

Configuration Tool for KNX EnOcean Gateways

KNX Eno Tool

User Manual for Version 22.0.0

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1 Installation

It's recommended to uninstall previous KNX Eno Tool versions before installing the new one. Run the setup installer Setup_KNXEnoTool_22.0.0.exe and follow all the instructions in the appearing dialog boxes.

2 Requirement

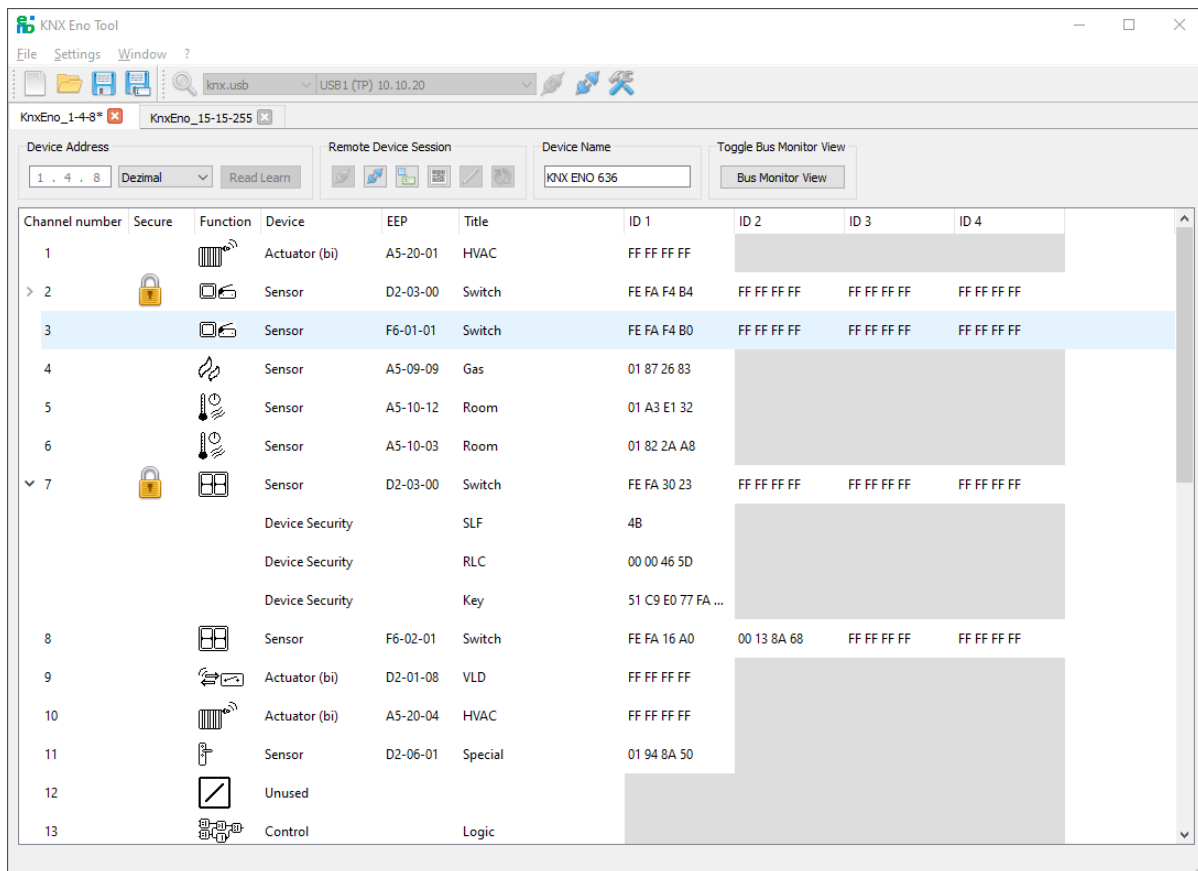
The KNX Eno Tool can be installed on Windows 7, Windows 8, Windows 8.1 and Windows 10.

3 General

The KNX Eno Tool is a KNX EnOcean link configuration and bus monitor tool for the Weinzierl KNX ENO 626, 63x product line. It can be used to configure links between different EnOcean devices and the EnOcean Gateway.

