Battery powered wireless push button for KNX RF or EnOcean with KNX Data Security and EnOcean Security for MATCH 55 series

KNX RF / ENO Push Button 440 *secure*

Operation and installation manual

(Art. # 5374 Insert with mounting kit and single rocker)
(Art. # 5326 Insert with mounting kit and double rocker)
(Art. # 5483 Insert without mounting kit)

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Content

1 Application

The KNX RF / ENO Push Button 440 *secure* is a wireless push button for KNX RF or for EnOcean. The device is available with one or two rockers. Each rocker offers two pressure points (up/down).

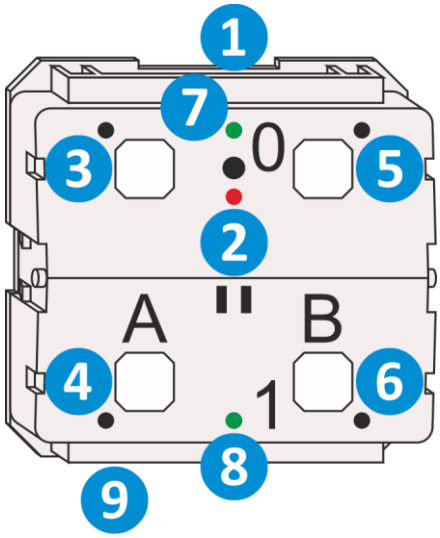
The device is part of the MATCH 55 push button series. With the supplied installation kit, the push button fits me-chanically to numerous switch ranges available on the market with internal dimensions of 55 mm. The soft and quiet push button operation allows the installation in bed-rooms and living rooms.

In the delivery state, the device sends EnOcean telegrams. Configuration for KNX RF is done with the ETS® via radio frequency or directly via the integrated USB interface (type Micro-USB). This interface can also be used to program other KNX devices via radio frequency. The pushbutton is powered by a standard battery type CR2032.

The application offers extensive functions for switching, dimming, shutter, valuator as well as scene and color con-trol. Each button on a rocker can be configured individual-ly. The flexible operating concept also allows different functions on one button depending on the setting. The device supports KNX Data Security and EnOcean Security.

2 Installation and connection

The KNX RF / ENO Push Button 440 *secure* is suitable for numerous switch ranges available on the market with 55 mm internal dimensions. The insert has the following operating elements and displays:



1. Battery
2. Button/LED for programming mode
3. Button A0
4. Button A1
5. Button B0
6. Button B1
7. LED KNX
8. LED EnOcean
9. Connection USB

2.1 KNX programming mode

The KNX programming mode is activated/deactivated either by pressing the recessed KNX programming button 2 or by simultaneously pressing the buttons 3 and 5.

When the programming mode is active, the programming LED 2 lights up red.

The operation of the programming mode on the front can be activated/deactivated in the ETS® on page general settings.

2.2 Status display

Summary of the states of the programming LED 2:

LED Status	Meaning
LED lights red	Programming mode is active.
LED blinks red (fast)	Programming mode is not active. The device is not properly loaded e.g. after an interrupted download.
LED blinks red (slow)	The device is awake e.g. when connected to USB.
LED flashes 1x red	After button press (KNX mode).
LED flashes 1x red (all 5 s)	Low battery voltage (< 2.6 V).
LED is off	The device is in sleep mode.

Summary of the states of LED KNX 7:

LED Status	Meaning
LED flashes green	The device indicates a KNX communication, e.g. when sending telegrams or during an active ETS download.

Summary of the states of LED EnOcean 8:

LED Status	Meaning
LED flashes green	The device indicates an EnOcean communication, e.g. when sending telegrams.

The KNX RF / ENO Push Button 440 *secure* is unidirectional in normal operation, and bidirectional only during programming mode. Therefore, the programming mode must be activated before downloading the ETS configuration (LED 2 lights red).

3 Reset to factory default settings

It is possible to reset the device to its factory default settings.
The battery voltage has to be more than 2.6 V.

- Remove the battery from the device.
- Press the KNX programming button 2 to discharge all capacitors.
- Press the KNX programming button 2 and keep it pressed down.
- Insert the battery into the device.
- Keep the KNX programming button 2 pressed for at least another 6 seconds.
- A short flashing of all LEDs (2 7 8) visualizes the successful reset of the device to factory default settings.

In the factory default settings, the device has the physical address 15.15.255 and no group addresses are connected. Also, KNX Data Security is disabled and the initial key (FDSK) must be used for secure commissioning.

The device can be used as an EnOcean rocker.

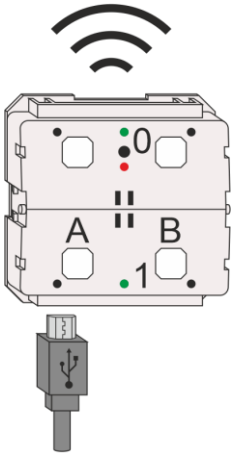
4 Operation as EnOcean device

In the factory default settings, the device can be operated as an EnOcean rocker (EEP F6-02-03, compatible with F6-02-01), in this case the device operates unencrypted.

EnOcean encryption can be activated by simultaneously pressing the buttons A0 3 and A1 4, or B0 5 and B1 6, for which purpose the rocker may have to be removed. By pressing all 4 buttons (A0, A1, B0, B1) simultaneously, the insert works again without encryption.

After configuration via ETS, the EnOcean protocol is deactivated. It can be reactivated by resetting to factory default settings.

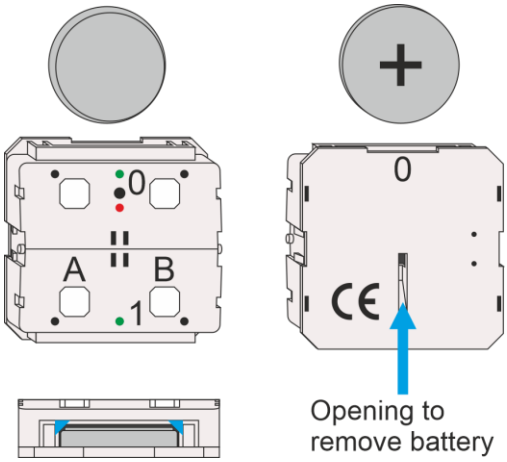
5 Wiring scheme



6 Battery and battery change

The button is powered by a standard CR2032 battery. Pay attention to the correct polarity when inserting the battery. The polarity can be seen through the corners of the battery compartment. To remove the battery, it can be pushed out with a suitable object through the opening on the back.

The object should not be conductive, otherwise there is a risk of a short circuit and the device will not shut down properly.



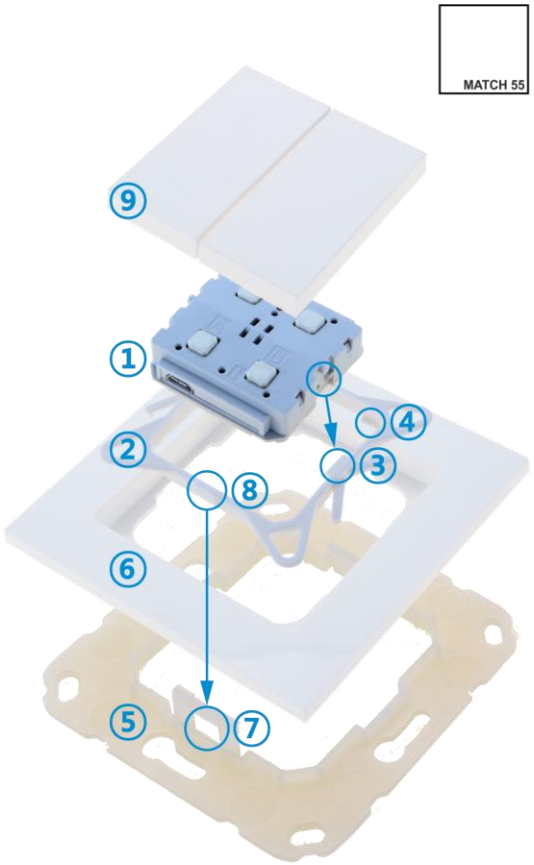
Good battery (voltage >= 2,6 V)

- After inserting, LED KNX 7 and LED EnOcean 8 light up for 2 seconds.
- After 3 seconds, programming LED 2 blinks slowly for 6 seconds.

Low battery (voltage < 2,6 V)

- After inserting, LED KNX 7 and LED EnOcean 8 light up for 2 seconds.
- After 3 seconds, programming LED 2 flashes 1x every 5 seconds.
- After 30 minutes, the device restarts.

7 Mounting and delivery



7.1 Mounting

Mounting of the KNX RF / ENO Push Button 440 *secure* ①:

- Insert the device ① from above into the holding frame ②. The device snaps into the retaining lugs ③ of the holding frame on the left and right and sits flush on the four retaining lugs ④.
- Fasten the wall mounting frame ⑤ in the desired installation position (with screws or adhesive pad) – make sure that the retaining straps ⑦ point up and down.
- Place the decorative frame ⑥ on the wall mounting frame ⑤ and then place the device ① locked into the holding frame ② from above. The wall mounting frame ⑤ snaps into the retaining lugs ⑧ of the holding frame ② with the retaining straps ⑦.
- Finally, place the rocker ⑨ (single rocker or double rocker depending on the model) on the KNX RF / ENO Push Button 440 *secure* ① and clip it in.

