**ELDAT**

**KNX®**

**Easywave**

## KNX Gateway

## RGK02E5023-01

## Operating Instruction

**Inhalt**

## 1      General

The Easywave KNX Gateway RGK02 (in the following called gateway) is a product of the KNX system and meets the KNX guidelines.

Sufficient technical knowledge provided through KNX training courses is required for comprehension. The functions of the device are software-dependent. For detailed in-formation about the software that is currently available for download¬ and the resulting function scope, refer to the manufacturer's internet site.

Planning, installation and commissioning of the gateway takes place with a software certified by KNX Association.

Fundamental knowledge of the Easywave radio system is required for optimum utilisation of the gate-way. Chapter 2, „Information about the Easywave radio system" contains important information to this respect.

### 1.1      Technical data

| | |
|---|---|
| Coding | Not required, as the send code is programmed. Up to 128 transmitters can be programmed. |
| Channels | 128 input channels, 32 output channels; |
| Range | 150 m at good free field conditions |
| Voltage supply | KNX bus voltage 29 V DC (no extra bus coupler required) |
| Operation | Via KNX bus and Easywave products |
| Operating modes | Easywave receive: toggle, switch, dim, shutter operation, set value, send signal Easywave send: ON/OFF (1-button operation), ON/OFF (2-button ope-ra-tion), UP/STOP/DOWN (3-button operation), dead-man button |
| Protection type | IP21 |
| Operating temperature | -20°C  to +60 °C |
| Dimensions | 46 x 46 x 25 mm |
| Current consumption | ca. 35 mA |
| Frequency | 868.30 MHz |

### 1.2      Intended Use

The bidirectional gateway links the KNX system and the Easywave radio system.

It is a KNX-conform device, certified in acc. with EN 50090 and EN 300220.

Only use the Easywave KNX Gateway RGK02 in dry indoor rooms.

The manufacturer will not be liable for damage caused by improper or inappropriate use.

## 1.3     Specifications

| Objects/functions | 640 |
|---|---|
| Group addresses | max. 335 |
| Associations | max. 335 |
| Command buffer | 8 commands |
| Max. separately addressable Easy-wave receivers | 128<br>(32 Easywave serial numbers with four keycodes each) |
| Max. executable functions<br>(KNX-side) | 335<br>(Limitation through max. group address-es/associations) |

## 1.4     Compatibility

The Easywave KNX Gateway can be operated with the engineering tool software (ETS) as of version 3.0f.

On the radio side, it is compatible with all transmitters and receivers in the Easywave product range.

## 1.5     Scope of delivery

Easywave-KNX Gateway RGK02E5023-01, Operating instruction

## 2        Information about the radio system   Easywave

## 2.1     General information and functionality

With its extensive product range, the radio system „Easywave" is the complete system for all applications in building services engineering.

The 868 MHz wave band with its division into sub-bands (e.g. sub-band 868.0 MHz to 868.6 MHz) and different duty cycles is ideally suited for sophisticated tasks. In the ISM wave band (ISM= Industrial, Scientific, Medical), transmission only takes place for a few hundred milliseconds with outputs of less than 1 milliwatt (max. 25 milliwatt poss.).

To be able to address a radio receiver, you first have to teach in the Easywave send code. After the teach-in process, the receiver can be shut off by the transmitter or the gateway.

The send code of an Easywave transmitter has a length of 32 bit and contains a serial number as well as a keycode. The serial number serves to identify the sender. The keycodes A, B, C and D are automatically assigned to the functions of the set operating mode by the receiver.

In dependence on the selected operating mode, the individual keycodes of a serial number are automatically assigned receiver functions upon teach-in.

For example, only one of four send buttons must be programmed with a receiver for a shutter control in order to be able to use the functions UP/STOP/DOWN.

For detailed information about the keycodes and the receiver's interpretation of the keycodes, see the respective instruction manuals.

## 2.2    Operating modes

### ON/OFF (1-button operation)

With 1-button operation or so-called toggling, the switching status of the receiver changes with every push of the button:

> 1. Send: ON  → 2. Send: OFF  →  3. Send: ON  →…

Each keycode can be programmed and used separately. There is no automatic assignment.

### ON/OFF (2-button operation)

With 2-button operation, the receiver switches directly ON and OFF.

> Keycode A: ON          Keycode C: ON
>
> Keycode B: OFF        Keycode D: OFF

A, B as well as C and D are assigned automatically. Only one of these keycodes must be programmed. Both groups can be used separately.

### TIMER

In timer mode, the receiver switches ON for 7 minutes after receiving a programmed send code and OFF again after expiration of this time.

