ABB

SEPTEMBER 2019

Webinar "ABB-tacteo KNX Access Control"

Diego Carzaniga – Global Product Manager Access Control

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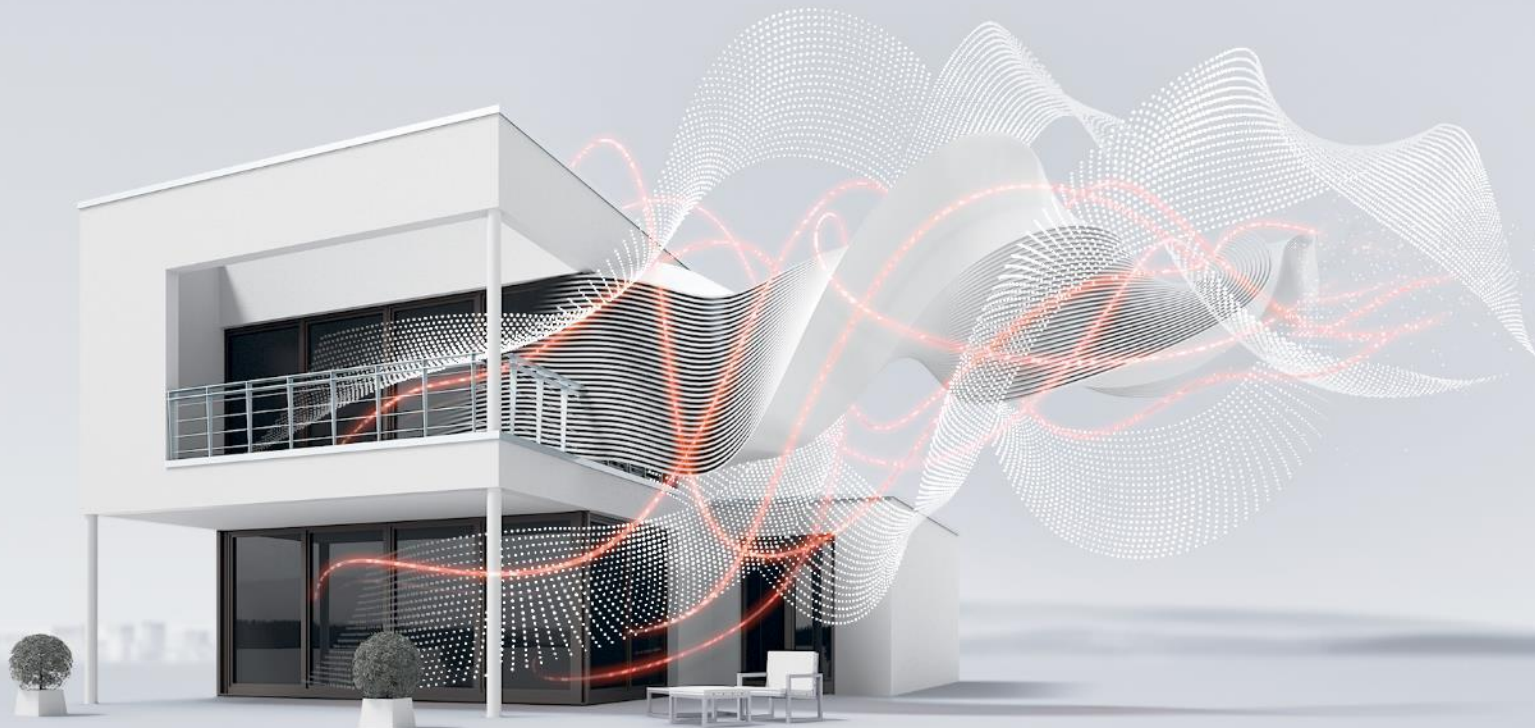
Agenda

Overview

Tacteo Access Control Range

Software "MiniMAC"

System Architecture

Access Control References

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Overview

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Segmentation

Needs & trends in different market segments

- Hotels and hospitality
- Main need is guest management and comfort
- Energy Efficiency is an important trend, becoming more and more strategic

- Banks, factories, other tertiary
- Main need is security: the goal is granting centralized and controlled management of access to common and/or reserved areas

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Energy Efficiency and cost savings

## Energy Efficiency and cost savings

- Load activations (lighting, TV) only when guests are inside their rooms
- Smart and optimized management of room heating/cooling (comfort mode activation during check-in operation and when guests are in their rooms; standby/OFF mode activation during check-out and when guests are outside their rooms)

Value-added services

- Access control to services provided by hotels, such as wellness or fitness center
- Access control to hotel common areas (conference rooms, car parking/garage, …)

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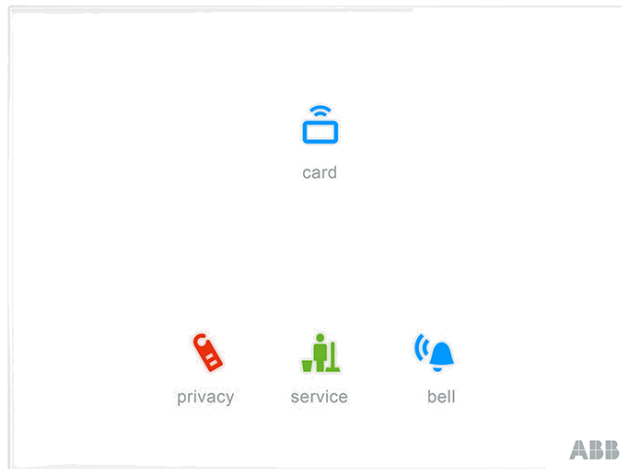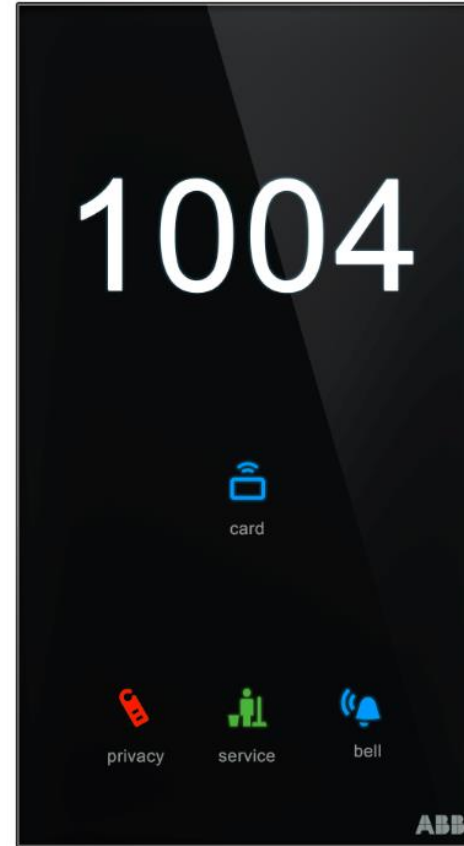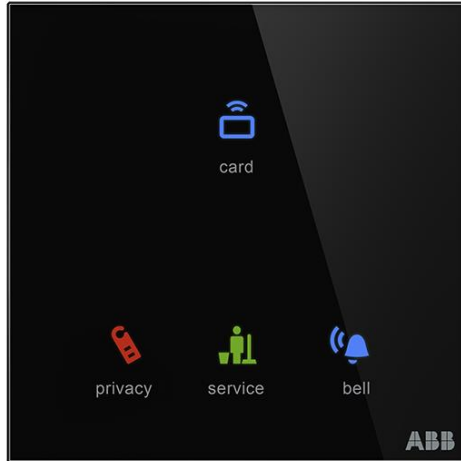
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The Access Control solution integrated with KNX

- Access control solution completely integrated into KNX building automation installations
- Every access control device installed into a KNX line and communicate with other KNX devices

- Commissioning in 2-steps:
1) Programming devices by ETS
2) System configuration by MiniMAC software → creating plant, devices configuration (White/black list, time range, extra accesses, …)

- Card management, and installation supervision operated by MiniMAC software

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System architecture
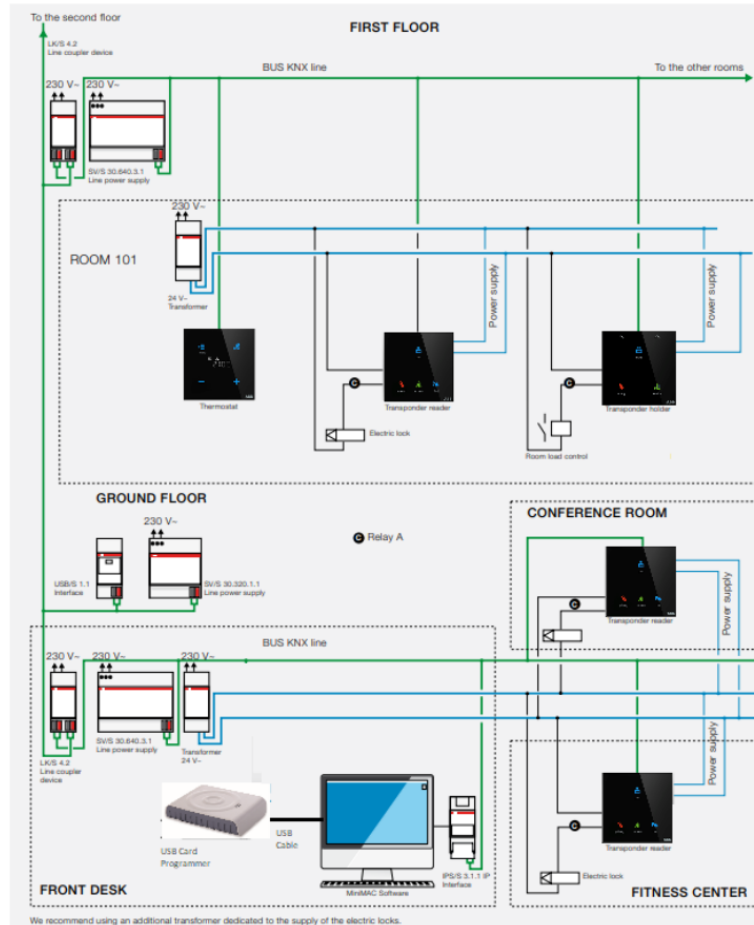
# Webinar "ABB-tacteo KNX Access Control"

MIFARE technology

- Tacteo access control transponder reader is based on Mifare technology (13.56 MHz), which grants:
  - a <u>better security</u>, if necessary, through encryption
  - an <u>higher speed</u> when exchanging data
  - <u>multi-application</u>, since contactless card used for 13.56 MHz standard (ISO/IEC 14443), typically MIFARE® smartcards, are available with 16 separate memory sectors, that can be used for different applications (not only access control but also payment for example). In this way access control solution can be more easily integrated, when and if necessary, with customer applications and solutions already implemented, or to be implemented

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MIFARE technology
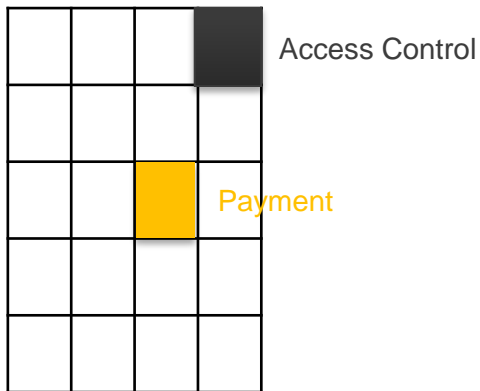
- Tacteo card reader and card holder support standard Mifare cards:

  - MIFARE Classic 1K EV1

  - MIFARE UltraLight

- Card programmer/reader writes/read into/from the first free memory block of transponder card

  - Integration with other third-party services/application is easier (they use other memory block in the card for their application)

  - Integration, when required, is up to the system integrator

Access Control

Payment
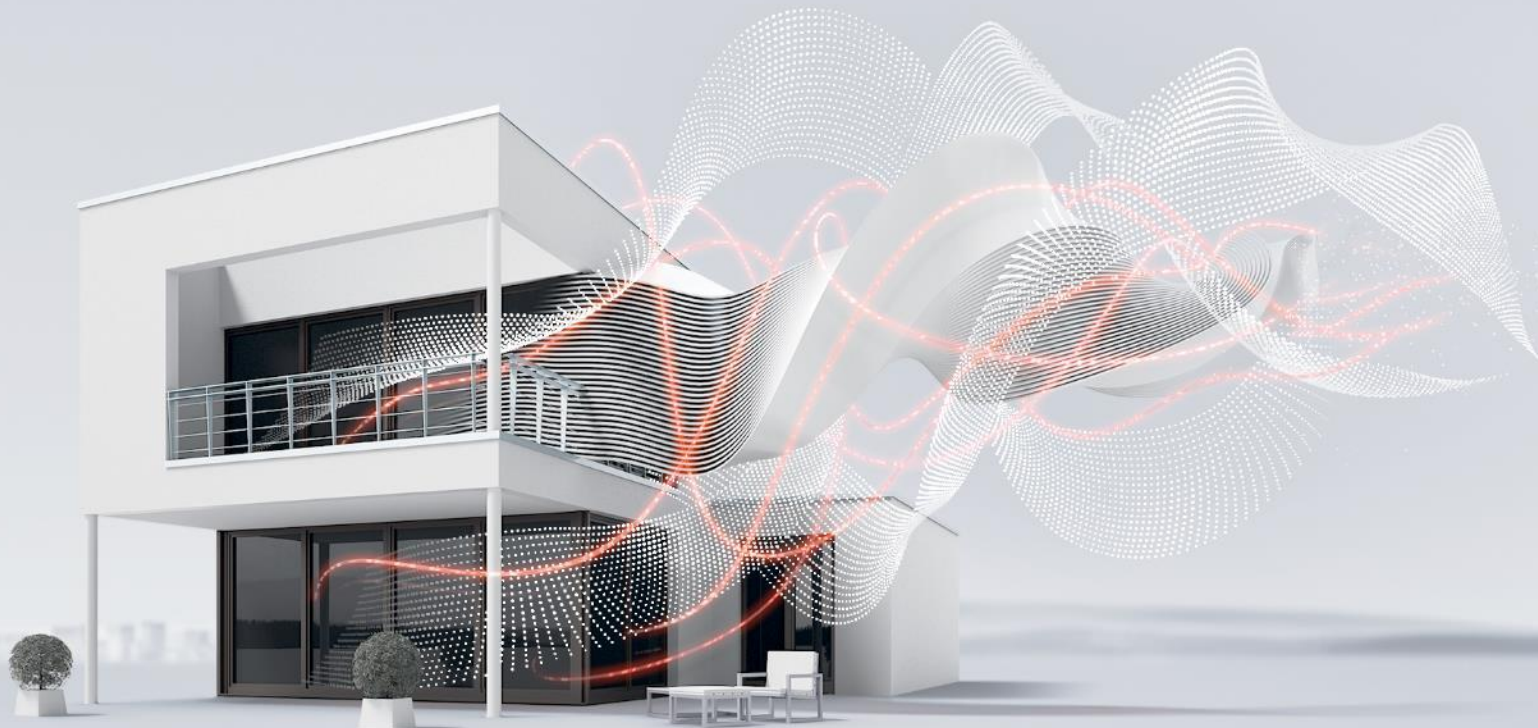
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The range