For dismantling, proceed in reverse order.

7.2 Delivery

KNX RF / ENO Push Button 440 *secure*, single rocker (Art. # 5374):

- Push button insert ①
- Holding frame ②
- Wall mounting frame ⑤
- Single rocker (no picture)

KNX RF / ENO Push Button 440 *secure*, double rocker (Art. # 5326):

- Push button insert ①
- Holding frame ②
- Wall mounting frame ⑤
- Double rocker ⑨

KNX RF / ENO Push Button Insert 440 *secure* (Art. # 5483):

The device comes without rockers or mounting kit.

- Push button insert ①

8 KNX Security

The KNX standard was extended by KNX Security to protect KNX installations from unauthorized access. KNX Security reliably prevents the monitoring of communication as well as the manipulation of the system.

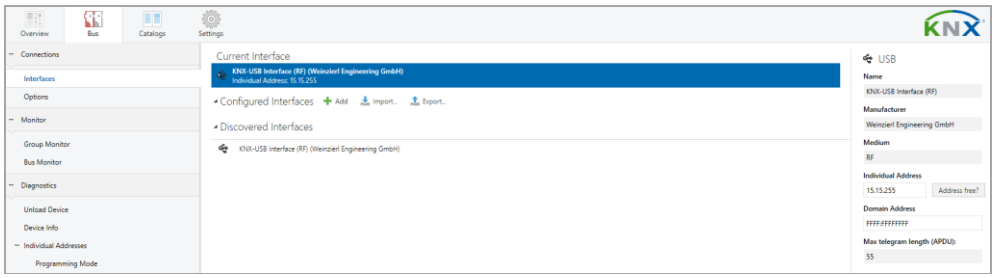
The specification for KNX Security distinguishes between KNX IP Security and KNX Data Security. KNX IP Security protects the communication over IP while on KNX TP the communication remains unencrypted. Thus, KNX IP Security can also be used in existing KNX systems and with non-secure KNX TP devices.

KNX Data Security describes the encryption on telegram level. This means that the telegrams on the twisted pair bus or via RF (radio frequency) are also encrypted.

Encrypted telegrams are longer than the previously used unencrypted ones. For secure programming via the bus, it is therefore necessary that the interface used (e.g. USB) and any intermediate line couplers support the so called KNX long frames.

9 Interface settings in the ETS

In the ETS, interfaces can be selected and configured via the ETS menu “Bus – Interfaces”. All available connections are listed under “Discovered Interfaces”. After clicking on the desired interface, connection specific information and options appear on the right side of the ETS window. Via the “Select” button, the selected interface can be set as “Current Interface”.

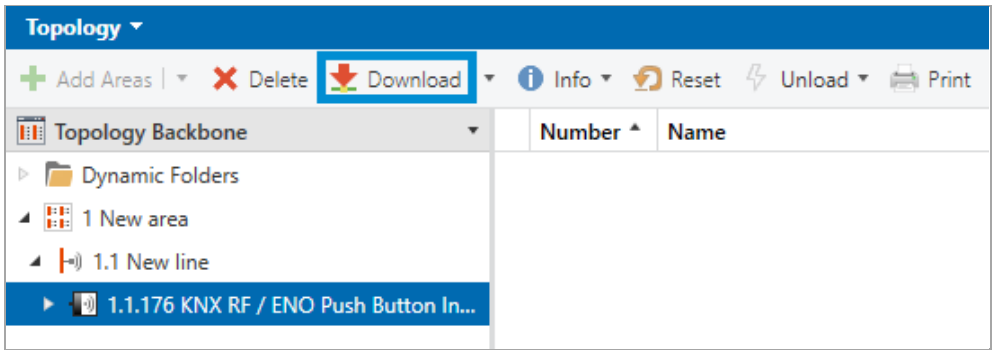


In the “Individual Address” section, the currently used individual KNX address can be changed. To check if the desired individual address is not already available in your KNX installation, the button “Address free?” can be pressed.

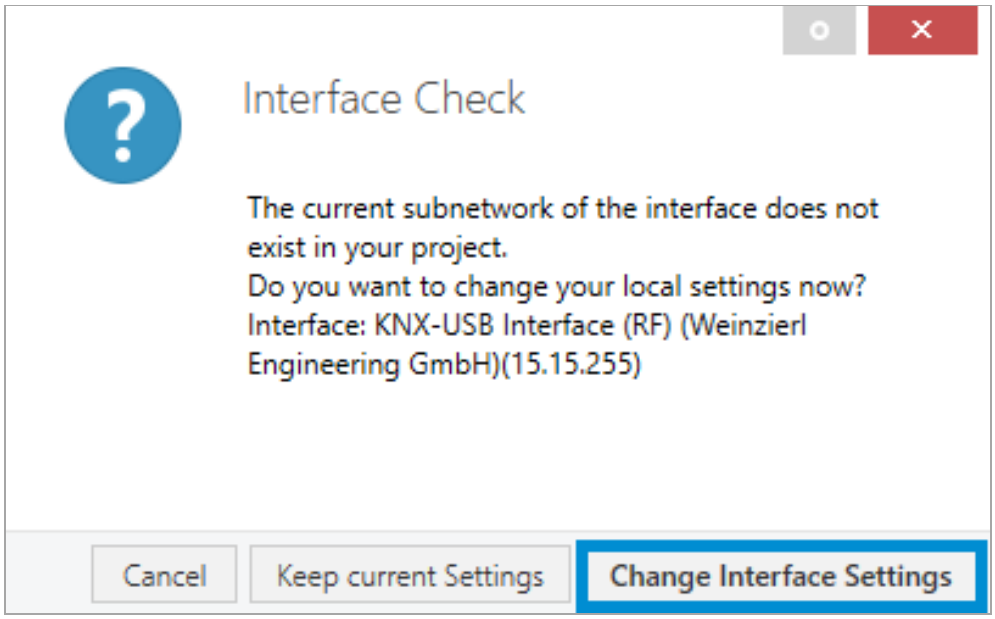
Furthermore, the “Domain Address” can be changed in the next section.

10 Local download

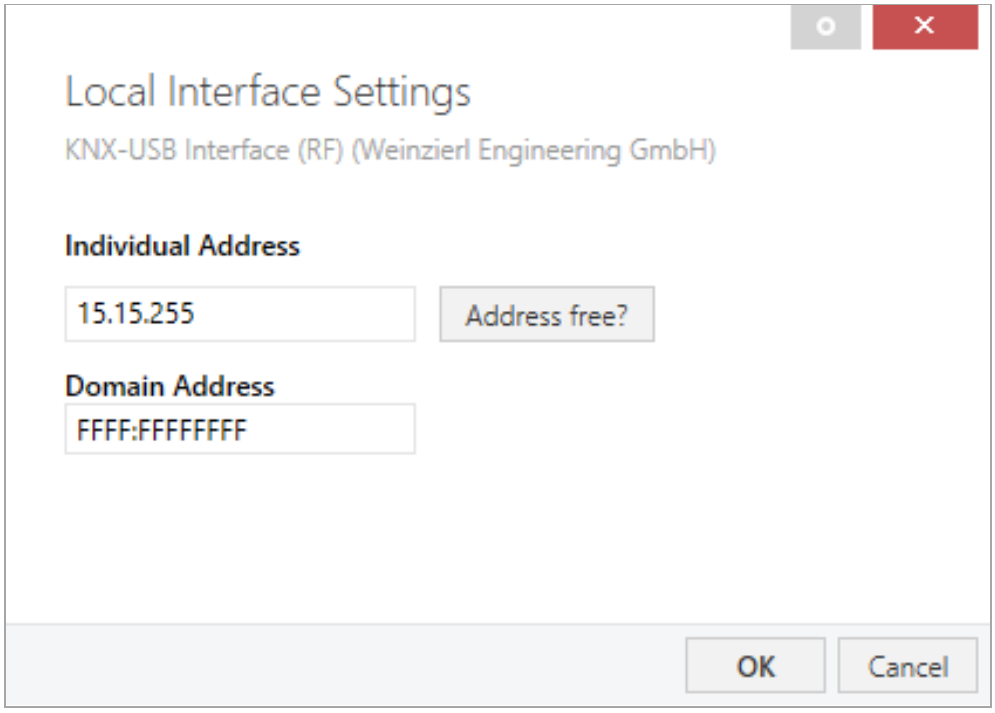
With the KNX RF / ENO Push Button 440 *secure* it is possible to program the device via the integrated USB interface (from ETS version 5.7.5). This saves the battery and significantly reduces the download time. To be able to load the KNX RF / ENO Push Button 440 *secure* via the integrated USB interface, it must be selected as the default interface in ETS. See the section “Interface settings in the ETS”.



If the KNX RF / ENO Push Button 440 *secure* is selected in the project and “Download” is pressed, a dialog appears where the individual address and the domain address of the interface can be changed.

