



ABB KNX solutions for hotel applications
Solutions designed for an interconnected
and safe tomorrow

Automation means integration

From a logic of individual devices to a system-based logic

KNX is the worldwide standard for Home & Building Automation, effectively usable in all types of buildings with multiple advantages. In particular, ABB's KNX-based solutions are perfectly adaptable not only to the needs of hotel industry operators, but to the hospitality sector in general (apartment hotels, B & Bs, holiday apartments, tourist farm accommodations and resorts).

Advantages for hotel applications



Maximum comfort for guests: manage all hotel functions via building automation (temperature control, lighting control, shutters and blinds control, real-time monitoring of energy consumption, etc.).



Ultra-easy building monitoring and maintenance thanks to a central display and control point (for example, from the front desk via panel or supervisory software) for the entire system.



Notable reduction in operating and maintenance costs (e.g. thanks to the centralized display of the most important system parameters and the real-time reporting of faults and problems).



The presence of a single low voltage bus, decoupled with respect to the power cables yet installable in the same conduits, allows not only to considerably reduce the cabling complexity and the design and installation times, but the related costs as well.



An intelligent building management, possible thanks to KNX building automation solutions, ensures considerable energy savings, both as regards lighting and the use of the heating and cooling system.



High flexibility afforded by the ability to reprogram devices - and to easily add new ones - while in operation, even months or years after installation to meet changing needs, to realize new applications, to successfully complete renovations and extensions.



Technology means flexibility

Transponder technology for innovative applications in the hotel and commercial sectors

Based on transponder technology, and exploiting their flexibility and security, ABB's solution for access control is fully compatible with the KNX-standard Home & Building Automation System.

The access control system is particularly suited for hotel applications and allows construction of flexible systems with advanced functions to optimize the services provided to hotel guests.

Access control can also be used in the residential or commercial sector: office buildings, laboratories, common areas in apartment buildings, etc..

The flexibility of ABB's access control solution allows device programming and operation also in stand-alone mode, without connection to the KNX bus system.

Advantages of the access control system



Simplified and centralized management

of all hotel functions from the front desk via the supervision software:

- check-in/check-out;
- card programming/cancellation
- front desk monitoring of room state (room cleaning, mini bar restocking required, maintenance request, unusable room);
- front desk monitoring of room loads (e.g. temperature control).



Energy efficiency and cost savings

- Activation of the room's electrical devices (lighting, TV, etc.) only when occupied by the guest.
- Intelligent and optimized air conditioning management (comfort mode activation at guest check-in and during room occupancy; transition to standby/OFF when room is unoccupied and at check-out).



Safety

- Transponder card for room access.
- Front desk monitoring of guest and hotel staff room occupancy.
- Front desk display of room alarms and messages.



Additional guest services

- Managing access to any paying areas (wellness or fitness center).
- Managing common areas (conference rooms, car park/parking space, etc.).

Access means service

A single card for many simple to integrate and easy to program functions

Access control

The **transponder reader** is the basic component of the access control system; it is installed outside rooms and other areas with restricted access. Swiping the appropriate card over the reader (equipped with an electronic circuit that transmits the unique access code) allows or denies access in relation to the authorization level. Like all ABB's range of access control devices, the transponder reader is equipped with three binary inputs and two relays: one is used to open the door, while the other can activate the courtesy light for a programmable time.

Millenium wiring accessories range



Occupancy detection

The **transponder holder**, for flush-mounting inside the room, is equipped with a slot in which the guest can insert the card upon entering the room. Thus, in addition to controlling activation of the room electrical devices (lighting, air conditioning, TV, etc.), room occupancy is notified at supervisor level (e.g. supervisor software installed on front desk PCs). Using master cards inserted in the transponder holder slot, hotel staff can notify the room status (room cleaning, minibar restocking required, maintenance request, unusable room) to the front desk PC (via the same supervisor software).

Millenium wiring accessories range



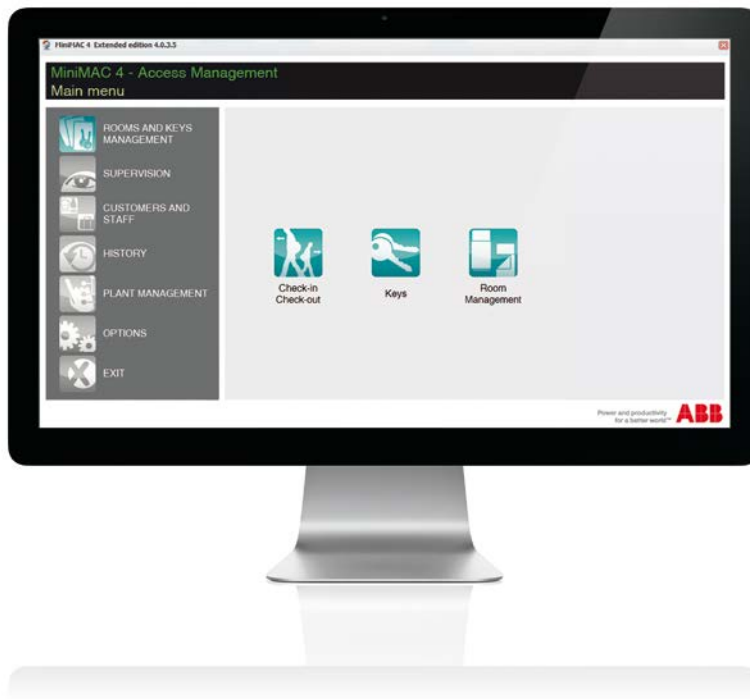
Card programming

Transponder card programming and device configuration can be performed from the front desk or from another location where a programmer module is installed, connected to a PC running ABB's Minimac access control supervisor software. To make programming/cancellation operations easier, the transponder programming device is equipped with four LEDs that allow the operator to immediately view the status of the operation being performed.

Millenium wiring accessories range



System management and configuration software



MiniMAC software features



Access control (management of keys, groups, time bands and staff cards, definition of access to common areas, etc.).



Room state monitoring.



Guest check in/check out.



Front desk room load monitoring.



Management of guest and employee databases.



Front desk management of room climate.



Occupancy and access records and statistics.



Software configuration capability for non-hotel applications.



Front desk monitoring and supervision.

Interfacing with hotel management software (PMS)

MiniMAC allows integration with hotel management software applications, usually called PMS (Property Management System).

If a hotel is equipped with PMS software and MiniMAC monitoring and configuration software for access control, the two applications can communicate with each other, each performing its own specific function.

- PMS software allows the proprietor and reception staff to manage all the information concerning booking, customer records, billing, management of room and services fees, etc.
- MiniMAC software for the configuration of the access control system (TAG programming, definition of access to rooms and readers, load management, climate control from the reception, display of alarms from the reception, ...)

The interfacing between the two systems allows you to enter the customer in the database from PMS software, which will recall the necessary check-in/check-out and transponder TAG programming operations on MiniMAC software.

Check-in operations are performed by Fidelio/Protel which communicates with MiniMAC through a two-clicks Pop-up in the tray bar of the PC (MiniMAC software is necessary, installed in background, but cannot be used by staff at reception).

