SEPTEMBER 2019

Webinar “ABB-tacteo KNX Access Control”

Diego Carzaniga – Global Product Manager Access Control
Webinar “ABB-tacteo KNX Access Control”

Agenda

Overview
Tacteo Access Control Range
Software “MiniMAC”
System Architecture
Access Control References
Webinar “ABB-tacteo KNX Access Control”
Overview
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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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
MIFARE technology

• Tacteo access control transponder reader is based on Mifare technology (13.56 MHz), which grants:
  • a **better security**, if necessary, through encryption
  • an **higher speed** when exchanging data
  • **multi-application**, 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
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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 LED for status icons (make-up-room, do-not-disturb)

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
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

<table>
<thead>
<tr>
<th>1.1.161 TLM/U.1.1-CG C-Touch Card Reader - Room 1 &gt; Actuator &gt; Common parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Device settings</td>
</tr>
<tr>
<td>+ Function block 1</td>
</tr>
<tr>
<td>+ Function block 2</td>
</tr>
<tr>
<td>+ Function block 3</td>
</tr>
<tr>
<td>− Actuator</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

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Access Control transponder reader

Output configuration: linked to card reader

Transponder reader output is configured for opening/leaving closed electronic door lock (or courtesy light) while guest card is valid/not valid for access.
Electronic door lock is controlled by an external KNX actuator (SA/S) which receive from access control transponder reader, via KNX bus, information for opening/leaving closed the door.

More secure solution, since the relay which controls door can be hided inside the room and not be short-circuited from outside.

Output freely configurable via ETS for controlling other load (for example low voltage LED).
Access Control transponder reader
KNX functionalities on card validation

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)
Access Control transponder reader

KNX functionalities on card validation

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.

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 **guest** card acknowledgment
  - On **service** card acknowledgment

#### Configuring number of Scene to be sent on specific event

<table>
<thead>
<tr>
<th>Device settings</th>
<th>Led light:</th>
<th>dark</th>
<th>bright</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function block 1</td>
<td>Enable customer card valid scene:</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Function block 2</td>
<td>Scene number:</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Function block 3</td>
<td>Enable service card valid scene:</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>Actuator</td>
<td>Scene number:</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Device settings</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Function block 1</td>
<td>(Switch actuator)  (Linked to card reader)</td>
</tr>
<tr>
<td>+ Function block 2</td>
<td>Normal closed  Normal open</td>
</tr>
<tr>
<td>+ Function block 3</td>
<td>No value</td>
</tr>
<tr>
<td>- Actuator</td>
<td></td>
</tr>
</tbody>
</table>

Common parameter

- Switch status: deactivated  activated
- Invert switch status: deactivated  activated
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)

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

- **Application**
  - Switch actuator
  - Linked to card reader

- **Output contact reaction**
  - Normally closed
  - Normally open

- **Communication object value at bus voltage recovery**
  - No value

- **Switch status**
  - Deactivated
  - Activated

- **Invert switch status**
  - Deactivated
  - Activated

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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

<table>
<thead>
<tr>
<th>Device settings</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Function block 1</td>
<td></td>
</tr>
<tr>
<td>+ Function block 2</td>
<td></td>
</tr>
<tr>
<td>+ Function block 3</td>
<td></td>
</tr>
<tr>
<td>- Actuator</td>
<td></td>
</tr>
<tr>
<td>Common parameter</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Application Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch actuator</td>
</tr>
<tr>
<td>Linked to card reader</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output contact reaction Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normally closed</td>
</tr>
<tr>
<td>Normally open</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Enable electric lock delay Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
</tr>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electric lock delay Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>hh:mm:ss</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Switch status Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>deactivated</td>
</tr>
<tr>
<td>activated</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Invert switch status Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>deactivated</td>
</tr>
<tr>
<td>activated</td>
</tr>
</tbody>
</table>
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.
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)
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 output 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

<table>
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<tr>
<th>1.1.162 TKM/U.1.1-CG C-Touch Card Holder - Room 1 &gt; Actuator &gt; Common parameter</th>
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<tbody>
<tr>
<td>Device settings</td>
</tr>
<tr>
<td>Function block 1</td>
</tr>
<tr>
<td>Function block 2</td>
</tr>
<tr>
<td>Actuator</td>
</tr>
<tr>
<td>Common parameter</td>
</tr>
<tr>
<td>Card holder</td>
</tr>
<tr>
<td>General functions</td>
</tr>
</tbody>
</table>
Access Control transponder holder
Output configuration: Switch Actuator

Room loads (e.g. lights) are controlled by an external KNX actuator (SA/S) which receive from access control transponder holder, via KNX bus, information about switching ON/OFF lights.
Access Control transponder holder
Output configuration: linked to card holder

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

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)

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

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

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.