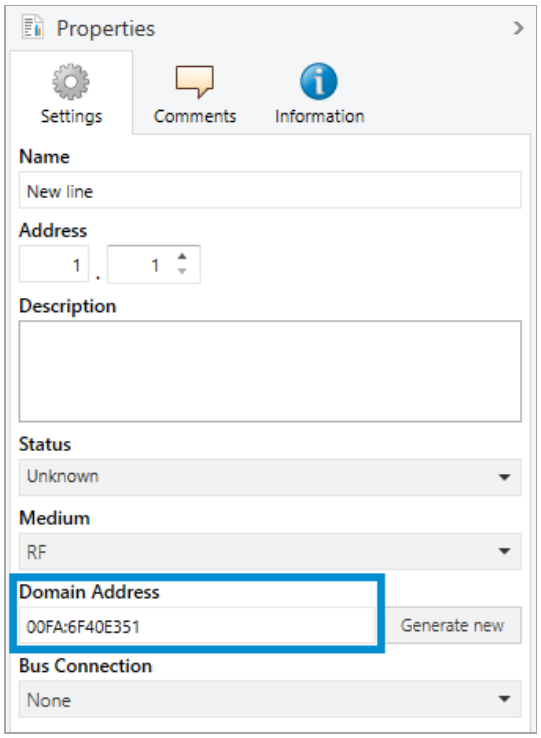


The addresses can be entered in the following dialog.

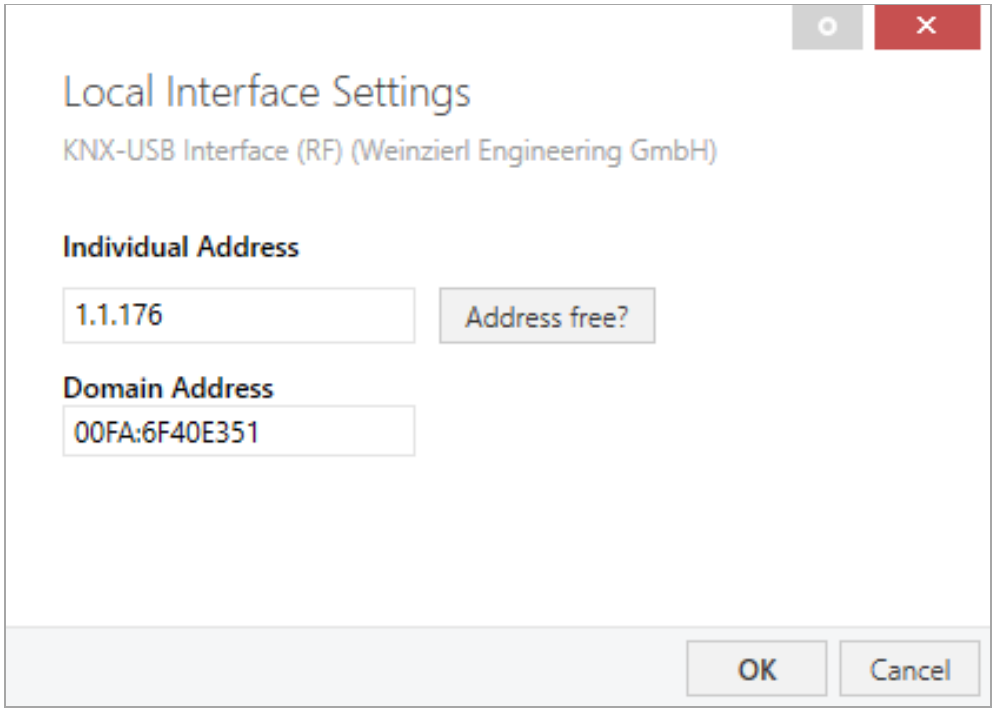


The “Individual Address” of the interface should correspond to the device address in the project.

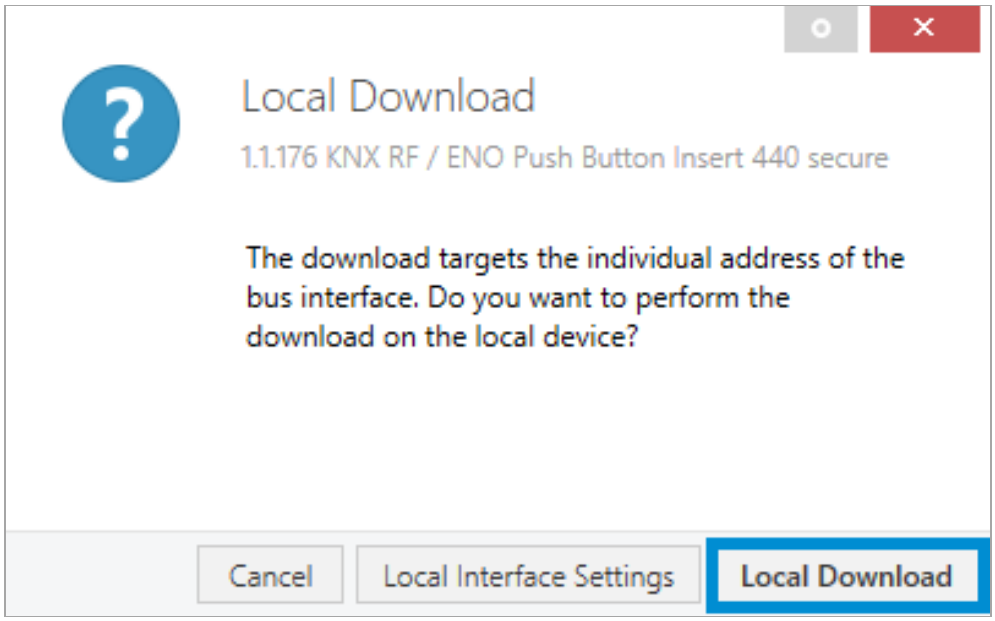
The “Domain Address” to be set can be found in the properties dialog of the corresponding radio line.



The settings for the example should look like this.



After confirmation the ETS offers in the next step the programming of the device via the local USB interface.



If the local interface is activated in the group monitor of the ETS, then no local download is possible.

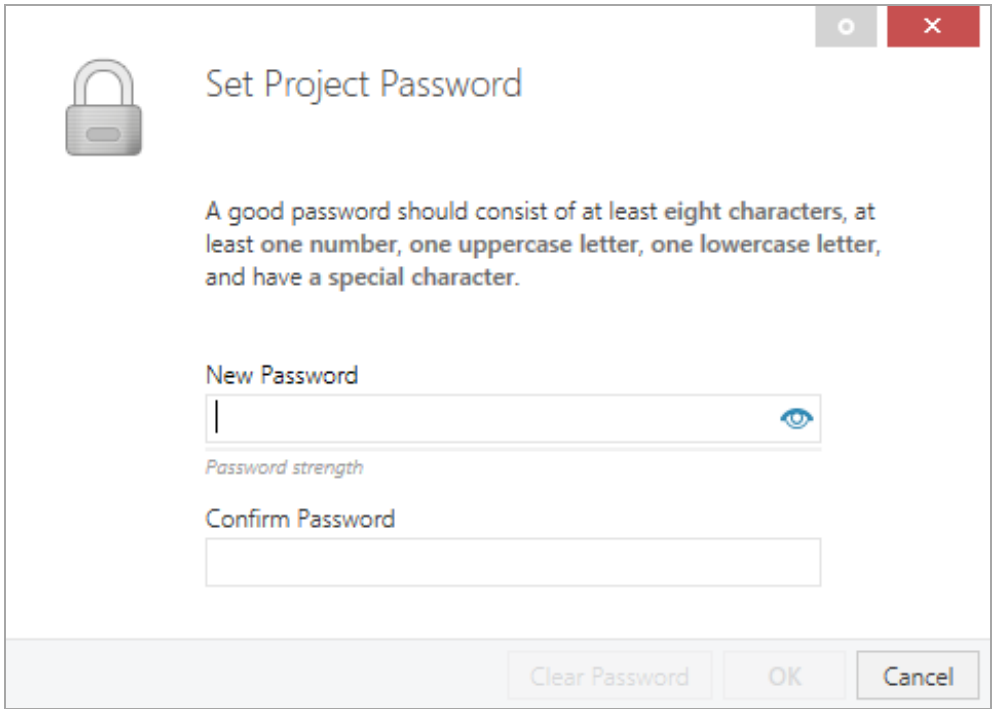
11 ETS database

The ETS5 database (for ETS 5.7 or newer) can be downloaded from the product website of the KNX RF / ENO Push Button 440 *secure* (www.weinzierl.de) or from the ETS online catalogue.

The KNX RF / ENO Push Button 440 *secure* supports KNX Data Security to protect the device against unauthorized access from the KNX bus. If the device is programmed via the KNX bus, this is done with encrypted telegrams.