The teach-in process of sensors and actuators can be completely remote-controlled via the software. The existing configuration of a Gateway can be read out, changed on the PC, archived and transferred back to the same or another gateway.

In addition, a bus monitor is included to display EnOcean telegrams via the KNX bus.








KNX Eno Tool: Main Window



The basic configuration of a device has to be done in the ETS. There you can configure the general settings, like the device name or add and configure the channels. The KNX Eno Tool reads this configuration and allows the user to use different helpful functionalities, like adding or removing links.

The following devices are supported:

KNX ENO 630	
KNX ENO 632	
KNX ENO 634	
KNX ENO 626 secure	
KNX ENO 636 secure	



There is a separate tool for the KNX ENO 620 and KNX ENO 622 devices, which can be downloaded from our website.

4 The Main Menu

The main menu provides all important functions of the KNX Eno Tool. In addition to basic features like creating a new configuration or opening an existing configuration, here are also the elements for searching and opening a KNX interface.



KNX Eno Tool: Main Menu

4.1 File

It is possible to open a new, empty configuration via "New" (Ctrl+N). This will be opened in a new tab inside the configuration window.

Using the menu item "Open" (Ctrl+O), already created and saved configurations can be opened in order to subsequently change them again or to load them into another device.

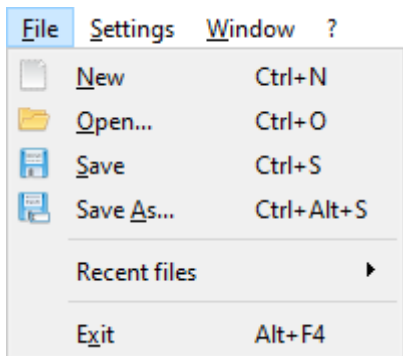
When selecting the menu item "Save" (Ctrl+S), the currently selected configuration can be saved. If this is the first save operation for this configuration file, a new window opens in which the storage location and a file name must be specified. At each subsequent process, the save is made directly.

With "Save as" (Ctrl+Alt+S) an already saved configuration can be saved under a new name. This is useful, for example, for changes where the initial configuration should not be lost.



The mentioned functions can also be selected via the quick selection icons directly under the menu item "File".

There is also the possibility to open "Recent files" and "Exit" (Alt+F4) the application.



KNX Eno Tool: File Menu

4.2 Settings

In the "Settings" menu, the language of the KNX Eno Tool can be selected via "Language". Available languages are currently German and English.

4.3 Window

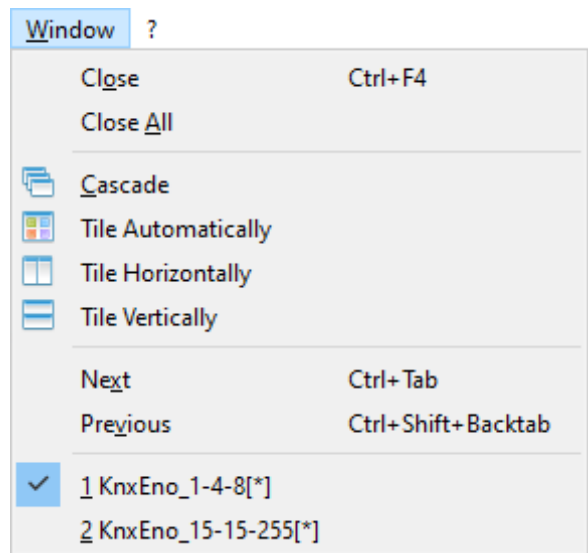
The "Window" menu contains all functions concerning the configuration window. Selecting "Close" will close the currently selected configuration. When selecting "Close All" all open configurations will be closed.



If an attempt is made to close a configuration in which there are still unsaved changes, a warning window is displayed. It is possible to save or discard the changes.

The functions "Cascade", "Tile Automatically", "Tile Horizontally" and "Tile Vertically" allow arranging the opened configurations differently. When selecting one of these functions the configuration windows are released and can be manually arranged within the configuration window.

With "Next" and "Previous" you can jump between the individual configuration windows - either to the next one - or to the previous one. The order is determined by the order opened in the KNX Eno Tool, with the starting point being the currently active window.