MiniMAC by default offer two plug-in available for granting interfacing with two important PMS software:

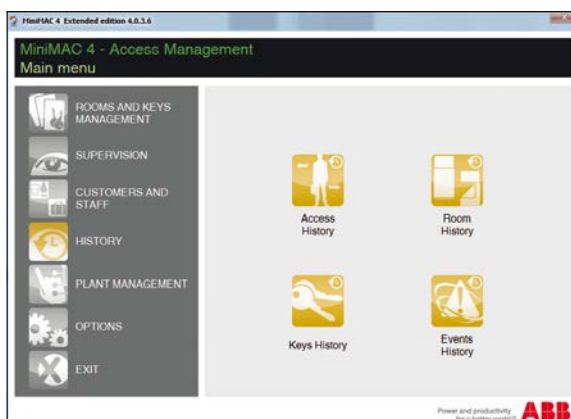
- Micros Fidelio
- Protel



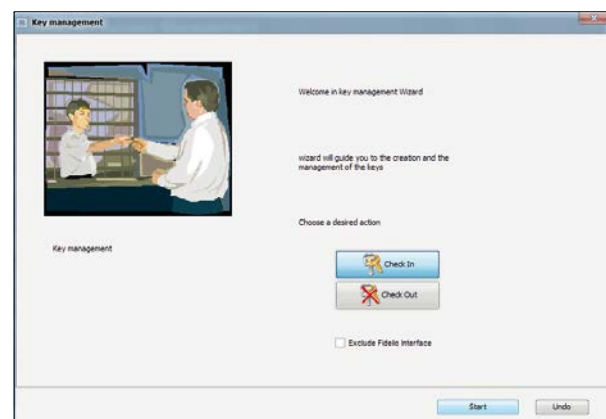
ABB Popup - card insertion



ABB Popup - card programming



Access history menu



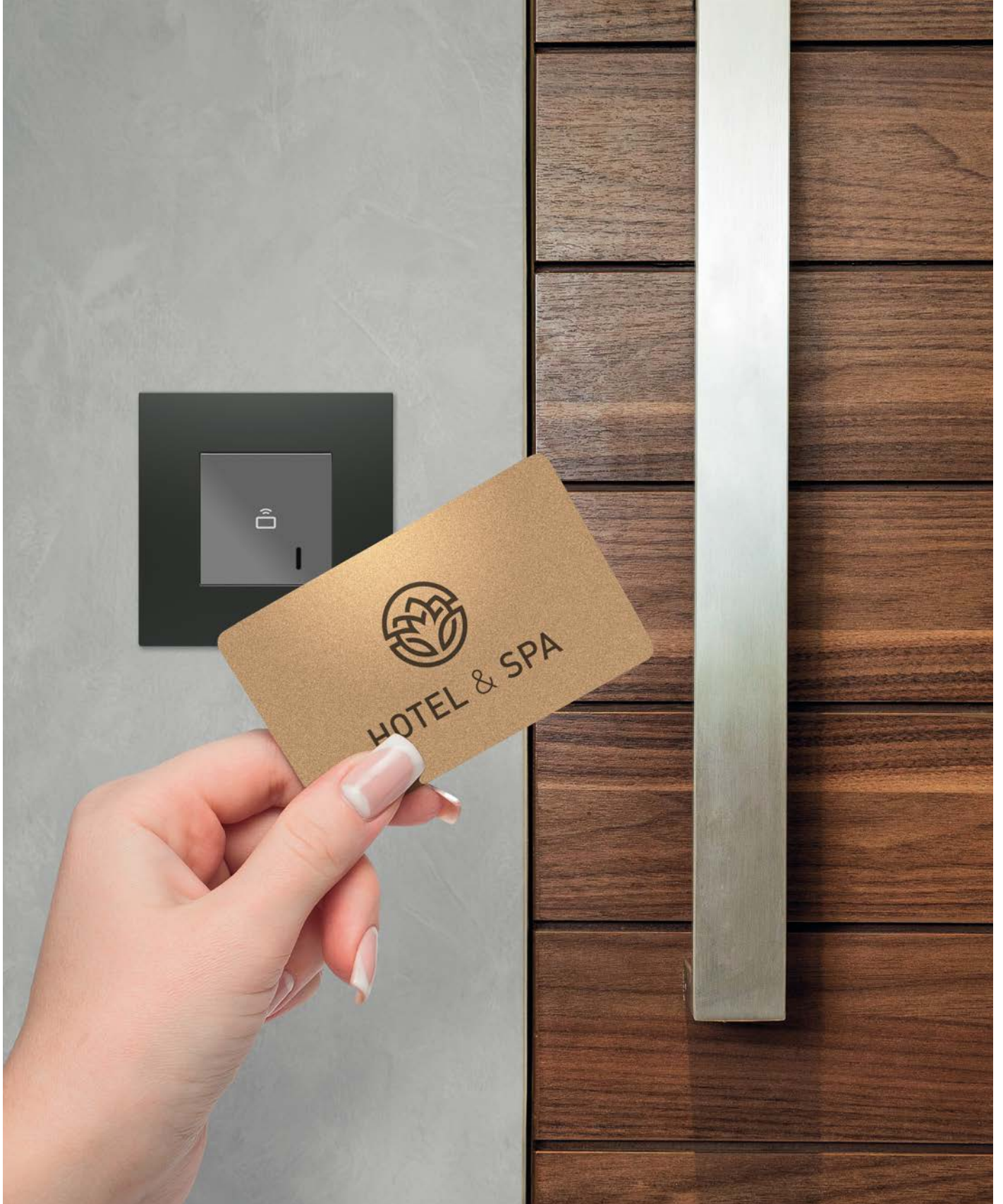
Check-in and Check-out

Value-added services for today's and tomorrow's hospitality industry

ABB's Home & Building Automation Systems for hotel applications offer guests an all-round captivating experience, providing also significant operating and financial advantages.

Suitable for all types of hotels, ABB's Home & Building Automation systems offer a perfect match of functionality and savings, of safety and comfort, of protection and efficiency. All with the highest levels of flexibility and reliability. Thanks to ABB's Home & Building Automation solutions, the room's electrical devices can be enabled and activated only when the transponder reader signals the presence of a guest or of service staff, avoiding any waste of energy and resources. Lighting, air conditioning, shutters and blinds, as well as the minibar and the TV, are always within reach and can be managed with flexibility and efficiency, adapting the features to different needs.

Whether on holiday or on business, a guest can be tracked and "coddled" during his entire stay, and offered services that promote a high degree of customer satisfaction and loyalty. In the room, the fitness area, as well as in the business center or in the parking area, the presence of guests is easily, comfortably and efficiently trackable. The openness and flexibility of the KNX-standard Home & Building Automation solutions also allow future integration with intrusion detection and fire protection platforms, ensuring total protection for guests, staff and facilities. Energy management and efficiency, services and design, comfort and technology: ABB's specific solutions for hotel applications leave nothing to chance.



An access control installation example for hotel use

The access control system is based on the KNX technology, recognized worldwide as the main open standard for control systems in all types of industrial, commercial and residential buildings.

The system design requires the KNX project to be developed using ETS (Engineering Tool Software), with the inclusion of all devices needed to perform the required functions; the access control system functions must be configured using the MiniMAC management software, designed to manage access

and monitor all passages through the access points.

All access control devices are equipped with two freely programmable relay outputs and three digital inputs, which significantly increase the system's flexibility. While the outputs can be used for load control, the digital inputs allow connection of the contacts of devices such as the rods bathroom alarm pull cords, buttons for opening/closing windows and shutters, lighting control switches.

Basic configuration

The access control system can be adapted to all hotel types.

The functions required in a typical hotel are:

- room access with transponder card;
- access to conference rooms and offices;
- room load control;
- guest and hotel staff room occupancy control;
- cooling system management;
- fitness center access.

Devices for the functions

The following devices are required to perform these functions:

- access control transponder reader, to be installed outside guest rooms, conference rooms and offices;
- transponder pocket for detecting a guest's presence and for activating utilities, to be installed inside guest rooms;
- transponder reader, to be installed outside the fitness center;
- transponder card programmer.

