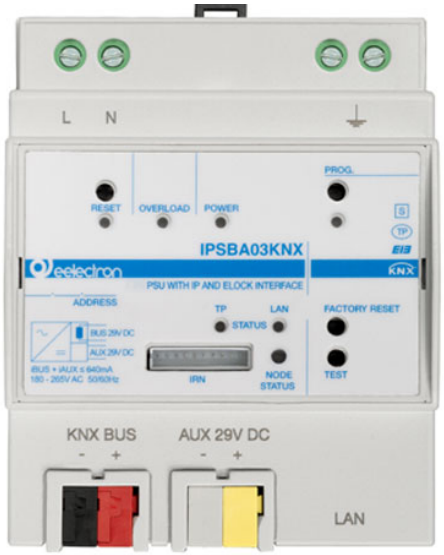
IPSBA03KNX	KNX Bridge With IP Interface And Power Supply KNX + AUX 640mA - KNX Secure, E-Lock-Inteface



USER MANUAL

Translation of the original instructions

Version: **1.0**

Date: **28/Oct/2025**

Contents

1. Introduction to the user manual 4
Meaning of the symbols used 4
2. Product overview 4
3. Installation instructions 4
4. Configuration and commissioning 5
5. General parameters 5
General settings 5
Surveillance configuration 6
Logics configuration 6
Network configuration 6
6. Diagnostic 7
7. Salto® Integration 7
ETS® configuration 8
SALTO® InRoom Node installation and commissioning 9
Log-in to server 10
8. Surveillance 10
9. Timer 10
10. Logics 10
11. Behaviour on bus failure, recovery and download 10
Behaviour on bus voltage failure 10
Behaviour on bus voltage recovery 10
Wrong application download 10

VERSION	DATE	CHANGES
1.0	**28/Oct/2025**	-

Any information inside this manual can be changed without advice.

This handbook can be download freely from the website:

www.eelectron.com

Exclusion of liability:

Despite checking that the contents of this document match the hardware and software, deviations cannot be completely excluded. We therefore cannot accept any liability for this.

Any necessary corrections will be incorporated into newer versions of this manual.

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1. Introduction to the user manual

This manual is intended for use by KNX installers and describes functions and parameters of the **IPSBA03KNX** device and how the settings and configurations can be changed using the ETS software tool.

For the technical data of the device and the compatible accessories, please refer to the datasheet of the device itself.

Meaning of the symbols used

WARNING - The operation or phase described must be carried out in compliance with the instructions provided and with the safety standards.

IMPORTANT NOTE - Details and specifications to be respected for the correct functioning of the device.

2. Product overview

The **IPSBA03KNX** device integrates a KNX power supply with auxiliary output with a a total current of **640mA, and an IP interface**, allowing KNX installations to be implemented quickly and efficiently.

The voltage of the bus output as well as that of the auxiliary output is **29V DC**.

The IP address can be obtained via DHCP server or manually configured via ETS®.

The device works in accordance with the KNXnet / IP specifications; up to 5 different IP addresses can be assigned. The device is also a KNX bus node, with its own application program and can be configured with ETS® to communicate using **KNX Data Secure protocol.**

By enabling the ETS **"Other power supplies on the BUS line"** parameter, it is possible to install two devices on the same bus line, at a minimum distance of 200 metres.

The bridge also has an input for wiring an **inRoomNode (IRN)** module for wireless control of SALTO® locks.

Moreover, 48 logic blocks are available to implement simple expressions with logical or threshold operator or complex expressions with algebraic and conditional operators; It is possible to use predefined algorithms as proportional controls of temperature and humidity or dew point calculation.

The device also integrates the **"Virtual Holder Logic";** the field of application is the hotel room: through a magnetic sensor installed on the door and connected to a digital input, accurate presence information is managed. The presence detection solution can deduce the presence of people in the room using one or more dedicated sensors. It also detects an unexpected presence and is able to differentiate more behaviours.

It is also implemented the control logic called **"Surveillance"** that checks if KNX TP devices (up to 128) of the subnet connected to the power supply are operating "On Line", alerting the backbone if one of them goes into "Off Line" status.

On the device there are push-buttons and signaling LEDs for bus reset operations as well as for Factory Reset or for displaying activity on the KNX bus and on the IP backbone. There is also a test button for the simulation of the opening/closing of the locks.