Card reader – TLM/U

Overview and main functionalities

- KNX certified device

- MiniMAC software needed for programming

- 1 output channel with 4A@24V relay (for electric lock or courtesy light for example)

- Available in 3 dimensions

- Flush-mounting installation according to worldwide standard (VDE, Swiss, British Standard, NEMA, Italian)

- Additional power supply required (12…24 V AC/DC, SELV)
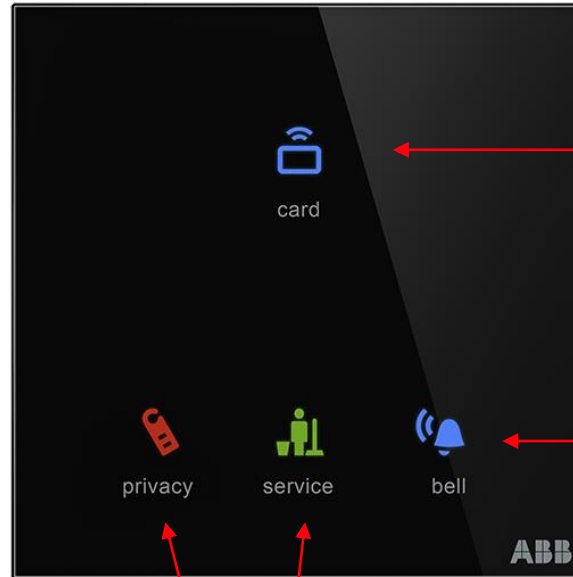
RGB icon with signaling related to card validation: access allowed/denied

1 "touch" push-button (+ integrated RGB LED for status icon) for controlling external door-bell

RGB LED for status icons (make-up-room, do-not-disturb)

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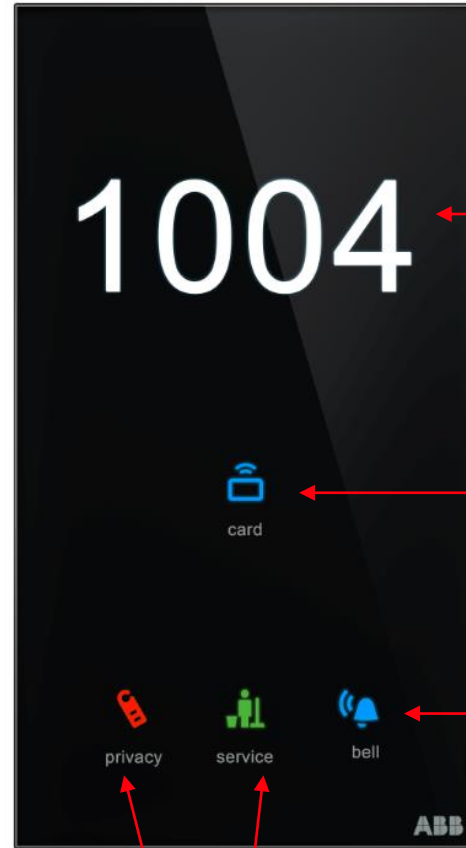
Room Outside Sensor – TA/U

Overview and main functionalities

- This device has the same functionalities of Card reader, but:

  - It has NOT card reader included (no access control capabilities)

  - MiniMAC software is NOT needed

- Typical application: hotel where access control (or at least ABB Access Control) is not included in the installation but hotel owner/manager wants to have (integrate in one single device):

  - DND/MUR indication displayed outside room for hotel staff notification

  - bell capabilities (push-button) outside the room
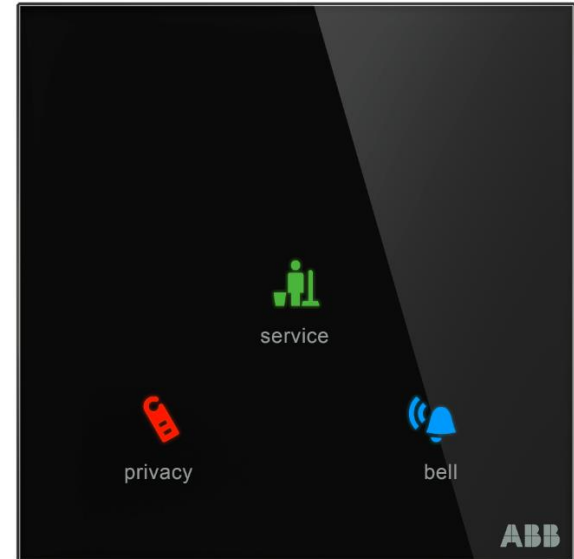
Room Number + Card reader – TSM/U

Overview and main functionalities

- KNX certified device

- MiniMAC software needed for programming

- 1 output channel with 4A@24V relay (for electric lock or courtesy light for example)

- Available in 1 dimension

- Flush-mounting installation according to worldwide standard (VDE, Swiss, British Standard, NEMA, Italian)

- Additional power supply required (12…24 V AC/DC, SELV)

Room Number indication (can be controlled by KNX)

RGB icon with signaling related to card validation: access allowed/denied

1 "touch" push-button (+ integrated RGB LED for status icon) for controlling external door-bell

RGB LED for status icons (make-up-room, do-not-disturb)

Room Number – TSN/U

Overview and main functionalities

- This device has the same functionalities of Room Number + Card reader, but:

    - It hasn't card reader included (no access control capabilities)

    - MiniMAC software is NOT needed

- Typical application: hotel where access control (or at least ABB Access Control) is not included in the installation but hotel owner/manager wants to have (integrated in one single device):

    - display of room number outside room (and controlling room number ON/OFF by KNX)

    - DND/MUR indication displayed outside room for hotel staff notification

    - bell capabilities (push-button) outside the room

Access Control transponder reader

Output configuration

The output of transponder reader can be configured according to two different modalities:

- **"Linked to card reader"**, receiving in this case switching commands from the device itself (according to transponder card validation). It's moreover possible to switch the relay according to a standard KNX telegram received from the bus by a KNX device

- **Being a standard KNX Switch actuator output**, able to be controlled by every KNX-standard devices

Access Control transponder reader

Output configuration: linked to card reader

Transponder reader
(access control)

Electric door lock

OUT
4A@24VAC/DC

Transponder reader output is configured for opening/leaving closed electronic door lock (or courtesy light) while guest card is valid/not valid for access

Access Control transponder reader
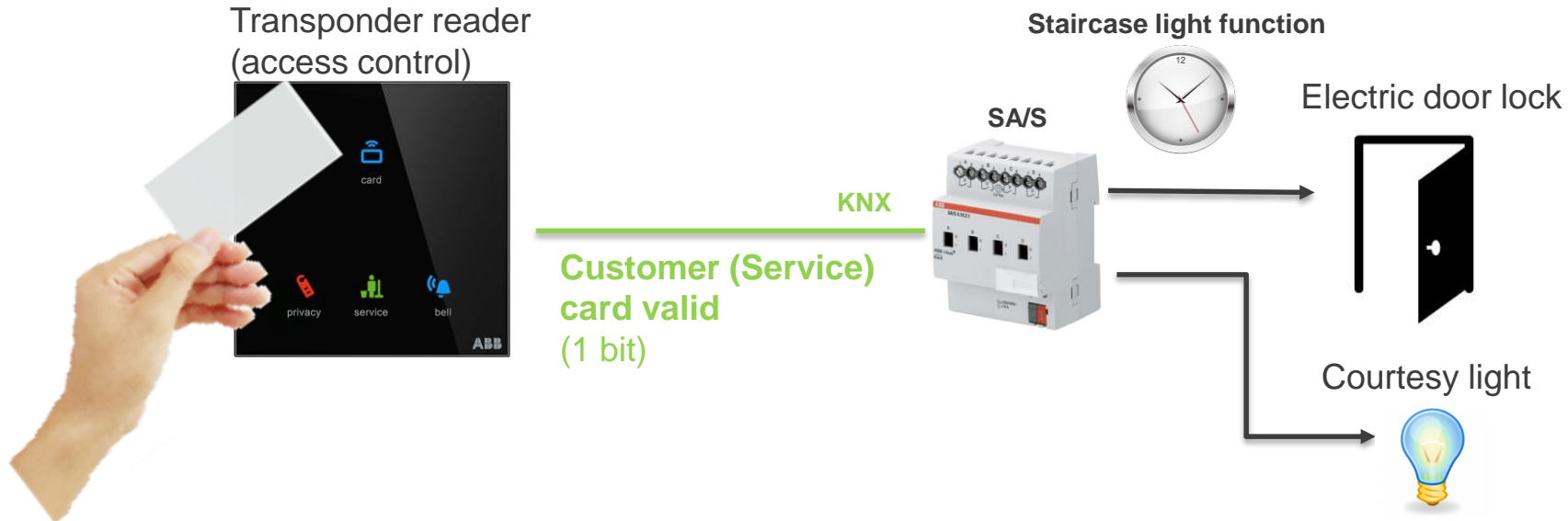
Output configuration: Switch Actuator

Transponder reader
(access control)

Output freely configurable via
ETS for controlling other load
(for example low voltage LED)

Electronic door lock is controlled by
<u>an external KNX actuator (SA/S)</u>
<u>which receive from access control</u>
<u>transponder reader, via</u> <u>KNX bus,</u>
<u>information for opening/leaving</u>
<u>closed the door</u>

→ More secure solution, since
the relay which controls door
can be hided inside the room
and not be short-circuited from
outside
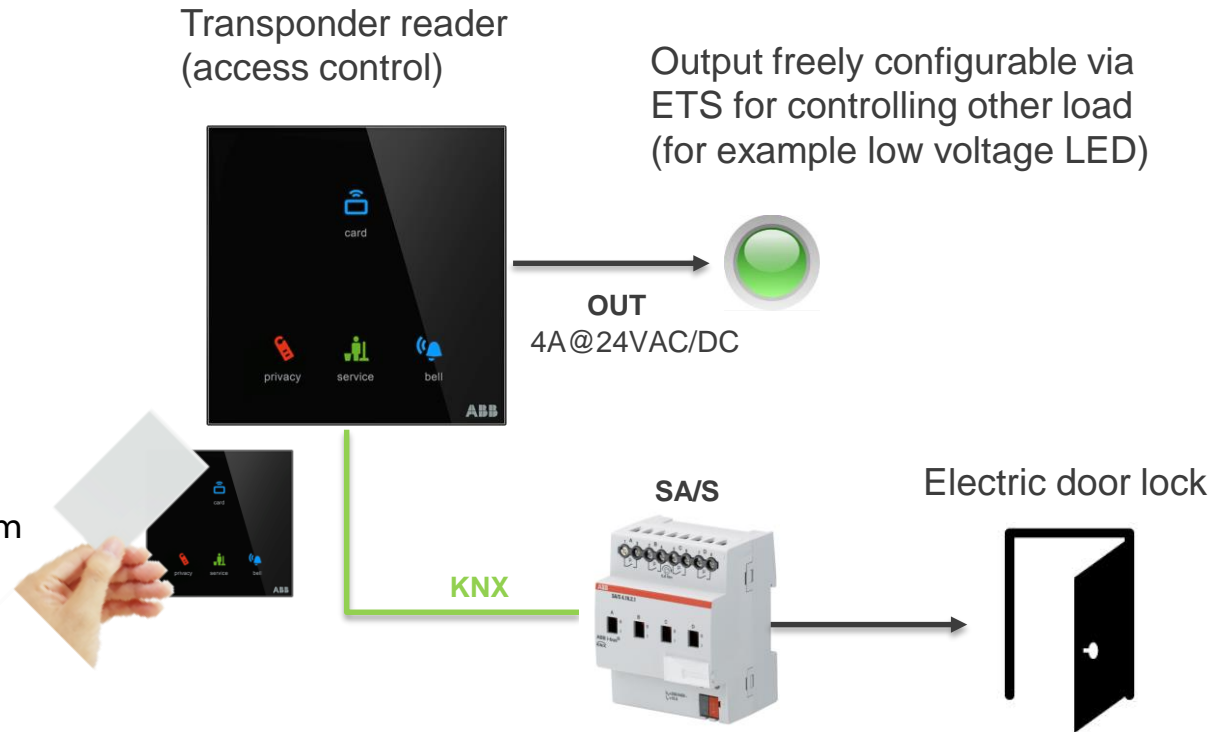
OUT
4A@24VAC/DC