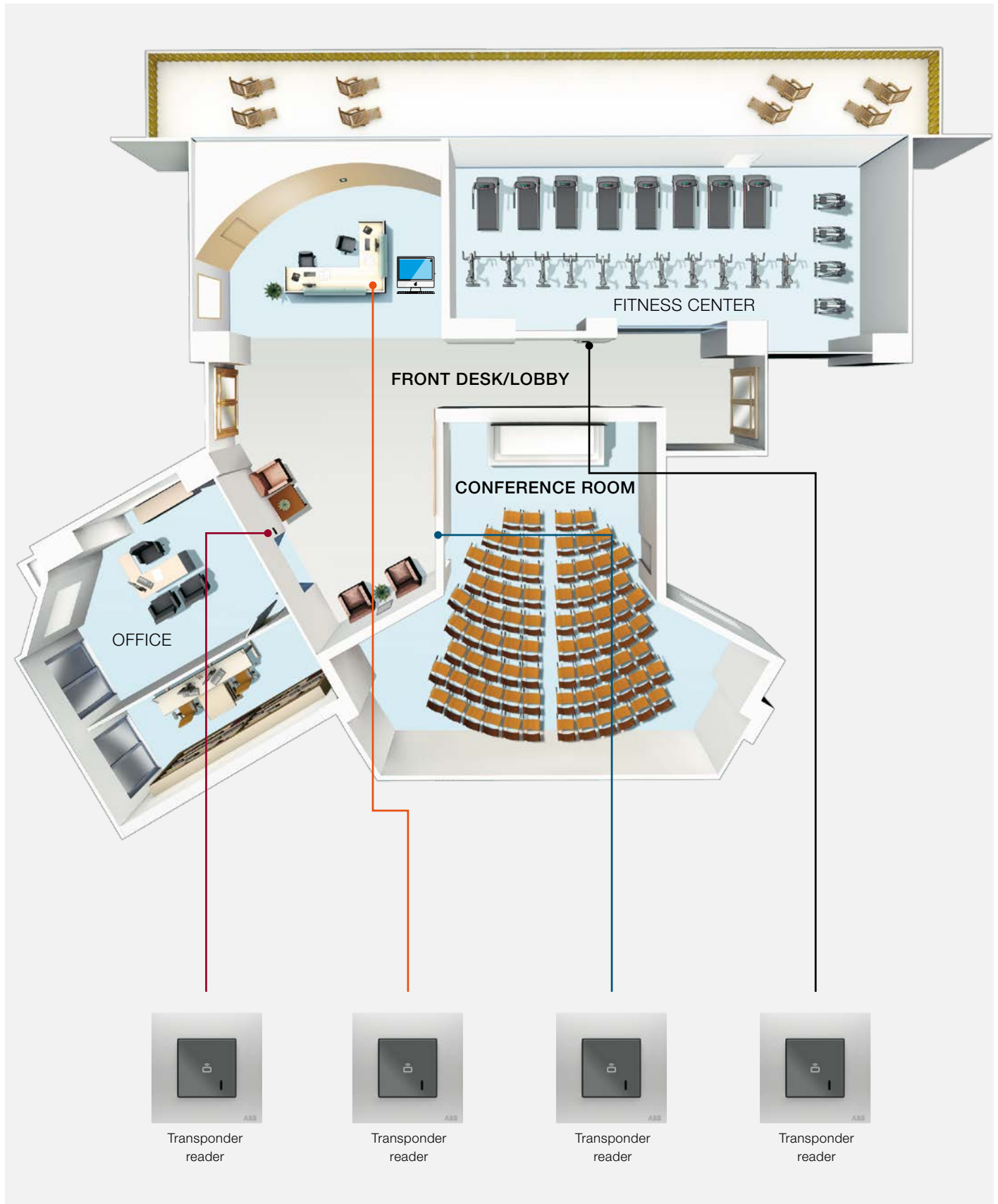
Example of a hotel facility

The example below applies to a hotel with 50 rooms on three floors.

The front desk/lobby and the fitness center are located on the ground floor, with guest rooms on the first and second floors.