The device is compact, with a size of only **4 DIN modules** and is intended for installation on DIN bar in LV distribution switchboards.

3. Installation instructions

The device can be used for permanent internal installations in dry places.

WARNING

- When a clear separation between the low voltage (SELV) and the dangerous voltage (230V) is NOT possible, the device must be installed maintaining a minimum guaranteed distance of 4 mm between the dangerous voltage lines or cables (230V not SELV) and the cables connected to the EIB / KNX BUS (SELV).
- The device must be mounted and commissioned by an authorized installer.
- The applicable safety and accident prevention regulations must be observed.
- The device must not be opened. Any faulty devices should be returned to manufacturer.
- For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.
- KNX bus allows you to remotely send commands to the system actuators. Always make sure that the execution of remote commands do not lead to hazardous situations, and that the user always has a warning about which commands can be activated remotely.

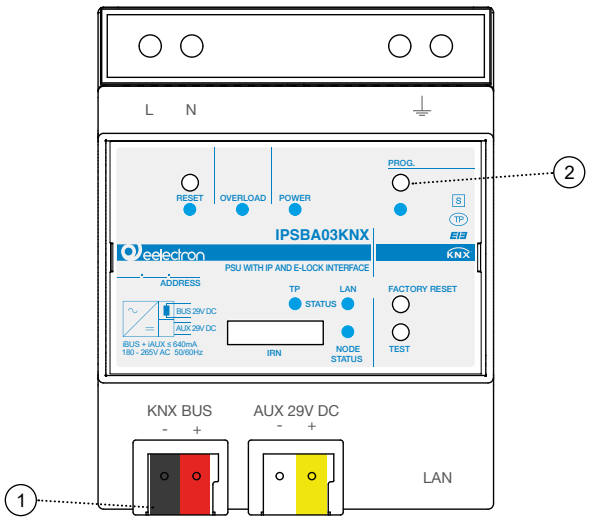
For more information visit www.eelectron.com.

4. Configuration and commissioning

The configuration and commissioning of the device is made with the ETS® (Engineering Tool Software). For the configuration of the device parameters the corresponding application program or the whole eelectron® product database must be loaded in the ETS® program.

The commissioning of the device requires the following steps:

- connect the bus KNX (1)
- turn on the bus power supply
- press the programming button (2); the red programming LED turns ON
- download into the device the physical address and the configuration with the ETS® program



5. General parameters

In ETS®, in the drop down menu of the device the general parameters consist of four configuration blocks, described in the next paragraphs.

General settings

Communication objects involved:

“<General> Heartbeat”	1 Bit	CRT
“<General> Power On Event”	1 Bit	CRT
“<General> Input Date”	3 Bytes	CWTU/CW
“<General> Input Time”	3 Bytes	CWTU/CW
“<General> Output Date”	3 Bytes	CRT
“<General> Output Time”	3 Bytes	CRT
“<General> IP Interface”	1 Bit	CW
“<General> Reset BUS”	1 Bit	CW
“<General> Primary Heartbeat”	1 Bit	CW
“<General> Primary Alarm”	1 Bit	CRT

KNX PARAMETER	SETTINGS
Delay to send telegrams on power-up	5 ÷ 15 seconds
Through this parameter it is possible to set the telegram transmission delay after switch-on by selecting the time beyond which the device is authorized to send telegrams. In large systems, after a power outage or shutdown, this delay avoids generating excessive traffic on the bus which cause slow performance or a transmission crash. In case of several devices requiring telegrams to be sent on the bus after a reset, these delays must be programmed to prevent traffic congestion during the initialization phase. Input detection and object values are updated at the end of the transmission delay time At the end of ETS programming, the device behaves as it did after it was switched on.	
Other power supplies on the BUS line	no / yes
By enabling this parameter it’s possible to install two devices on the same bus line, at a minimum distance of 200 metres.	
Heartbeat (periodic alive notification)	nothing periodic on request
The parameter allows you to notify a hierarchically superior control or supervision system of your existence / correct online activity. The notification can take place spontaneously (periodically - settable period value) or following a query (upon request). The value of the 1-bit notification telegram can be set.	
Telegram value	off / on / toggle
Defines the value of the 1 bit notification telegram. The toggle value is not available for “on demand” configuration.	
Period - time unit	seconds / minutes / hours
Defines the unit of measure of the notification time interval. This parameter is not available for the “on demand” configuration.	
Period - time value	1 ... 255
Defines the notification interval time. This parameter is not available for the “on demand” configuration.	
Date and time source for timers	from BUS / from NTP server
Defines wether the time data are taken from the BUS line or the NTP server.	
Request time at power ON	no / yes
In case of date and time data sourcing fro BUS, this parameter permits to enable a time request at power ON.	
Output date objects	Date and Time / DateTime
Defines whether the relay outputs are managed individually or coupled.	
Cyclic send time	never / every minute / every 30 minutes / every hour / every 6 hours / every 12 hours / every day
Set the period of cyclical sending.	
Timezone mode	custom / standard
In custom mode it is possible to set manually the coordinates In standard mode the location is chosen from the drop down menu.	
IP interface	always enabled / bus controlled
With this parameter it is possible to set how to manage the IP interface function.	