SA/S

Electric door lock

KNX

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Access Control transponder reader

KNX functionalities on card validation

Transponder reader
(access control)

Staircase light function

SA/S

KNX

Electric door lock

**Customer (Service)
card valid**
(1 bit)

Courtesy light

Through 1 bit KNX communication object sent on the bus on card validation event, transponder reader is able to communicate with other KNX devices (for example SA/S) which grants access to room, and activates courtesy light (or moreover they could realize other functions/control other loads)

It's possible to differentiate behavior between guest and services card validation (some loads activated when guest access the room, some others when staff access the room)

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Access Control transponder reader

KNX functionalities on card validation

Transponder reader
(access control)

Electric door lock

**RM/S
Room Master**

KNX

**Customer (Services)
card valid scene**
(1 byte scene)

Courtesy light

Shutters

Through 1 byte KNX communication object sent on the bus on card validation event, standard KNX scene can be triggered, for example from one Room Master able to control different kinds of load inside or outside the room

Other loads

It's possible to differentiate behavior between guest and services card validation (one scenario activated when guest access the room, one other when staff access the room)

Access Control transponder reader
ETS Configuration

- Enabling/disabling 8 bit scenes:

  - On <u>guest</u> card acknowledgment

  - On <u>service</u> card acknowledgment

Configuring number of Scene to be sent on specific event

Access Control transponder reader
ETS configuration

Configuring behavior of output (relay)

➢ Normally open/Normally closed contact

➢ Behaviour on bus voltage recovery

➢ Sending status telegram related to switching

1.1.161 TLM/U.1.1-CG C-Touch Card Reader - Room 1 > Actuator > Common parameter

+ Device settings	Application	⦿ Switch actuator ◯ Linked to card reader
+ Function block 1	Output contact reaction	◯ Normally closed ⦿ Normally open
+ Function block 2	Communication object value at bus voltage recovery	No value ▼
+ Function block 3	Switch status	◯ deactivated ⦿ activated
— Actuator	Invert switch status	⦿ deactivated ◯ activated
Common parameter		

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Access Control transponder reader

ETS configuration

Configuring «Output» functionality

➢ Switch Actuator

- the output can be configured as a standard KNX output, freely programmable via ETS with group addresses
- Output is not linked to access control functions (card validation)

1.1.161 TLM/U.1.1-CG C-Touch Card Reader - Room 1 > Actuator > Common parameter

+ Device settings	Application ⦿ Switch actuator ◯ Linked to card reader
+ Function block 1	Output contact reaction ◯ Normally closed ⦿ Normally open
+ Function block 2	Communication object value at bus voltage recovery — No value ▾
+ Function block 3	Switch status ◯ deactivated ⦿ activated
− Actuator	Invert switch status ⦿ deactivated ◯ activated
Common parameter	

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Access Control transponder reader

ETS configuration

Configuring «Output» functionality

➢ Linked to card reader

- **the output is linked to access control (relay reacts on transponder card validation)**

- Additional functions → staircase lighting (Electric lock delay) for courtesy light or electric door lock

1.1.161 TLM/U.1.1-CG C-Touch Card Reader - Room 1 > Actuator > Common parameter	
+ Device settings	Application ○ Switch actuator ● Linked to card reader
+ Function block 1	Output contact reaction ○ Normally closed ● Normally open
+ Function block 2	Enable electric lock delay ○ No ● Yes
+ Function block 3	Electric lock delay 00:00:03 hh:mm:ss
− Actuator	Switch status ○ deactivated ● activated
Common parameter	Invert switch status ● deactivated ○ activated

Room number (TSN/U) - Card Reader with Room Number (TSM/U)
ETS configuration

In the "Function Block 4" it is possible to configure the behavior of LED related to Room Number signaling, in particular brightness intensity or completely ON/OFF when the devices receive 1-bit telegram (ON/OFF) on the correspondent group object

1.1.1 TSM/U.2.1-CG C-Touch Card Reader and Room Number > Function block 4 > Common parameter

+ Device settings	Brightness for off	low, dark
+ Function block 1	Brightness for on	max, dark
+ Function block 2		
+ Function block 3		
− Function block 4		
Room number LED		
Common parameter		
Extended parameters		

	Number ▲	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
	11	S1: Switching	Input/Output			1 bit	C	-	W	T	U	switch	Low
	19	S2: Switching	Input/Output			1 bit	C	-	W	T	U	switch	Low
	27	S3: Switching	Input/Output			1 bit	C	-	W	T	U	switch	Low
	35	L4: LED status	Input			1 bit	C	-	W	-	U	switch	Low
	37	RL: Switch object	Input			1 bit	C	-	W	-	-	switch	Low
	39	CR: Card Valid	Output			1 bit	C	R	-	T	U	switch	Low
	40	CR: Date	Input			3 bytes	C	-	W	-	U	date	Low
	41	CR: Time of the day	Input			3 bytes	C	-	W	-	U	time of day	Low
	42	CR: Access data	Output			4 bytes	C	R	-	T	U	counter pu...	Low
	43	CR: Customer card valid	Output			1 bit	C	R	-	T	U	switch	Low
	44	CR: Service card valid	Output			1 bit	C	R	-	T	U	switch	Low

Card Holder programmable – TKM/U

Overview and main functionalities

- KNX certified device

- MiniMAC software needed for programming

- 1 output channel with 4A@24V relay (for electric lock or courtesy light for example)

- Available in 2 dimensions

- Flush-mounting installation according to worldwide standard (VDE, Swiss, British Standard, NEMA, Italian)

- Additional power supply required (12…24 V AC/DC, SELV)

Slot for card insertion

RGB icon with signaling related to card validation: card valid/not valid

card

privacy

service

1 "touch" push-button (+ integrated RGB LED for status icon) for setting DND condition

1 "touch" push-button (+ integrated RGB LED for status icon) for setting MUR condition
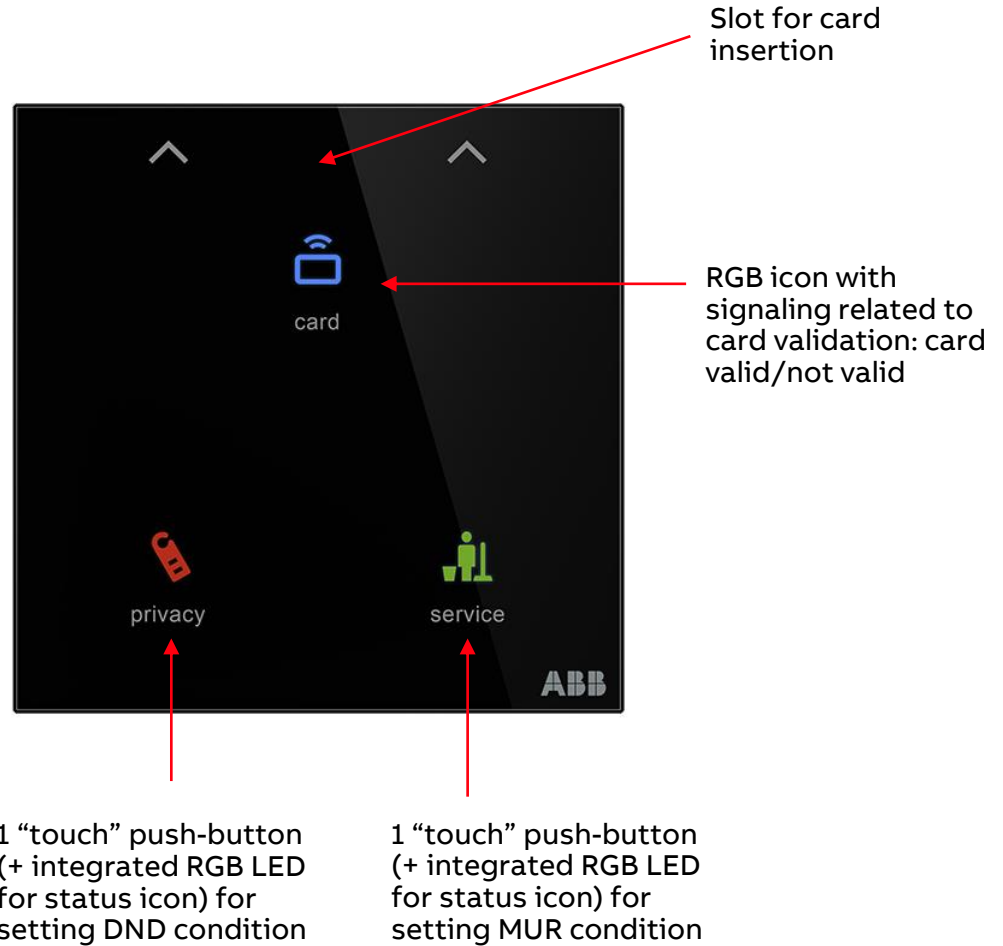
Card holder "universal" – TKK/U

Overview and main functionalities

- This card holder has the same functionalities of "programmable" Card Holder (KNX functionalities, 1 relay 4A@24V, RGB push-button)

- The only difference is represented by card validation scheme/logic:

    ➢ This "universal" card holder includes MIFARE antenna but without access control capabilities (card validation). This means that every MIFARE card (also not programmed by MiniMAC access control software) is able to activate the relay of the output channel included in the device

- MiniMAC software is NOT needed

- Typical application → hotel in which Access Control solution (relying on MIFARE technology) is provided by other company (i.e. Vingcard, Salto, …), and ABB could nevertheless offer card holder for guest presence/absence scenes integrated on KNX
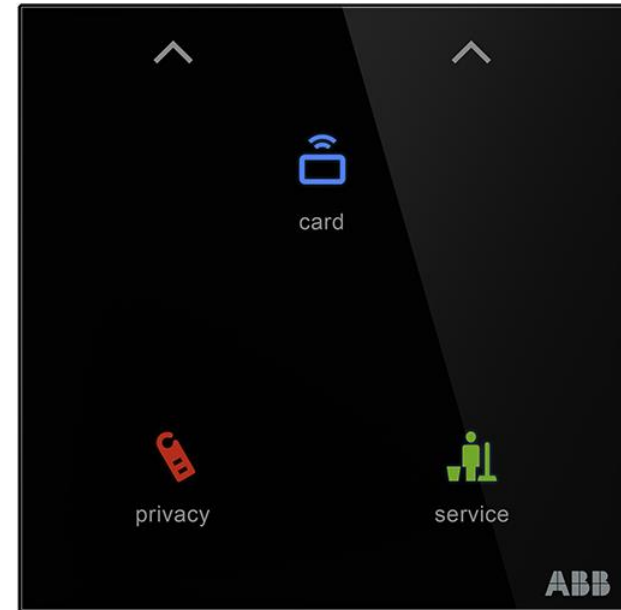
Access Control transponder holder
Output configuration

The <u>output</u> of transponder card-holder can be configured according to two different modalities:

- **"Linked to card holder"**, receiving in this case switching commands from the device itself (according to valid transponder card inserted/removed into/from the card holder)
- **Being a standard KNX Switch actuator output**, able to be controlled by every KNX-standard devices

1.1.162 TKM/U.1.1-CG C-Touch Card Holder - Room 1 > Actuator > Common parameter	
+ Device settings	Application ○ Switch actuator ◉ Linked to card holder
+ Function block 1	
+ Function block 2	Output contact reaction ○ Normally closed ◉ Normally open
− Actuator	Enable electric lock delay ○ No ◉ Yes
	Electric lock delay 00:00:20 hh:mm:ss
Common parameter	Switch status ○ deactivated ◉ activated
+ Card holder	Invert switch status ◉ deactivated ○ activated
+ General functions	

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Access Control transponder holder
Output configuration: Switch Actuator

Transponder holder
(access control)
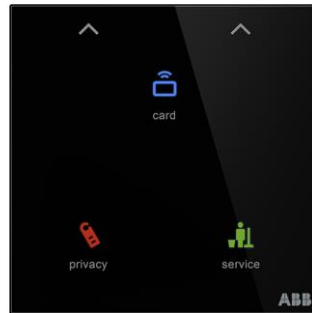
Output freely configurable via
ETS for controlling other load
(for example low voltage LED)

OUT
4A@24VAC/DC
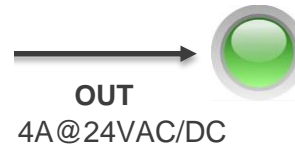
Room loads (e.g lights) are
controlled by <u>an external
KNX actuator (SA/S) which
receive from access control
transponder holder, via
KNX bus, information
about switching ON/OFF
lights</u>

