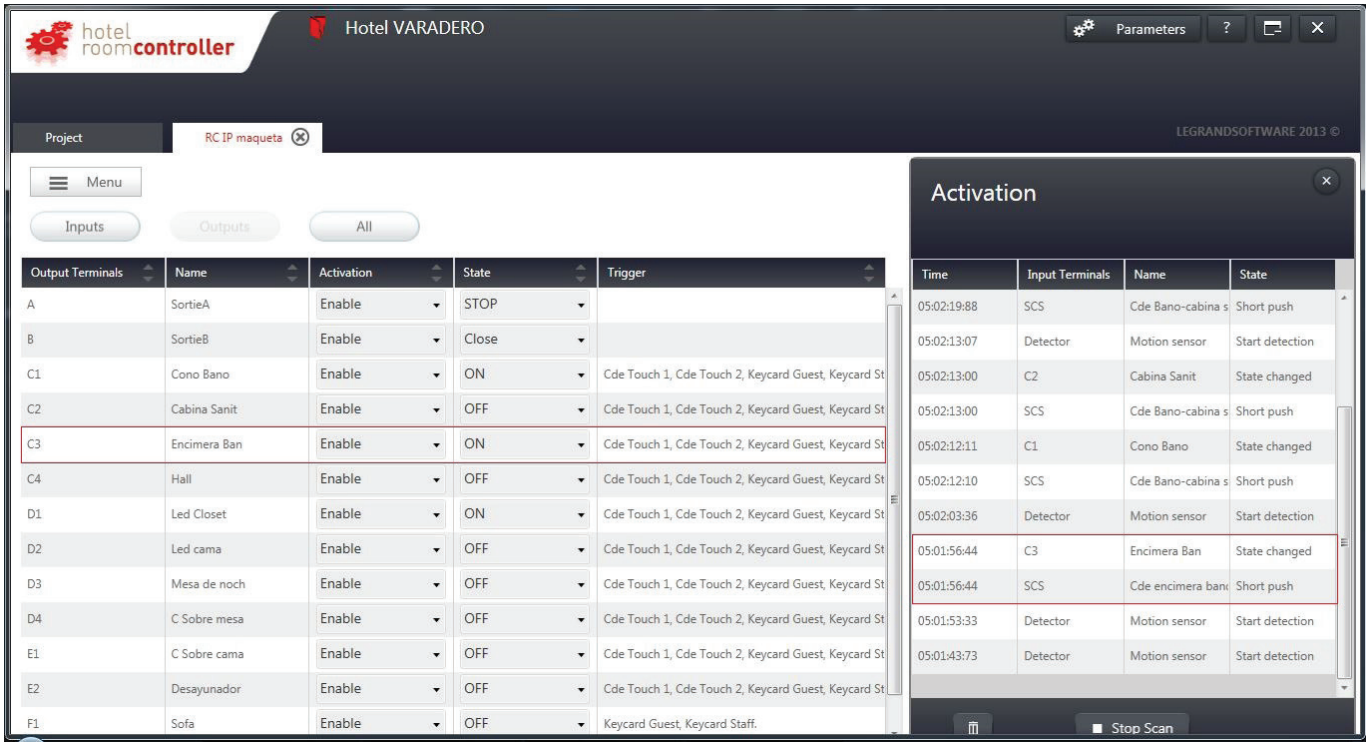


4 All: used to view the inputs and outputs.
Enables/disables the inputs and changes the output state in order to check the wiring.



5 Events: displays a new tab, used to test the controls in the room and see the impact on the outputs.

LEVEL 1 DIAGNOSTICS (ONLINE FUNCTION) (CONTINUED)



EXAMPLE: short press on the 8-scenario control => changes the state of output D2 which is connected to L Living room - the output switches to ON

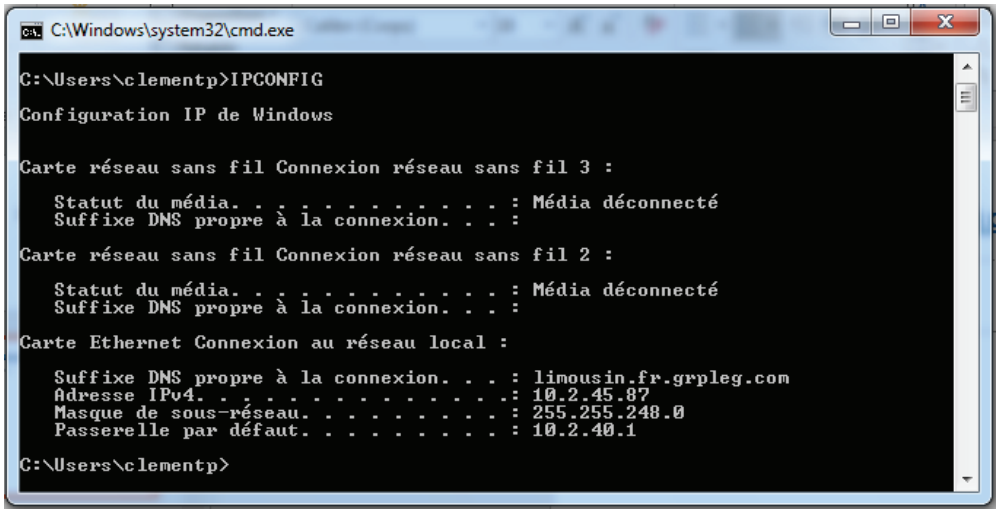
LEVEL 2 DIAGNOSTICS (ONLINE FUNCTION)

The purpose of level 2 diagnostics is to validate the complete hotel project in order to allow integration with a third-party system (validation of IP addresses and BACnet IDs).