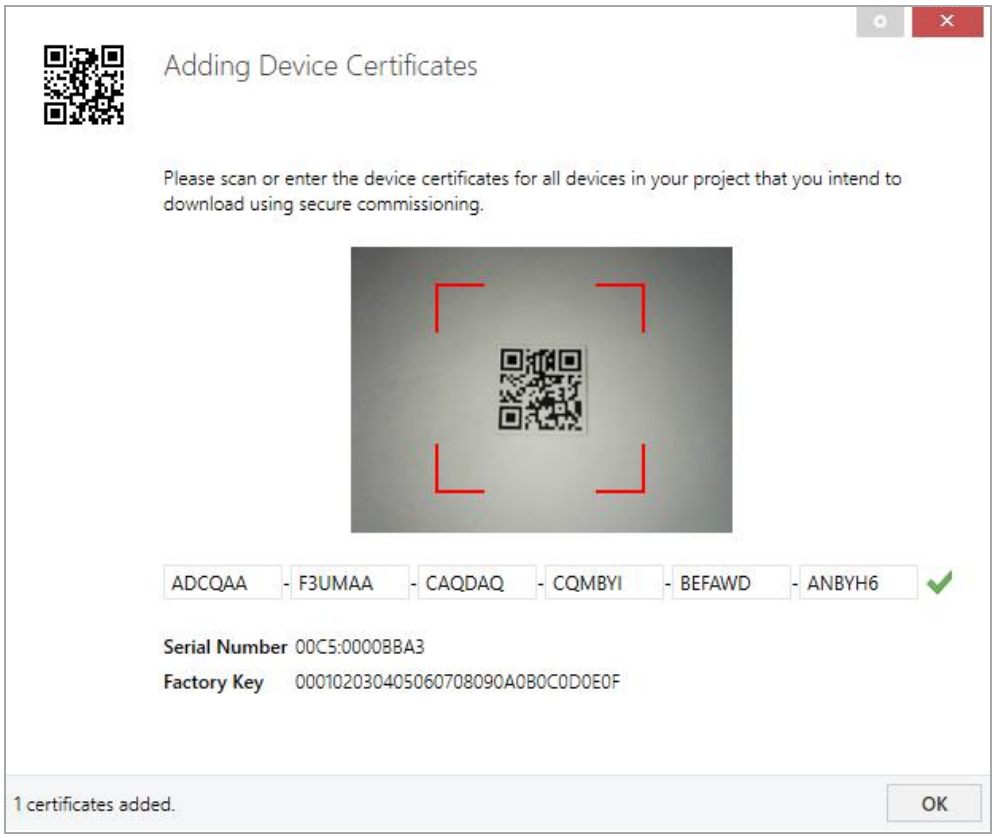
11.1 Secure commissioning

If the first product is inserted into a project with KNX Security, the ETS prompts you to enter a project password.



This password protects the ETS project from unauthorized access. This password is not a key that is used for KNX communication. The entry of the password can be bypassed with "Cancel", but this is not recommended for security reasons.

ETS requires a device certificate for each device with KNX Security that is created in the ETS. This certificate contains the serial number of the device as well as an initial key (FDSK = Factory Default Setup Key).



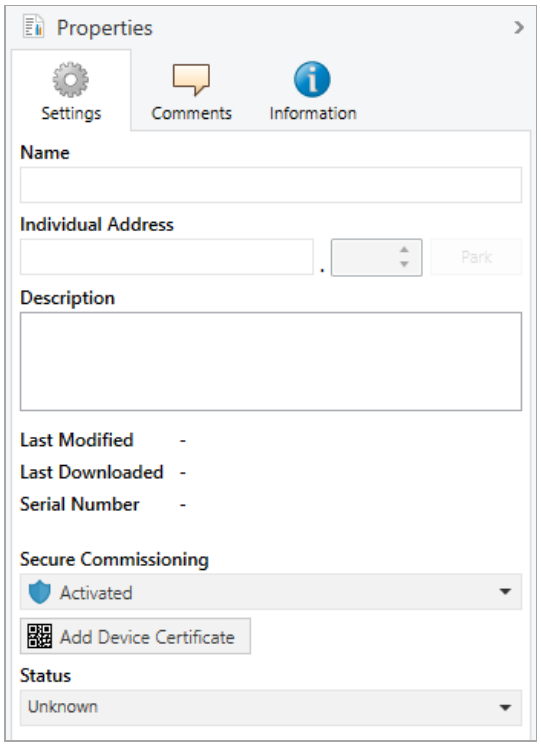
The certificate is printed as text on the device. It can also be scanned from the printed QR code via a webcam.

The list of all device certificates can be managed in the ETS panel Reports – Project Security.

This initial key is required to safely put a device into operation from the start. Even if the ETS download is recorded by a third party, the third party has no access to the secured devices afterwards. During the first secure download, the initial key is replaced by the ETS with a new key that is generated individually for each device. This prevents persons or devices who may know the initial key from accessing the device. The initial key is reactivated after a reset to factory default settings.

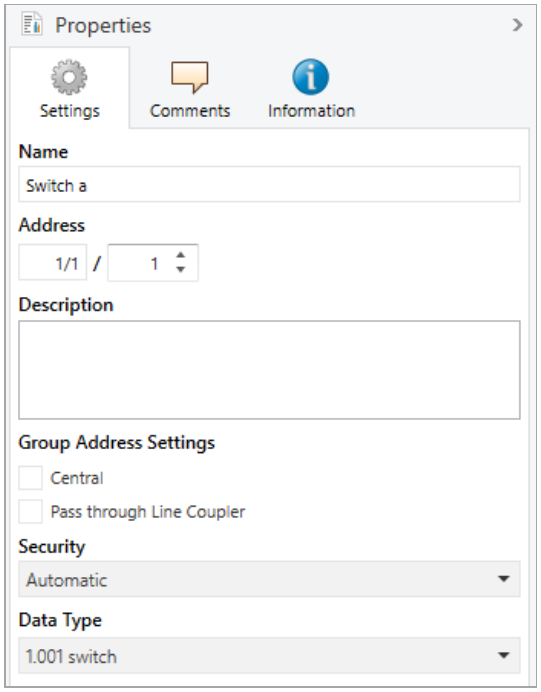
The serial number in the certificate enables the ETS to assign the correct key to a device during a download.

In the ETS project in the properties of the device, secure commissioning can be activated and the device certificate can be added:



11.2 Secure group communication

Each object of the device can communicate either encrypted or unencrypted. The encryption is set under "Security" in the properties of the used group address:



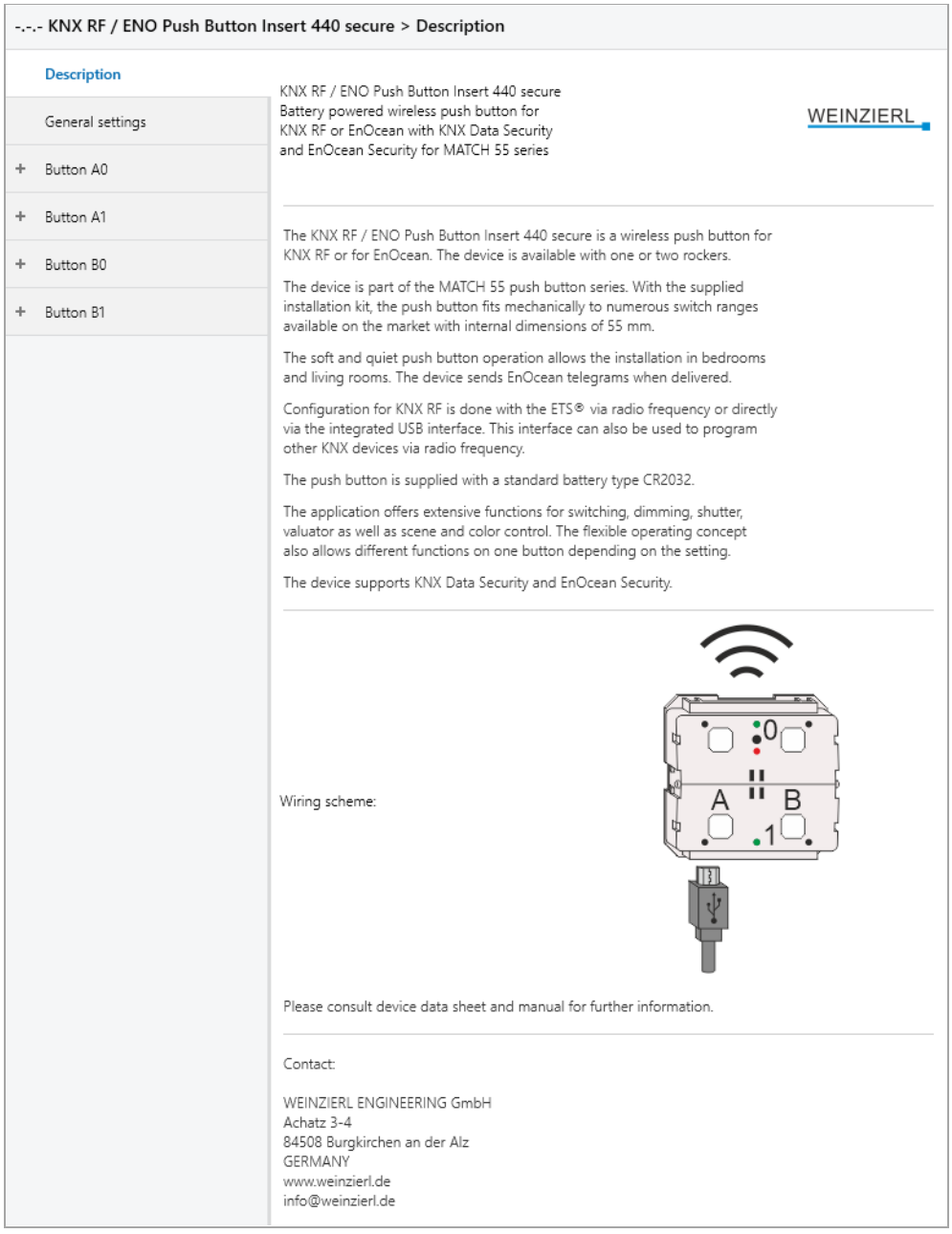
The setting "Automatic" activates encryption if both objects to be connected can communicate encrypted. Otherwise encrypted communication between the objects is not possible.