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).
Access Control transponder holder (universal – TKK/U)

**KNX functionalities on card insertion/removal**

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.

- **Guest (Services)**
  - Card Insertion scene (1 byte scene)
  - Card Removal scene (1 byte scene)
Access Control transponder holder (programmable – TKM/U)

ETS Configuration

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

Configuring number of Scene to be sent on specific event
Access Control transponder holder (universal – TKK/U)

ETS Configuration

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

![Diagram of Access Control transponder holder configuration](image)

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

![Configuration diagram](image-url)
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 insertion/removal)
### 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)

<table>
<thead>
<tr>
<th>Device settings</th>
<th>Application</th>
<th>Switch actuator</th>
<th>Linked to card holder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function block 1</td>
<td>Output contact reaction</td>
<td></td>
<td>Normally closed</td>
</tr>
<tr>
<td>Function block 2</td>
<td>Enable electric lock delay</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>Actuator</td>
<td>Electric lock delay</td>
<td>00:00:20</td>
<td>hh:mm:ss</td>
</tr>
<tr>
<td></td>
<td>Switch status</td>
<td>deactivated</td>
<td>activated</td>
</tr>
<tr>
<td></td>
<td>Invert switch status</td>
<td>deactivated</td>
<td>activated</td>
</tr>
</tbody>
</table>
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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)
MiniMAC Functions
Check-in/Check-out

Wizard for programming/deleting key-card automatically associated to a room number
MiniMAC Functions
Check-in/Check-out: creating key-card

It’s possible to specify the kind of card to be created (guest/staff)
MiniMAC Functions
Check-in/Check-out: creating key-card

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

<table>
<thead>
<tr>
<th>Key code</th>
<th>Expiration date</th>
<th>Group</th>
<th>System Code</th>
<th>Key type</th>
<th>Pos</th>
<th>Associated person</th>
<th>Profile</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>16/04/2019 12:00:00</td>
<td>Guest</td>
<td>237834</td>
<td>Normal key</td>
<td>-</td>
<td>Diego Room 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>14/03/2019 12:00:00</td>
<td>Guest</td>
<td>237834</td>
<td>Normal key</td>
<td>-</td>
<td>diego Room 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>23/07/2020 12:00:00</td>
<td>Staff</td>
<td>237834</td>
<td>Normal key</td>
<td>-</td>
<td>squattt</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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

Available detailed list of:
- Guests
- Staff
MiniMAC Functions
Room heating/cooling

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

Configuring set-point and operating mode
Viewing room temperature
Showing thermostat status (only on models that support it)
MiniMAC Functions

Room details

Detailed list of rooms:

- Situation (empty/occupied, make-up-room, cleaned, …)
- Room type (number of rooms, floor, …)
List of transponder reader and historical data related to access to hotel rooms (which card/user, when)
MiniMAC Functions