■ Step **1**: Check the laptop network configuration

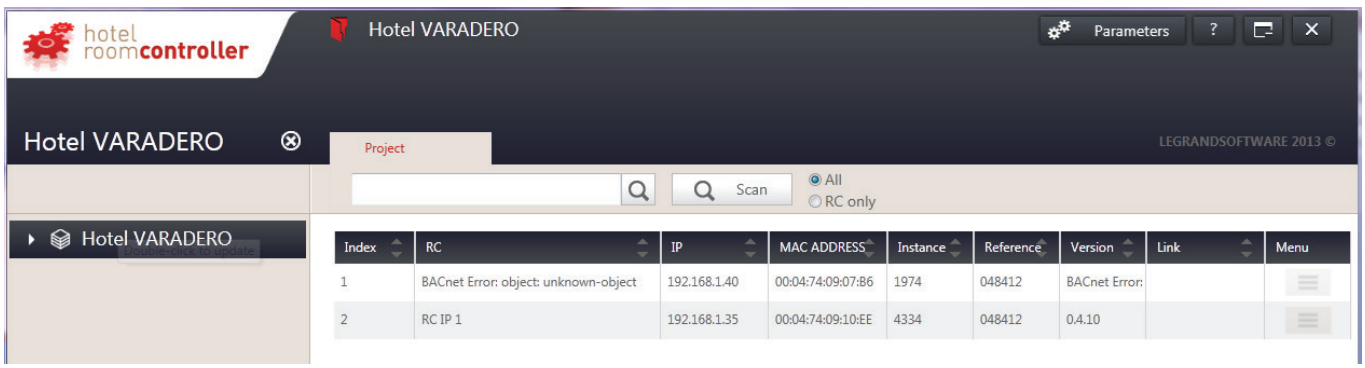
1 Open a cmd.exe window

2 Type "IPCONFIG"



3 You can check the laptop IP address. Make sure you are in the same group of IP addresses as the peripheral.
For example: if the controller address is 192.168.1.xx, the laptop should be in 192.168.1.yy.

■ Step **2**: Run a scan of the configuration software



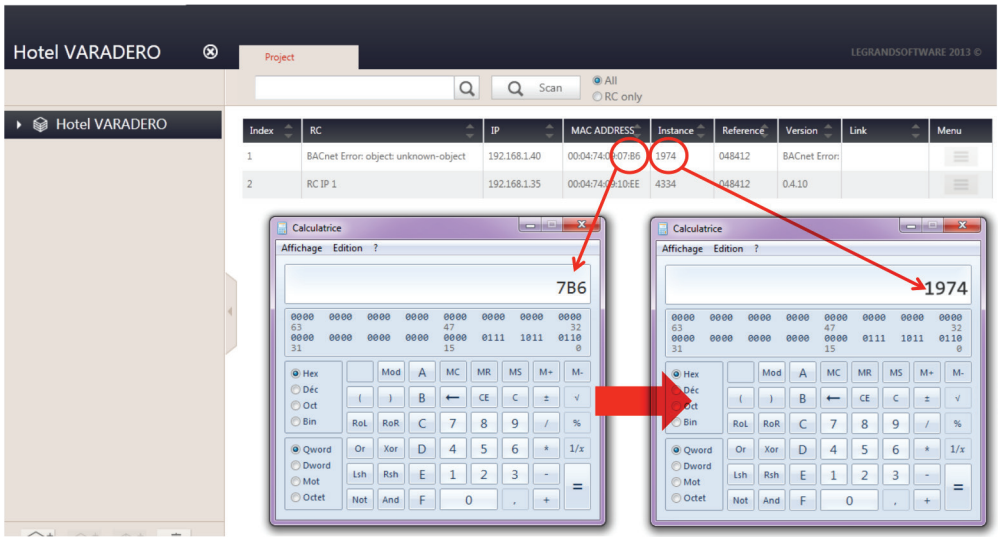
When you have run a scan with the configuration software, you may find a few errors! : BACnet Error object

These errors can occur for one of 2 reasons:
- 2 controllers with the same BACnet ID
- 2 controllers with the same IP address

Caution, when 2 controllers have the same IP address or the same BACnet ID, the scan only brings up one peripheral

LEVEL 2 DIAGNOSTICS (ONLINE FUNCTION) (CONTINUED)