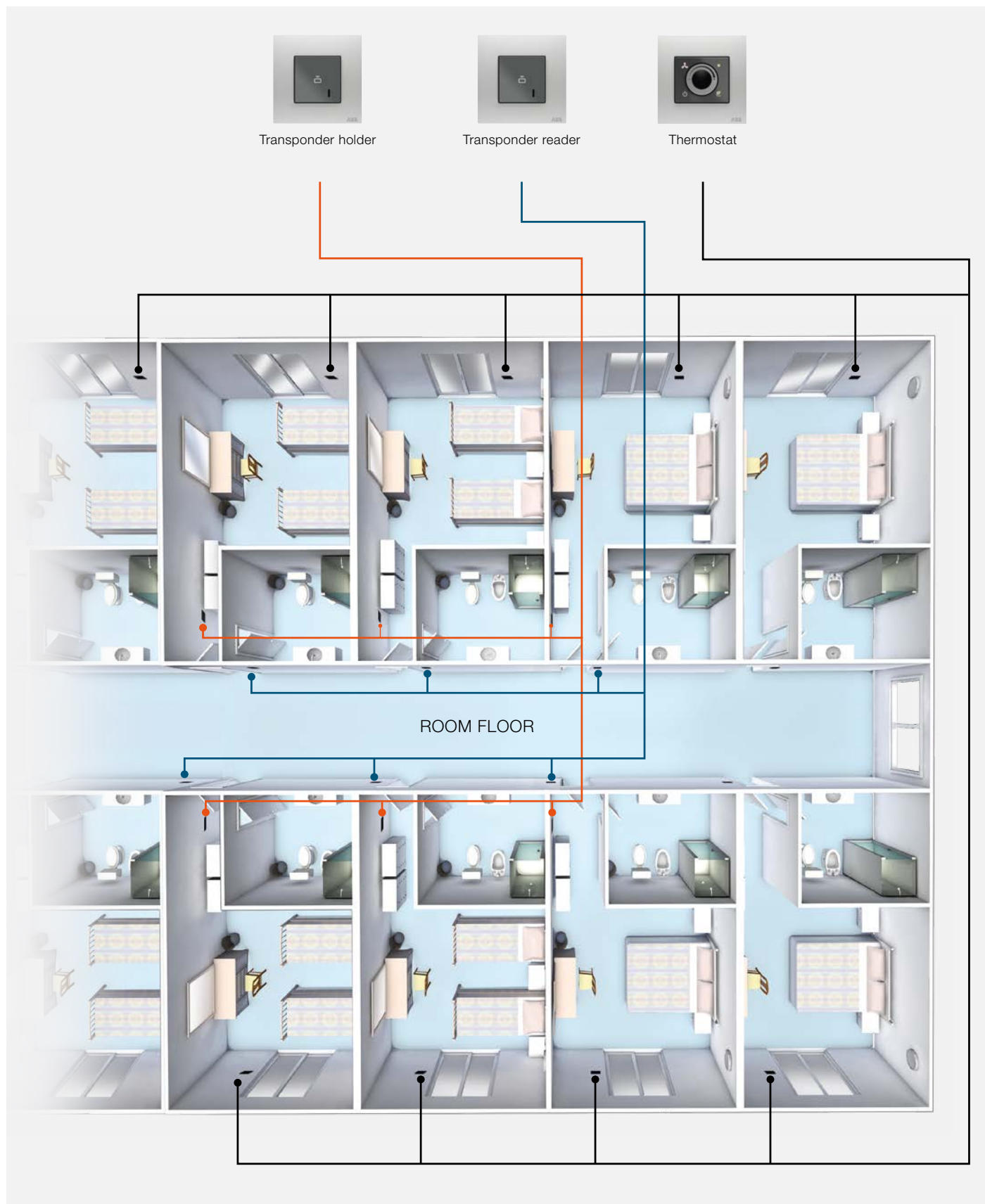
Access control in hotel applications

Placement of ground floor devices



Access control in hotel applications

Placement of guest room floor devices



Access control in hotel applications

Example of a components connection diagram

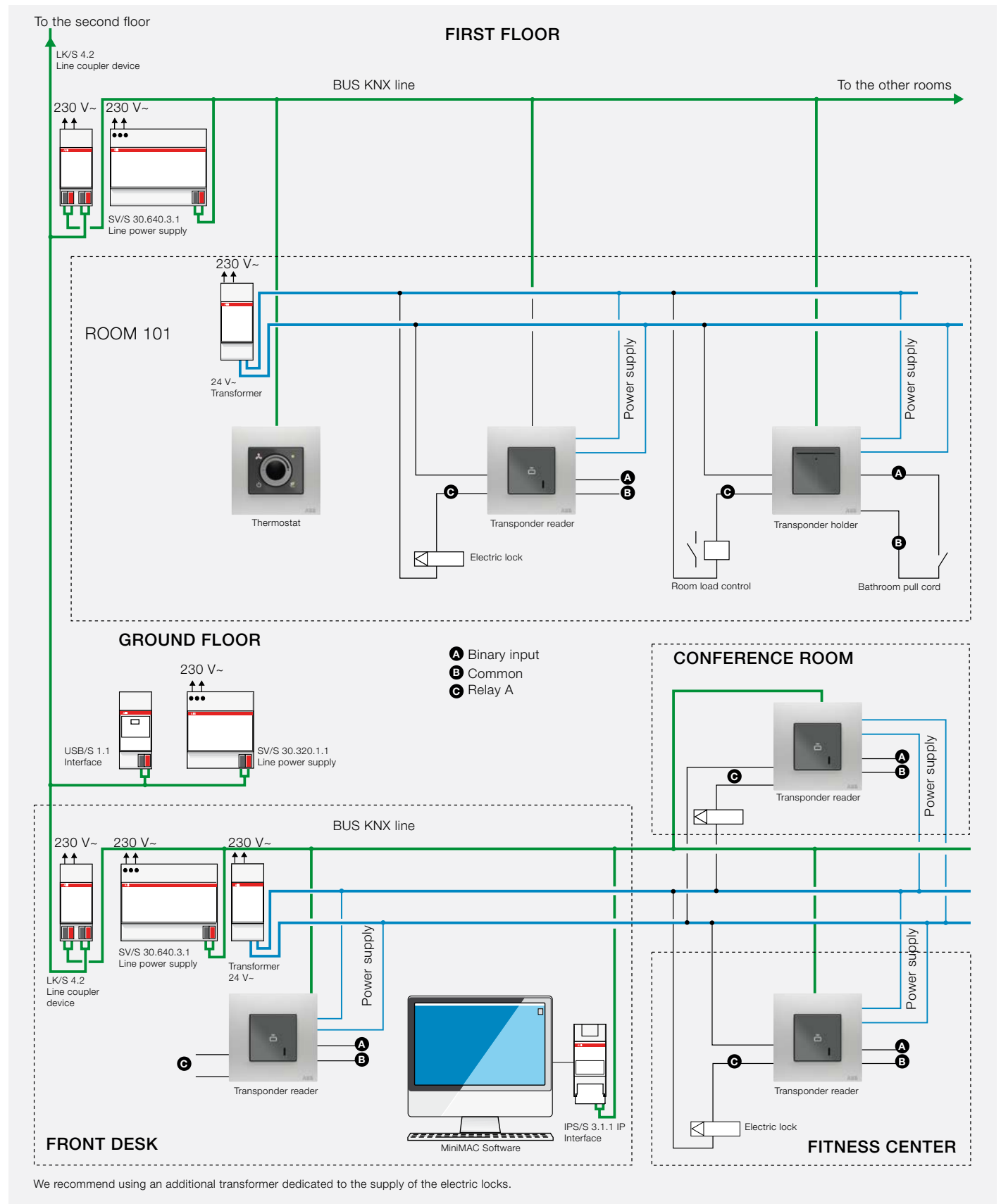


ABB KNX Building Automation Solutions

ABB's experience at the hotel industry's service

ABB technology for a modern and exclusive hotel means easy access and customized services for guests; reliability and installation flexibility for operators.

The primary objective of hotel operators is to continuously raise the service quality offered to guests, because the function of a modern hotel, with just a few rooms or able to host several hundred people, goes beyond the traditional role of simply providing a place for overnight accommodation. Today, hotels aim increasingly towards providing a suitable environment in which to work, rest and renew a state of physical well-being.

For this reason, hotels now tend to abandon the logic of simple conventional systems in favor of advanced technological solutions and systems that can meet these growing needs.

ABB has the knowledge, skills and products needed to integrate into a single system all equipment and facilities that may be found in a hotel.

An integration that starts from aesthetics - thanks to the elegant civil series Mylos, Élos which offer a full range of available functions - and leads seamlessly to a complete functional integration, achieved with components based on the international KNX standard, in which ABB is an industry leader.

Hotel "Top"

The first hotel in Riyadh to use ABB's intelligent room control system, the Mövenpick is a luxury property with more than 440 rooms and suites located on King Fahad Road, just two miles from the heart of the city.

Guests of the hotel - the largest in the Saudi capital - benefit from the advanced features of ABB's room management system, one of the most used in luxury facilities throughout the Middle East.

Room Master is the central device at the base of the room's electrical system. It allows guests to handle all room functions, including lighting, heating, ventilation, air conditioning and curtains.

Installed by the Nassli Company, an ABB partner, the Room Master solution is integrated in the system through a KNX-technology bus that allows the system to be expanded with a number of new additional services.

The implementation of the ABB solution offers many practical advantages. For example, the intelligent room management system ensures a double-digit percentage reduction in power consumption, while continuing to provide guests with all the services and high-level details that make the Riyadh Mövenpick Hotel one of the most popular destinations for business travelers in the region.

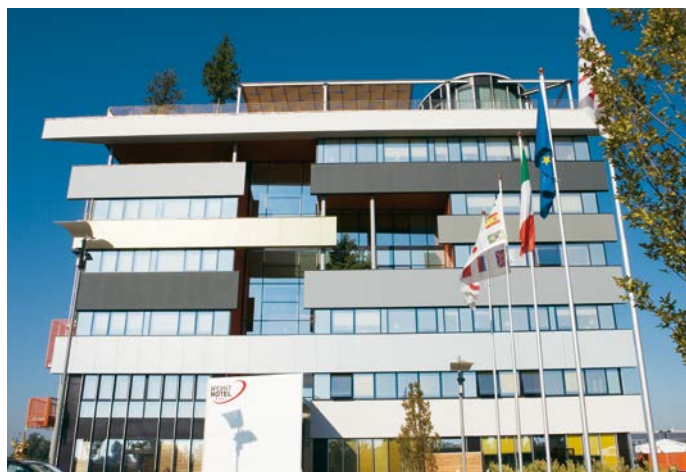


View of Riyadh

Mid and large-sized hotels

Located between Modena and Bologna, the modern iPointhotel of San Giovanni in Persiceto welcomes guests to a relaxing and hospitable ambiance in a technologically innovative facility. The hotel's functions are based on ABB's KNX i-bus building automation system and on advanced supervision and management software.

The building automation system configuration allowed the implementation of top-level automation in the various hotel systems and installations: in particular, internal, external and underground garage lighting; room temperature control and ventilation; motorized devices; movement of parking lot barriers; lobby flower bed irrigation. The 51 rooms are managed via the access control system, an integral component of the building automation system's functions, whose specific components are technically compatible with the KNX standard.



iPoint Hotel Bologna - 4-star, 51 rooms

Small hotels

The "Il Corazziere" Hotel is located in a lush countryside area and therefore the hotel owners paid particular attention to integrate the newly constructed building into the surrounding natural environment. Designed with a close eye for the real needs of guests and integrating the most modern solutions, the hotel includes a building automation system based on the international KNX standard supplied by ABB.

The building automation system provides room management using a transponder card system that allows guests to access the assigned room and to activate the lights, sockets and all other electrical devices in the room.