Bus controlled	
Initial enable state	disabled / enabled
It defines the initial state of the IP interface function when bus controlled.	
Enable activation telegram	telegram “0” / telegram “1”
It defines the telegram sent tothe object “<General> IP Interface” to enable the function.	
Automatic deactivation time (0=never) [min]	0 ... 255
It defines the automatic time after which the function is deactivated.	
Reset BUS object	disabled / enabled
With this parameter it’s possible to enable the object “<General> Reset BUS”.	
Telegram for reset	telegram “0” / telegram “1”
It defines the telegram sent to the object “<General> Reset BUS” to enable the reset.	
Salto integration	disabled / enabled
It enables the Salto integration function for wireless control of SALTO® locks.	
Additional function x	4 logics 1 virtual holder
With this parameter it is possible to enable this functions: **4 logics** - see “Logic” user manual **1 virtual holder** - is a logical function that automatically recognizes the presence of a person in a room. This function can be used in hotels or similar installations and requires connection to other devices (see “Virtual Holder”).	

Surveillance configuration

Communication objects involved:

“<General> Alarms 0 - 15”	4 bytes	CRT
“<General> Alarms 16 - 31”	4 bytes	CRT
“<General> Alarms 32 - 47”	4 bytes	CRT
“<General> Alarms 48 - 63”	4 bytes	CRT
“<General> Alarms 64 - 79”	4 bytes	CRT
“<General> Alarms 80 - 95”	4 bytes	CRT
“<General> Alarms 96 - 111”	4 bytes	CRT
“<General> Alarms 112 - 127”	4 bytes	CRT
These objects are used to sum up the alarm status of the relative surveillance channels.		

KNX PARAMETER	SETTINGS
Physical address main line	0 .. 255
This parameter defines the physical main address of the surveilled devices (e.g. 10.13.x --> 10).	
Physical address sub line	0 .. 255
This parameter defines the physical sub address of the surveilled devices (e.g. 10.13.x --> 13).	
Alarm time - hours	0 ... 255
This parameter defines the surveillance time (hours) before sending the alarm. Used by the surveillance modules when the alarm function is enabled.	
Alarm time - minutes	0 ... 255
This parameter defines the surveillance time (minutes) before sending the alarm. Used by the surveillance modules when the alarm function is enabled.	
Warning time - seconds	20 ... 255
This parameter defines the warning time (seconds). This time indicates how much before the end of the surveillance time a group value read is sent on the bus through the “Warning Read Request” object. Used by the surveillance modules when the warning function is enabled.	
Surveillance priority	primary / secondary
This parameter defines if the device is the primary surveillance device or if it is the secondary one. If secondary is selected, the heartbeat period of the primary device must be aligned to the one of the primary device itself. If no message is received in the period an alarm message is sent on the object “<General> Primary Alarm” and the secondary device starts to surveil the plant.	
Primary period - time unit	seconds / minutes / hours
This parameter defines the unit of measures of the Primary Heartbeat period.	
Primary period - time value	1 ... 255
This parameter defines the time interval for sending the “<General> Primary Heartbeat” object.	
Number of surveillances	16, 32, 48, 64, 80, 96, 112, 128
This parameter defines the number of surveillance modules.	