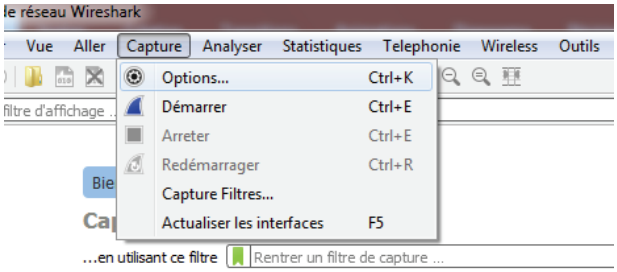
■ Step **3**: Check compatibility of the MAC address/BACnet ID



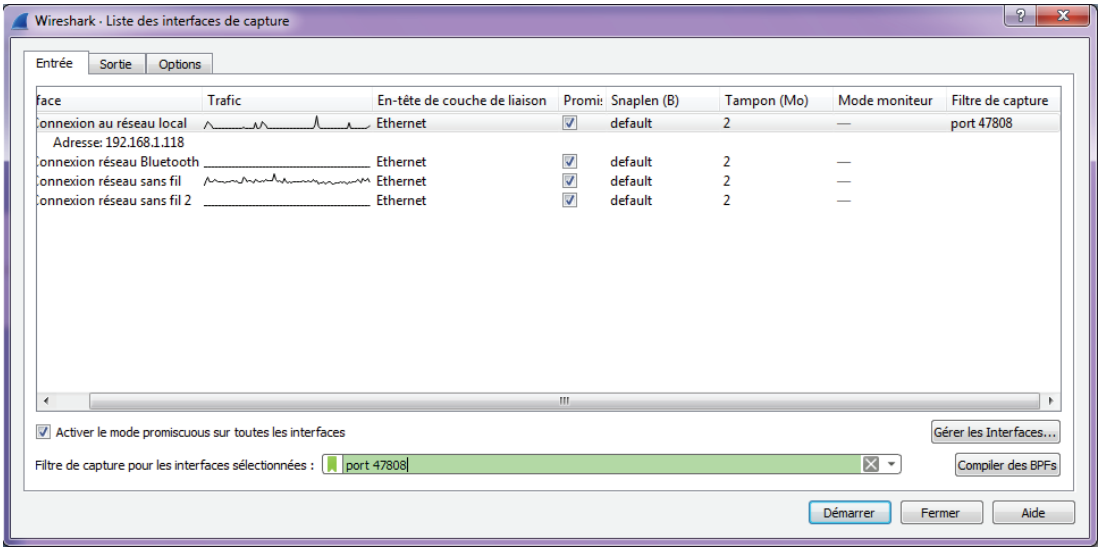
1. Take the last 4 characters of the MAC address: 07B6 in the example
2. Type these characters into the calculator in hexadecimal mode
3. Convert to decimal mode => this will give you the BACnet ID: 1974 in the example
   => this means that the BACnet ID 1974 is correct for the controller with the MAC address...: 07:B6

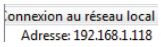
■ Step **4**: Scan the IP addresses (via the Wireshark program)

1. Download the Wireshark program (a free version is available on the WEB)
2. Install Wireshark
3. Launch Wireshark
4. Open the Capture/Options tab



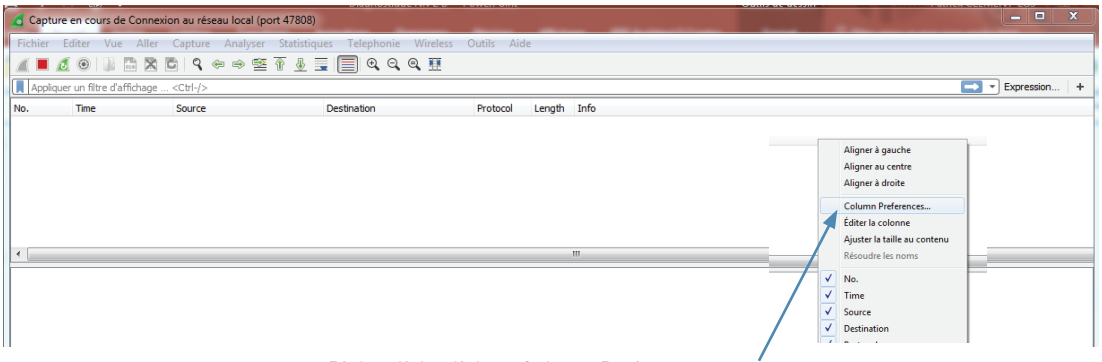
■ Step **4**: Scan the IP addresses (via the Wireshark program) (continued)