Temperature management is organized to obtain optimal comfort, based on pre-programmed setpoints with the possibility of a minimal local adjustment.

The complete system can be managed from the front desk through video screens that display the various indications for each room.

The building automation system controls also the lighting of the common areas: thanks to the sensors managed by the system, the brightness is kept constant throughout the day, also depending on the natural light from outside.



"Il Corazziere" Hotel, Merone (Como) - 4-star, 36 rooms

Access control

Order codes



Transponder reader

The "transponder reader" is a flush-mounting device for British Standard wall boxes, designed to realize access control systems with a communication support based on KNX bus.

It is equipped with one relay (4A @24 V AC/DC) and one input to be used for connecting external conventional card-holder (e.g. Millenium wiring accessories card-holder).

The output can be programmed in three different ways: "Linked to access control", receiving in this case switching commands from the device itself (according to transponder card validation); being a standard KNX Switch actuator output, able to be controlled by every KNX standard devices; "linked to card-holder", that means that the relay is switched according to closing/opening internal input contact available on transponder reader.

The bicolor (red-green) LED placed on the front of the device allow you to monitor device operation and can be also switched ON/OFF in the proper color according to KNX telegram (for example for DND/MUR purposes).

The transponder reader can be configured with MiniMAC software in order to behave as transponder programming device.

The transponder reader requires a 12...24 V AC/DC external power supply to ensure its operation even with bus voltage failure.

The transponder reader is available for ABB Millenium wiring accessories range.

For the list of available plates, please refer to Millenium catalogue, code 2CLC6AM006C0201.

Type	Code
TR/U 1.1	2CSY235683R2001



Transponder holder

The "transponder holder" is a flush-mounting device for British Standard wall boxes, designed to realize access control systems with a communication support based on KNX bus.

It is equipped with one relay (4A @24V AC/DC) and one binary input to be used for connecting external conventional push-button for switch, dimmer and shutter functionalities, or for example for connecting window contact or similar.

The output can be programmed as "Linked to access control", receiving in this case switching commands from the device itself (according to card insertion/removal); or being a standard KNX Switch actuator output, able to be controlled by every KNX-standard devices.

The white blinking LED placed on the front of the device allow you to monitor device operation and can be also switched ON/OFF in the proper color according to KNX. The transponder reader requires a 12...24 V AC/DC external power supply to ensure its operation even with bus voltage failure.

The transponder reader is available for ABB Millenium wiring accessories range.

For the list of available plates, please refer to Millenium catalogue, code 2CLC6AM006C0201.

Type	Code
TH/U 1.1	2CSY265232R2021



Transponder card

The transponder card uses passive transponder technology operating in radio frequency (MIFARE technology), without the need for contact between the reader and the card itself. The transponder card is read by swiping it in front of the reader at a maximum distance of 20 mm (can be reduced according to installation environment).

Type	Code
TS/T 1	2CSY259412R2041



MiniMAC - Management and configuration software

The management and configuration software ensures bidirectional communication with the access control system devices, allowing the system's configuration during its installation and its overall management and supervision.

Type	Code
Software MiniMAC Release 4.1	2CSY258202R2051

ABB's KNX range for hotel applications

Temperature control actuators

ABB offers a full range of KNX-standard products suited to meet all needs related to managing building heating and cooling systems, especially in hotel applications

where ABB's KNX solutions allow operators to obtain significant energy savings without sacrificing maximum guest comfort.

Fan coil actuators



A broad and versatile range

- FCL/S for controlling thermoelectric valve drives.
- FCA/S for controlling electromotor valve drives and 0-10 V valves.



Maximum flexibility in conditioning control

- Automatic control: based on the setpoint on the thermostat.
- Manual control: by setting the thermostat to the desired fan coil speed.



Full conditioning control

- Fan coil speed control (from 3 to 5 speed depending on the model)
- Fan coil valves control for both heating and cooling (for 2, 3 and 4-pipe systems).



Energy efficiency

- Automatic deactivation of heating/air conditioning when doors/windows are opened to optimize energy consumption.
- Thanks to the binary inputs integrated on the FCA/S.
 - Thanks to the external binary inputs for the FCL/S.



Valve control for temperature management



A broad and versatile range

- TSA/K: thermoelectric valve drives, both 24 V and 230 V.
- ST/K: electromotor valve drives.



Simple and standard control

- The TSA/K thermoelectric valve drives can be controlled either by standard SA/S switching actuators, or by specific actuators such as VAA/S and VAA/A, or by ES/S electronic actuators.
- ST/K electromotor valve drives receives commands directly on the KNX bus from the thermostat.

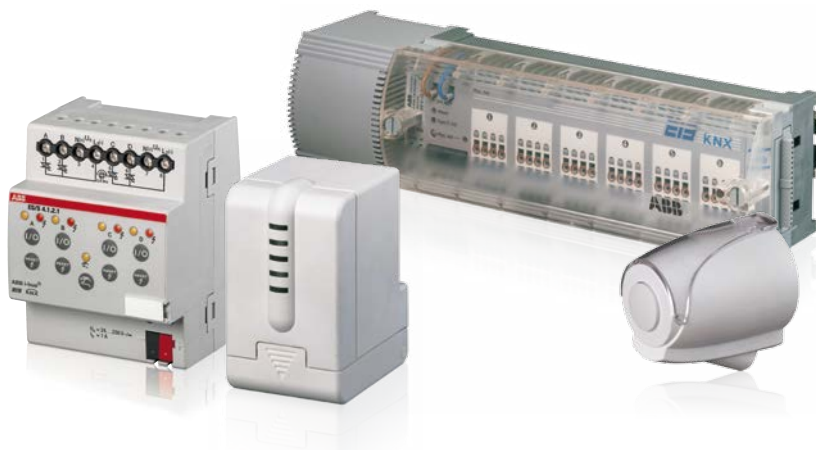


A wide variety of adapters for the main valves on the market are available for both thermoelectric valve drives and electromotor valve drives.



Energy efficiency

- Automatic deactivation of heating/air conditioning when doors/windows are opened to optimize energy consumption.
- Thanks to the integrated binary inputs on the ST/K electromotor valve drives.
 - Thanks to the external binary inputs for thermoelectric valve drives, controlled by the relative actuators.



ABB's KNX range for hotel applications

Millenium KNX

The new Millenium collection is the first metal range to incorage the KNX system, the most intelligent way of managing spaces and optimizing performance in terms of energy savings. Millenium is based on a combinable concept which creates a very comprehensive range, suitable for any types of needs. This makes it the ideal collection for all types of homes, hotels, offices and shops.

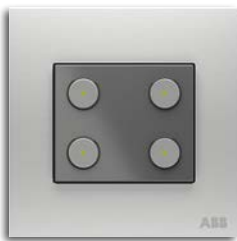
Wide range. Millenium range offers special mounting plates for KNX sensors to reduce the height and improve the aesthetics for ultra slim design. The KNX sensors allow to replace the buttons with desired symbols in order to adjust the sensors to specific design and needs like light, blind, scene, RTC or fan coil. Millenium offers a wide and elegant choice of finishes in stainless steel material: from the Brush Stainless Steel, to the soft new touch given by the Silk Black, and the luxury of the sophisticated gold finishes, Matt Gold and Antique Gold.



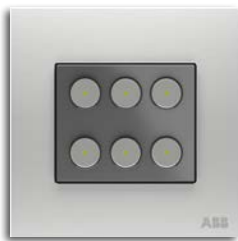
01



02



03



- 01 Switch Sensor 2gang KNX
- 02 Switch Sensor 4gang KNX
- 03 Switch Sensor 6gang KNX
- 04 Switch Sensor 6gang KNX with IR
- 05 Busch watchdog 180° KNX
- 06 Room Thermostat KNX

Function
Switching | Dimming | Blinds |
Sending values | Scenes etc.