In the overview of communication objects in the ETS project, secured objects can be recognized by a shield symbol:

	Security	Number	Name	Object Function	Description	Group Address
		11	Button A0: Object a	Switch	Switch a	1/1/1
		12	Button A0: Object b	Switch	Switch b	1/1/2
		21	Button A1: Object a	Switch	Switch a	1/1/1
		22	Button A1: Object b	Switch	Switch b	1/1/2

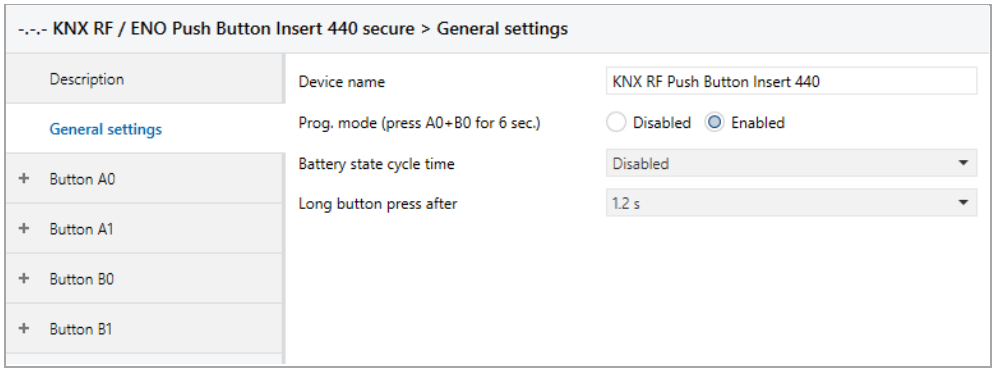
A separate key is automatically generated by the ETS for each secured group address. These keys can also be checked in the ETS panel Reports – Project Security. To enable all devices to communicate with a secure group address, the keys must be known to all. Therefore a download must be made into all devices that use this group address when a key is created or changed. A key is changed by the ETS e.g. when the encryption of a group address is switched off and on again.

11.3 Description



This page shows the device description and the associated wiring scheme.

11.1 General settings



Device name *(30 characters)*

An arbitrary name can be assigned for the KNX RF / ENO Push Button 440 *secure*. The device name should be meaningful, e.g. “Living Room”. This helps the clarity of the ETS project.

Prog. mode (press A0+B0 for 6 sec.)

In addition to the normal programming button 2 the device allows activating the programming mode on the device front without removing the rocker. The programming mode can be activated and deactivated via pressing simultaneously both buttons 3 and 5 for 6 seconds.

This feature can be enabled and disabled via the parameter “Prog. mode (press A0+B0 for 6 sec.)”. The recessed programming button 2 is always enabled and not influenced by this parameter.

The prog. mode (A0+B0) should be deactivated if push button functions are configured for actuations of more than 6 seconds (e.g. moving shutter via deadman switch)

Battery state cycle time

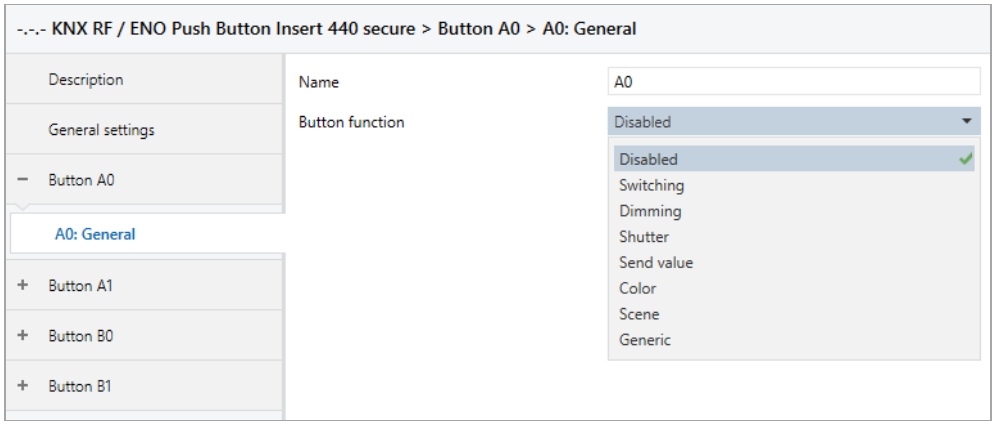
Sends the battery state good (1) or low (0) cyclically to the KNX bus. For the cycle time values between 1 h and 24 h are selectable.

Group object	Type KNX	Size	Direction
GO 1 Battery state – State good	1.001	1 Bit	To KNX

Long button press after

Here you can set the time for detecting a long actuation, this time is valid for all buttons.

11.2 Button A0: General



Name *(30 characters)*

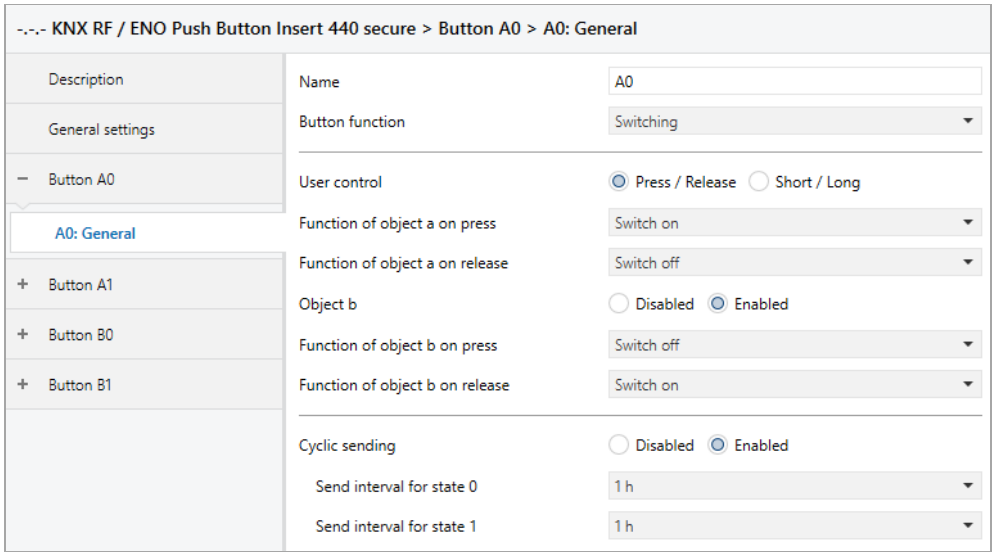
An arbitrary name can be assigned for the button. However, this should be clear and meaningful, this makes it easier to work with the associated group objects, because the given name is displayed there as a label. If no name is assigned, the group objects are named “Button …” with the button number engraved on the housing, which is also used in this manual. The 1st button will be described below, the functioning of the other 3 buttons is according to the 1st.

Button function

The following functions are selectable:

- Switching
- Dimming
- Shutter
- Send value
- Color
- Scene
- Generic

11.3 Button function “Switching”



If the switching function is selected, up to 2 binary switching telegrams can be sent via the following objects:

Group object	Type KNX	Size	Direction
GO 11 Button A0: Object a – Switch	1.001	1 Bit	To KNX
GO 12 Button A0: Object b – Switch	1.001	1 Bit	To KNX

Object b is only visible when activated by parameter.

The time for detection of a long button press can be set in the general parameters and is valid for all buttons.

User control

The parameter “User control” determines whether telegrams are sent when the input is changed (e.g. key switches) or when the button is operated short/long (e.g. button for switching/dimming).

Function of object a/b on press
Function of object a/b on short press
Function of object a/b on release
Function of object a/b on long press

It is selectable for each object a and b, which telegram is sent on press and release or on short/long button press.

The following options are available:

- No reaction
- Switch on
- Switch off
- Toggle

Object b

Here object b can be enabled and configured.

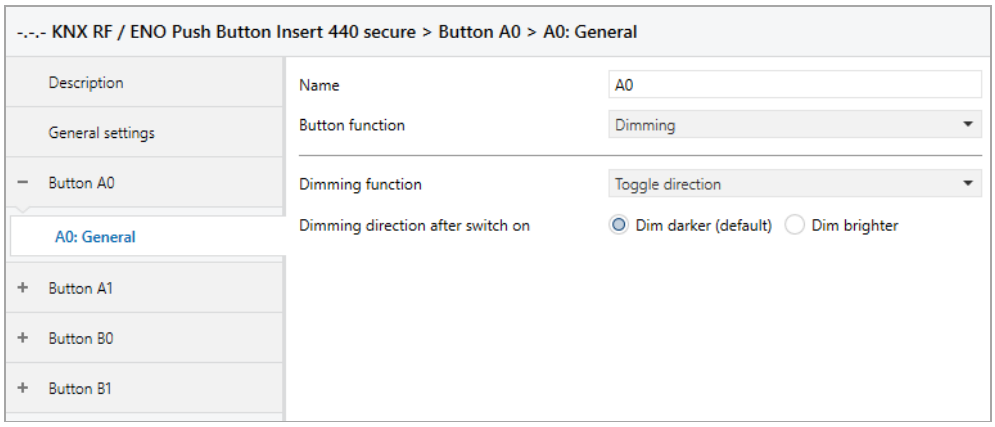
Cyclic sending

Cyclic sending can be configured independently for states 0 and 1:

Send interval for state 0
Send interval for state 1

The send interval of the respective state can be set here.