5 Select the local network card 

6 Enter the BACnet port (capture filter): port 47808

7 Launch the scan 

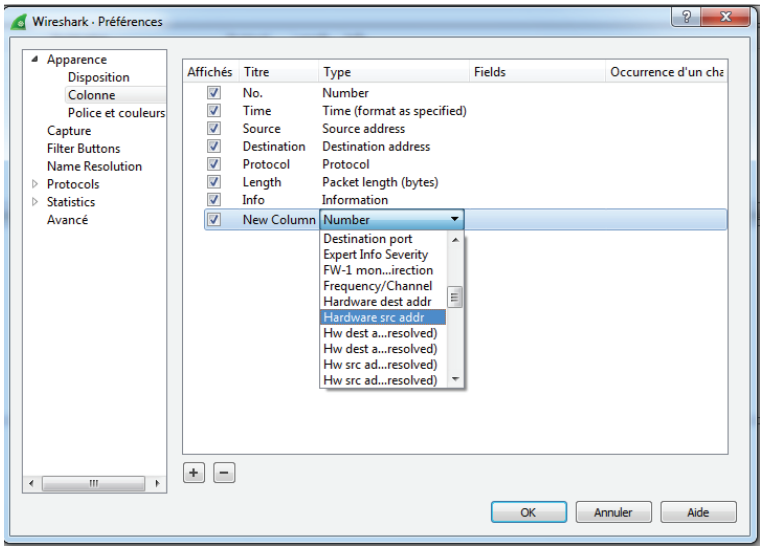


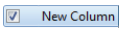
Right-click: click on Column Preferences...

8 Add a new column – this opens a pop-up window.

LEVEL 2 DIAGNOSTICS (ONLINE FUNCTION) (CONTINUED)

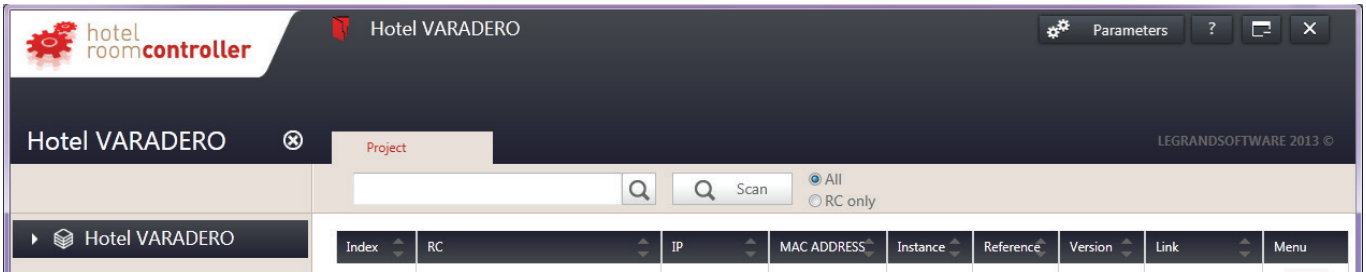
■ Step **4**: Scan the IP addresses (via the Wireshark program) (continued)



9 Add a new column 

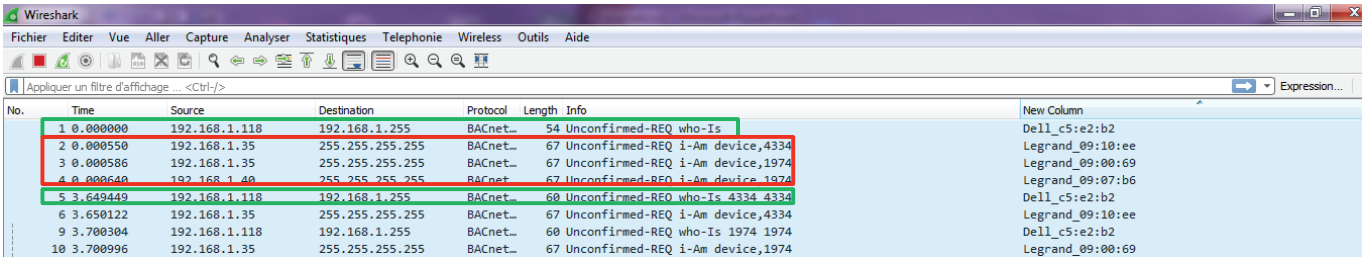
10 Double-click on Number 

11 Select hardware_src_address 

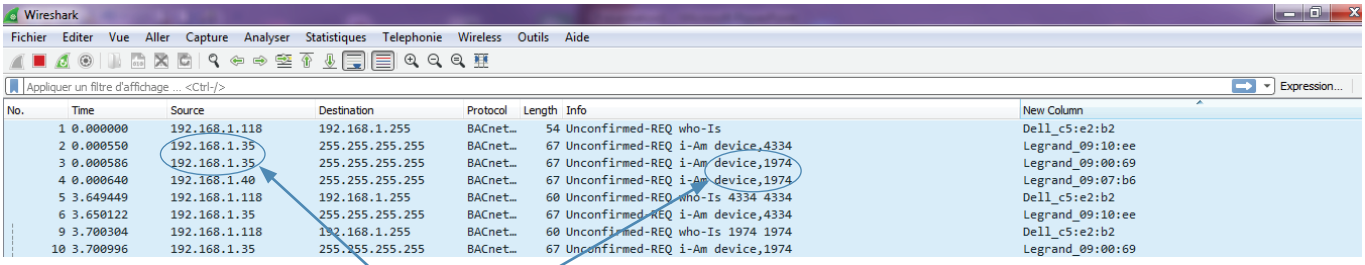


12 Launch the scan in the configuration software 

■ Step **4**: Scan the IP addresses (via the Wireshark program) (continued)