Logics configuration

Communication objects involved:

“<General> Enable/Disable All Logics”	1 Bit	CW
“<General> Enable/Disable Logic x”	1 Bit	CW

KNX PARAMETER	SETTINGS
Logic activation telegram	telegram “0” / telegram “1”
Defines the telegram sent on the object “<General> Enable/Disable All Logics” to enable the logic function.	
Logic x enabled/disabled state after download	disabled / enabled
This parameter defines the value set for object ““<General> Enable/Disable Logic x” after a download.	
Logic x enable/disable object	do not use / use
With this parameter it’s possible to use the object “<General> Enable/Disable Logic x”.	

Network configuration

This function allows the device to communicate with the DNS (Domain Name System) and NTP (Network Time Protocol) services, to be considered mandatory for the ETS IP configuration.

To guarantee the correct functioning of the validation of the security certificates and the identity of the broker to which to connect with the MQTT service, the device must reach the NTP and DNS services.

In addition to the MQTT part, the NTP service is required to use the object dedicated to sending the date and time via KNX.

Communication objects involved:

“<General> Alarm DHCP”	1 Bit	CRT
“<General> Alarm Ping”	1 Bit	CRT
“<General> Alarm DNS Resolution”	1 Bit	CRT
“<General> Alarm NTP”	1 Bit	CRT
“<General> Alarm 4 Bytes”	4 Bytes	CRT
“<General> Alarm Text”	14 Bytes	CRT

KNX PARAMETER	SETTINGS
DNS 1 address	max 15 bytes
With this parameter (Domain Name System) it’s possible to convert a web address in an IP address which uniquely identifies the device.	
DNS 2 address	max 15 bytes
This parameter it’s used in case of failure of DNS 1.	
DHCP alarm	disabled / enabled
This parameter (Dynamic Host Configuration Protocol) is used to assign IP addresses and other network configurations automatically to devices that connect to a network. This parameter allows a message to be sent to the bus which warns whether or not the protocol has correctly released the IP address to the device.	
Alarm telegram	telegram “0” / telegram “1”
It defines the value sent to the object “<General> Alarm DHCP” to activate the alarm.	
Cycling ping alarm	disabled / enabled
Ping is a command that is used to verify the network connection between two devices. Ping works by sending a packet of data from one device to another. Ping is often used to check if a given IP address or host name is reachable across a network connection. For example, you can use ping to check if a server is able to respond to connection requests or to diagnose network connection problems. This parameter allows a message to be sent to the bus which warns if the IP address/DNS has responded correctly to the request.	
Address to ping	max. 32 bytes allowed
It defines the IP address/DNS the device will connect to.	
Alarm telegram	telegram “0” / telegram “1”
It defines the value sent to the object “<General> Alarm Ping” to activate the alarm.	
Cyclic time [min]	1 ... 60
It defines the time interval for ping request.	
DNS resolution alarm	disabled / enabled
This parameter allows a message to be sent to the bus which warns if at least one of the configured DNS functions correctly (see DNS1/2).	
Domain name	max. 32 bytes
It defines the name of the IP address/DNS to resolve.	
Alarm telegram	telegram “0” / telegram “1”
It defines the value sent to the object “<General> Alarm DNS Resolution” to activate the alarm.	
Server x (1- 4)	max. 32 bytes
Network Time Protocol (NTP) is a network protocol that is used to synchronize the system time of a device on the network with a time server. We have 4 servers available to ensure time synchronization, if server 1 fails the request is passed to 2 and so on up to 4.	
NTP alarm	disabled / enabled
This parameter allows a message to be sent to the bus which warns if at least 1 of the configured NTP servers is working correctly (see Server1/2/3/4).	
Alarm telegram	telegram “0” / telegram “1”
It defines the value sent to the object “<General> Alarm NTP” to activate the alarm.	
Alarm 4 bytes	disabled / enabled
This parameter enable the object “<General> Alarm 4 Bytes” which sends to the BUS a bitmask containing the network errors.	
Alarm text	disabled / enabled
This parameter enable the object “<General> Alarm Text” which sends a text string containing network errors to the BUS.	

6. Diagnostic

Please refer to the “Diagnostic” user manual.

7. Salto Integration

In this chapter is described the Salto integration, for more information please visit www.saltosystems.com.