11.4 Button function “Dimming”



On selection of button function dimming following objects are visible:

Group object	Type KNX	Size	Direction
GO 11 Button A0: Dimming on/off – Switch	1.001	1 Bit	To KNX
GO 12 Button A0: Dimming relative – Brighter/Darker	3.007	4 Bit	To KNX

The time for detection of a long button press can be set in the general parameters and is valid for all buttons.

Dimming function

The parameter “Dimming function” determines whether only one switching/dimming direction or 1-button control is to be used.

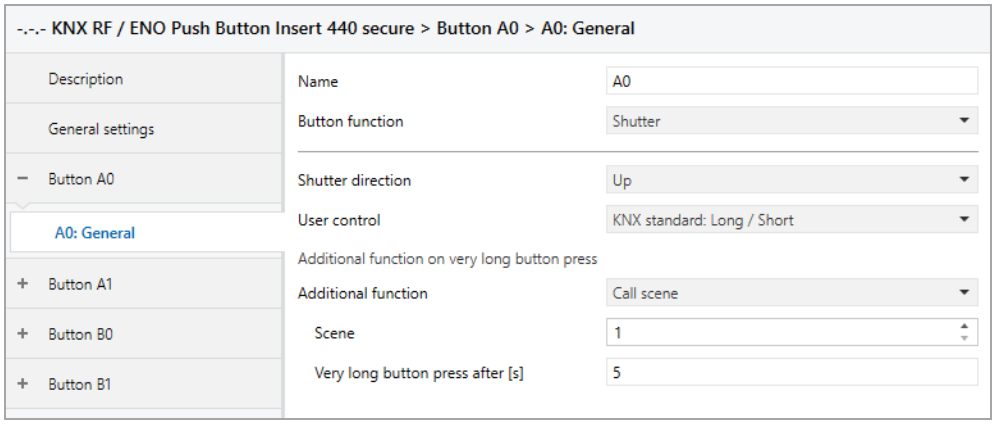
- On / Dim brighter
- Off / Dim darker
- Toggle direction

If the button detects a short button press, a switching telegram is sent via object 11. On long button press, a relative dimming is sent over the entire dimming range to object 12. When releasing after long button press, a dimming-stop telegram is sent via object 12.

Dimming direction after switch on *(only for toggle direction)*

This parameter is only visible on toggle direction and determines the dimming direction of the next dimming command following an ON telegram.

11.5 Button function “Shutter”



On selection of button function shutter following objects are visible:

Group object	Type KNX	Size	Direction
GO 11 Button A0: Drive start – Up/Down	1.008	1 Bit	To KNX
GO 12 Button A0: Drive stop – Step/Stop	1.007	1 Bit	To KNX

The time for detection of a long button press can be set in the general parameters and is valid for all buttons.

Shutter direction

The parameter “Shutter direction” determines whether only one shutter direction or 1-button control is to be used.

- Up
- Down
- Toggle

User control

The parameter “User control” determines the sending of telegrams on short and long button press:

- KNX standard: Long / Short
  Long actuation: Drive command via object 11
  Short actuation: Stop/Step command via object 12
  Very long actuation: Additional function

- KNX standard with turning time
  Long actuation: Drive command via object 11
  Release after long actuation within turning time: Stop/Step command via object 12
  Release after long actuation after turning time: No reaction
  Short actuation: Stop/Step command via object 12
  Very long actuation: Additional function

- KNX Inverted: Short / Long
  Short actuation: Drive command via object 11
  Long actuation: Stop/Step command via object 12
  Actuation during drive: Stop/Step command via object 12
  Very long actuation: Additional function

- Short / Short
  Short actuation: Drive command via object 11
  Actuation during drive: Stop/Step command via object12
  Long actuation: Additional function

- Short / Short plus Long with turning time
  Short actuation: Drive command via object 11
  Long actuation: Drive command via object 11
  Release after long actuation within turning time: Stop/Step command via object 12
  Release after long actuation after turning time: No reaction
  Actuation during drive: Stop/Step command via object 12
  Very long actuation: Additional function

- Hold (Deadman switch)
  On actuation: Drive command via object 11
  On release: Stop/Step command via object 12

- Hold with turning time
  On actuation: Drive command via object 11
  On release within turning time: Stop/Step command via object 12
  On release after turning time: No reaction

- Hold, delayed with turning time
  Long actuation: Drive command via object 11
  Release after long actuation within turning time: Stop/Step command via object 12
  Release after long actuation after turning time: No reaction
  Short actuation: Additional function
  Actuation during drive: Stop/Step command via object 12

Drive time (Time window for stop) [s]

Only displayed for the user controls with “Actuation during drive: Stop/Step command”. The time window for the actuation at which a stop/step command is sent is set here.

Turning time [s]

Only displayed for the user controls with turning time. In general, by releasing within the turning time, the shutter can be stopped while continuing to move after the turning time.

Additional function on short/long/very long button press

The following functions can be triggered by short/long/very long keystrokes:

- Switch on
- Switch off
- Toggle

Group object	Type KNX	Size	Direction
GO 13 Button A0: Additional function – Switch	1.001	1 Bit	To KNX

- Dim brighter
- Dim darker

Group object	Type KNX	Size	Direction
GO 13 Button A0: Additional function – Dimming relative	3.007	4 Bit	To KNX

- Drive up
- Drive down

Group object	Type KNX	Size	Direction
GO 13 Button A0: Additional function – Up/Down	1.008	1 Bit	To KNX

- Step up / Stop
- Step down / Stop

Group object	Type KNX	Size	Direction
GO 13 Button A0: Additional function – Step/Stop	1.007	1 Bit	To KNX

- Send value
  With this function, a byte value can be sent. A parameter for selecting the value is displayed

Group object	Type KNX	Size	Direction
GO 13 Button A0: Additional function – Send value	5.001	1 Byte	To KNX

- Call scene
  With this function, a scene can be sent. A parameter for selecting the scene is displayed.

Group object	Type KNX	Size	Direction
GO 13 Button A0: Additional function – Call scene	18.001	1 Byte	To KNX

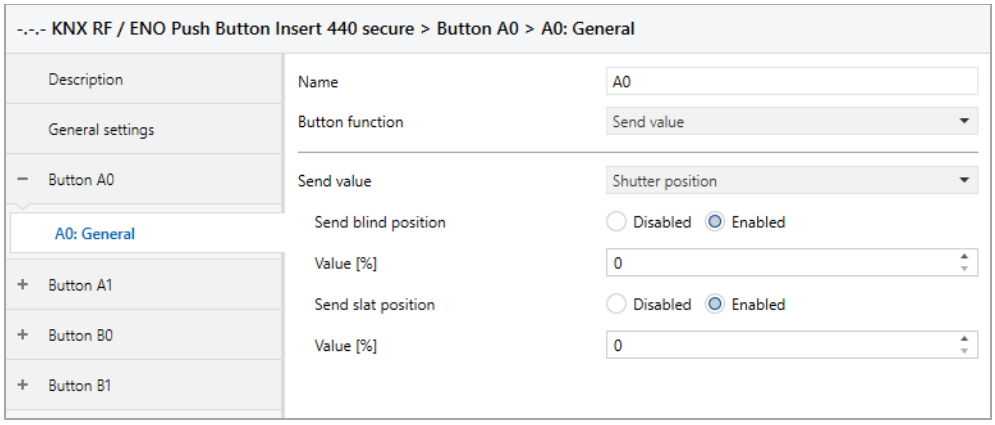
- Save scene
  With this function, a scene can be saved. A parameter for selecting the scene is displayed.

Group object	Type KNX	Size	Direction
GO 13 Button A0: Additional function – Save scene	18.001	1 Byte	To KNX

Very long button press after [s]

This parameter is visible only when using the very long actuation, it sets the time to detect a very long button press.