You can see the result between 2 of the laptop addresses (green rows)
Between these 2 rows, you will find the list of all controllers connected to the network (red rows – there are 3 controllers in our example)



You can see:
. 2 controllers with the same IP address
. 2 controllers with the same BACnet ID

1974 —OK→ 07 b6

1974 —NOK→ 00 69

So you can now check whether there are 2 controllers with the same IP address or the same BACnet ID

13 Check the list of IP addresses with the IP network administrator (the IP network administrator MUST give you the list of available IP addresses for the controllers in every room)

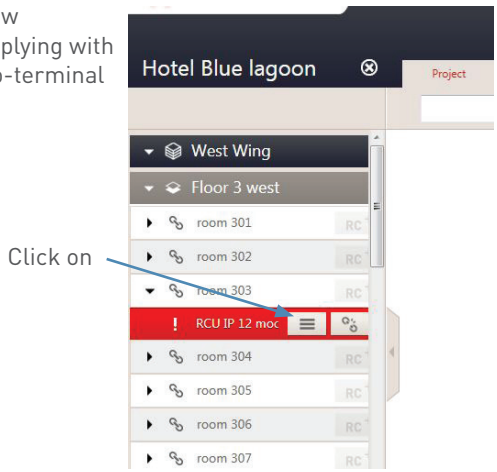
MAINTENANCE OF ROOM CONTROLLER AND BUS PERIPHERALS

This section explains how to replace a room controller or a faulty BUS peripheral. Mechanical peripherals are not programmed. To replace them, the terminal-to-terminal wiring must be correct.

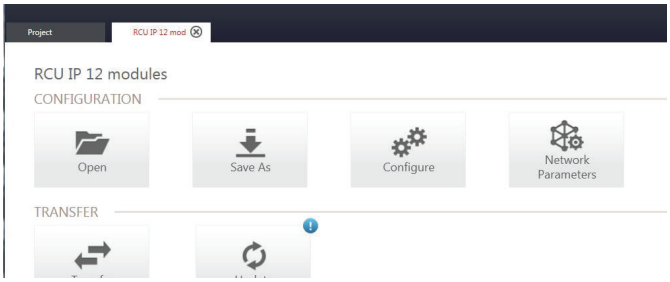
1. Replacing the room controller

a. Connect the new controller, complying with the terminal-to-terminal wiring.

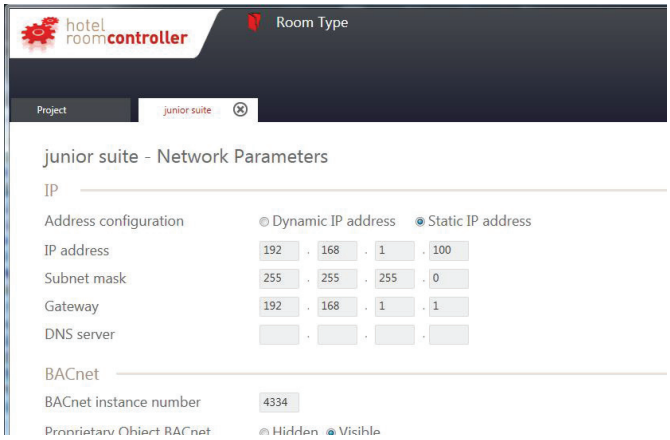
b. Open the room configuration file.



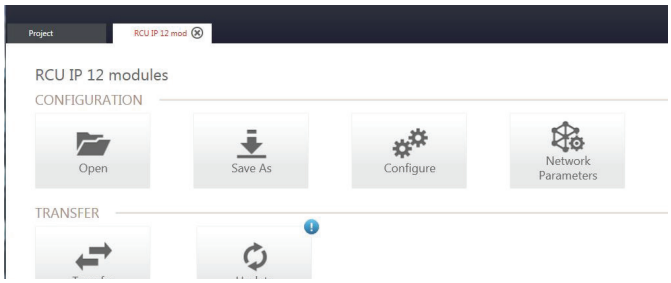
c. Go into "Network Parameters".



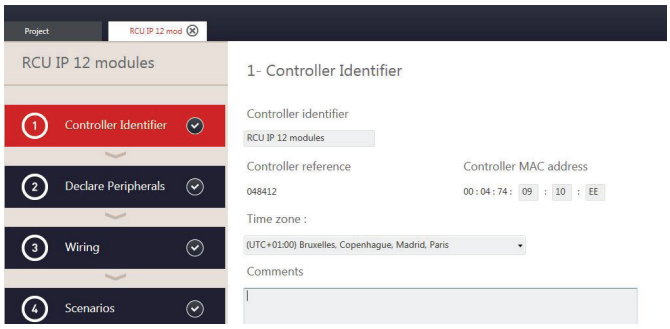
d. Record the BACnet ID number (1974 in the example).



e. Return to the modules screen and go into "Configure".