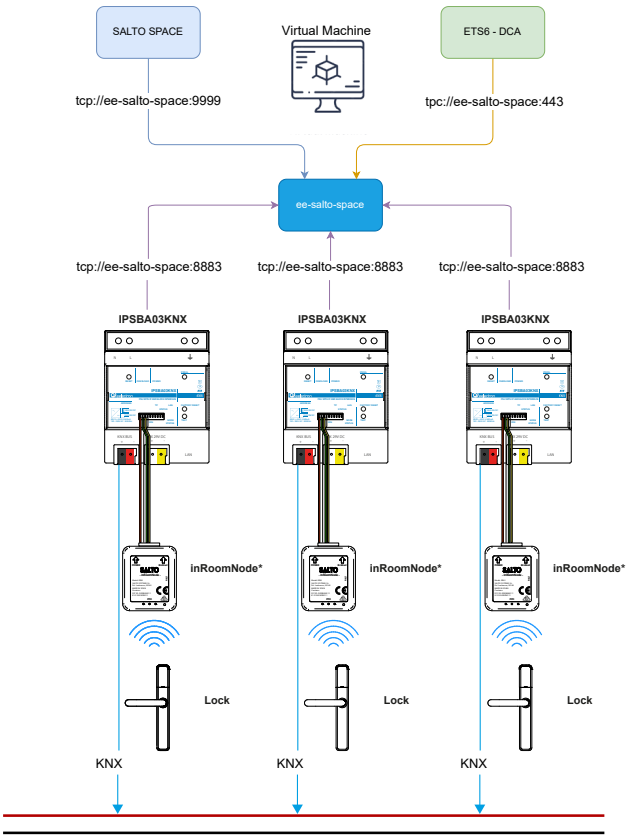
SALTO brand products are owned by SALTO Systems HQ, Spain

Definitions

BLUEnet	Salto proprietary wireless communication for Locks and other devices
Bridge	IPSBA03KNX device
InRoom Node	The Salto device that connects the Lock to the Bridge
Node	Short form for InRoom Node
PPD	Salto portable programming device to initialize locks and other devices

The SALTO integration to the Eelectron server involves the use of a SALTO server and an IRN (InRoom Node module), provided by SALTO Systems.

The IRN is connected physically to IPSBA03KNX and performs the BLUEnet wireless communication with the Door Lock by translating it to UART messages for IPSBA03KNX. The SALTO server logs in the Eelectron Server as a client to receive the messages from the bridge. All messages between Door Lock and Salto server are protected by an end to end encryption.



The Salto integration consists of 3 main steps:

1. ETS configuration
2. SALTO InRoom Node installation and commissioning
3. Log-in to Server

ETS configuration

In this paragraph are described the parameters for the configuration in ETS.
Communication objects involved:

“<Salto E-Lock> Door Contact”	1 Bit	CRT
“<Salto E-Lock> Privacy Contact Status”	1 Bit	CRT
“<Salto E-Lock> Privacy Command”	1 Bit	CW
“<Salto E-Lock> Guest Valid”	1 Bit	CRT
“<Salto E-Lock> Service Valid”	1 Bit	CRT
“<Salto E-Lock> Radio Communication”	1 Bit	CRT
“<Salto E-Lock> Charged Battery”	1 Bit	CRT
“<Salto E-Lock> InRoomNode Communication”	1 Bit	CRT
“<Salto E-Lock> Free Access”	1 Bit	CRT
“<Salto E-Lock> Intrusion”	1 Bit	CRT
“<Salto E-Lock> Door Left Open”	1 Bit	CRT
“<Salto E-Lock> Emergency mode”	1 Bit	CRT
“<Salto E-Lock> Enable”	1 Bit	CW

KNX PARAMETER	SETTINGS
Door name	
Identifies the name of the door to manage.	
Door number	0 ... 2147483647
Defines the number associated with the lock to manage.	
Enable state after download	disabled / enabled
Defines if the Salto E-Lock function is enabled after downloading the application.	
Enable activation telegram	telegram “0” / telegram “1”
This parameter defines the telegram to send to the object “<Salto E-Lock> Enable” to activate the Salto KNX function.	
E.g. this parameter is mainly used when a lock is in maintenance and must be disabled the sending of the communication objects.	
Send door status objects after enabling	all / only if changed
This parameter defines which status objects are sent after enabling the Salto function. **All** All the status objects will be sent: “<Salto E-Lock> Door Contact” “<Salto E-Lock> Privacy Contact Status” “<Salto E-Lock> Free Access” “<Salto E-Lock> Intrusion” “<Salto E-Lock> Door Left Open” “<Salto E-Lock> Emergency mode” **Only if changed** Will be sent only the objects that changed status.	
E.g. after a maintenance this parameter will send the actual status of the lock. The Salto server will report all the lock status in the “Online Monitoring” section on the web page.	
Send latest access after enabling	no / yes
It enables the sending of the latest access type after enabling the Salto function.	
Button function	none / door opening emulation
It enables the test button on the device. Press for two seconds to emulate the door opening (send the corresponding KNX message on the bus). Once released it emulates the door closing (send the corresponding KNX message on the bus). The emulation allows you to verify the correct setting of the ETS configuration.	