SA/S

KNX

Room light

ABB
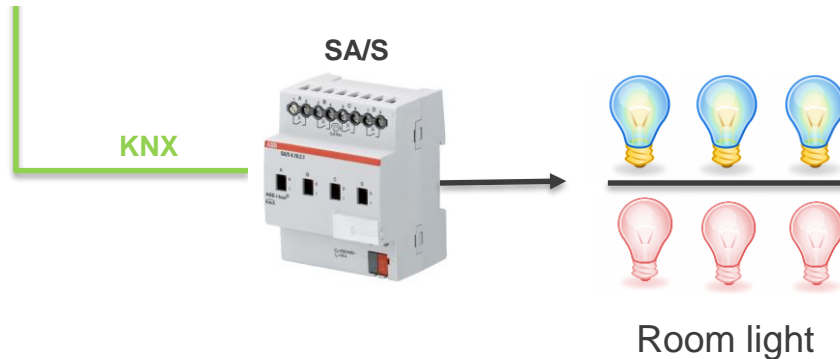
Access Control transponder holder
Output configuration: linked to card holder

Transponder holder
(access control)

OUT
4A@24VAC/DC

Room light
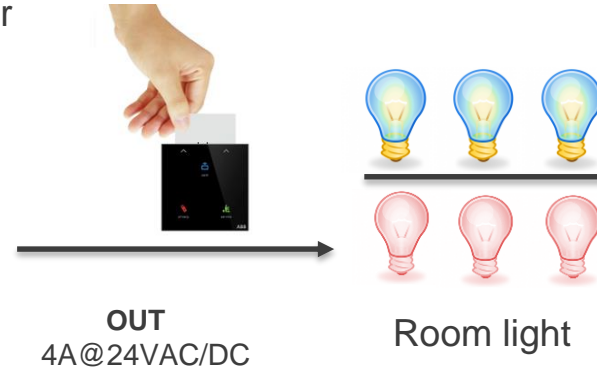
Transponder holder output is configured in order to react on transponder card insertion/removal

Additional loads can be switched ON/OFF on card insertion/removal using proper communication object available
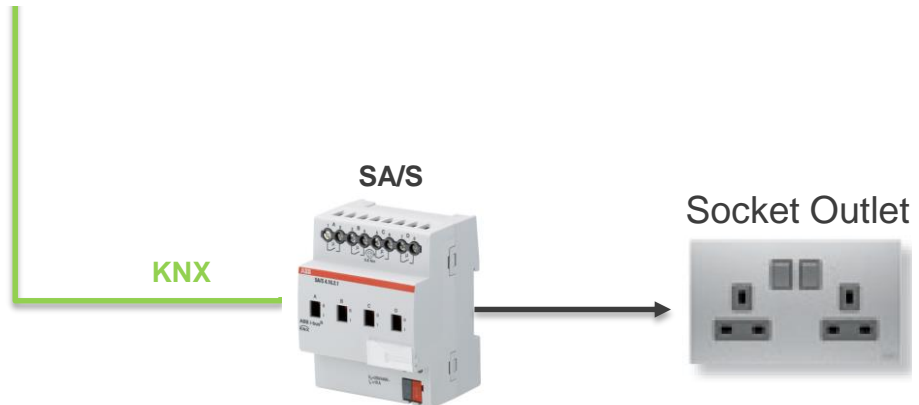
SA/S

KNX

Socket Outlet

ABB

Access Control transponder holder (programmable – TKM/U) KNX functionalities on card insertion/removal

Transponder holder
(access control)

Delayed OFF

Room light

SA/S

KNX

Guest (Service) card insertion/removal
(1 bit)

Delayed OFF
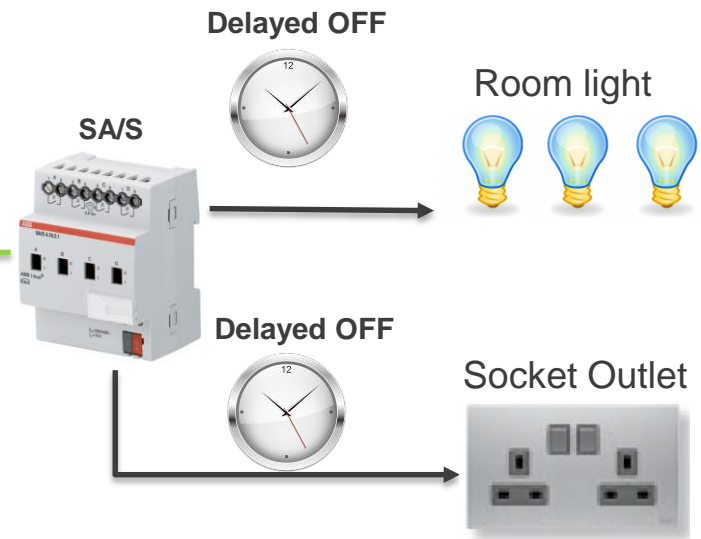
Socket Outlet

Through <u>1 bit KNX communication object sent on the bus on card insertion/removal event</u>, transponder holder is able to communicate with other KNX devices (for example SA/S) which activate room loads (e.g. room light, socket outlet)

It's possible to differentiate behavior between guest and services card validation (some loads activated when guest is inside/outside the room, some others when staff is inside/outside the room)

Access Control transponder holder (universal – TKK/U) KNX functionalities on card insertion/removal

Transponder holder
(access control)

Delayed OFF

Room light

SA/S

KNX

~~Guest (Service)~~ **Card insertion/removal**
(1 bit)

Delayed OFF
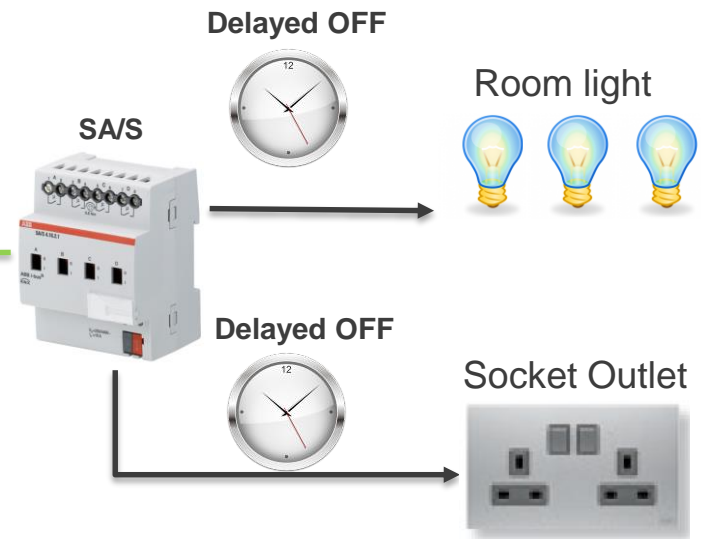
Socket Outlet

Through 1 bit KNX communication object sent on the bus on card insertion/removal event, transponder holder is able to communicate with other KNX devices (for example SA/S) which activate room loads (e.g. room light, socket outlet)

Access Control transponder holder (programmable – TKM/U)
KNX functionalities on card insertion/removal

Transponder holder
(access control)

Guest (Services) Card Insertion scene
(1 byte scene)

KNX

RM/S Room Master

Room light

Guest (Services) Card Removal scene
(1 byte scene)

Socket Outlet

Shutters

Through <u>1 byte KNX communication object sent on the bus on card insertion/removal event</u>, standard KNX scene can be triggered, for example from one Room Master able to control different kinds of load inside the room

It's possible to differentiate behavior between guest and services cards insertion (one scene activated when guest insert/remove cards into/from the card-holder, one other when staff insert/remove cards into/from the card-holder)

KNX Thermostat   **Fan coil actuator**

Fan-coil

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Access Control transponder holder (universal – TKK/U)
KNX functionalities on card insertion/removal

Transponder holder
(access control)

Guest (Services)
Card Insertion scene
(1 byte scene)

KNX

Guest (Services)
Card Removal scene
(1 byte scene)

**RM/S
Room Master**

Room light

Socket Outlet

Shutters
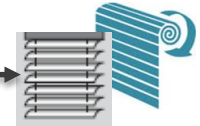
Through 1 byte KNX communication object sent on the bus on card insertion/removal event, standard KNX scene can be triggered, for example from one Room Master able to control different kinds of load inside the room

KNX Thermostat

Fan coil actuator

Fan-coil

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Access Control transponder holder (programmable – TKM/U)
ETS Configuration

- Enabling/disabling 8 bit scenes:
  - On <u>guest</u> card insertion
  - On <u>service</u> card insertion
  - On <u>guest</u> card removal
  - On <u>service</u> card removal

1.1.162 TKM/U.1.1-CG C-Touch Card Holder - Room 1 > Card holder > General parameter		
+ Device settings	Led light	○ dark ◉ bright
+ Function block 1	Insertion customer card scene	○ no ◉ yes
+ Function block 2	Scene number	3
− Actuator	Insertion service card scene	○ no ◉ yes
Common parameter	Scene number	4
− Card holder	Removal customer card scene	○ no ◉ yes
	Scene number	5
General parameter	Removal service card scene	○ no ◉ yes
+ General functions	Scene number	6

Configuring number of Scene to be sent on specific event

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Access Control transponder holder (universal – TKK/U)
ETS Configuration

- Enabling/disabling 8 bit scenes:
  - On card insertion
  - On card removal

Configuring number of Scene to be sent on specific event

Access Control transponder holder
ETS configuration

Configuring behavior of output (relay)

➢ Normally open/Normally closed contact

➢ Behavior on bus voltage recovery

➢ Sending telegram status for switching

1.1.162 TKM/U.1.1-CG C-Touch Card Holder - Room 1 > Actuator > Common parameter

+	Device settings	Application	◉ Switch actuator ◯ Linked to card holder
+	Function block 1	Output contact reaction	◯ Normally closed ◉ Normally open
+	Function block 2	Communication object value at bus voltage recovery	No value ▼
−	Actuator	Switch status	◯ deactivated ◉ activated
	Common parameter	Invert switch status	◉ deactivated ◯ activated

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Access Control transponder holder
ETS configuration

Configuring «Output» functionality

➢ Switch Actuator

- the output can be configured <u>as a standard KNX output, freely programmable via ETS with group addresses</u>

- Output <u>is not linked to access control functions</u> (card insertion/removal)

1.1.162 TKM/U.1.1-CG C-Touch Card Holder - Room 1 > Actuator > Common parameter	
+ Device settings	Application ⦿ Switch actuator ◯ Linked to card holder
+ Function block 1	Output contact reaction ◯ Normally closed ⦿ Normally open
+ Function block 2	Communication object value at bus voltage recovery [No value ▼]
− Actuator	Switch status ◯ deactivated ⦿ activated
Common parameter	Invert switch status ⦿ deactivated ◯ activated

Access Control transponder holder
ETS configuration

Configuring «Output» functionality

➢ Linked to card holder

- **the output is linked to access control (relay reacts on valid MIFARE transponder card insertion/removal)**

- Additional functions → delayed OFF (card removal delay)

1.1.162 TKM/U.1.1-CG C-Touch Card Holder - Room 1 > Actuator > Common parameter	
+ Device settings	Application ○ Switch actuator ● Linked to card holder
+ Function block 1	Output contact reaction ○ Normally closed ● Normally open
+ Function block 2	Enable electric lock delay ○ No ● Yes
− Actuator	Electric lock delay 00:00:20 hh:mm:ss
Common parameter	Switch status ○ deactivated ● activated
	Invert switch status ● deactivated ○ activated

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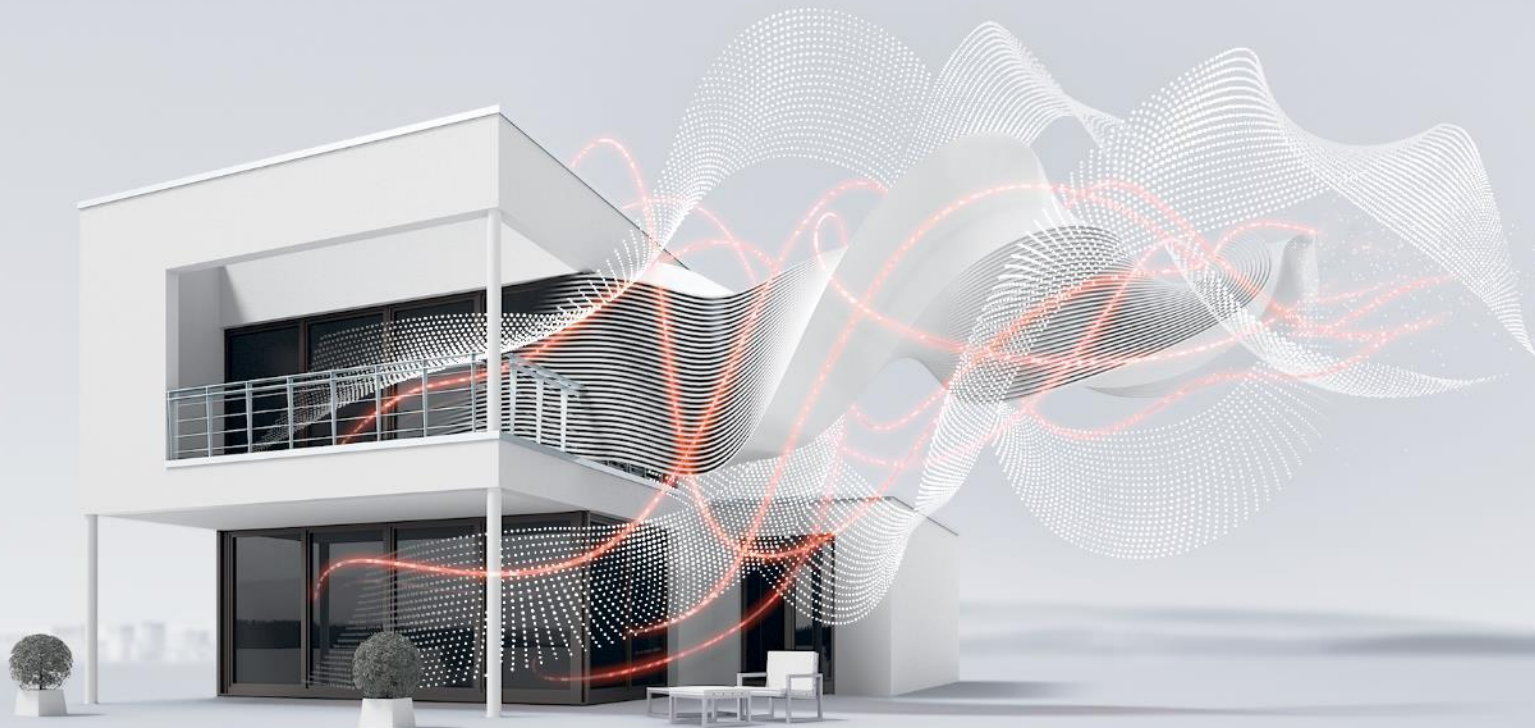
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MiniMAC software