KNX Eno Tool: Window Menu



At the bottom of the "Window" menu, all currently open configuration files are displayed in order and the active window is marked with a check mark.

4.4 ?-Help

In the "Help" menu, the user manual can be opened via "Help". "Info" opens a small information window that contains a short description of the KNX Eno Tool as well as the version designation.

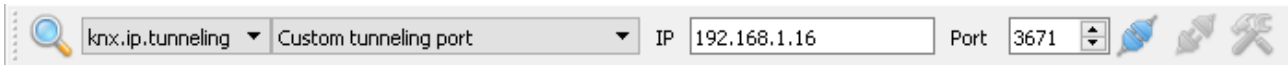
5 Searching and Opening KNX Interfaces

In order to read and write configurations, a connection to the KNX bus via a KNX interface is required. To find available KNX interfaces, a search process is already carried out at the start of the KNX Eno Tool.

KNX interfaces added later can be found at any time with a manually started search process, by just clicking on the "Search" button.

To open a KNX Interface, the connection type has to be selected first. For KNX IP Tunneling, choose "knx.ip.tunneling". KNX USB interfaces can be found under "knx.usb". The found interfaces are displayed in the adjacent DropDown Box with corresponding information, such as IP address or individual address (depending on selection and configuration).

For KNX IP Tunneling Interfaces there is an additional "Custom tunneling port". With this a KNX IP Interface can be selected with its IP address and port (default KNX Port is 3671). This port always uses the NAT mode, to be able to use interfaces over the internet.

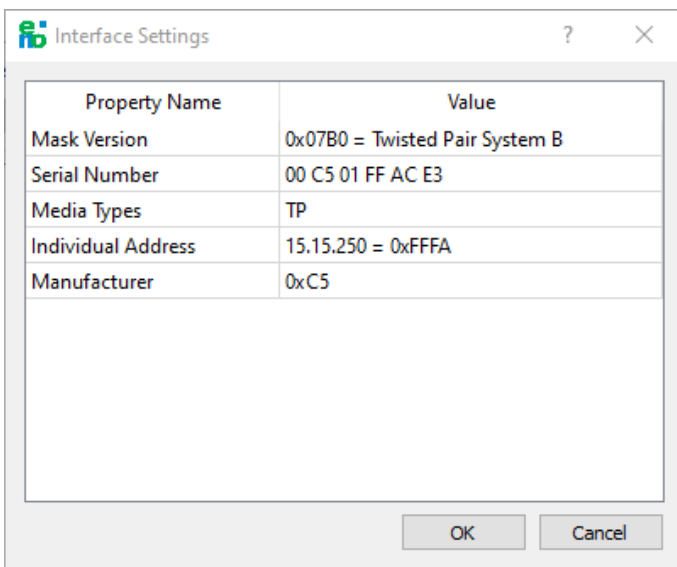


KNX Eno Tool: ToolBar Custom tunneling port

Once an interface has been selected, a connection can be established, by clicking on the "Connect" button. To close a connection to an interface, just click on the "Disconnect" button.

5.1 Change Interface Settings

Selecting "Configuration" opens a window with the interface settings. In this window the settings of the current interface can be read and the Individual Address of the interface can be edited.



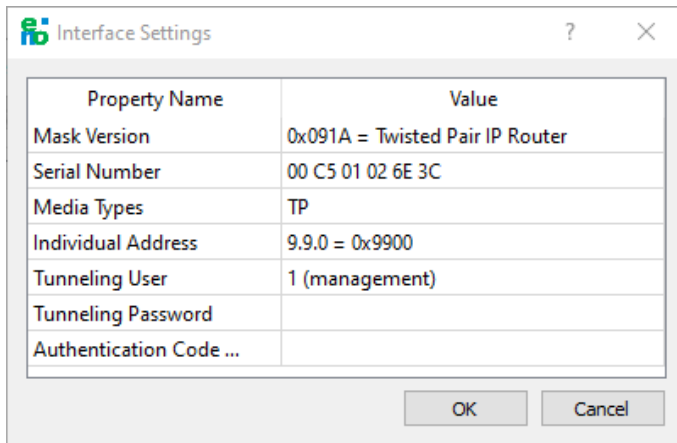
KNX Eno Tool: Interface Settings



The new Individual Address has to be selected according to the topology of the KNX Installation.