Features
Incl. 10 logic channels (light scene actuator | sequence actuator | logic gates, etc.)
Control element: Switch contacts
Display elements: LED to indicate the function

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Switching | Dimming | Blinds |
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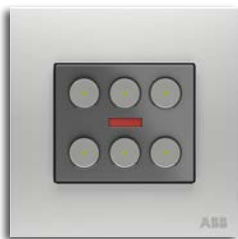
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Switching | Dimming | Blinds |
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Control element: Switch contacts
Display elements: LED to indicate the function



04



Function

Switching | Dimming | Blinds |
Sending values | Scenes etc. |
6gang sensor with IR.

Features

Incl. 10 logic channels (light scene
actuator | sequence actuator | logic
gates, etc.)
Control element: Switch contacts
Display elements: LED to indicate
the function

05



Function

Movement sensor with up to four
channels.
Detection range: frontal: 6 m,
lateral: 6 m
Detection angle: 180 °
Brightness limit value:
5 Lux - 150 Lux
Mounting height: 1.1 m

06



Function

Control element with room
thermostat function for triggering the
heating, ventilation and fan-coil
actuators. The controller is a
thermostat for Fan Coil units in 2-
and 4-pipe systems and conventional
heating or cooling systems. The fan
stage can be switched manually or in
automatic mode.

The Millenium range is only available
in the following countries:

China, Dubai, India, Kuwait, Oman,
Qatar, Saudi Arabia, Singapore, UAE
and UK.

Frames and special mounting plates
for KNX sensores have to ordered by:
ABB, S.A.

Low Voltage Products-Niessen,
Oiartzun / Spain
www.abb.es/niessen

Features

Incl. 10 logic channels (light scene
actuator | sequence actuator | logic
gates, etc.)
Switch contacts for operating mode
selection and dial for setpoint or fan
speed adjustment.
Display elements: LCD showing
operation modes.
Protection class (Device): IP 20
Temperature range (Device): - 5 °C
to 45 °C

ABB's KNX range for hotel applications

Room Automation

Room Master and Room Controller of ABB's KNX range are the ideal solution for hotels and apartment hotels, and in general for all those applications in which there is need to save space and optimize the installation by being able to control all room or environment functions, for example by combining management of inputs, lighting, temperature control and shutters in a single device.



Installation types suitable for all needs

- Room Master is a device for DIN rail installation.
- Room Controller is a device for underfloor or suspended ceiling installation.



Two different concepts to support the system design

- Integration: Room Master already incorporates all functions needed to control a room/environment in a single device.
- Modularity: Room Controller consists of a fixed base into which the modules for managing the desired function can be easily inserted using the plug-in mode.



A wide range to ensure maximum selection flexibility












- The Room Master range consists of four different devices, which differ based on the number and type of integrated functions.
- Room Controller is available in both the 4-module (single phase) and in the 8-module (three-phase) versions.



Improved safety and cost optimization

The significant reduction in wiring minimizes the flammable load improving the protection of persons and buildings.






Room Master RM/S

	RM/S 1.1 Basic	RMS/ 2.1 Premium	RM/S 3.1	RM/S 4.1	Applications	
Binary inputs (contact scanning)	8	18	12	8	Connection of push-buttons or switches (lights on/off, shutters up/down, bathroom fan on/off, general command on/off, etc.) or sensors (window and door contacts, water and water condensation sensors, badge reader)	
Outputs						
20A (16 AX)	1	3	-	-	Electrical devices switching	
16A (20AX)	-	-	4	-	Electrical devices switching	
16A (10AX)	2	1	-	-	Auxiliary electrical heating of the fan coil unit, lighting	 
6A	3	12	-	8	Auxiliary electrical heating of the fan coil unit, lighting, fan coil speed	  
0,5A electronic	4	4	-	-	Valve control (heating/cooling)	
6A contact in switching	-	1	4	-	Motorized devices management (blinds, shutters)	
Number of managed scenarios	10	16	16	16	Check-in/check-out, card removal/ insertion and other scenarios	

Room Controller



	RC/A 4.2	RC/A 8.2
Number of modules	4	8
Number of phases	Single-phase	Three-phase

Module type	Range	
Binary inputs	BE/M 4.230.1 – Binary Input Module, 4-fold (115/230 V AC o DC) BE/M 4.24.1 – Binary Input Module, 4-fold (12/24 V AC o DC) BE/M 4.12.1 – Binary Input Module, 4-fold (contact scanning)	
Switching actuators	SA/M 2.6.1 – Switch Actuator Module, 2-fold, 6 AX SA/M 2.16.1 – Switch Actuator Module, 2-fold, 16 A	
Shutters actuator	JA/M 2.230.1 – Shutter Actuator Module, 2-fold (115/230 V AC) JA/M 2.24.1 – Shutter Actuator Module, 2-fold (12/24 V DC)	
Dimmer 1-10V	LR/M 1.6.2 – Light Controller Module 1-10V, 1-fold, 6 AX UD/M 1.300.1 – Universal Dim Actuator Module, 1-fold, 300 VA	
Electronic actuator	ES/M 2.230.1 – Electronic Switch Actuator Module, 2-fold (115/230 Vac) ES/M 2.24.1 – Electronic Switch Actuator Module, 2-fold (12/24 Vdc)	

ABB's KNX range for hotel applications

Energy consumption monitoring

Energy monitoring is an increasingly important application in modern hotel projects, with the objective of maximizing cost reduction by optimizing energy consumption and reducing and rationalizing maintenance of systems.

Main applications related to Energy Management are:

- metering of energy consumption, monitoring and supervision;
- ability to measure not only power, but also gas and water consumption;
- ability to monitor consumption in different hotel areas in order to easily detect waste and inefficiencies;
- graphical, immediate and intuitive display of consumption, on Touch Screen and/or supervision software;
- pre-verification of actual consumption compared to that recorded in utility operator invoices to identify any billing errors.



ABB's KNX solutions for Energy Management

Function	Applications	Range
Absorbed current measurement	<ul style="list-style-type: none"> - Preventive identification of lamp faults (in the event of no or under-threshold absorption). - Maintenance optimization. 	Switching actuators with current detection: <ul style="list-style-type: none"> - SA/S x.16.6.1
Interfacing with meters	<ul style="list-style-type: none"> - Precise measuring of energy consumption and of other electrical variables. - Data transmission to the KNX bus for viewing consumption via touch screen and/or supervisor software. 	KNX ZS/S 1.1 meter interface module + An ABB meter of the A series (A41, A42, A43, A44), all certified according to the MID European Directive.
Electrical consumption monitoring	<ul style="list-style-type: none"> - Energy consumption monitoring in various sections of the system. - Data transmission to the KNX bus for viewing consumption via touch screen and/or supervisor software. - Any load switching logics when consumption thresholds are exceeded. 	<ul style="list-style-type: none"> - EM/S 3.16.1 energy module. - SE/S 3.16.1 energy actuator for any additional automatic load switching logics.
Water and gas consumption monitoring	<ul style="list-style-type: none"> - Display of consumption on touch-screen and/or supervisor software. - Signal transmission when consumption thresholds are exceeded. 	Binary inputs to scan for voltage-free contacts: <ul style="list-style-type: none"> - BE/S x.20.2.1 + <ul style="list-style-type: none"> - Gas/water meters equipped with pulse output.

ABB's KNX range for hotel applications

Motion and occupancy detectors

The motion and presence detectors ensure substantial electricity savings by automatically turning off lighting in areas that remain unoccupied for longer periods of time (such as hallways leading to the guest rooms in hotels or underground parking levels).



A wide range of device suited for any type of application

- Motion detectors: to be used in areas where people move actively within the detection area (e.g. walking through). Typical environments are entries, stairs, access points to external hotel areas, public bathrooms.
- Presence detectors: used in areas in which people move only sporadically over a certain time interval, e.g. offices, conference rooms.