DOOR CONTACT	
Value to send on opening event	nothing / off / on
Defines the value sent by the “<Salto E-Lock x> Door Contact” object when the door is opened.	
Value to send on closing event	nothing / off / on
Defines the value sent by the “< Salto E-Lock x> Door Contact” object when the door is closed.	
Consider opening event when closing event	no / yes
By enabling this parameter, it is possible to receive a door opening message associated with the closing event.	

PRIVACY CONTACT	
Privacy function	disabled / enabled
By enabling this parameter, the manual privacy of the lock is activated (deadbolt launched or electronic push button activated). Only keys that override the privacy can open the lock.	

	COM.	NAME	STATUS	BATTERY	TAMPER
☐	✓	room 101			

Value to send for privacy active	nothing / off / on
It defines the value sent by the object “<Salto E-Lock> Privacy Command” when privacy function is active.	
Value to send for privacy not active	nothing / off / on
It defines the value sent by the object “<Salto E-Lock> Privacy Command” when privacy function is not active.	
Command - Activation Telegram	telegram “0” / telegram “1”
This parameter defines the telegram to send to the object “<Salto E-Lock> Privacy Command” to activate the Privacy function (electronic push button activated).	

USER ACCESS	
Guest - Value to send for valid user	off / on
It defines the value sent by the object “<Salto E-Lock> Guest Valid” when a valid guest user access the door by passing the card on the lock reader.	
Service - Value to send for valid user	off / on
It defines the value sent by the object “<Salto E-Lock> Service Valid” when a valid service user access the door by passing the card on the lock reader.	

ADDITIONAL FEEDBACK OBJECTS	
Radio communication	disabled / enabled
It enables the object “<Salto E-Lock> Radio Communication”.	
Telegram for active communication	telegram “0” / telegram “1”
This parameter defines the telegram sent by the object “<Salto E-Lock> Radio Communication” when the communication is active.	
E.g. if the telegram associated is “1”, when receiving “0” there is no communication with the lock and the rest of objects don’t reveal the actual status.	
Battery status	disabled / enabled
It enables the object “<Salto E-Lock> Charged Battery”.	
Telegram for charged battery	telegram “0” / telegram “1”
This parameter defines the telegram sent by the object “<Salto E-Lock> Charged Battery” when the battery is charged.	
E.g. if the telegram associated is “1”, when receiving “0” the batteries of the lock are low (a replacement is required).	
InRoom Node communication	disabled / enabled
It enables the object “<Salto E-Lock> InRoomNode Communication”.	
Telegram for active communication	telegram “0” / telegram “1”
This parameter defines the telegram sent by the object “<Salto E-Lock> InRoomNode Communication” when the communication between the bridge and the node is active.	
E.g. if the telegram associated is “1”, when receiving “0” there is no communication between the node and the bridge. The Salto server will report the lock status in the “Online Monitoring” section on the web page as shown in the figure below; room 107 - no communication.	
Free access mode	disabled / enabled
It enables the object “<Salto E-Lock> Free Access”.	
Telegram for access free	telegram “0” / telegram “1”

This parameter defines the telegram sent by the object “<Salto E-Lock> Free Access” when the lock is in free access (access granted permanently).	
Intrusion	disabled / enabled
It enables the object “<Salto E-Lock> Intrusion”.	
Telegram for intrusion	telegram “0” / telegram “1”
This parameter defines the telegram sent by the object “<Salto E-Lock> Intrusion” when the intrusion alarm is currently active.	