> Keycode A: ON (for 7 minutes)         Keycode C: ON (for 7 minutes)
>
> Keycode B: ON (for 7 minutes)         Keycode D: ON (for 7 minutes)

Each keycode can be programmed and used separately. There is no automatic as-signment.

### DEADMAN FUNCTION

In deadman function, the receiver switches for the duration of the transmitter operation. Due to the maximum duty cycle, all transmitters automatically switch off after 36 sec-onds. With the gateway, the system switches off after 31 seconds already.

> Keycode A: ON          (max. 31 seconds)
>
> Keycode B: ON          (max. 31 seconds)
>
> Keycode C: ON          (max. 31 seconds)
>
> Keycode D: ON          (max. 31 seconds)

Each keycode must be programmed and used separately. There is no automatic as-signment. Simultaneous use of several channels is not possible.

### UP/DOWN (2-button operation)

This operating mode is only available with receivers for shutter control featuring two interlocked relay outputs. Here, UP stands for switching of the 1st relay, DOWN for switching of the 2nd relay.

Parallel switching of both outputs is not possible. The relays automatically

cut off again after 90 seconds.

The STOP command is triggered by transmission of the counter-direction.

For example, if the shutter moves UP (A), it is stopped initially when pressing the button for the opposite direction (B) and DOWN when pressing the button (B) again.

     Keycode A: UP/STOP Keycode C: UP/STOP

     Keycode B: DOWN/STOP     Keycode D: DOWN/STOP

A, B as well as C and D are assigned automatically. Only one of these keycodes must be programmed. Both groups can be used separately.

### UP/STOP/DOWN (3-button operation)

This operating mode is only available with receivers for shutter control featuring two interlocked relay outputs. Here, UP stands for switching of the 1st relay, DOWN for switching of the 2nd relay. The relays automatically cut off again after 90 seconds. Parallel switching of both outputs is not possible.

The STOP command is triggered by transmitting the keycode C or D.

     Keycode A: UP        Keycode C: STOP

     Keycode B: DOWN    Keycode D: STOP

A, B as well as C and D are assigned automatically. Only one of these keycodes must be programmed.

### IMPULSE

With this operating mode, the relay output is switched for 1 second upon receipt of a programmed send code and afterwards releases again,  independently of how long the manual transmitter is operated.

     Keycode A: ON (1 second)    Keycode C: ON (1 second)

     Keycode B: ON (1 second)    Keycode D: ON (1 second)

Each keycode can be programmed and used separately. There is no automatic as-signment.

## 3     Installation and programming

### 3.1     Assembly

Only qualified experts may mount and com-mission the device.

The gateway can be installed in a flush-mounted socket, surface socket or any other types of housing.

The electricity connection is realised via the KNX bus voltage of 29 V DC. When using the gateway, observe the current consumption of 35 mA.



KNX-Systemleitung 24 V DC
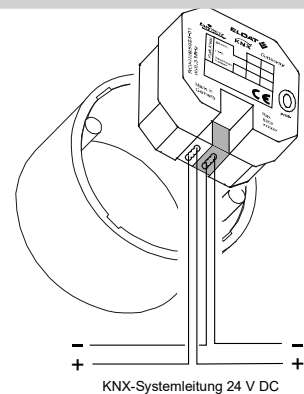
### 3.2     Integrating the database file in the ETS5

Fundamental knowledge of the engineering tool software (ETS) is required to integrate the database. Download the file „RGK02.vd5" from the ELDAT internet page www.eldat.de.
(*Products Easywave → Interfaces → RGK02*)

Import the vd5 file into the ETS5 software via

     Work place    ➢   Catalogs    ➢   Import    ➢   RGK02.vd5

Now the device information is available in the ETS5.

## 3.3     Inserting a gateway into a project

Once you have created the desired range and line in the menu „Topology", you can add the gateway to the project.

You will find the Gateway under the following category:

      ELDAT        ➢       Gateway        ➢        KNX-Easywave-Gateway

Alternatively, you can also search for „Easywave Gateway" in the search line.