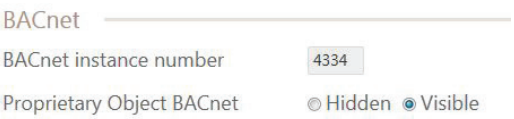


f. Update the MAC address of the old controller with that of the new one.

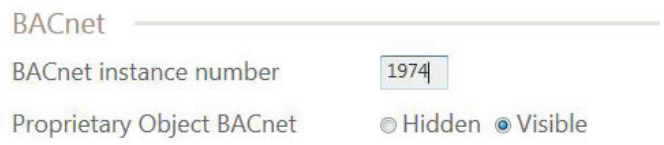


Then return to the modules screen by clicking "Menu".

g. Return to "Network Parameters". The BACnet ID has automatically been updated in line with the new MAC address.



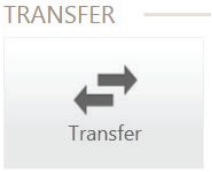
To retain the links to the BMS/supervisor, you need to put in the old BACnet ID number, as recorded in step b.



Then return to the modules screen by clicking "OK".

1. Replacing the room controller (continued)

h. Transfer the room configuration to the controller then test that the room works.



i. Update the MAC address in the "Hotel construction progress follow-up" file.

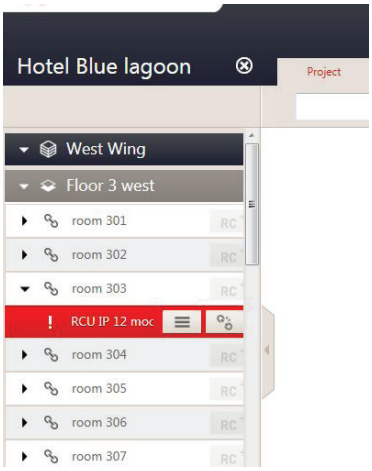
st Wing	Floor 26	302	standard king size bed	ID SCS device 7	0033DA93
st Wing	Floor 27	303	standard king size bed	MAC address	00:04:74:09:06:B7
st Wing	Floor 28	303	standard king size bed	ID BACNET	1974
st Wing	Floor 29	303	standard king size bed	IP Address	192.168.1.3
st Wing	Floor 30	303	standard king size bed	Sub MASK	255.255.255.0
st Wing	Floor 31	303	standard king size bed	IP gateway	192.168.1.1
st Wing	Floor 32	303	standard king size bed	ID SCS device 1	002F3AAC
st Wing	Floor 33	303	standard king size bed	ID SCS device 2	00EF34DE
st Wing	Floor 34	303	standard king size bed	ID SCS device 3	003EE538
st Wing	Floor 26	302	standard king size bed	ID SCS device 7	0033DA93
st Wing	Floor 27	303	standard king size bed	MAC address	00:04:74:09:10:EE
st Wing	Floor 28	303	standard king size bed	ID BACNET	1974
st Wing	Floor 29	303	standard king size bed	IP Address	192.168.1.3
st Wing	Floor 30	303	standard king size bed	Sub MASK	255.255.255.0
st Wing	Floor 31	303	standard king size bed	IP gateway	192.168.1.1
st Wing	Floor 32	303	standard king size bed	ID SCS device 1	002F3AAC
st Wing	Floor 33	303	standard king size bed	ID SCS device 2	00EF34DE
st Wing	Floor 34	303	standard king size bed	ID SCS device 3	003EE538

Do not change the BACnet ID as it is this ID number which creates the link to the BMS/supervisor.

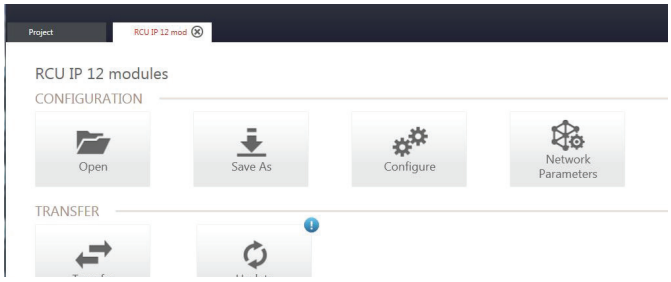
2. Replacing a BUS peripheral

a. Replace the BUS peripheral.

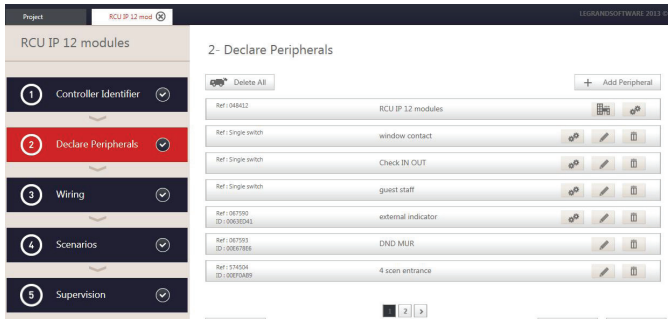
b. Open the room configuration file.



c. Go to "Configure".