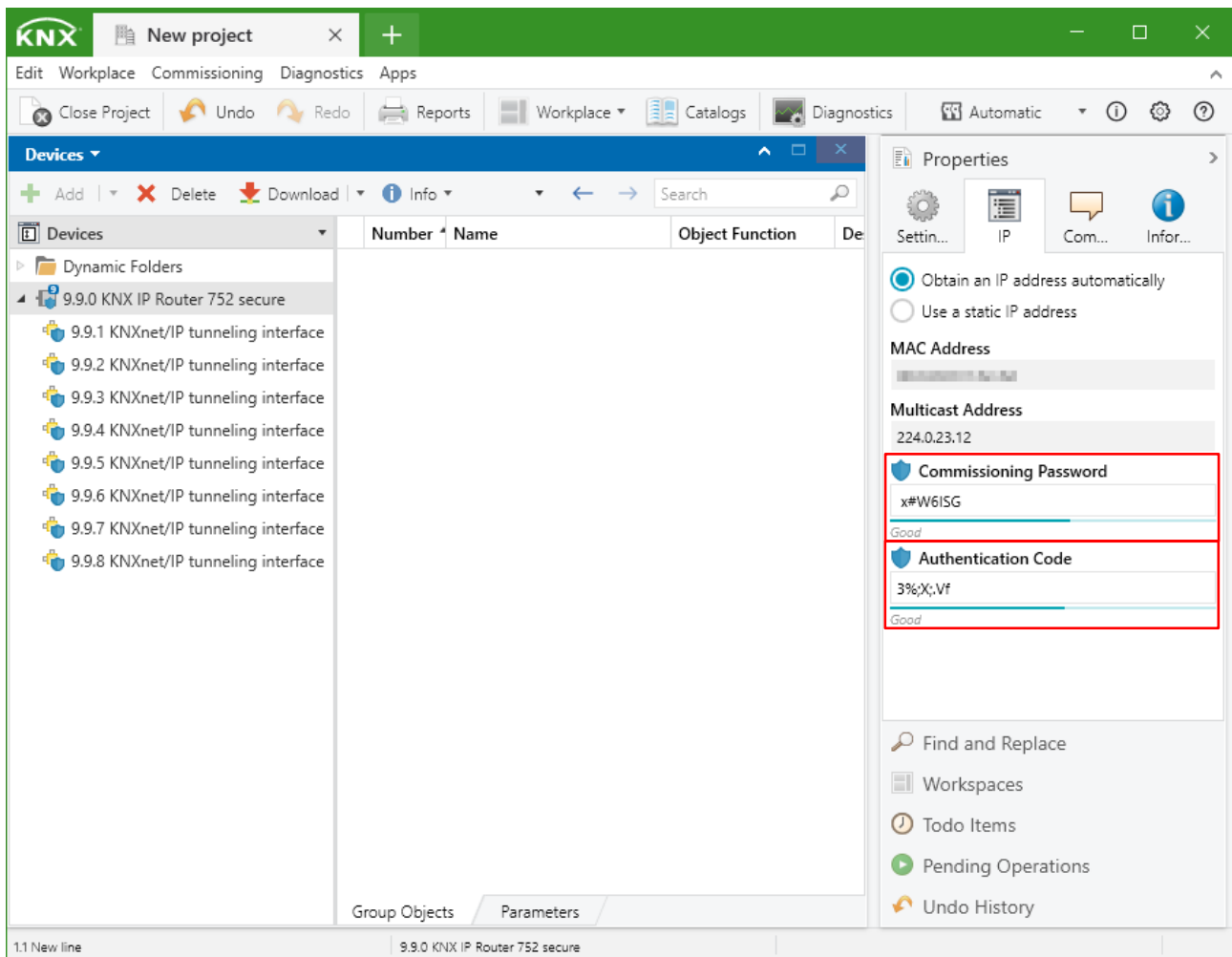
5.2 KNXnet/IP security

For tunneling connections, the user to be used and its password can also be specified in order to establish a secure tunneling connection. If a password is specified, an attempt is always made to establish a secure tunnel connection.