Double-clicking the gateway adds the device to the currently selected area line in the current project.
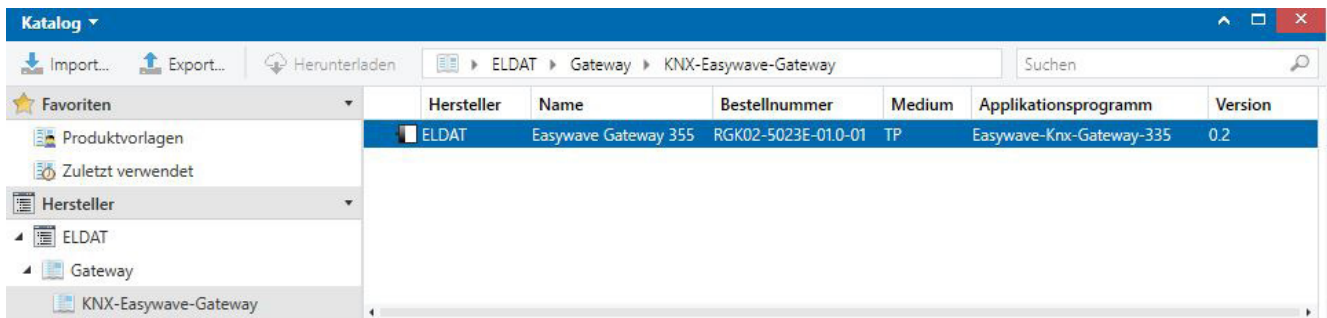


Afterwards, the gateway is displayed the menu „topology" with the following functions: (2 send objects, 2 receive objects and the 3 system objects)
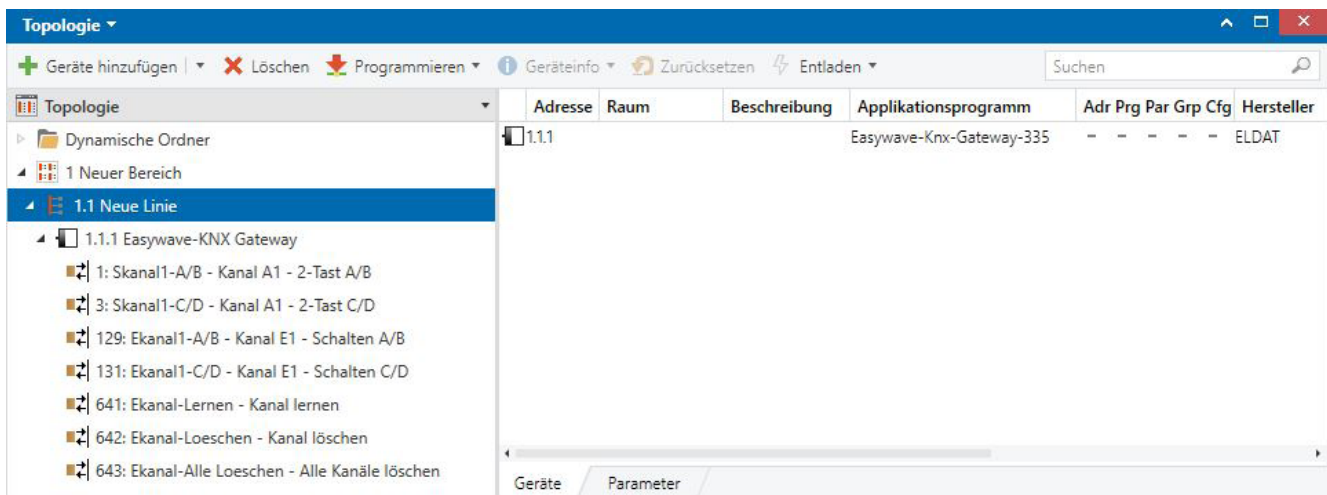


### Overview of all available functions

| System objects | Receive objects | Send objects |
|---|---|---|
| (see chapter 4.1) | (see chapter 4.2) | (see chapter 4.3) |
| Programming a channel | Toggle | 1-button operation |
| Delete channel | Switch | 2-button operation |
| Delete all channels | Dim | 3-button operation |
|  | Shutters | Deadman (max. 31 seconds) |
|  | Set value |  |
|  | Signal |  |

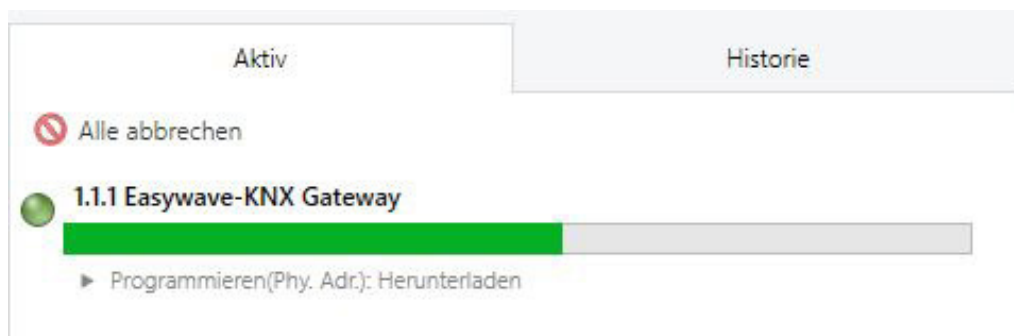### 3.4    Programming the physical address

An unequivocal physical address must be assigned to the newly created gateway in the KNX bus system.