Access Control
New software MiniMAC 4.1

- **Commissioning and configuration of the system**

- **Simplified and centralized management of hotel functionalities**:
  - Check-in/check-out
  - Program/delete cards on check-in/check-out
  - Room status overview at reception (dirty clean, minibar to fill, maintenance request, room not usable)
  - Access and room occupation history
  - Interfacing with PMS software (such as Oracle Fidelio, Protel)

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MiniMAC Functions
Check-in/Check-out

ROOMS AND KEYS MANAGEMENT
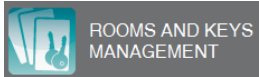
Check-in Check-out

Wizard for programming/deleting key-card automatically associated to a room number

ABB

MiniMAC Functions
Check-in/Check-out: creating key-card

ROOMS AND KEYS MANAGEMENT
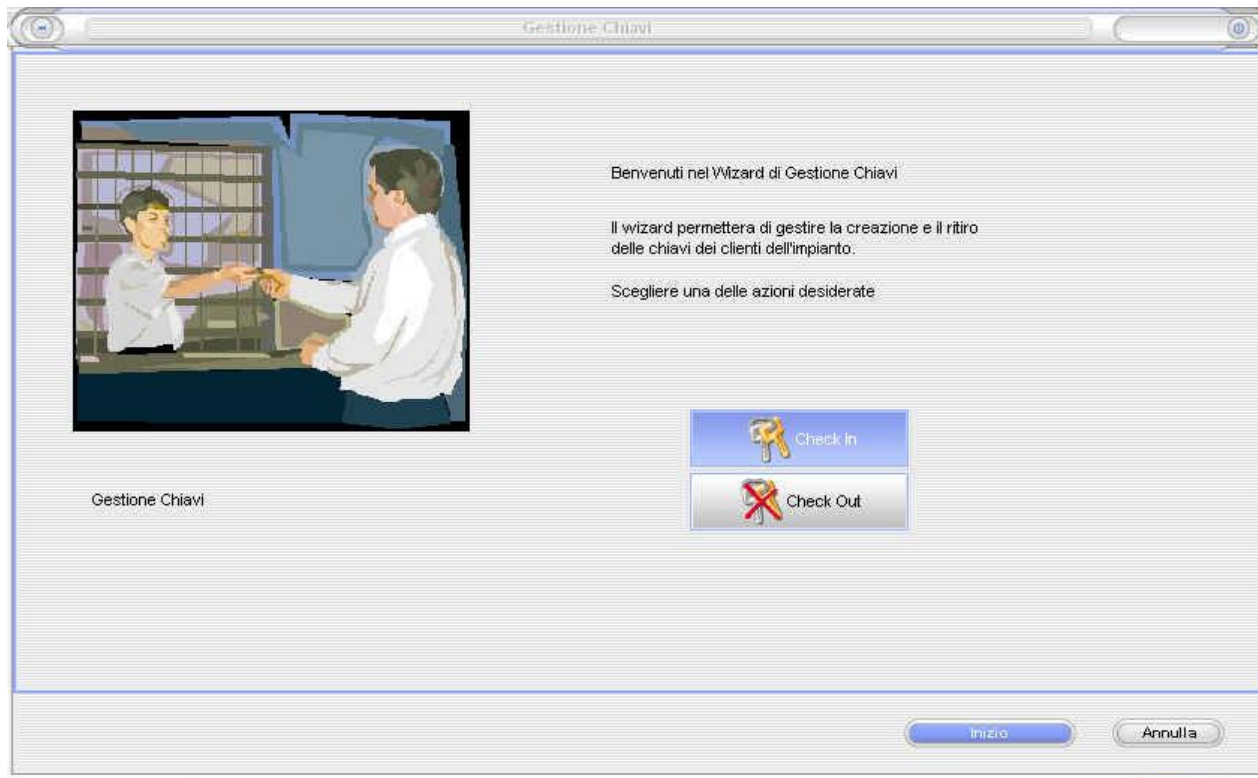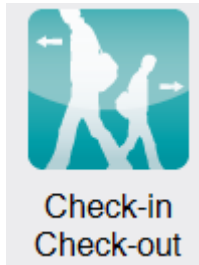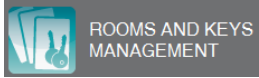
It's possible to specify the kind of card to be created (guest/staff)
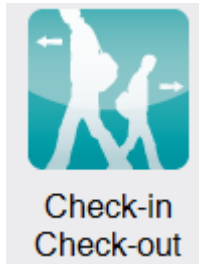
Check-in
Check-out

Welcome in key management Wizard

wizard will guide you to the creation and the management of the keys

Key management

Choose a desired action

Check In

Check Out

Start   Undo

ABB

MiniMAC Functions
Check-in/Check-out: creating key-card

ROOMS AND KEYS MANAGEMENT

Check-in Check-out
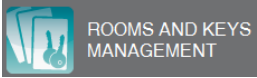
To be filled form with guest/staff data

Customer/staff assigned to groups
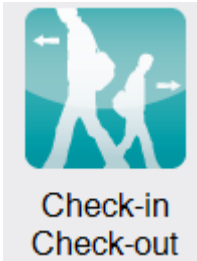
MiniMAC Functions
Transponder card details
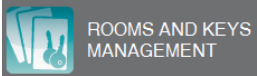
Detailed list of transponder card created and their characteristics

MiniMAC Functions
Special cards
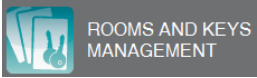
It's possible to create and manage:

– Special card for personnel, in order to notify room status

– Force open (not recommended)
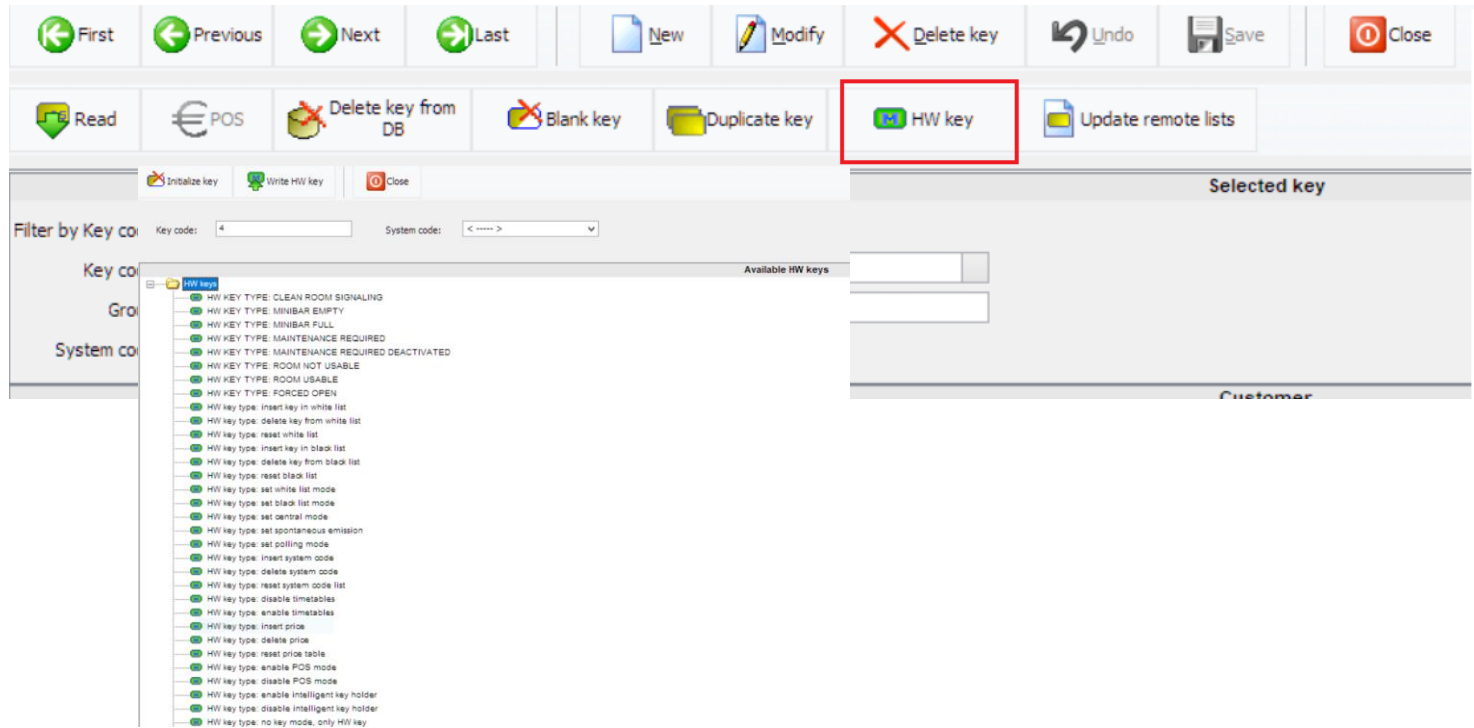
MiniMAC Functions
Guest and Staff list

CUSTOMERS AND STAFF
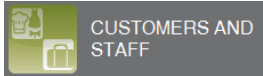
Customers

Employees

Available detailed list of:

– Guests

– Staff

MiniMAC Functions
Room heating/cooling

ROOMS AND KEYS MANAGEMENT

Room Management

Remote supervision and control (by reception) of room heating/cooling

Configuring heating/cooling supervision linking KNX group addresses (only for compatible thermostats)

MiniMAC Functions
Room heating/cooling

ROOMS AND KEYS MANAGEMENT

Room Management

Configuring set-point and operating mode

Viewing room temperature

Showing thermostat status (only on models that support it)

ABB
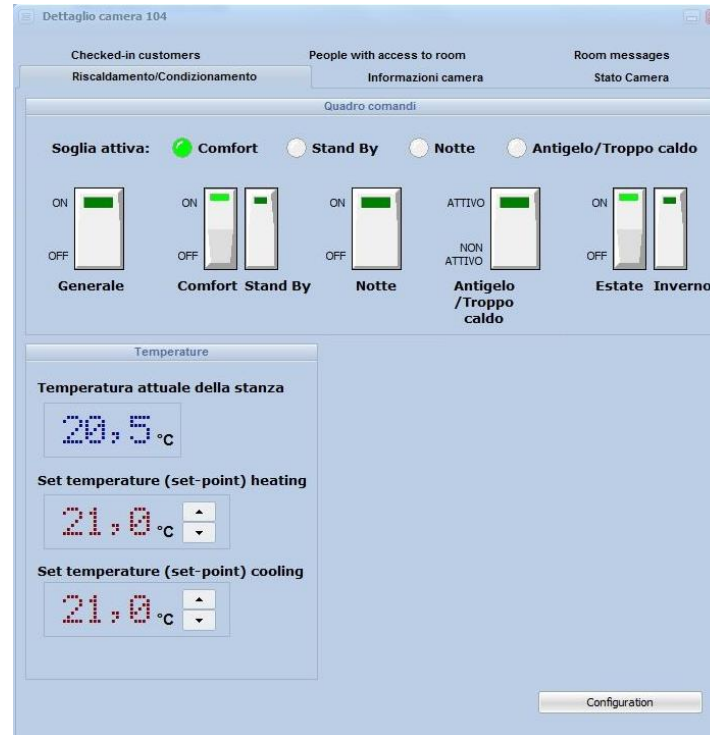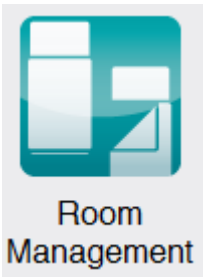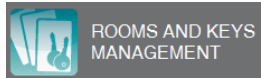
MiniMAC Functions
Room details

ROOMS AND KEYS MANAGEMENT

Room Management
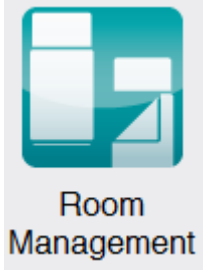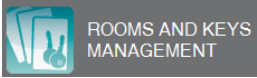
Detailed list of rooms:

– Situation (empty/occupied, make-up-room, cleaned, …)

– Room type (number of rooms, floor, …)

MiniMAC Functions
Access history
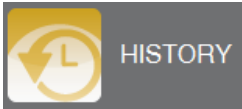
List of transponder reader and historical data related to access to hotel rooms (which card/user, when)

Access History

| | First | | Previous | | Next | | Last | | Delete | | Refresh | | Save to file | | Close |