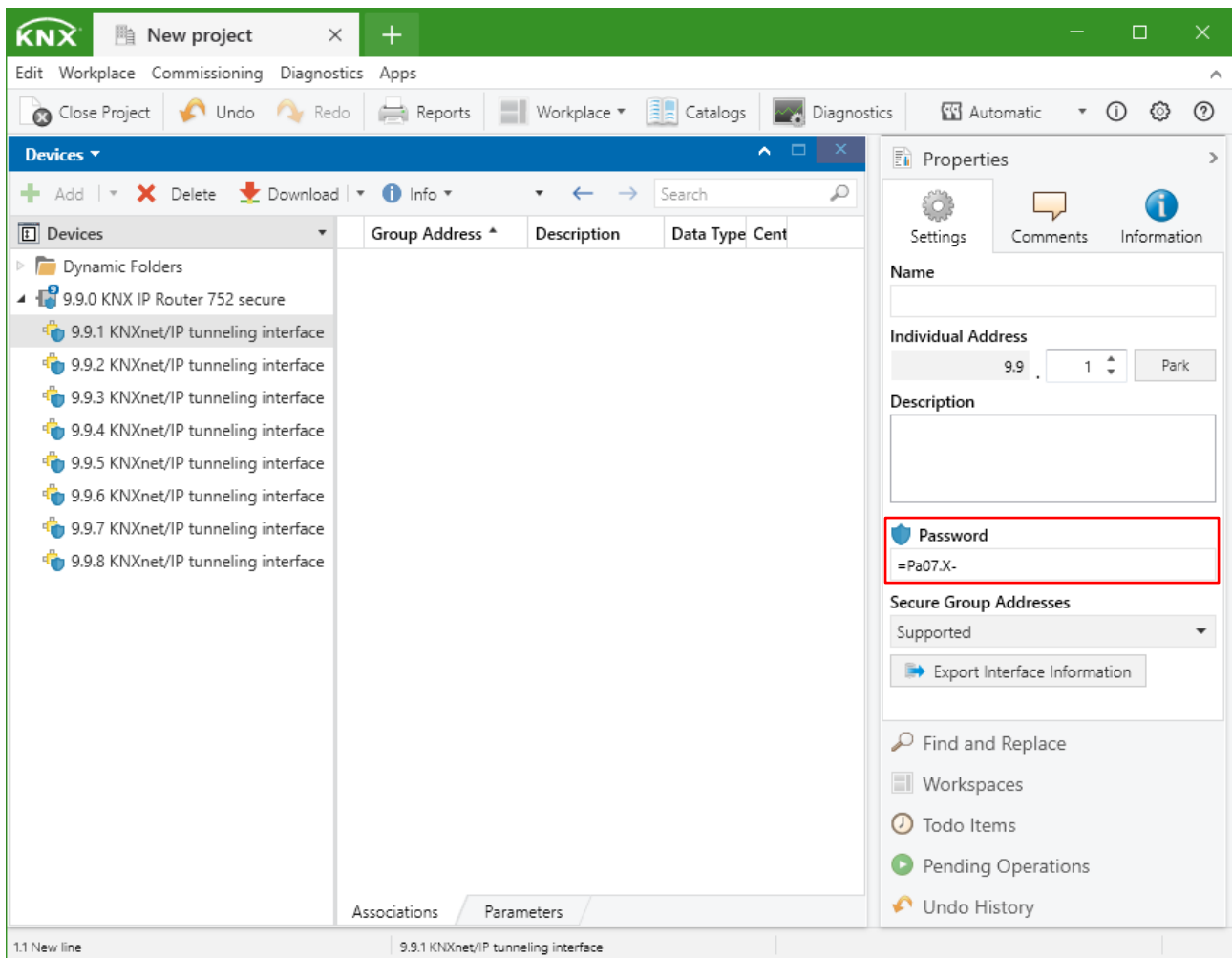
KNX Eno Tool: ToolBar Tunneling Port with activated KNXnet/IP security

By default, the ETS generates passwords for all users, but these can be adapted according to your own needs.