Room history

List of rooms and historical data on occupation

<table>
<thead>
<tr>
<th>Camera</th>
<th>Code</th>
<th>Title</th>
<th>Start Date</th>
<th>Start Time</th>
<th>End Date</th>
<th>End Time</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAMERA 311</td>
<td>423</td>
<td>7</td>
<td>27-05-2005</td>
<td>14:02:00</td>
<td>27-05-2005</td>
<td>14:02:30</td>
<td>0h 0'</td>
</tr>
<tr>
<td>CAMERA 301</td>
<td>423</td>
<td>7</td>
<td>23-05-2005</td>
<td>11:30:50</td>
<td>23-05-2005</td>
<td>11:30:50</td>
<td>0h 0'</td>
</tr>
<tr>
<td>CAMERA 302</td>
<td>62120</td>
<td>62120</td>
<td>30-05-2005</td>
<td>13:08:50</td>
<td>30-05-2005</td>
<td>13:08:50</td>
<td>0h 0'</td>
</tr>
<tr>
<td>CAMERA 305</td>
<td>62120</td>
<td>62120</td>
<td>30-05-2005</td>
<td>13:08:50</td>
<td>30-05-2005</td>
<td>13:09:20</td>
<td>0h 0'</td>
</tr>
<tr>
<td>CAMERA 403</td>
<td>62120</td>
<td>62120</td>
<td>30-05-2005</td>
<td>13:08:50</td>
<td>30-05-2005</td>
<td>13:09:20</td>
<td>0h 0'</td>
</tr>
</tbody>
</table>
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

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, ...)

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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 **Administrator**: it can access every menu:
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
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 and check-out and keys list with allowed operation card reading and deleting)
MiniMAC Functions
System Creation and Management

Creation of system architecture and configuration of devices

Available import from ETS function
MiniMAC Functions
Groups and time-ranges

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

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

Overview

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

- 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.
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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
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 available 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 dedicated power supply for electric door lock (not the same used for devices belonging to access control range)

• IMPORTANT → it’s forbidden to use for access control devices transformers for discontinuous loads (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 Access Control solution
Card reader and card-holder

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

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

N rooms 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 common areas in a hotel

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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 MiniMAC 4.1 software license

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

> N/10 + K/10
(N = number of rooms
K = common areas)
Third-party Access Control solution
Room outside sensor and card-holder

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

- 1 universal card-holder per room (TKK/U)
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 1W peak absorption from every device

**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)
Webinar “ABB-tacteo KNX Access Control”
Overview ranges
# Tacteo Access Control

Range overview

## ABB Access Control installation (MiniMAC software)

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

### Range overview

**Third-party Access Control installation**

<table>
<thead>
<tr>
<th>Device type</th>
<th>Article number</th>
<th>Order code</th>
<th>Article name</th>
<th>Shape</th>
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</thead>
<tbody>
<tr>
<td>Room outside sensors (outside the room)</td>
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<tr>
<td>TA/U 3.1.1-CG</td>
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<td>Room outside sensor</td>
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<td>TA/U 3.2.1-CG</td>
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<tr>
<td>TA/U 3.3.1-CG</td>
<td>2CKA006300A1597</td>
<td>Room outside sensor</td>
<td>115x86</td>
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<tr>
<td>OR</td>
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<tr>
<td>TSN/U.2.1-CG</td>
<td>2CKA006300A1603</td>
<td>Room outside sensor with room number</td>
<td>86x157</td>
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<tr>
<td>CARD HOLDER (inside the room)</td>
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<tr>
<td>TKK/U.1.1-CG</td>
<td>2CKA006300A1552</td>
<td>Card holder universal</td>
<td>86x86</td>
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<tr>
<td>TKK/U.3.1-CG</td>
<td>2CKA006300A1588</td>
<td>Card holder universal</td>
<td>115x86</td>
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<tr>
<td>Cards</td>
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<tr>
<td>TS/T 1</td>
<td>2CSY259412R2041</td>
<td>Set of 10 MIFARE transponder cards</td>
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<td></td>
</tr>
<tr>
<td>TS/T 1.1</td>
<td>2CSY232175R2041</td>
<td>Set of 1000 MIFARE transponder cards</td>
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<td>Anti-removal devices</td>
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<tr>
<td>TZE/U.0.2.CK</td>
<td>2CSY245271S3601</td>
<td>Anti-removal device for squared, horizontal and Room Number devices (86x86, 115x86, 86x157)</td>
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<tr>
<td>TZE/U.0.3.CK</td>
<td>2CSY233741S3611</td>
<td>Anti-removal device for vertical devices (86x115)</td>
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<tr>
<td>TZE/U.0.1.CK</td>
<td>2CKA006300A1633</td>
<td>Anti-removal device for TA/U Room outside sensor</td>
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</tbody>
</table>
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→ Training Calendar
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- Followed by two day application training

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Certified KNX Basic Course
February 2019 in Heidelberg
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)
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