Access history configur

| Parameters | Period | Access type | Conditions |

Period

From day	11/02/2019	From hour	00:00:00	☐ Filter by start date
To day	18/02/2019	To hour	00:00:00	☐ Filter by end date

Access list

MAC name	Key code	Date and time	Success	ASSOCIATED_NAME
Reader - Room 1	1	15/02/2019 15:09:13	Yes	Diego Room 1
Reader - Room 2	1	15/02/2019 15:09:15	No	Diego Room 1
Reader - Room 1	1	15/02/2019 15:09:18	Yes	Diego Room 1
Reader - Room 2	1	15/02/2019 15:09:20	No	Diego Room 1
Wellness Reader	1	15/02/2019 15:09:40	No	Diego Room 1
Reader - Room 2	2	15/02/2019 15:17:30	Yes	diego room 2
Reader - Room 1	2	15/02/2019 15:17:35	No	diego room 2
Holder Room 1	2	15/02/2019 15:17:36	Yes	diego room 2
Reader - Room 2	2	15/02/2019 15:10:44	No	

MiniMAC Functions
Room history
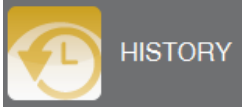
HISTORY

Room History

List of rooms and historical data on occupation

ABB

MiniMAC Functions
Key-card history
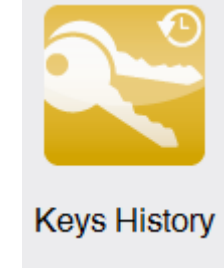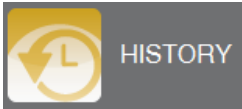
List of transponder card and historical data operations performed (creation, cancellation, …)

MiniMAC Functions
Event history
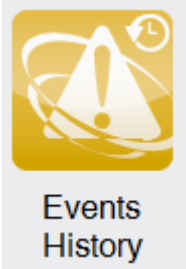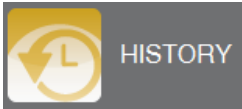
List of all events/operations performed in access control installations by every MiniMAC user

MiniMAC Functions
Event management
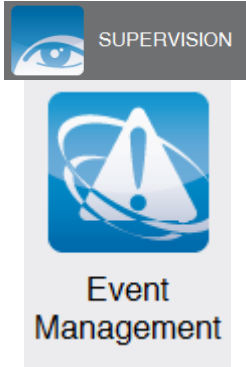
Event Management

Visualization and control of events (1-bit) associated to alarms (for example bathroom alarm, technical alarm, fire alarm, …)
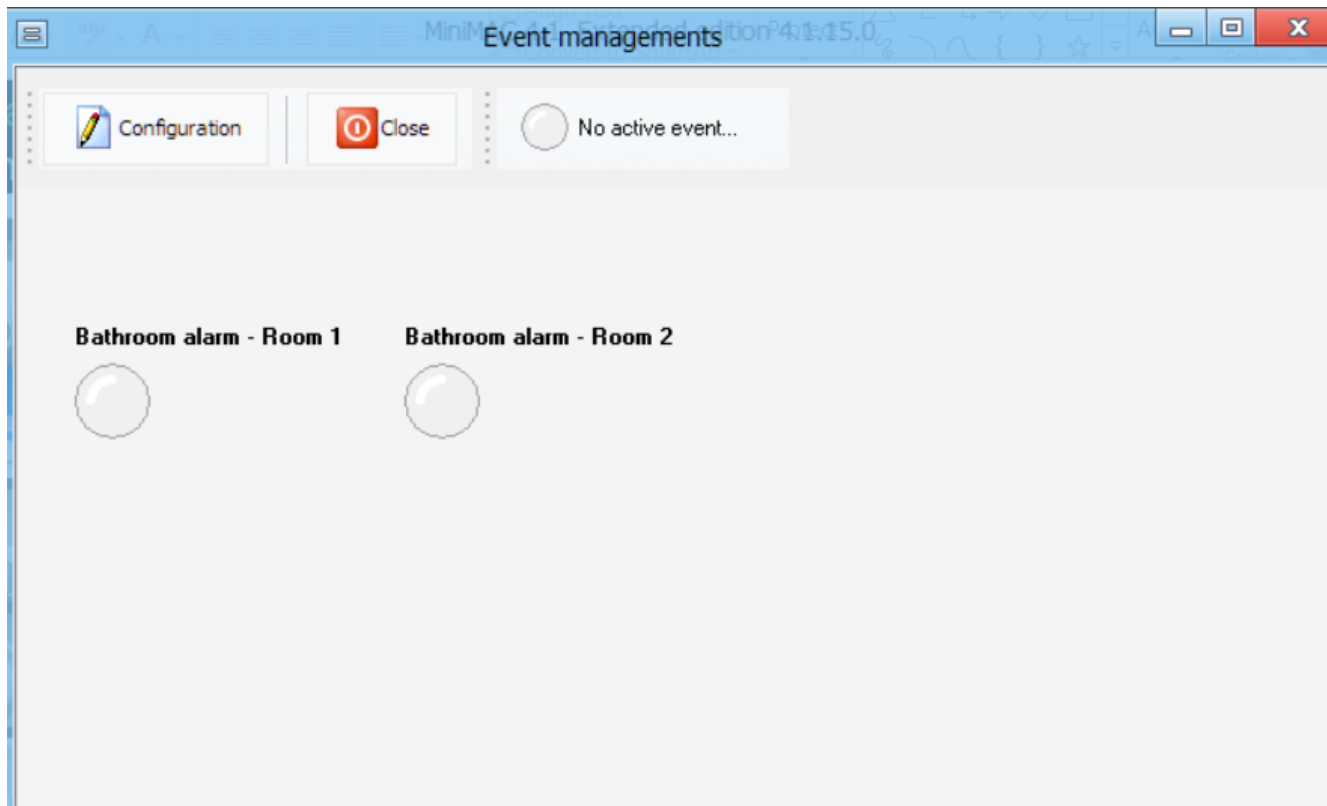
MiniMAC Functions
Load management

Visualization and control of loads (1-bit) into the installation (for example lighting of common areas, electrical loads, air conditioning, irrigation, …)
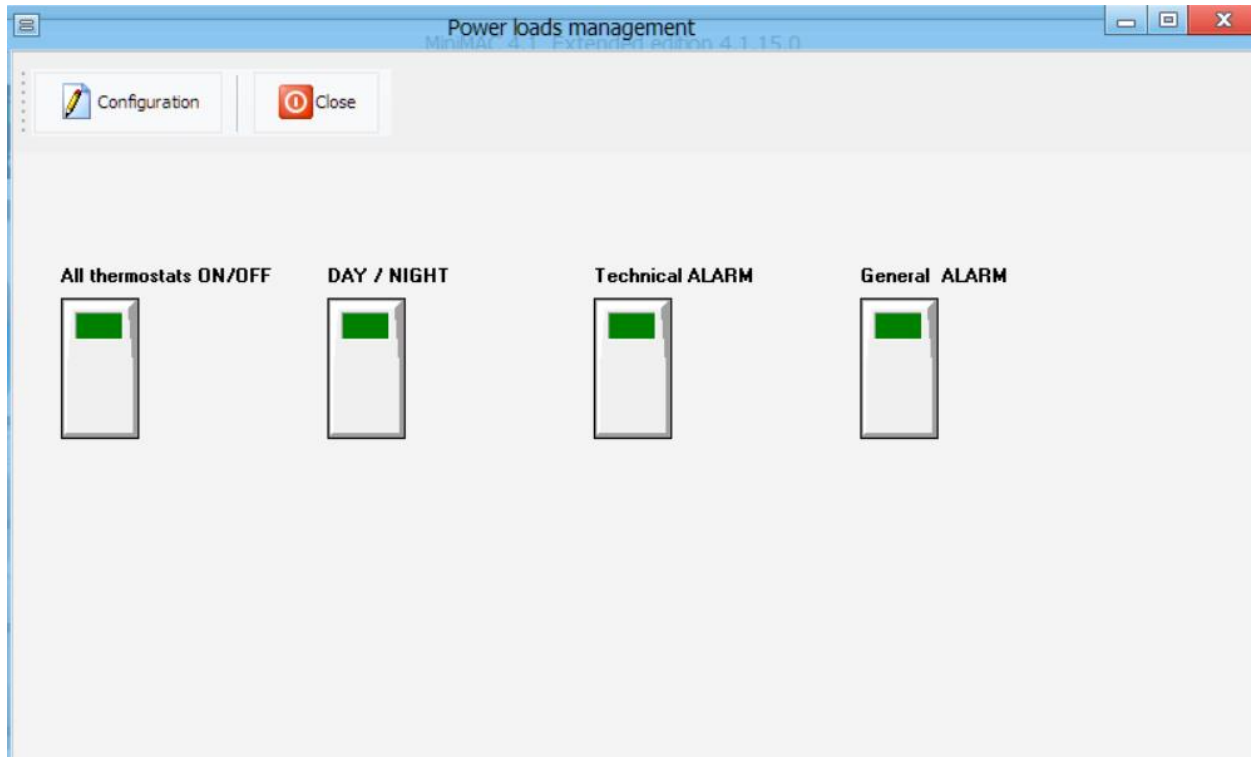
MiniMAC Functions
Users list
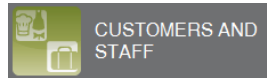
Available detailed list of all users of MiniMAC software

It's possible to create different users (user/administrator/front office), according to requirements:

MiniMAC Functions
Users list
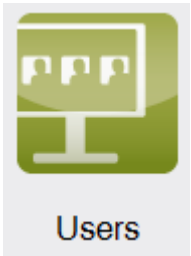
- User **<u>Administrator</u>**: it can access every menu:
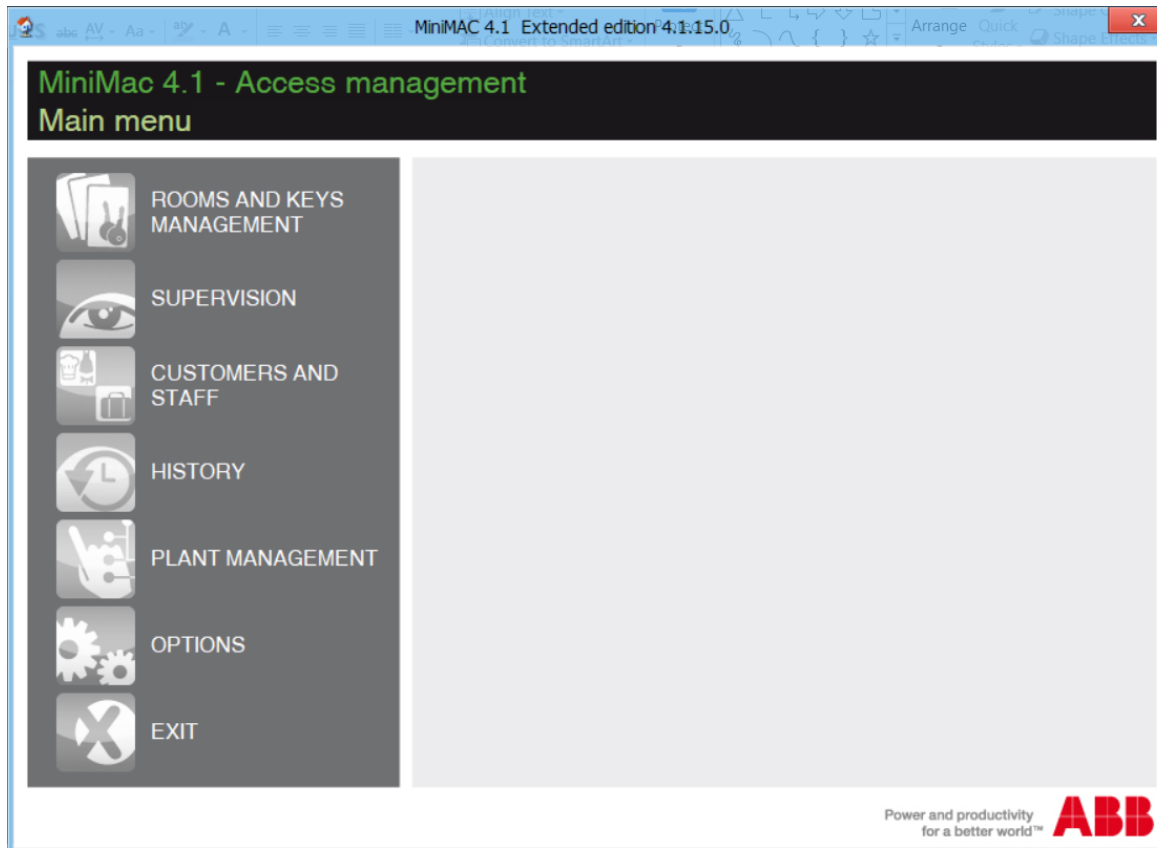
Users