	COM.	NAME	STATUS	BATTERY	TAMPER
☐	✓	room 101			

Door left open	disabled / enabled
It enables the object “<Salto E-Lock> Door Left Open”.	
Telegram for door left open	telegram “0” / telegram “1”
This parameter defines the telegram sent by the object “<Salto E-Lock> Door Left Open” when the door is left open after a certain time set in the Salto server.	

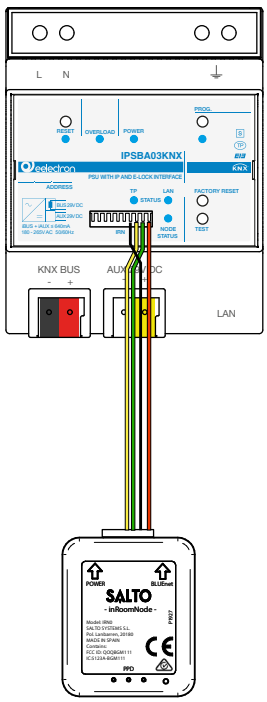
☐	✓	room 101			
☐	✓	room 105			

Emergency mode	disabled / enabled
It enables the object “<Salto E-Lock> Emergency mode”.	
Telegram for Emergency mode	telegram “0” / telegram “1”
This parameter defines the telegram sent by the object “<Salto E-Lock> Emergency mode” when the door is in Emergency mode.	
E.g. this parameter can be used when an emergency occurs in the building and a lock must be opened; this command is set in the Salto server.	

	COM.	NAME	STATUS	BATTERY	TAMPER
☑	✓	room 101			

SALTO InRoom Node installation and commissioning

The InRoomNode has to be connected with 4 wires (wiring is included in delivery) to the bridge IPSBA03KNX as shown in the figure below.



The commissioning consists in pairing the Lock and the corresponding InRoom Node module.

- First, the Lock has to be programmed and already working in offline mode.
- A PPD (Portable Programmer Device) with the site credential has to be connected to the Lock and then to the Node. Once PPD is disconnected from the Node, the pairing process begins.
- At this point the Lock and the Node become paired and the Bluenet LED of the Node shows the status of the communication.

The commissioning has to be repeated only when any of both devices, Lock or Node, are replaced due to maintenance reason. The battery change or power supply interruptions do not affect the paired state of both devices.

Signals of the Bluenet Led:

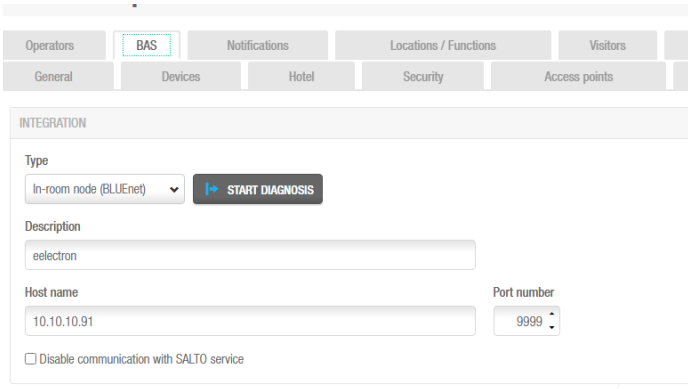
- Green color: the wireless connection to the Lock is ok.
- Blinking green: Pairing process (searching Lock to pair with)
- Off: Not initialized with Lock-ID.

For more information, visit www.saltosystems.com.

Log-in to server

The log-in of Salto server to Eelectron server is done in the corresponding page on the web site by inserting the host name and the port number.

For more information please refer to SALTO Space Integrator.



8. Surveillance

Please refer to the “Surveillance” user manual.

9. Timer

Please refer to the “Timer” user manual.

10. Logics

Please refer to the “Logics” user manual.

In the devices described, the logical expression can have a maximum of 24 characters.

11. Behaviour on bus failure, recovery and download

Behaviour on bus voltage failure

On failure of bus voltage, it’s possible to set an action to execute in case of independent relays. Behaviour of controlled actuators must be set using their own parameters.

Behaviour on bus voltage recovery

On bus voltage recovery all the communication objects are set to 0 except for objects for which a parameter is defined for the initial value.

Wrong application download

If the wrong ETS application is downloaded then KNX/EIB led starts blinking and device is not operative on the bus. A power reset must be done or the correct ETS application must be downloaded.