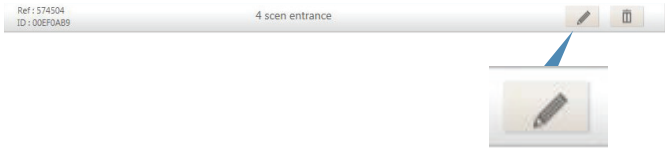
d. Go to step 2.



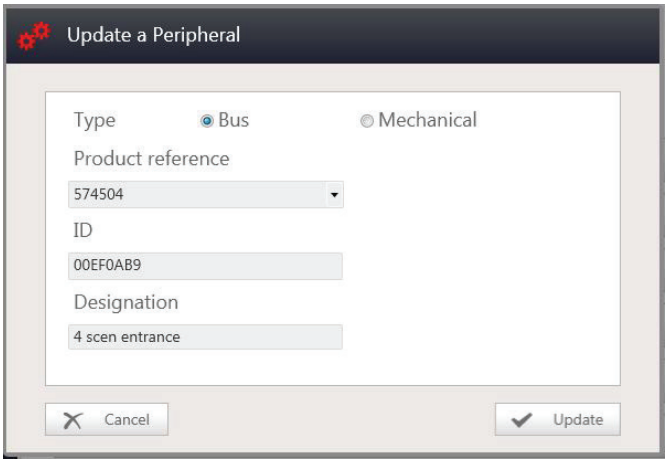
MAINTENANCE OF ROOM CONTROLLER AND BUS PERIPHERALS (CONTINUED)

2. Replacing a BUS peripheral (continued)

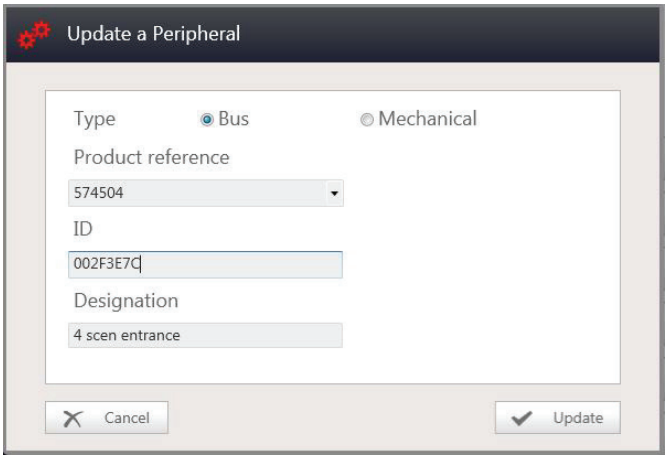
e. Find the BUS peripheral to be replaced and click on the pencil.



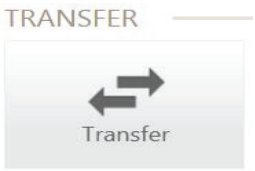
f. A window opens.



g. Update the peripheral ID number and click "Update".



h. Return to the modules screen and send the configuration to the peripherals.



Then test the new peripheral.

i. Update the BUS peripheral ID number in the "Hotel construction progress follow-up" file.

st Wing	Floor 30	303	standard king size bed	Sub MASK	255.255.255.0
st Wing	Floor 31	303	standard king size bed	IP gateway	192.168.1.1
st Wing	Floor 32	303	standard king size bed	ID SCS device 1	002F3AAC
st Wing	Floor 33	303	standard king size bed	ID SCS device 2	00EF34DE
st Wing	Floor 34	303	standard king size bed	ID SCS device 3	003EE538
st Wing	Floor 35	303	standard king size bed	ID SCS device 4	00EF0AB9
st Wing	Floor 36	303	standard king size bed	ID SCS device 5	003E5665
st Wing	Floor 37	303	standard king size bed	ID SCS device 6	002F3D33
st Wing	Floor 30	303	standard king size bed	Sub MASK	255.255.255.0
st Wing	Floor 31	303	standard king size bed	IP gateway	192.168.1.1
st Wing	Floor 32	303	standard king size bed	ID SCS device 1	002F3AAC
st Wing	Floor 33	303	standard king size bed	ID SCS device 2	00EF34DE
st Wing	Floor 34	303	standard king size bed	ID SCS device 3	003EE538
st Wing	Floor 35	303	standard king size bed	ID SCS device 4	002F3E7C
st Wing	Floor 36	303	standard king size bed	ID SCS device 5	003E5665
st Wing	Floor 37	303	standard king size bed	ID SCS device 6	002F3D33

STANDARD BACNET OBJECTS

Ask the customer care centre or your sales representative for the list of BACnet objects.