1.  Select in the menu „Topology" the Easywave-Gateway. Click on in the menu bar
    *„Edit" → "Download"* .  The „Program" window appears.

2.  To program the physical gateway address, click on the button „Download Individual Address".

| | |
|---|---|
| Programmieren (Physikalische Adresse & Applikationsprogramm) | Strg + Umschalttaste + L |
| Programmieren (Partiell) | Strg + D |
| Physikalische Adresse | Strg + Umschalttaste + I |
| Überschreibe physikalische Adresse | Strg + Umschalttaste + Alt + I |
| Applikationsprogramm | Strg + Umschalttaste + Alt + D |

3.  The programming procedure starts and you will be prompted to press the programming button of the gateway. The red LED goes off after approx. 4 seconds and the physical address is now programmed.

    Further information can be found in the operating instructions of the respective receiver.

| Aktiv | Historie |
|---|---|

🚫 Alle abbrechen

🟢 **1.1.1 Easywave-KNX Gateway**

▶ Programmieren(Phy. Adr.): Herunterladen

## 4       Functionen and Object properties

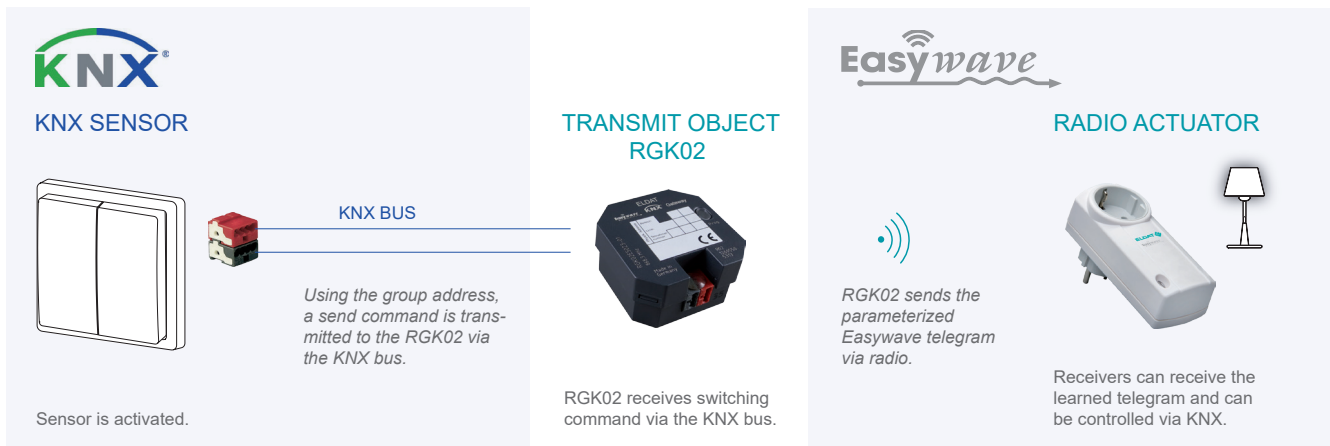There are three types of objects:

### System objects

The three system objects are required for the administration of the Easywave send codes.

KNX programming and assignment of the Easywave radio products to the individual objects (program-ming and deleting) is done with the ETS.

### Transmit objects

Send objects send an Easywave telegram from the perspective of the KNX gateway. The transmission process is triggered by KNX sensors and controls Easywave receiver.



KNX SENSOR

Using the group address, a send command is trans-mitted to the RGK02 via the KNX bus.

Sensor is activated.

TRANSMIT OBJECT RGK02

RGK02 receives switching command via the KNX bus.

RADIO ACTUATOR

RGK02 sends the parameterized Easywave telegram via radio.

Receivers can receive the learned telegram and can be controlled via KNX.

### Receive objects

Receive objects receive Easywave telegrams and convert them as commands to the KNX bus.



RADIO SENSOR

Switching command is transmitted by radio to the RGK02.

Easywave transmitter is operated.

RECEIVE OBJECT RGK02

RGK02 receives the radio telegram.

KNX ACTUATOR

RGK02 transmits the switching command by used the group address via the KNX bus.

All KNX actuators linked to this group address switch according to the parameterization.

## 4.1    System objects

The three system objects are required for the administration of the Easywave send codes. These objects are permanently integrated in the system and cannot be changed.

Valid group addresses must be assigned to use the system objects.