Flexibility

Simple switching from automatic to manual control via KNX buttons and switches (useful for example for cleaning and maintenance staff).



Features and benefits

Innovation, design and technology Made in Spain

Millenium's design and functionality converts into numerous technical and installation advantages



Modern and contemporary finishes, made in real stainless steel material, AISI 304 to complete the four elegant finishes of Millenium: Stainless Steel, Silk Black, Antique Gold, and Matt Gold.

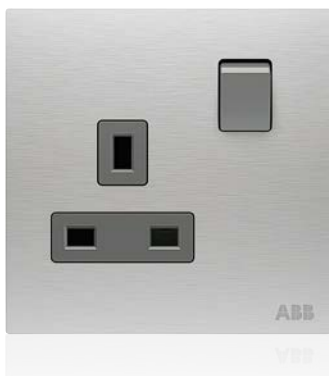
Designed by the famous European designer
Josep LLuscá.



Slim line design, only 4 mm height with straight and square lines at the forefront. Rocker with attractive chrome profile that gives a distinctive glance.



First British Standard range with wide rocker and metal finish. Screwless front plate ultra slim design.



Large variety of sockets outlets, equipped with shutters for increased safety. Single and double pole, round pin, universal socket outlet, references with and without led indicator, 13 A and 15 A. All equipped with child protection safety shutter system.



Control your LED lamps redefining the use of light and using only a 50% of the energy of conventional lamps. Comfortable light control in a trice. Press the rotary knob and dim the light darker or brighter as required. The technology of the LED dimmers is based on transistors, avoiding humming noise.



Easy to install, simple and adaptable. Allows the use of bigger screws helping installation in any situation and place. Additionally, strong centered bridles allow to absorb differences in uneven walls up to 2 mm height in order to keep the installation perfect under any circumstances.



First British Standard range of wiring accessories with Ecodesign Certificate. Millenium has been designed from its conception to reduce the environmental impact throughout the product life cycle from design, production, operation, distribution and product recall.



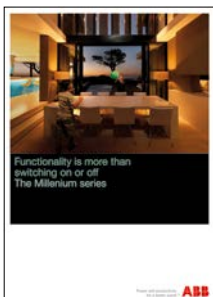
Millenium offers a complete solution for any commercial project and especially for hotels, including within its range of wiring accessories not only special conventional solutions for hotels (DND/MUR switch, card switch, electronic thermostat, etc) but also KNX, free@home, access control and sound systems.



ABB warranty policy for Millenium collection:

- 10 years for mechanical switches and socket outlets
- 1 year for electronic devices

Discover all other available products Millenium catalog



Functionality is more than switching on or off
The Millenium series
2CLC6AM006C0204



Application examples using ABB KNX solutions

Room





Curtain and shutter control



HVAC management



Alarm signaling



Lighting management



Access control



Application examples using ABB KNX solutions

Room

A cozy and comfortable room that right from entry, controlled by a transponder reader, provides a pleasant and relaxing stay. By inserting the transponder card issued at check-in into the transponder holder right after entering the room, the lighting is activated, the climate control is set to "comfort" and the room occupancy signal appears on the front desk computer. When the guests leaves the room and takes out the card, the lighting is turned off and the air conditioning system resumes the economy operating mode. The lighting on/off or dimmer switches are replicated in several places as required: near the entrance, in the vicinity of the light source and next to the bed. The temperature can be adjusted using the thermostat, whose screen can also display messages sent from the front desk. Curtains and shutters are motorized and can be controlled from several points, as is the case for lighting.

The outside curtains are also motorized and are rewound automatically for safety reasons when the weather station indicates strong wind. Sensors are applied to openings to the outside, i.e. windows and French doors: when they are open and people are present they interrupt the air conditioning operation to avoid waste; conversely, they send an alarm signal to the front desk if the system detects that a room is unoccupied, for example, due to the absence of the card in the transponder holder. Through special transponder cards reserved for hotel staff it is possible to signal the room state (room cleaning, mini bar to be restocked, maintenance requests, unusable room) to the front desk via the MiniMAC supervisor software.

There is a pull cord in the bathroom that activates a specific alarm signal at the front desk; the alarm can then be canceled from the front desk after an appropriate verification, or directly in the room using the specific button.

Access control



Millenium transponder reader

- Opens the door and activates the courtesy light.
- LED signals outside the room and at the front desk (Do not disturb, Make up room).



Millenium transponder holder

- Activates the room's electrical supply upon guest or staff entry.
- Signals room occupancy to the front desk.
- Activates the standby temperature control when a guest leaves the room.

Lighting



Millenium wiring accessories series control devices (push-buttons, switches) + KNX binary inputs (US/U x.2 or BE/S x.20.2.1)

Local manual control of lighting loads:

- ON/OFF.
- Dimmer function (if available).
- Scenario recall.



Modular KNX switching actuators, SA/S range

- ON/OFF switching of lighting loads.
- Scenario management.
- Definition of room logic.
- Controlled outlets for standby management (e.g. TV).



KNX modular dimmers (to be chosen depending on the type of lamps to be regulated): universal dimmers, dimmers for 1..10 V or DALI Gateway controllers.

- Room brightness control
- Scenario management.

Shutters/blinds



Millenium wiring accessories series control devices (push-buttons, switches) + KNX binary inputs (US/U x.2 or BE/S x.20.2.1)

Local manual control of motorized shutters, blinds and sun-shield awnings:

- up-down;
- stop (slat adjustment on blinds);
- scenario recall.



KNX shutter actuators, JRA/S modular range

- Motor control of motorized shutters/blinds.
- Scenario management.
- Management of any weather alarms sent by the KNX weather stations.

Climate control



KNX 6124/08-981 thermostat for protruding installation

- Temperature control adjustment (transmission of control signals to fan coil actuators).
- Manual adjustment of temperature setpoint by guests.
- Manual setting of the fan coil speed by guests.
- Modification of temperature setpoint from the front desk.



KNX fan coil actuators

- Speed control of fan coils and relative valves.