MiniMAC Functions
Users list
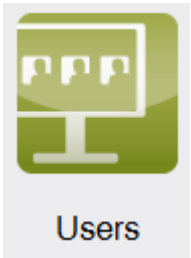
- user **users** has access to the following menus:
  - ➢ Rooms and keys management (all the operations are allowed with the exception of master card (HW key) creation and card delete from database
  - ➢ Supervision (only visualization, no configuration)
  - ➢ Customers and staff (without the possibility to add new MiniMAC user)
  - ➢ History
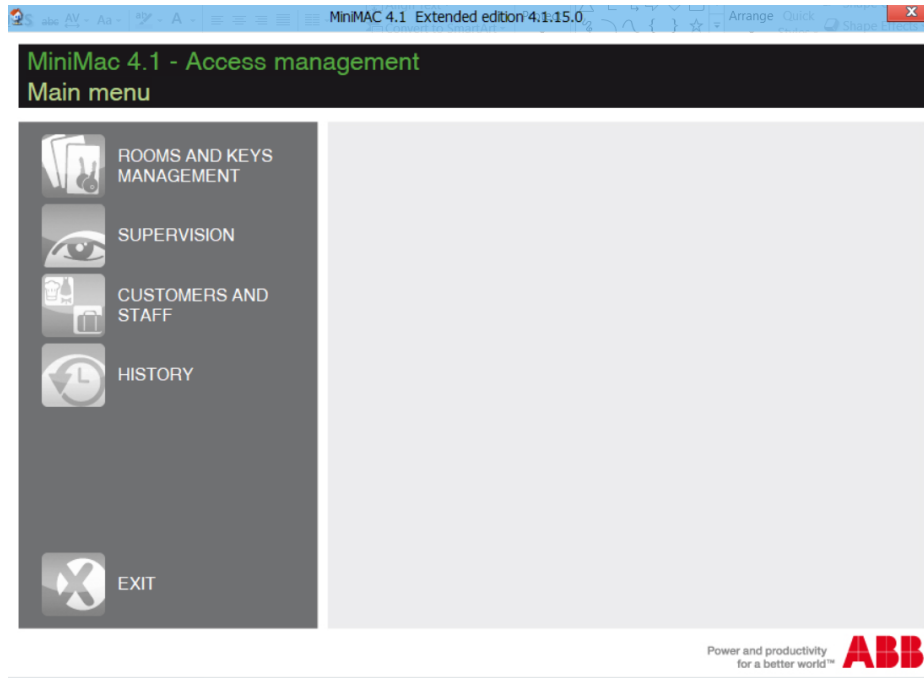
Users

MiniMAC Functions
Users list
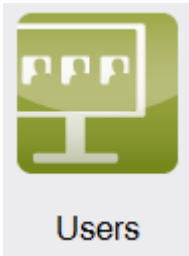
- user **Front Office** has access only to the following menu:
  - ➢ Rooms and keys management (only check-in/check-out and solo check-in e check-out and keys list with allowed operation card reading and deleting)
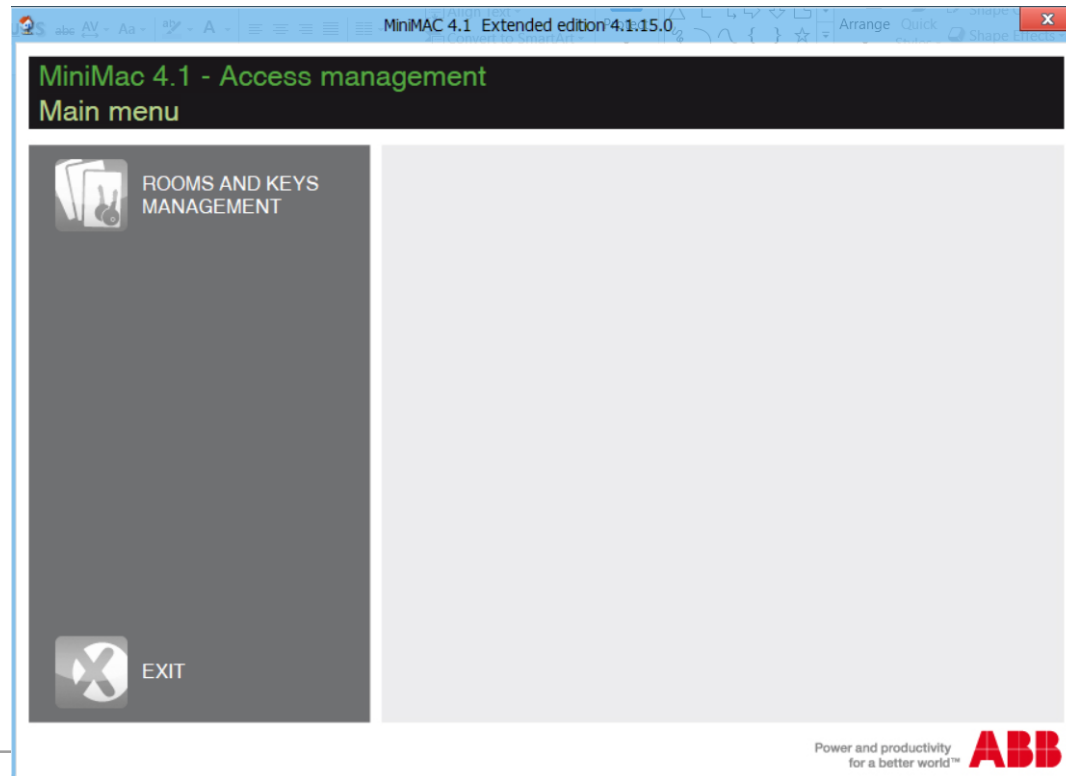
MiniMAC Functions
System Creation and Management

PLANT MANAGEMENT

Plant
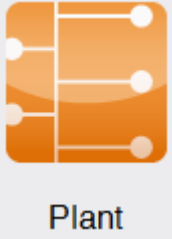
Creation of system architecture and configuration of devices

Available import from ETS function

MiniMAC Functions
Groups and time-ranges

PLANT MANAGEMENT

Groups

Access-control guests and staff are organized in groups (at least one existing in the plant)

Time-ranges can be created and associated to groups for every devices, in order to define and managed time-specific authorized access to some room/restricted areas

MiniMAC Functions
Group and Extra accesses

PLANT MANAGEMENT

Groups

In the Extra-Accesses tab, you can specify the list of devices which, for people belonging for the specific group, can be accessed automatically without specifying it at check-in

MiniMAC-PMS Interface
Overview

PMS ABB
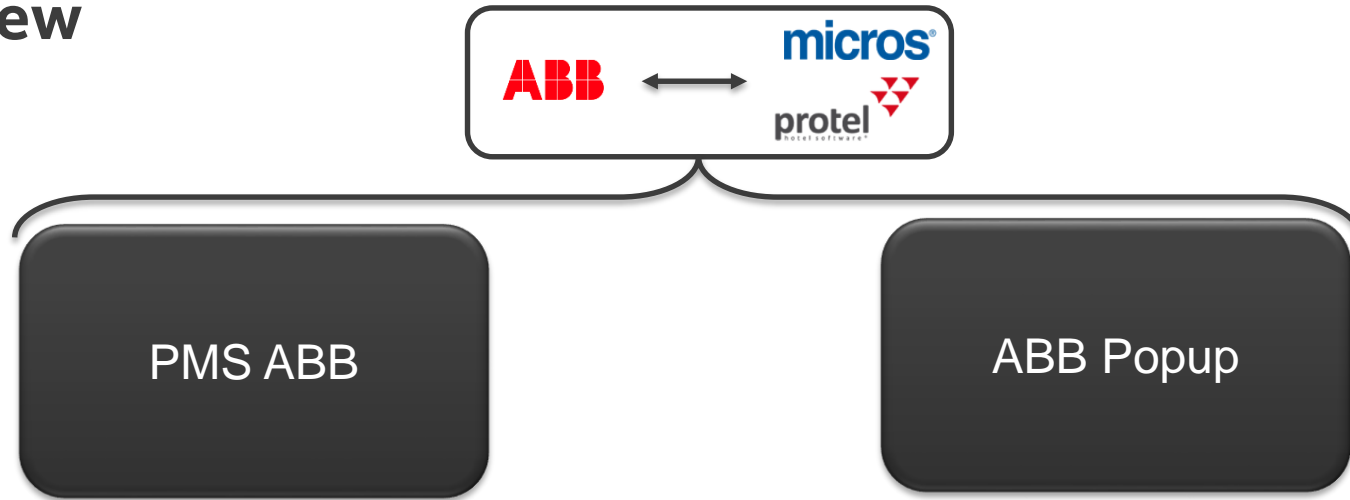
- Retrieves from Fidelio/Protel guest check-in data information and automatically fills up the MiniMAC check-in wizard

ABB Popup

- 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 staff at reception can use only PMS software (+ ABB Popup)

MiniMAC-PMS Interface
ABB Popup

The PopupClient is usually activated automatically by the service as soon as it detects one or more TAGs to be created.

This screen is only triggered by the service and cannot be recalled at user level. An example of customer TAG creation request is shown below
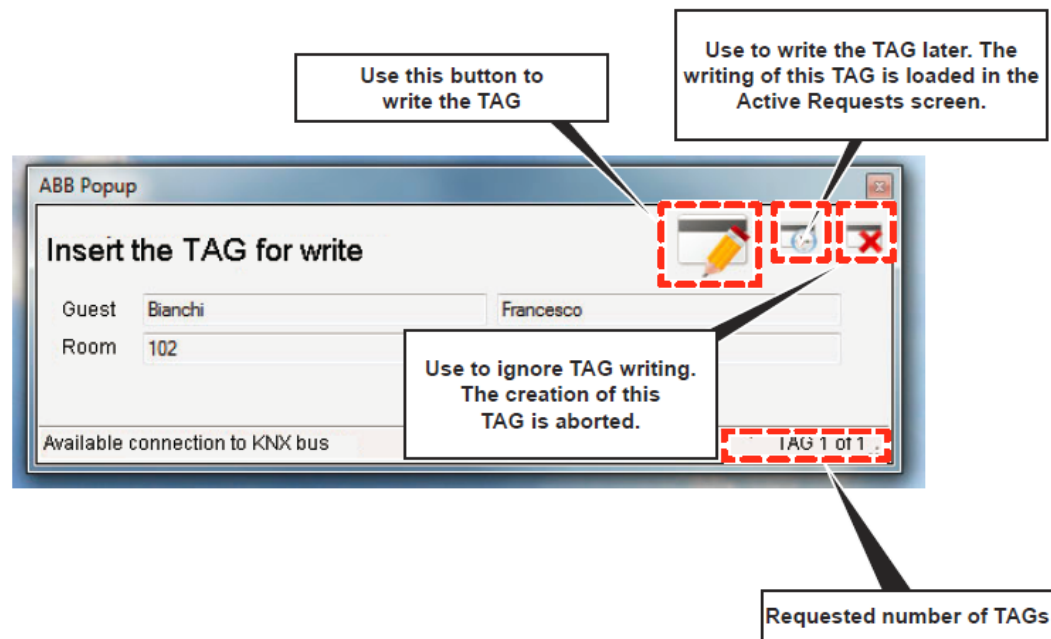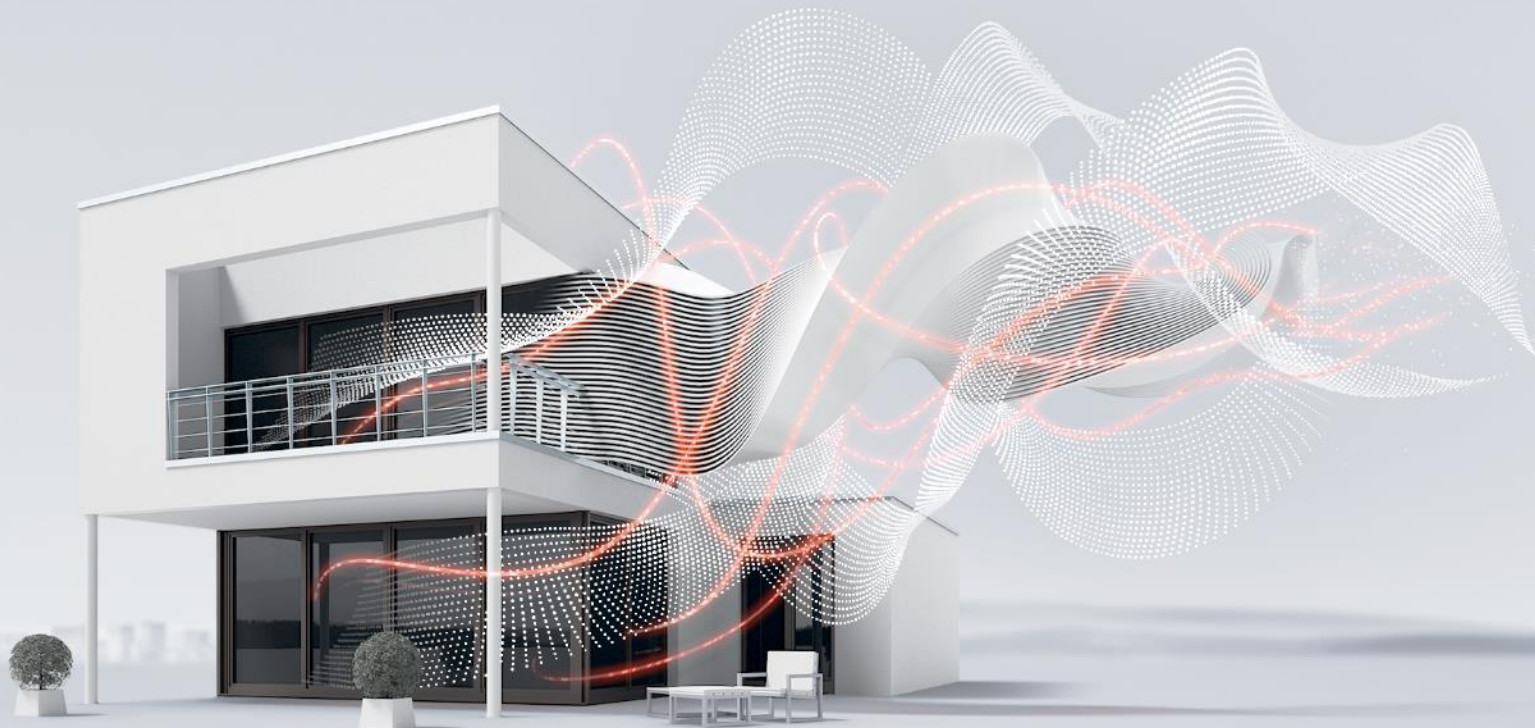
Webinar "ABB-tacteo KNX Access Control"