User 1 is always the management connection, whose password can be found under Devices/Properties/IP/Commissioning Password.

The Authentication Code is not mandatory, but increases the connection security.



Further, a user is assigned to each tunneling interface. The first tunnel of the interface can be used with user 2, the second with user 3 and so on. For this, the passwords are displayed under `Devices/Properties/Settings/Password`.

6 The Configuration Window

The configuration window is the main window of the KNX Eno Tool. Here the configurations of Eno devices can be read out, changed or transferred to a new device.

It is divided into two areas. On the one hand the menu area in which an Eno device can be connected, additional options are provided and the bus monitor can be opened. On the other hand the configuration table which displays the read configuration data.

Device Address		Remote Device Session		Device Name		Toggle Bus Monitor View			
1 . 4 . 8		Dezimal		KNX ENO 636		Bus Monitor View			
Channel number	Secure	Function	Device	EEP	Title	ID 1	ID 2	ID 3	ID 4
1			Actuator (bi)	A5-20-01	HVAC	FF FF FF FF			
> 2			Sensor	D2-03-00	Switch	FE FA F4 B4	FF FF FF FF	FF FF FF FF	FF FF FF FF
3			Sensor	F6-01-01	Switch	FE FA F4 B0	FF FF FF FF	FF FF FF FF	FF FF FF FF
4			Sensor	A5-09-09	Gas	01 87 26 83			
5			Sensor	A5-10-12	Room	01 A3 E1 32			
6			Sensor	A5-10-03	Room	01 82 2A A8			
▼ 7			Sensor	D2-03-00	Switch	FE FA 30 23	FF FF FF FF	FF FF FF FF	FF FF FF FF
			Device Security		SLF	4B			
			Device Security		RLC	00 00 46 5D			
			Device Security		Key	51 C9 E0 77 FA ...			
8			Sensor	F6-02-01	Switch	FE FA 16 A0	00 13 8A 68	FF FF FF FF	FF FF FF FF
9			Actuator (bi)	D2-01-08	VLD	FF FF FF FF			
10			Actuator (bi)	A5-20-04	HVAC	FF FF FF FF			
11			Sensor	D2-06-01	Special	01 94 8A 50			
12			Unused						
13			Control		Logic				

KNX Eno Tool: Configuration Window

6.1 The Menu Area

In the menu area it is possible to enter the individual address of the Eno Gateway. Alternatively, an Eno Gateway can also be recognized in programming mode with the "Read Learn" button and its address can be entered automatically. Please note that only one Eno Gateway is in programming mode.

Device Address

1 . 4 . 8

Dezimal

Read Learn

KNX Eno Tool: Device Address in the Configuration Window

The "Device Name" area displays the device name entered in the ETS configuration (KNX Eno 626, 636) or the device type (KNX Eno 630, 632, 634).

To open a bus monitor in which all transmitted Eno telegrams are displayed, click on the button "Bus Monitor View".

In the menu area "Remote Device Session" you can manage the device. Via the "Connect" button a connection to the device can be established. With the "Close" button it can be closed again. Using the "Write" button, link ID's that have been changed in the configuration table can be written directly into the device. Possible changes to the links or security data will activate the "Refresh" button, which will allow the links and security data to be re-read.