11.6 Button function “Send value”



If button function send value is selected, the following telegrams can be sent at button press:

- 1 Byte – Integer value / Percent

Group object	Type KNX	Size	Direction
GO 11 Button A0: Send integer value (1 Byte) – Set value	5.001	1 Byte	To KNX

- 2 Byte – Integer value

Group object	Type KNX	Size	Direction
GO 11 Button A0: Send integer value (2 Bytes) – Set value	7.001	2 Byte	To KNX

- 2 Byte – Float value

Group object	Type KNX	Size	Direction
GO 11 Button A0: Send float value (2 Bytes) – Set value	9.001	2 Byte	To KNX

- 3 Byte – RGB value

Group object	Type KNX	Size	Direction
GO 11 Button A0: Send RGB color value (3 Bytes) – Set value	232.600	3 Byte	To KNX

- 14 Byte – ASCII string

Group object	Type KNX	Size	Direction
GO 11 Button A0: Send ASCII string (14 Bytes) – Set value	16.000	14 Byte	To KNX

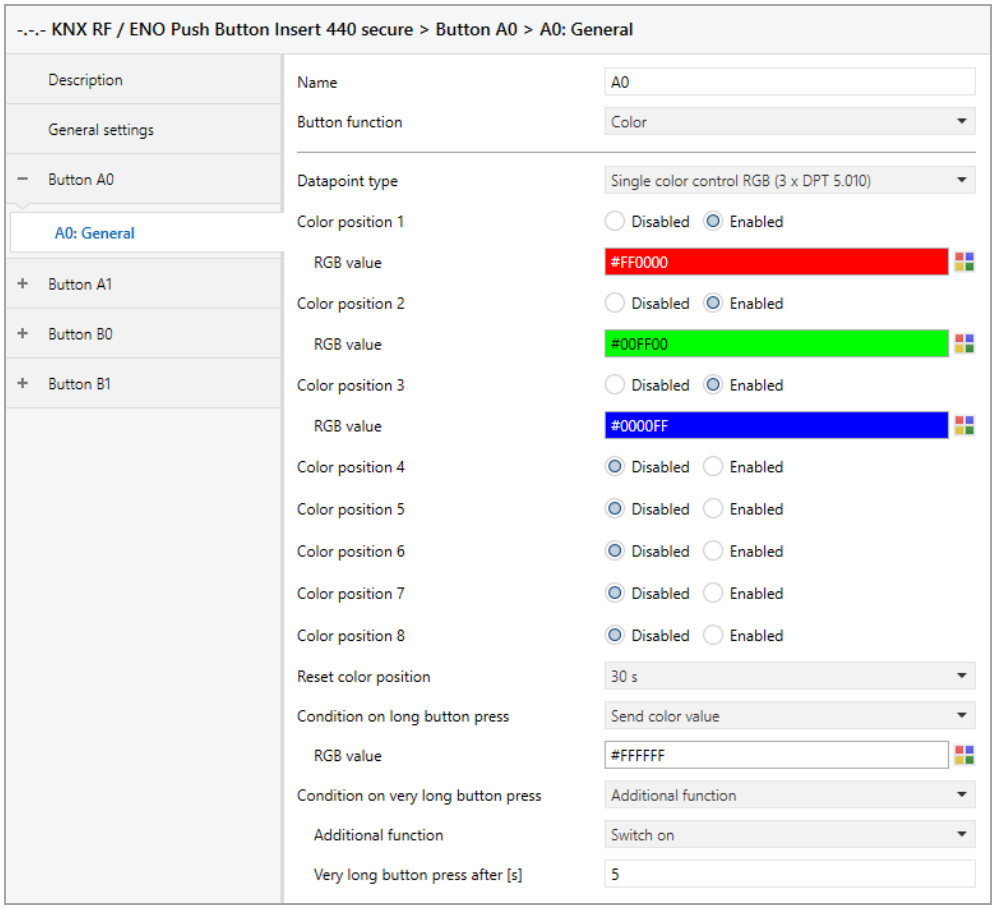
- Shutter position

Group object	Type KNX	Size	Direction
GO 11 Button A0: Send blind position – Set position	5.001	1 Byte	To KNX
GO 12 Button A0: Send slat position – Set position	5.001	1 Byte	To KNX

A field for entering the values to be sent is displayed, as well as the objects appropriate to the selected type.

If the shutter is selected as the value to be sent, height is sent on button press, lamella is sent on releasing the button, if the respective value is used.

11.7 Button function “Color”



The time for detection of a long button press can be set in the general parameters and is valid for all buttons.

Datapoint type

Depending on this parameter, the following objects are available for color control:

- Single color control RGB (3 x DPT 5.010)

Group object	Type KNX	Size	Direction
GO 11 Button A0: Value R – Set color	5.010	1 Byte	To KNX
GO 12 Button A0: Value G – Set color	5.010	1 Byte	To KNX
GO 13 Button A0: Value B – Set color	5.010	1 Byte	To KNX

- Single color control RGBW (4 x DPT 5.010)

Group object	Type KNX	Size	Direction
GO 11 Button A0: Value R – Set color	5.010	1 Byte	To KNX
GO 12 Button A0: Value G – Set color	5.010	1 Byte	To KNX
GO 13 Button A0: Value B – Set color	5.010	1 Byte	To KNX
GO 14 Button A0: Value W – Set color	5.010	1 Byte	To KNX

- Color control RGB (DPT 232.600)

Group object	Type KNX	Size	Direction
GO 11 Button A0: RGB color value (3 Bytes) – Set color	232.600	3 Byte	To KNX

Color position 1 – 8

For each position a color can be chosen.

If only one color position is activated, it is sent on short button press. If several color positions are used, the activated positions are switched through with each short button press.

The behavior for selecting and sending the color positions can be determined by the following parameter.

Reset color position

The following options are available:

- Never
  Starting with the first color position, the next position of the list is sent with each short button press. After the last color position has been sent, the list starts again from the beginning.

- After execution
  This selection enables the parameter **Time until execution**.
  Beginning with the first color position, each short button press switches the position by one position within the execution delay. At the end of the execution delay, the current color position is sent.

- 5 s – 10 min.
  On each button press the configured delay time is started.
  Starting with the first color position, the next position of the list is sent with each short button press, after the last color position has been sent, the list starts again from the beginning.
  After the delay time has expired, the list starts again at the first color position on the next short button press.

Condition on long button press
Condition on very long button press

Here it is possible to select how a long and very long button press should be handled:

- No reaction
- Reset position
  This function is used to override the behavior as set in the parameter **Reset color position**.
- Color off
  The color value 0/0/0 for black is sent.
- Send color value
  The selected color value is sent.
- Additional function

Additional function

The following functions can be triggered by a long or very long button press:

- Switch on
- Switch off
- Toggle

Group object	Type KNX	Size	Direction
GO 15 Button A0: Additional function – Switch	1.001	1 Bit	To KNX

- Dim brighter
- Dim darker

Group object	Type KNX	Size	Direction
GO 15 Button A0: Additional function – Dimming relative	3.007	4 Bit	To KNX

- Drive up
- Drive down

Group object	Type KNX	Size	Direction
GO 15 Button A0: Additional function – Up/Down	1.008	1 Bit	To KNX

- Step up / Stop
- Step down / Stop

Group object	Type KNX	Size	Direction
GO 15 Button A0: Additional function – Step/Stop	1.007	1 Bit	To KNX

- Send value
  With this function, a byte value can be sent. A parameter for selecting the value is displayed.

Group object	Type KNX	Size	Direction
GO 15 Button A0: Additional function – Send value	5.001	1 Byte	To KNX

- Call scene
  With this function, a scene can be sent. A parameter for selecting the scene is displayed.

Group object	Type KNX	Size	Direction
GO 15 Button A0: Additional function – Call scene	18.001	1 Byte	To KNX

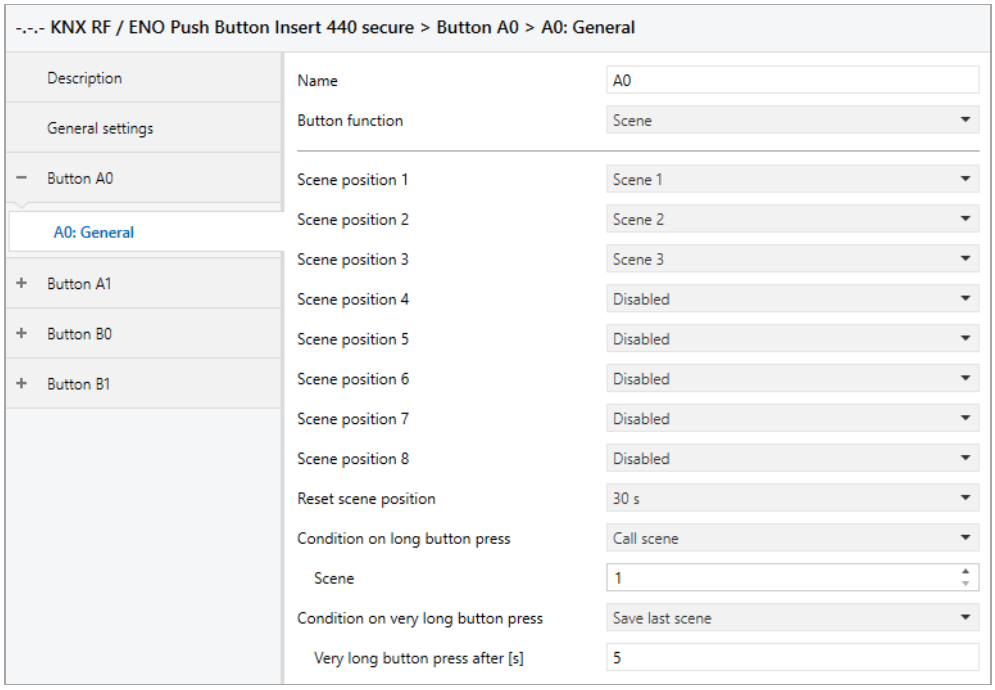
- Save scene
  With this function, a scene can be saved. A parameter for selecting the scene is displayed.

Group object	Type KNX	Size	Direction
GO 15 Button A0: Additional function – Save scene	18.001	1 Byte	To KNX

Very long button press after [s]

This parameter is visible only when using the very long actuation, it sets the time to detect a very long button press.