The following system objects are available:

**641** (1 Byte):   „Teach channel" (see chapter 4.1.1) (= „Kanal lernen")
                    Teaching in a handheld transmitter on the memory slots 1-128

**642** (1 Byte):   „Delete channel" (see chapter 4.1.2) (= „Kanal löschen")
                    Deleting a handheld transmitter on the memory slots 1-128

**643** (1 Bit):    „Delete all channels" (see chapter 4.1.3) (= „Alle Kanäle löschen")
                    Deletes all programmed manual transmitters
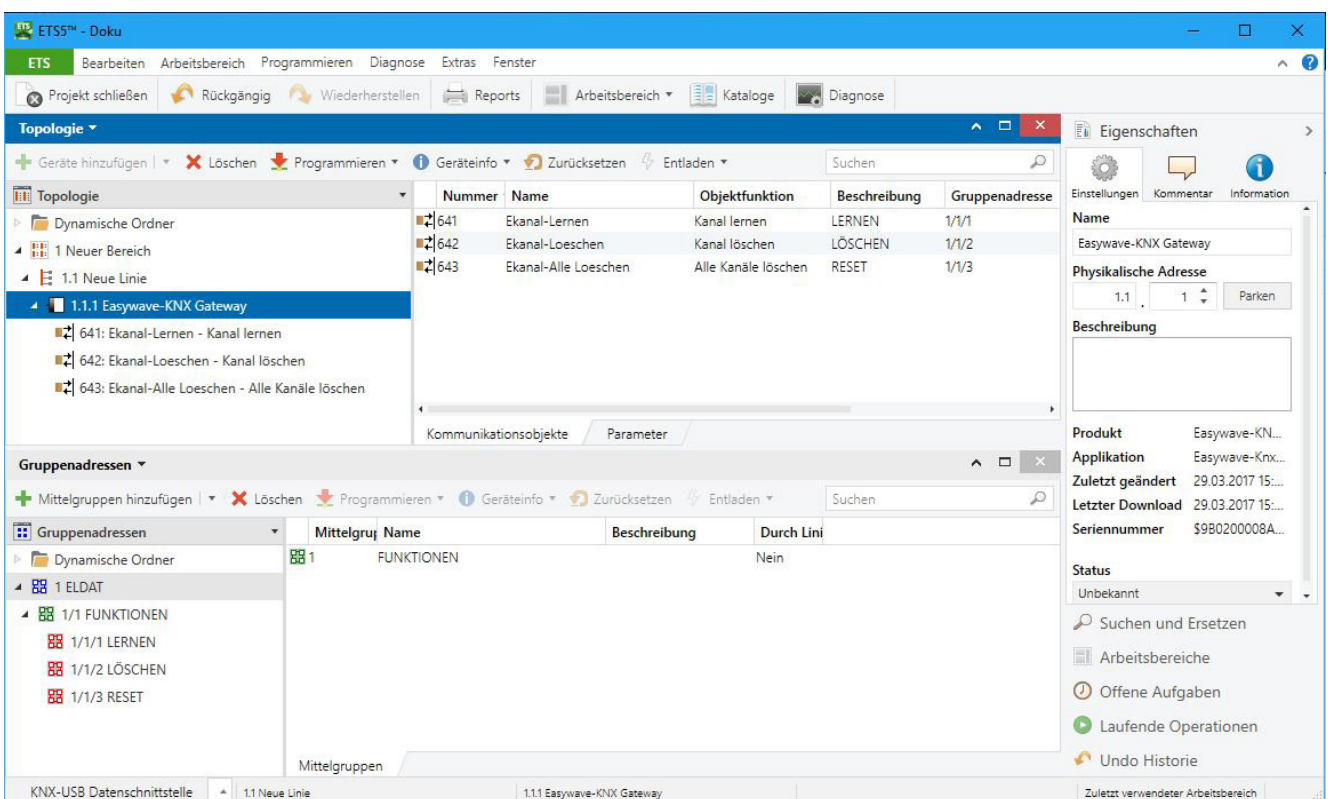


After creating and assigning the group addresses, these can be addressed directly via the ETS group monitor.

### 4.1.1  Teaching in a channel

The system object 641 serves for teaching in Easywave send codes.

The teach-in process is initiated by transmitting the desired memory slot number (value from 1 to 128) to the respective group object.