System architecture

Access Control
MiniMAC

– Tacteo transponder programming devices is a USB Programmer connected only to the PC where MiniMAC is installed

→This is a difference compared to Millenium and Chiara-Mylos access control where the transponder programming device is a KNX device and therefore for programming transponder card, programming device must be connected to KNX bus. For Tacteo this does not happen: the programming device has only to be connected to the PC using USB cable

- Server/PC with MiniMAC installed has to be connected to access control installation

→It's necessary to use KNX IP interface to connect MiniMAC server installation to access control system through KNX bus

ABB

Access Control
Choosing transponder cards for Tacteo Access Control

Devices belonging to Tacteo Access Control range are based on MIFARE technology (13,56 MHz)

– **Every MIFARE standard card availale on the market can be used with Tacteo access control devices**. In particular supported cards are:

- **MIFARE Classic 1K EV1**
- **MIFARE UltraLight**

ABB includes in the catalogue some MIFARE cards (MIFARE Classic 1K EV1) that are tested specifically with ABB Access Control devices:

– TS/T 1: set of 10 MIFARE transponder cards (order code = 2CSY259412R2041)

– TS/T 1.1: set of 1000 MIFARE transponder cards (order code = 2CSY232175R2041)

– TS/T 1.X: set of MIFARE customized transponder cards (order code = 2CSY232185R2041)

Access Control
MiniMAC
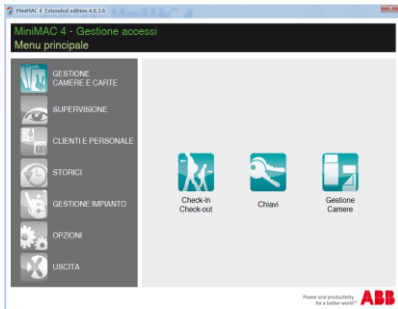
- MiniMAC 4.1 software is able to manage configuration and supervision of all access control devices for all ranges included in catalogue:

  - Chiara-Mylos (125 KHz)

  - Millenium (MIFARE)

  - Tacteo (MIFARE)

- But please remember that Chiara-Mylos, Millenium and Tacteo are based on different RFID technologies (125 kHZ vs Mifare) and therefore mixed installations are not allowed.

- Even Millenium and Tacteo, although both based on MIFARE technology, have different encryption schemes and therefore they can't coexist in the same installation

Access Control
Additional Power supply

- All Tacteo access control devices belonging to the range require additional external power supply (12...24V AC/DC, SELV) which allow their working (for example unlocking of electric door lock) also when KNX bus voltage is down

- It's recommended using a <u>dedicated power supply for electric door lock (not the same used for devices belonging to access control range</u>)

- <u>IMPORTANT → it's forbidden to use for access control devices transformers for discontinuos loads</u> (therefore for example TS and TM from ABB range are not ok since they are used for discontinuous loads, such as doorbell, ...)

- For external supply it's recommended to use always stabilized SELV power supply

- For dimensioning access control installation in term of transformers/power supply (number and kind) you have to consider that every Tacteo device require 1W peak

ABB

ABB Access Control solution
Card reader and card-holder

N rooms in a hotel

– 1 card reader per room (TLM/U or TSM/U if Room Number variant is needed)

N x

– 1 programmable card-holder per room (TKM/U)

N x

+
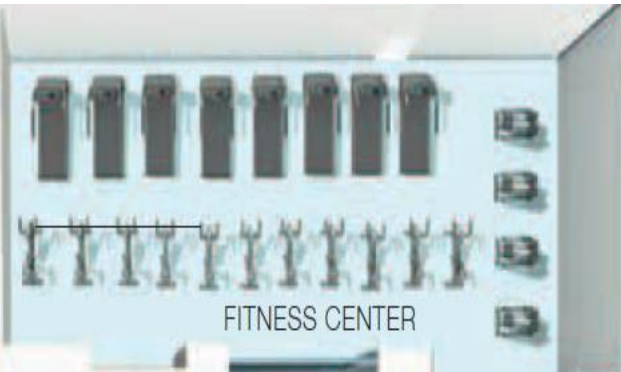
K common areas in a hotel

– 1 card reader (TLM/U) per every common area required to be controlled with access control (parking, gym, wellness center, conference room, main entrance, restaurant, …)

K x

ABB

ABB Access Control solution
Common devices, accessories and software

1 **USB Programmer** (more than one only if customer clearly request to have different seats for transponder card creation at check-in)

1 x
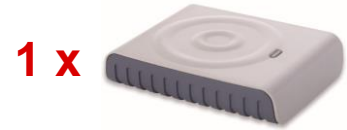
1 **MiniMAC 4.1 software license**

1 x

A number of set of 10 <u>MIFARE transponder cards</u> able at least to cover the total number of rooms plus common areas

> N/10 + K/10
(N = number of rooms
K = common areas)

ABB

Third-party Access Control solution
Room outside sensor and card-holder

N rooms in a hotel

- 1 Room outside sensor per room (TA/U or TSN/U if Room Number variant is needed)

N x

- 1 universal card-holder per room (TKK/U)

N x

© ABB Group

Access Control Range list of material
KNX devices and accessories

KNX Power supply

- Number of KNX power supply according to standard KNX rules → every access control devices requires 10mA from KNX

Additional Power supply (12...24 V AC/DC)

- One Power Supply can be shared among different devices, dimensioning in term of <u>1W peak absorption from every device</u>

KNX Line coupler

- Number of KNX Line coupler (or IP Router) according to number of KNX lines and areas in hotel installation (obviously depending also by total number of other KNX devices installed)
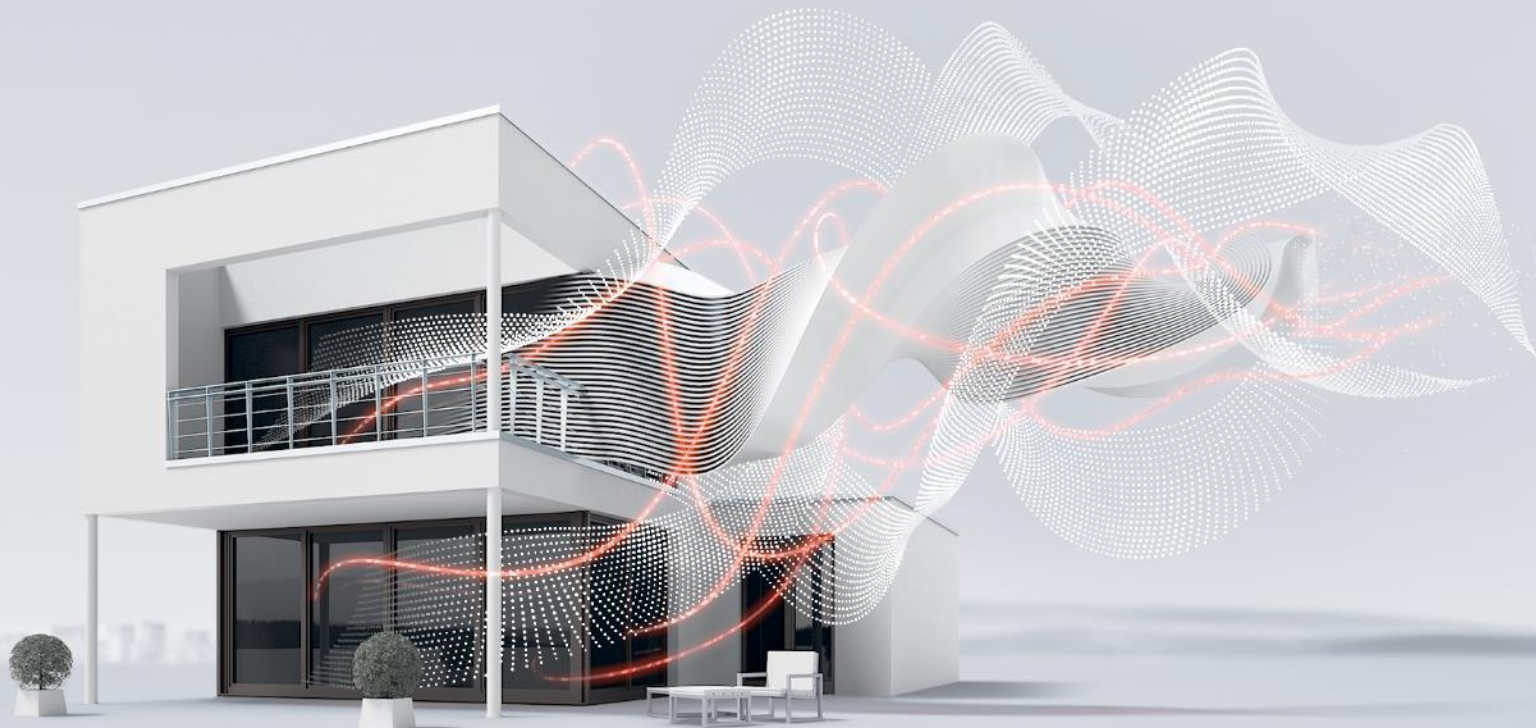

KNX IP interface

- One KNX IP interface for connecting MiniMAC PC to the KNX bus (needed only for ABB access control installation)

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Overview ranges

Tacteo Access Control
Range overview

ABB Access Control installation (MiniMAC software)

Device type	Article number	Order code	Article name	Shape
CARD READER (outside the room)	TLM/U.1.1-CG	2CKA006300A1550	Room outside sensor with card reader	86x86
	TLM/U.2.1-CG	2CKA006300A1587	Room outside sensor with card reader	86x115
	TLM/U.3.1-CG	2CKA006300A1599	Room outside sensor with card reader	115x86
	OR			
	TSM/U.2.1-CG	2CKA006300A1555	Room outside sensor with card reader and room number	86x157
CARD HOLDER (inside the room)	TKM/U.1.1-CG	2CKA006300A1553	Card holder programmable	86x86
	TKM/U.3.1-CG	2CKA006300A1589	Card holder programmable	115x86
Software, cards, USB programmer	SW MiniMAC 4.1	2CSY258202R2051	MiniMAC Software	-
	TP/T 1	2CSY289621R3801	USB MIFARE Programmer	-
	TS/T 1	2CSY259412R2041	Set of 10 MIFARE transponder cards	-
	TS/T 1.1	2CSY232175R2041	Set of 1000 MIFARE transponder cards	-
Anti-removal devices	TZE/U.0.2.CK	2CSY245271S3601	Anti-removal device for squared, horizontal and Room Number devices (86x86, 115x86, 86x157)	-
	TZE/U.0.3.CK	2CSY233741S3611	Anti-removal device for vetical devices (86x115)	-

Tacteo Access Control
Range overview

Third-party Access Control installation

Device type	Article number	Order code	Article name	Shape
Room outside sensors (outside the room)	TA/U 3.1.1-CG	2CKA006300A1549	Room outside sensor	86x86
	TA/U 3.2.1-CG	2CKA006300A1585	Room outside sensor	86x115
	TA/U 3.3.1-CG	2CKA006300A1597	Room outside sensor	115x86
	OR			
	TSN/U.2.1-CG	2CKA006300A1603	Room outside sensor with room number	86x157
CARD HOLDER (inside the room)	TKK/U.1.1-CG	2CKA006300A1552	Card holder universal	86x86
	TKK/U.3.1-CG	2CKA006300A1588	Card holder universal	115x86
Cards	TS/T 1	2CSY259412R2041	Set of 10 MIFARE transponder cards	-
	TS/T 1.1	2CSY232175R2041	Set of 1000 MIFARE transponder cards	-
Anti-removal devices	TZE/U.0.2.CK	2CSY245271S3601	Anti-removal device for squared, horizontal and Room Number devices (86x86, 115x86, 86x157)	-
	TZE/U.0.3.CK	2CSY233741S3611	Anti-removal device for vetical devices (86x115)	-
	TZE/U.0.1.CK	2CKA006300A1633	Anti-removal device for TA/U Room outside sensor	

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Training & Qualification Database

In this database you can find the complete online training portfolio for ABB Home and Building Automation

The database includes the following types of training content:

– Application Manuals

– E-Learnings

– Presentations

– Video tutorials

– Webinar slides and videos

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   → Training and Qualification

      → Training Database

Webinar "ABB-tacteo KNX Access Control"

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In this Training & Qualification Calendar you can find the educational events that are taking place during 2019

If you are interested in a training please click the training und you will be forwarded to register in "ABB MyLearning"

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→ Training and Qualification

→ Training Calendar

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Certified KNX Courses in Heidelberg
– Basic Course : 21st to 25th October
– Followed by two day application training

And many more training courses in the calendar
"International Training Dates 2019"

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**Certified KNX Basic Course
February 2019 in Heidelberg**

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Webinar "ABB-tacteo KNX Access Control"

Next Webinar

The topic will be announced …

Wednesday 16th October 2019

– Morning 09:00 am Europe Time
  (Berlin, UTC + 1h)

– Afternoon 03:00 pm Europe Time
  (Berlin, UTC + 1h)

ABB

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