11.8 Button function “Scene”



On selection of scene function the following object is visible:

Group object	Type KNX	Size	Direction
GO 11 Button A0: Scene – Call/Save	18.001	1 Byte	To KNX

The time for detection of a long button press can be set in the general parameters and is valid for all buttons.

Scene position 1 – 8

For each position, scene 1 – 64 can be activated.

If only one scene position is activated, it is sent on short button press. If several scene positions are used, the activated positions are switched through with each short button press.

The behavior for selecting and sending the scene positions can be determined by the following parameter.

Reset scene position

The following options are available:

- Never
  Starting with the first scene position, the next position of the list is sent with each short button press, after the last scene position has been sent, the list starts again from the beginning.

- After execution
  This selection enables the parameter **Time until execution**.
  Beginning with the first scene position, each short button press switches the position by one position within the execution delay, at the end of the execution delay, the current scene position is sent.

- 5 s – 10 Min.
  On each button press the configured delay time is started.
  Starting with the first scene position, the next position of the list is sent with each short button press, after the last scene position has been sent, the list starts again from the beginning.
  After the delay time has expired, the list starts again at the first scene position on the next short button press.

Condition on long button press
Condition on very long button press

It is also possible to select how a long and very long button press should be handled:

- No reaction
- Reset position
  This function is used to override the behavior as set in the parameter **Reset scene position**.
- Call scene
  The scene configured in the appearing parameter is sent.
- Save last scene
  A telegram for “save scene” with the last sent scene is triggered.
- Additional function

Additional function

The following functions can be triggered by a long or very long button press:

- Switch on
- Switch off
- Toggle

Group object	Type KNX	Size	Direction
GO 15 Button A0: Additional function – Switch	1.001	1 Bit	To KNX

- Dim brighter
- Dim darker

Group object	Type KNX	Size	Direction
GO 15 Button A0: Additional function – Dimming relative	3.007	4 Bit	To KNX

- Drive up
- Drive down

Group object	Type KNX	Size	Direction
GO 15 Button A0: Additional function – Up/Down	1.008	1 Bit	To KNX

- Step up / Stop
- Step down /Stop

Group object	Type KNX	Size	Direction
GO 15 Button A0: Additional function – Step/Stop	1.007	1 Bit	To KNX

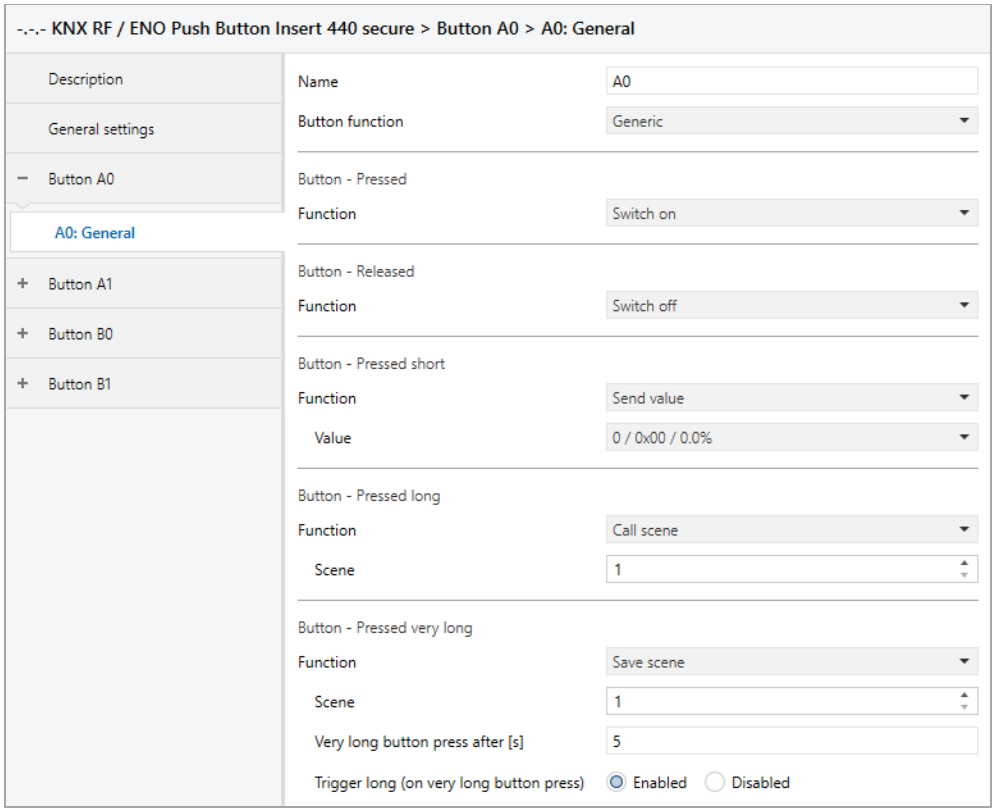
- Send value
  With this function, a byte value can be sent. A parameter for selecting the value is displayed.

Group object	Type KNX	Size	Direction
GO 15 Button A0: Additional function – Send value	5.001	1 Byte	To KNX

Very long button press after [s]

This parameter is visible only when using the very long actuation, he sets the time to detect a very long button press.

11.9 Button function “Generic”



With this button function, a separate object is available for each event at the push button in order to set the function of the push button individually.

These events at the button and their associated objects are:

- Button – Pressed

Group object	Type KNX	Size	Direction
GO 12 Button A0: Pressed – ...	Depending on function		To KNX

- Button – Released

Group object	Type KNX	Size	Direction
GO 12 Button A0: Released – ...	Depending on function		To KNX

- Button – Pressed short

Group object	Type KNX	Size	Direction
GO 13 Button A0: Pressed short – ...	Depending on function		To KNX

- Button – Pressed long

Group object	Type KNX	Size	Direction
GO 14 Button A0: Pressed long – ...	Depending on function		To KNX

- Button – Pressed very long

Group object	Type KNX	Size	Direction
GO 15 Button A0: Pressed very long – ...	Depending on function		To KNX

Each event can be assigned the following functions:

- Switch on
- Switch off
- Toggle

Group object	Type KNX	Size	Direction
GO ... Button A0: ... – Switch	1.001	1 Bit	To KNX

- Dim brighter (no Stop)
- Dim darker (no Stop)
- Dim Stop

Group object	Type KNX	Size	Direction
GO ... Button A0: ... – Dimming relative	3.007	4 Bit	To KNX

- Drive up
- Drive down

Group object	Type KNX	Size	Direction
GO ... Button A0: ... – Up/Down	1.008	1 Bit	To KNX

- Step up / Stop
- Step down / Stop

Group object	Type KNX	Size	Direction
GO ... Button A0: ... – Step/Stop	1.007	1 Bit	To KNX

- Send value
  With this function, a byte value can be sent. A parameter for selecting the value is displayed.

Group object	Type KNX	Size	Direction
GO ... Button A0: ... – Send value	5.001	1 Byte	To KNX

- Call Scene
  With this function a scene can be sent, a parameter for selecting the scene is displayed.

Group object	Type KNX	Size	Direction
GO ... Taster A0: ... – Call scene	18.001	1 Byte	To KNX

- Save Scene
  With this function a scene can be saved, a parameter for selecting the scene is displayed.

Group object	Type KNX	Size	Direction
GO ... Taster A0: ... – Save scene	18.001	1 Byte	To KNX

The time for detection of a long button press can be set in the general parameters and is valid for all buttons.

Very long button press after [s]

This parameter is visible only when using the very long actuation, he sets the time to detect a very long button press.

Trigger long (on very long button press)

This parameter is only visible when the long and very long actuation is used simultaneously.

If this parameter is activated, both events are always triggered after a very long actuation; if it is deactivated, the duration of the activation is evaluated: if it lies between the time of long and very long actuation, only the function for long actuation is triggered. If the time for very long actuation is exceeded, only the function for very long actuation is triggered.

12 Battery information

BATTERY WARNING

- Do not ingest battery, Chemical Burn Hazard.
- This product contains a coin cell battery. If the coin cell battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death.
- Keep new and used batteries away from children.
- If the appliance is not permanently installed in the holding frame, keep the product away from children.
- If you think batteries might have been swallowed or placed inside any part of the body, seek immediate medical attention.

- Improper handling of batteries can result in explosion, fire or chemical burn due to leakage.
- Do not heat or throw batteries into fire.
- Do not reverse polarity, short-circuit or recharge batteries.
- Do not deform or disassemble batteries.
- Replace batteries only with an identical or equivalent type.

DISPOSAL OF BATTERIES

- Remove empty batteries immediately and dispose of in an environmentally friendly manner.
- Do not throw batteries into household waste.
- Consult your local authorities about environmentally friendly disposal.
- According to statutory provisions, the end consumer is obligated to return used batteries.

WARNING

- The device must be mounted and commissioned by an authorized electrician.
- The prevailing safety rules must be heeded.
- The device must not be opened.
- For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.

Product database for ETS 5/6
www.weinzierl.de/en/products/440/ets6

Data sheet
www.weinzierl.de/en/products/440/single/datasheet
www.weinzierl.de/en/products/440/double/datasheet

CE Declaration
www.weinzierl.de/en/products/440/ce-declaration

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