1.  Open the group monitor (*Menu → Work place → Group Monitoring*) and
    click on **Start**.
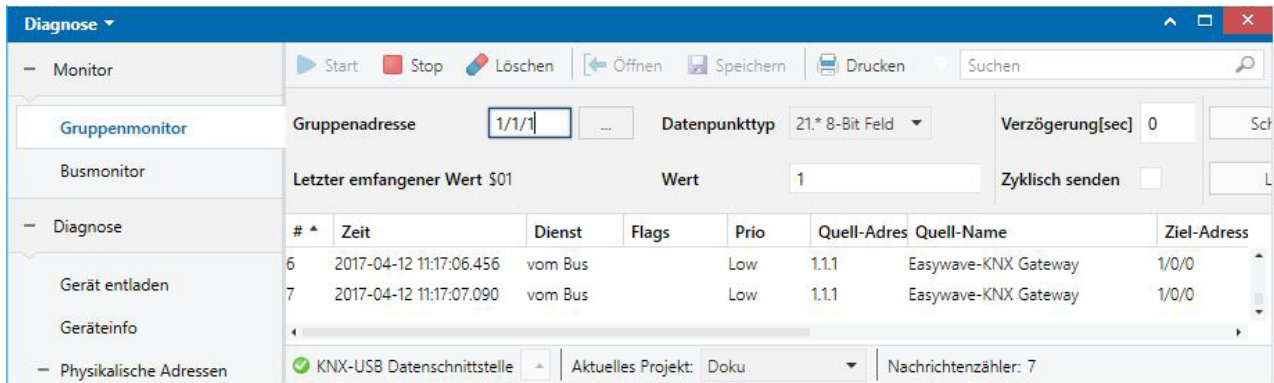


2.  In the dialogue „*Group Address*", enter the group address of the system object „Teach channel"" (e.g. 1/1/1).
3.  In „*Data Point Type*", select „**21 * 8-bit set**".
4.  In the field „Value" enter the de-sired memory slot number and click on „Write". Please note that the number of the memory slot represents the assignment to the corresponding receive object at the same time (see point 4.2).
5.  The LED on the gateway lights up red. Now press the desired transmitter.
    Once the teach-in process is completed, the LED goes off.
6.  Repeat these steps for each additional transmitter.


**ATTENTION!**

If you teach in a transmitter double on a memory slot (value), the already programmed send code is overwritten.

If you teach in the same transmitter on different memory slots, the gateway will only execute the function of the lowest channel.

### 4.1.2   Deleting a channel

The system object 642 serves for deleting specific Easywave send codes.

Direct deletion of a send code is initiated by sending the value for the memory slot (1-128) to the corresponding group object.

1.  Open the group monitor (*Menu → Work place → Group Monitoring*) and click on **Start**.
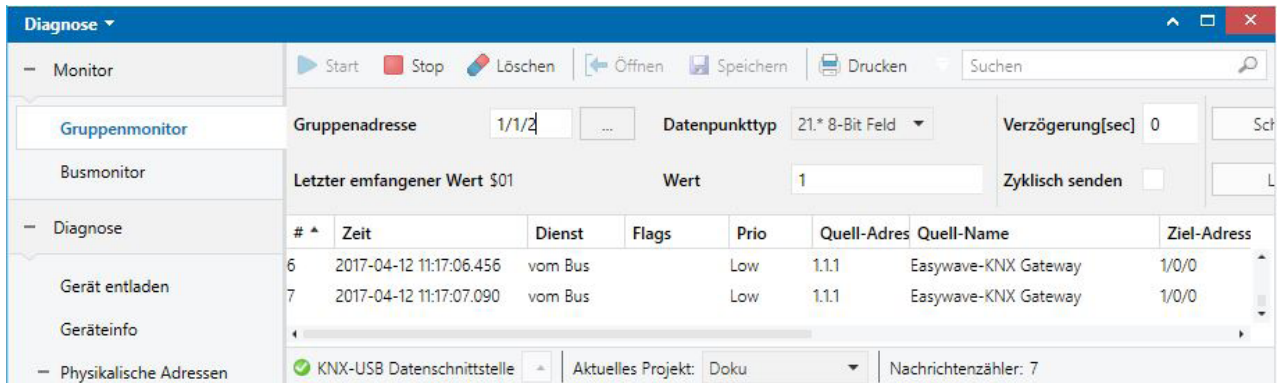


2.  In the dialogue „*Group Address*", enter the group address of the system object „Delete channel" (e.g. 1/1/2).
3.  In „*Data Point Type*", select „**21.\* 8-Bit set**".
4.  In the field „Value" enter the memory slot number to be deleted and click on „Write".
    The corresponding memory slot is deleted and the gateway will no longer react tot he corresponding transmitter.
5.  Repeat these steps for each additional channel to be deleted.

### 4.1.3   Delete all channels

The system object 643 serves for deleting all programmed Easywave send codes. Deletion of all send codes is initiated by sending [1] to the corresponding group object.