Thermoelectric Valve Drives

- ON/OFF switching of valves

Electromotor Valve Drive

- Proportional control of motorized valves

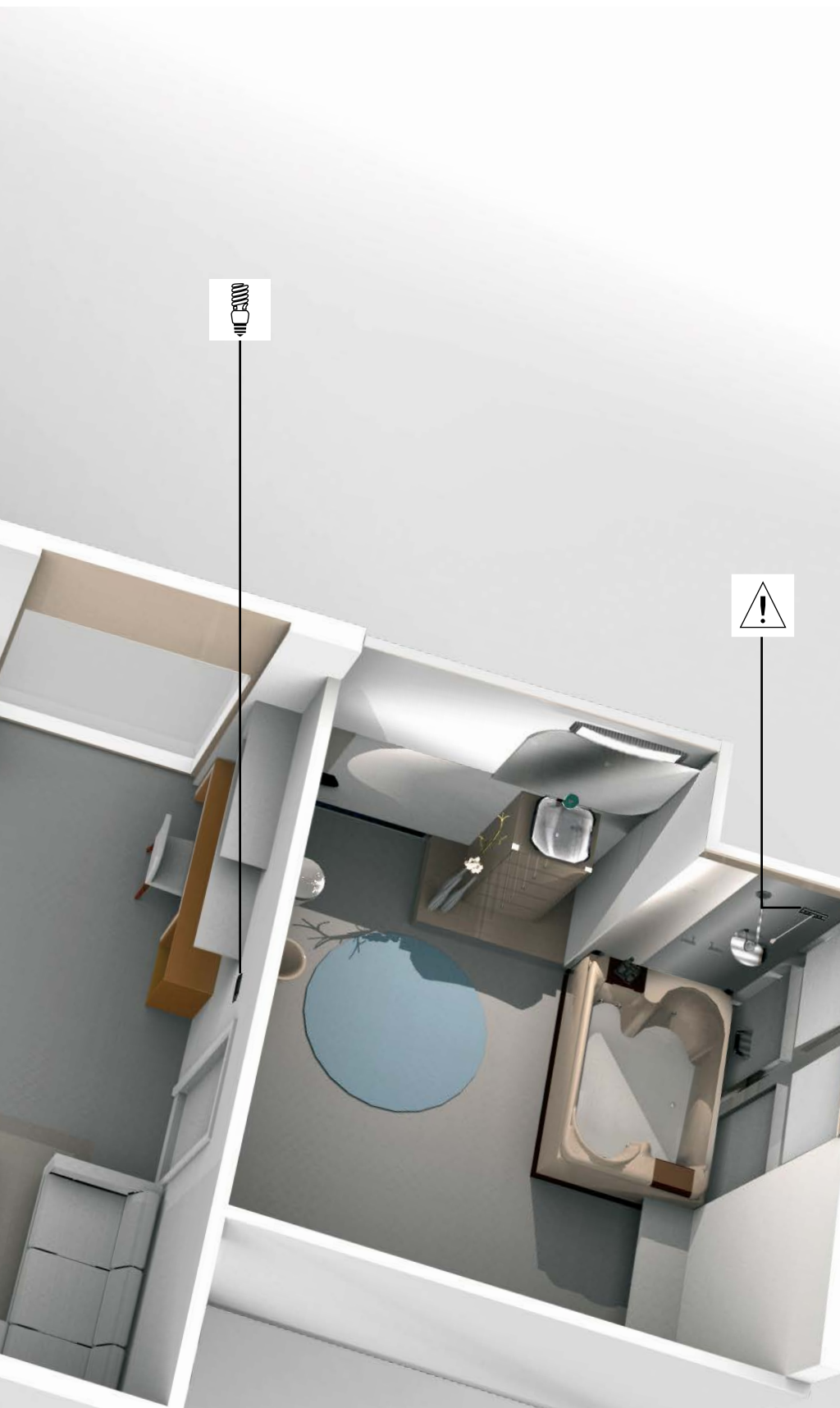
Alarms



Millenium offers a complete solution for any commercial project and especially for hotels, including within its range not only KNX and access control but also conventional wiring accessories solutions for hotels as DND/MUR switch, card switch, electronic thermostat, etc

Application examples using ABB KNX solutions Suite





Curtain and shutter control



HVAC management



Alarm signaling



Lighting management



Access control

Application examples using ABB KNX solutions Suite

In the suite one sees all the features discussed in the room description. KNX range for Millenium is the specific and ideal solution for suites and, in general, for all hotels that want to maximize the advantages of KNX Building Automation in terms of comfort and energy efficiency, without sacrificing the design and looks of rooms and environments.

Millenium KNX is a range of compact devices for installation in British-standard flush-mounting boxes, perfectly integrated with the sophisticated and exclusive finishes of the Myos wiring accessories series, which are well suited to any type of need and taste. The integration of inputs or relays and buttons in the devices allows to optimize the system design and installation.

Access control



Millenium transponder reader

- Opens the door and activates the courtesy light.
- LED signals outside the room and at the front desk (Do not disturb, Make up room).



Millenium transponder holder

- Activates the room's electrical supply upon guest or staff entry.
- Signals room occupancy to the front desk.
- Activates standby temperature control when a guest leaves the room.

Lighting, shutter/blinds and climate control



Description	Type	Technical data
2 -Fold sensor	AMD72053-AN (6125/20-981-500)	Incl. 10 logic channels (light scene actuator, sequence actuator, logic gates, etc.) Control element: Switch contacts Display elements: LED to indicate the function Protection class (Device): IP 20 Temperature range (Device): -5 °C to 45 °C Dimensions: (L x W x D): 53 mm x 44 mm



Description	Type	Technical data
4 -Fold sensor	AMD74053-AN (6126/20-981-500)	Incl. 10 logic channels (light scene actuator, sequence actuator, logic gates, etc.) Control element: Switch contacts Display elements: LED to indicate the function Protection class (Device): IP 20 Temperature range (Device): -5 °C to 45 °C Dimensions: (L x W x D): 53 mm x 44 mm



Description	Type	Technical data
6 -Fold sensor	AMD76053-AN (6129/20-981-500)	Incl. 10 logic channels (light scene actuator, sequence actuator, logic gates, etc.) Control element: Switch contacts Display elements: LED to indicate the function Protection class (Device): IP 20 Temperature range (Device): -5 °C to 45 °C Dimensions: (L x W x D): 53 mm x 44 mm



Description	Type	Technical data
6-Fold sensor with IR	AMD76153-AN (6129/21-981-500)	Incl. 10 logic channels (light scene actuator, sequence actuator, logic gates, etc.) Control element: Switch contacts Display elements: LED to indicate the function Protection class (Device): IP 20 Temperature range (Device): -5 °C to 45 °C Dimensions: (L x W x D): 53 mm x 44 mm



Description	Type	Technical data
Watchdog 180 flush mounted.	AMD70153-AN (6122/20-981-500)	Movement sensor with up to four channels. Detection range: frontal: 6 m, lateral: 6 m Detection angle: 180 ° Brightness limit value: 5 Lux - 150 Lux Mounting height: 1.1 m Protection class (Device): IP 20 Temperature range (Device): -5 °C to 45 °C Dimensions: (L x W x D): 53 mm x 44 mm Position for installation: vertical

Climate control



Millenium KNX flush-mounting thermostat

- Temperature control (transmission of a control signal to the fan coil actuators).
- Manual adjustment of temperature setpoint by guests.
- Manual adjustment of fan coil speed by guests.
- Temperature adjustment and operating mode from the front desk.



KNX fan coil actuators

- Speed control of fan coils and relative valves.



Thermoelectric Valve Drives

- ON/OFF switching of valves

Electromotor Valve Drive

- Proportional control of motorized valves

Application examples using ABB KNX solutions

Front Desk





Hotel management and supervision

Application examples using ABB KNX solutions

Front Desk

In the lobby, the guest has the first contact with the quality of service offered by the hotel. At the front desk there is a computer to assign the room and issue the transponder card. Using this card, the guest can access his/her room and the other restricted areas at guests' disposal, and also use the exclusive services. The same computer displays the status of individual rooms and any alarms that may be indicated. During the day, the lobby is lit by natural light, which is integrated automatically when and where required by artificial lighting. The sunlight is filtered through motorized blinds that are adjusted automatically and continuously to ensure a constant level of light without glare. The blinds can also be controlled using the manual controls arranged in their vicinity or at the front desk. In the evening, the lighting is managed by the pre-set scenarios, which control the various light sources.

The lighting of particular lobby areas, such as shop windows and displays, can be activated by motion detectors in order to attract the attention of the guests passing near them. All light sources can also be controlled manually from the front desk.

The air conditioning system automatically ensures maximum comfort during normal guest attendance time bands, maintaining a low energy consumption temperature in other periods of the day. If necessary, the temperature of the environment can be changed manually by setting the local thermostat or activating a different operating mode.

Access points are closed and video surveillance is activated during the night hours, allowing the front desk staff to open the doors remotely when required.

System supervision and management



Millenium transponder programming device

- transponder card programming for check-in and check-out.



MiniMAC - Access control management and configuration software

System configuration and management software:

- check-in/check-out;
- room temperature control;
- guest occupancy control for room state verification;
- definition of fees for access to services for payment;
- definition of time bands and groups;
- display of room events/alarms and transmission of commands;
- interface capability with hotel management software, such as Micros Fidelio.

Contacts

ABB SACE

A division of ABB S.p.A.

www.abb.com/knx

[ABB Access Control solution](#)

[ABB offer for Hotels](#)

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