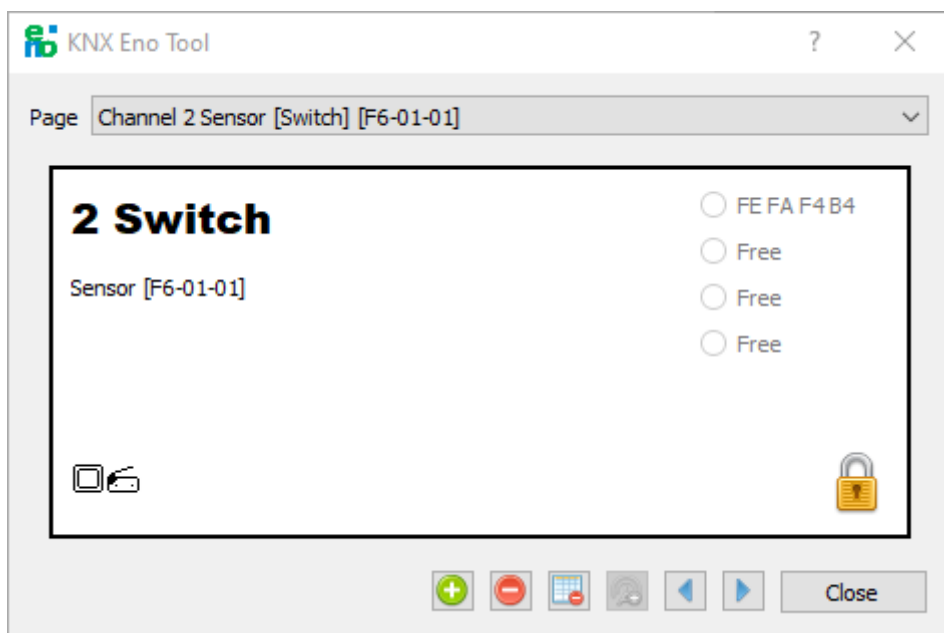


When executing the link write process, the device is restarted!

6.1.1 The Link Configuration Window

Behind the "Interactive Remote Control Session" button hides the link configuration window. Here new links can be added or removed. To add a new link, just click on the "Add Link" button to activate the "Learn mode". The ID of the next device which sends a Teach-In telegram is added to the links. You can also delete all links. In addition, it is possible to delete individual links via "Delete Link" by receiving a teach-in telegram or to delete all links with "Delete all links".

With the arrow buttons or the drop-down menu you can switch between the configured channels.

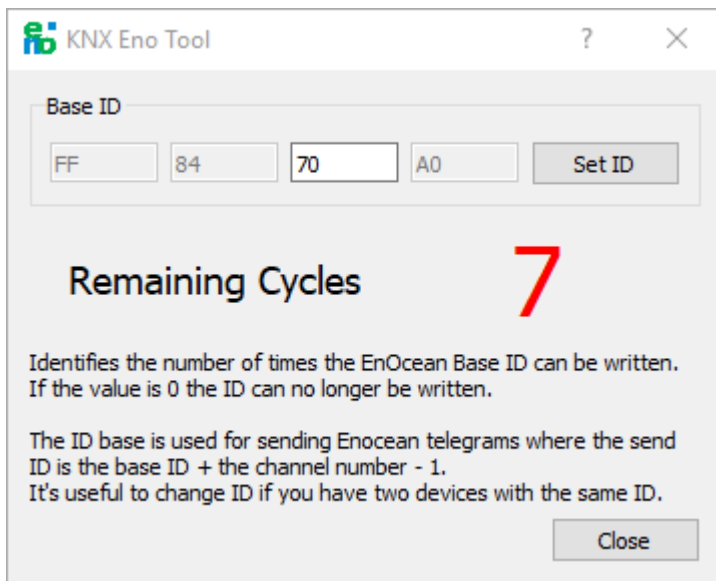


KNX Eno Tool: Link Configuration Window

6.1.2 Manage the Base ID

With a click on the button "Manage the Base ID" an administration window opens in which the Eno Base ID of the connected Eno device can be changed.

The new Base ID can easily be entered into the appropriate fields and then will be written into the device by clicking on the "Set ID" button.



KNX Eno Tool: Base ID Window



The number of remaining cycles indicates how often the Eno Base ID can still be written. If the value is 0, the ID cannot be changed anymore.

6.2 The Configuration Table

The configuration table shows the read configuration of the connected Eno device. Information of the particular channel is displayed, sorted by channel number.