1.  Open the group monitor (*Menu → Work place → Group Monitoring*) and click on **Start**.
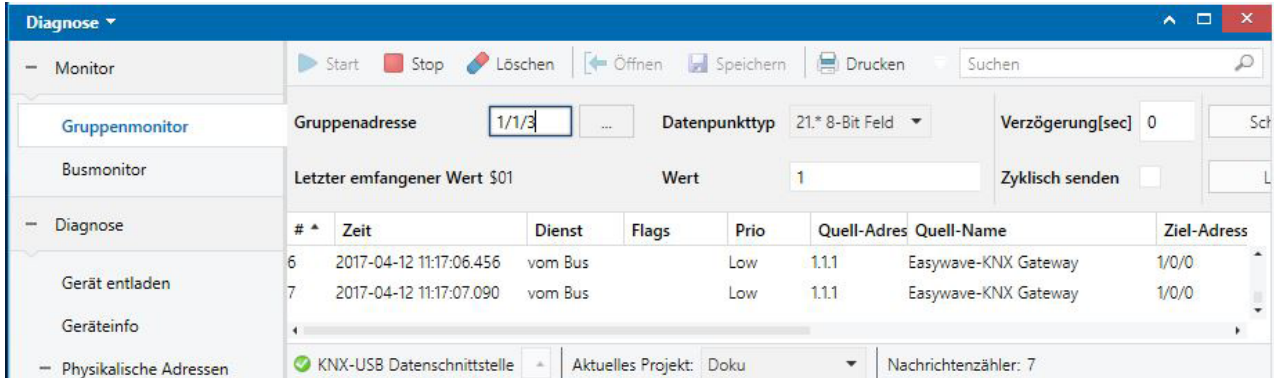


2.  In the point *"Group Address"*, enter the system object "Delete all transmitters" (e.g. 1/1/3)

3.  In „*Data Point Type*", select „**1.015 Reset**".
4.  Change the value to „*reset command (trigger)*" and click on „Write".
5.  Now all send codes are deleted and the gateway will no longer re-act to radio signals until new transmitters are programmed.

**ATTENTION!**

There is no prompt for confirmation! All transmitters are permanently deleted!

A restoration of the assignment is not possible.

Therefore, only assign a group address to object 643 if you really need it and then delete the group address again!

## 4.2    Creating receive objects

The receive objects serve for the implementation of Easywave operating modes in the KNX Bus. Alto-
gether 128 memory slots are available for Easywave serial numbers.

The receive objects are divided into 16 groups (E to T); each group has eight receive functions. By
default, only the 8 receive functions of group E are activated. If more re-ceive functions are required,
further groups in the menu „Receive groups" must be set to „Use".

Afterwards, the newly selected receive group is available for function assignment.
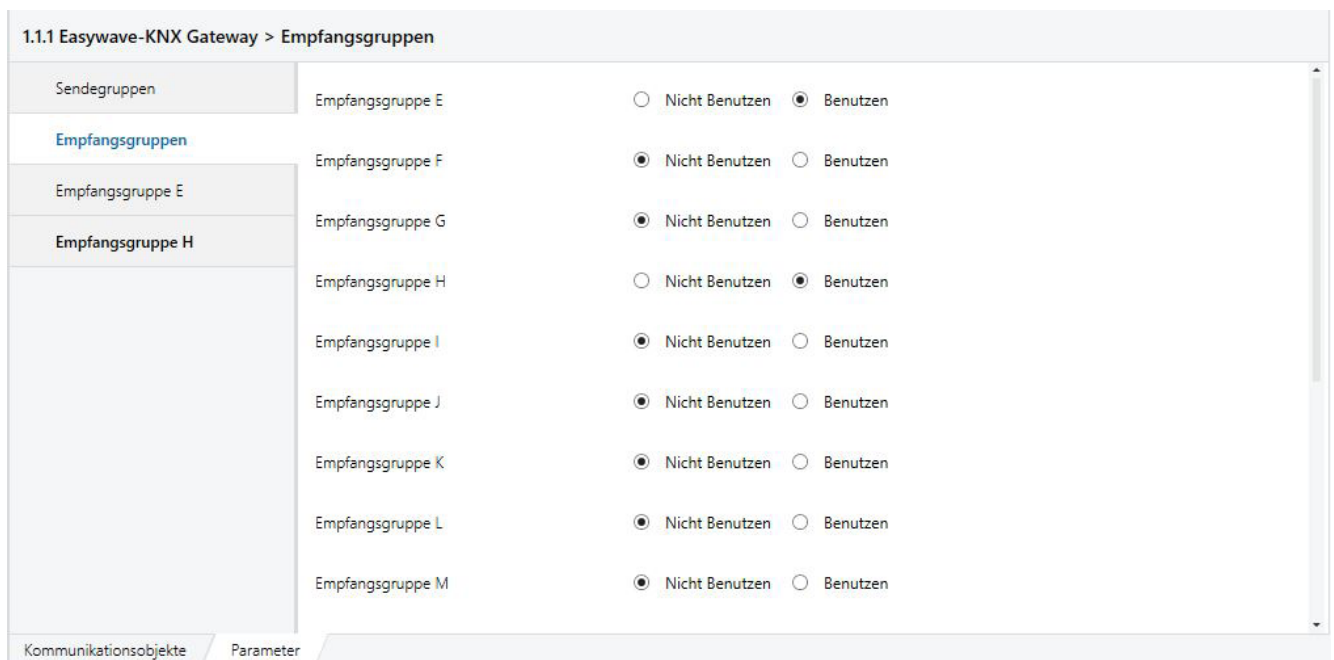