Function	Name	Object	Property	Instance	Type	Product
Room	Presence	Binary Input	Present Value	0	Read only	SCS or Virtual Keycard
	PMS	Binary Value	Present Value	14	Read only	PMS
	Power circuit	Binary Value	Present Value	0 to 3	R/W	Room Control
	Lighting circuit	Binary Value	Present Value	4 to 11	R/W	Room Control
	Roller Shutter	Multistate Value	Present Value	0 to 1	R/W	Room Control
Energy Management	Consumption	Analog Input	Present Value	0 to 7	Read only	Room Control
	Σ Energy	Analog Input	Present Value	9	Read only	Room Control
	Green Sensitive	Binary Input	Present Value	1	Read only	Choice of control unit or scenario
	Consumption reset	Binary Output	Present Value	0	Write only	Room Control
Temperature regulation	Heating mode	Multistate Value	Present Value	2	R/W	SCS thermostat
	Ambient T°	Analog Input	Present Value	8	Read only	SCS thermostat
	Reference T°	Analog Value	Present Value	0	R/W	SCS thermostat
	Summer/Winter	Multistate Value	Present Value	3	R/W	SCS thermostat
Service	Please make up Room	Multistate Value	Present Value	4	R/W	Room control or DND/SCS indicator &
	Do not disturb					
	Room service	Binary Value	Present Value	12	R/W	Room Control
	SOS alarm	Binary Value	Present Value	13	R/W	Room Control
Scenarios	Room Scenario 1	Binary Output	Present Value	1	Write only	Room Control
	Room Scenario 2	Binary Output	Present Value	2	Write only	Room Control
	Room Scenario 3	Binary Output	Present Value	3	Write only	Room Control
	Room Scenario 4	Binary Output	Present Value	4	Write only	Room Control
	Room Scenario 5	Binary Output	Present Value	5	Write only	Room Control
External Scenarios	External Scenario 1	Binary Output	Present Value	6	Write only	Room Control
	External Scenario 2	Binary Output	Present Value	7	Write only	Room Control
	External Scenario 3	Binary Output	Present Value	8	Write only	Room Control
	External Scenario 4	Binary Output	Present Value	9	Write only	Room Control
	External Scenario 5	Binary Output	Present Value	10	Write only	Room Control

Rules for using variables for supervision
Input variable: Read only
Output variable: Write only
Value variable: Read/Write

TROUBLESHOOTING

COMMON ERRORS

Ⓐ When the Configure button has an exclamation mark in a red circle alongside, it means one of the configuration steps is invalid.

As long as a configuration is invalid, the Transfer button remains greyed-out on the modules page.

- 1. Room identifier not filled in

The Room identifier field, found in step 1 of the Controller configuration, is compulsory and only accepts alphanumeric characters. See the Step 1 section.

- 2. Controller MAC address not filled in or in incorrect format

The Controller MAC address field, found in step 1 of the Controller configuration, is compulsory. The MAC address is recorded on the Controller casing in the format 00:04:74:XX:XX:XX. If the MAC address is invalid, the field appears in red. See the Step 1 section.

- 3. Peripheral ID not filled in

A communicating peripheral must always have an ID. Its ID number can be found on the product label – an 8-character string in hexadecimal format. This is unique and the field will appear in red until the correct format has been entered. See the Step 2 Add Peripheral section.

- 4. Control type peripheral missing

A Controller must always have a control type peripheral. See the Step 2 Add Peripheral section.

- 5. No scenario created

For a Controller configuration to be valid, a scenario must be present in it.
See the Step 4 Add Scenario section.

- 6. Error message after sending the configuration to the controller

- Check the BUS wiring of the communicating peripheral
- Check the peripheral ID

Ⓑ Error during transfer/during a scan

- Check the connection.
- Check that the MAC address corresponds to that of the peripheral.
- If the computer is connected directly to the controller, check the network card configuration (configure it as fixed IP if the controller is fixed IP – the first 3 digits of the IP address must be common/configure it as dynamic if the controller is dynamic IP).
- Check the computer's firewall and antivirus settings.

Tip: run a scan before transferring a configuration, to see whether the controller is connected to the computer – if a parameter has changed on the computer network card, the network card must be re-validated by clicking

and validating the card.

Ⓒ Thermostat errors: when the screen displays the message "E" followed by a number, the thermostat is signalling an error condition.

The errors which can occur are described below:

E1	No response from the pump.
E2	No response from the actuator.
E3	No response from the auxiliary probe.
E4	Incorrect temperature sensor operation.
E5	Internal device error.

In the event of "E1", "E2" and "E3" errors, the thermostat stays in the present mode and the displayed error condition can be cleared (by pressing any button). If the error condition persists, after 15 minutes, the error page is displayed again.

In the event of "E4" and "E5" errors, the thermostat changes to OFF mode and any action by the user, for example pressing the buttons, is blocked.

Below is an example of an error page (*).

(*) NOTE: If either the message "E4", or a very different temperature to that seen after the initial installation, is displayed, wait for at least 5 hours before checking operation again or recalibrating.

Ⓓ Controller IP address: by default (factory mode) is in dynamic IP
IP address: 169.254.254.169

GLOSSARY

BMS: Building Management System

GUI: Guest User Interface

GRMS: Guest Room Management System

HVAC: Heating Ventilation and Air Conditioning

PMS: Property Management System: hotel booking/billing software

RMS: Revenue Management System: software for optimising hotel management, including staff management

DND: Do Not Disturb

MUR: Make Up Room

RGS: Room Generic Service: (extra service defined by the hotel proprietor, for example: collecting laundry)

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