Channel number	Secure	Function	Device	EEP	Title	ID 1	ID 2	ID 3	ID 4
7			Sensor	D2-03-00	Switch	FE FA 30 23	FF FF FF FF	FF FF FF FF	FF FF FF FF
			Device Security		SLF	4B			
			Device Security		RLC	00 00 46 5D			
			Device Security		Key	51 C9 E0 77 FA ...			
8			Sensor	F6-02-01	Switch	FE FA 16 A0	00 13 8A 68	FF FF FF FF	FF FF FF FF
9			Actuator (bi)	D2-01-08	VLD	FF FF FF FF			

KNX Eno Tool: Configuration Table in the Configuration Window

The Configuration Table contains following Information:

Label	Description
Channel number	Number of the Channel
Secure	Channels marked with a lock have been configured as secured in the ETS
Function	The device connected to the channel is displayed visually
Device	Description of the device (sensor or actuator)
EEP	EnOcean Equipment Profile of the device connected to the channel
Title	The channel designation text configured in the ETS
ID	The device ID's connected to this channel



The ID's can be edited directly with a double click in the respective cell. After changing an ID, it is displayed in red to signalize a change. The "Write" button from the menu area can be used to transfer the changes to the device.

6.2.1 Security Data

Secured devices have additional parameters that can be expanded and collapsed with the arrow on the left side. These can be edited by double-clicking on them, the changes are indicated by red text, just like links.



Normally, these parameters must not be edited manually, otherwise the secure Eno device will no longer be able to communicate with the Eno gateway.

For sensors, the following device security data of the connected Eno device is displayed:

Parameter	Description
SLF	Security level format
RLC	Rolling Code
Key	The key to decrypt the telegram

For actuators, the following channel security data of the Eno Gateway channel is displayed:

Parameter	Beschreibung
RLC	Rolling Code
Key	The key to decrypt the telegram

7 The BusMonitor

The BusMonitor displays information of sent and received telegrams. It can be opened via the "BusMonitor View" button in the menu area of the configuration window. The telegrams are numbered with time specification and displayed in tabular form.

In addition to the sending direction (sending or receiving), there is also displayed the type of the telegram (Eno data, KNX, Eno Teach-In, Eno Teach-In (Sec)).

In addition, the data (in the case of Eno data or KNX telegrams), the ID of the transmitter, as well as the EEP/RORG information and the connection quality (RSSI), are shown.

For subsequent analysis of communication traffic, the BusMonitor list can also be saved using "Save" or "Save as...".

If the content of the BusMonitor list is no longer necessary, it can be removed using the "Delete" button. Afterwards the BusMonitor is completely empty again.

Commands							
<div> Clear Save as... Save </div>							
Num	Timestamp		Type	Data	ID	EEP/ROI	RSSI
0026	2019-02-26 08:20:21 135	↑	Eno Teach-In		00 25 49 1F	F6-FF..	...
0027	2019-02-26 08:20:21 167	↑	Eno Data	00 00 00 00	00 25 49 1F	F6-FF..	...
0028	2019-02-26 08:20:21 167	↑	Eno Teach-In		00 25 49 1F	F6-FF..	...
0029	2019-02-26 08:20:24 683	↑	Eno Data	30 00 00 00	00 25 49 1F	F6-FF..	...
0030	2019-02-26 08:20:24 792	↑	Eno Teach-In		00 25 49 1F	F6-FF..	...
0031	2019-02-26 08:20:24 839	↓	KNX	01 00 00 00	GO nr: 1		
0032	2019-02-26 08:20:25 058	↑	Eno Data	00 00 00 00	00 25 49 1F	F6-FF..	...
0033	2019-02-26 08:20:25 074	↑	Eno Teach-In		00 25 49 1F	F6-FF..	...
0034	2019-02-26 08:20:26 246	↑	Eno Data	30 00 00 00	00 25 49 1F	F6-FF..	...
0035	2019-02-26 08:20:26 402	↑	Eno Teach-In		00 25 49 1F	F6-FF..	...
0036	2019-02-26 08:20:26 418	↓	KNX	01 00 00 00	GO nr: 1		
0037	2019-02-26 08:20:26 480	↑	Eno Data	96 00 00 09	01 A5 1E DA	A5-FF..	...
0038	2019-02-26 08:20:26 589	↑	Eno Data	00 00 00 00	00 25 49 1F	F6-FF..	...
0039	2019-02-26 08:20:26 683	↑	Eno Teach-In		00 25 49 1F	F6-FF..	...

KNX Eno Tool: BusMonitor



When analyzing the connection quality (RSSI), make sure that it is at least 2, otherwise the transmission is unreliable. There might be a loss of data due to other changing, external influences.



"Data" of secure telegrams are not displayed decrypted.



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