The receive functions are numbered consecutively (1 to 128). The respective channel number is per-
manently assigned to the memory slots for the Easywave send codes.

For example, the functions of receive object 4 can only be controlled by the Easywave transmitter pro-
grammed on slot 4.

The receive objects can be assigned to one of the following KNX functions:

- Toggle
- Switch
- Dim
- Shutters
- Set value
- Signal
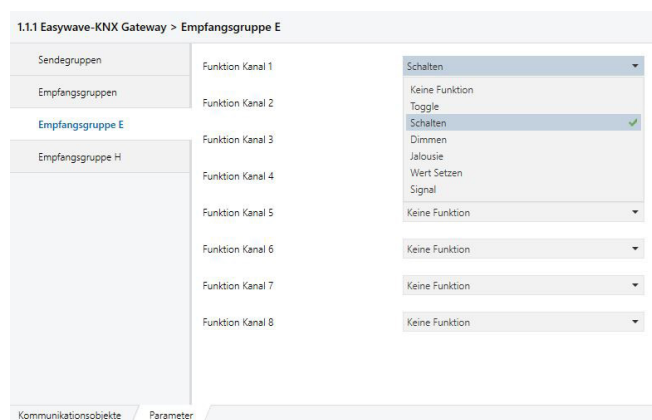
### 4.2.1  Toggle

| Data type | 1 Bit | |
|---|---|---|
| Number of objects | 4 | (A) Toggle, (B) Toggle, (C) Toggle, (D) Toogle |
| Object behaviour upon receiving | | (A): Toggle [1] or [0] |
| | | (B): Toggle [1] or [0] |
| | | (C): Toggle [1] or [0] |
| | | (D): Toggle [1] or [0] |



In this operating mode, four 1 bit objects are created for the respective channel. These represent the keycodes A, B, C and D of one Easywave serial number.
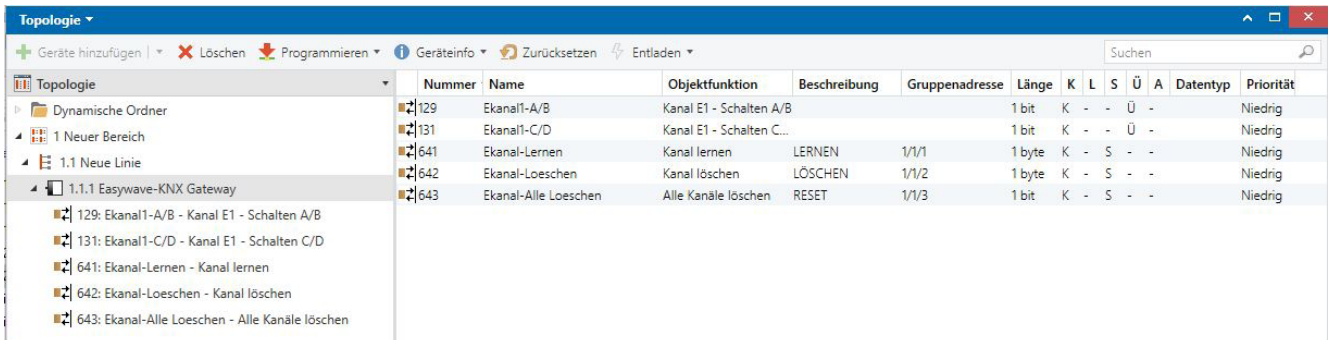
If one of the keycodes is received, the gateway alternately sends [1] or [0] to the respective group objects of the KNX bus.

After pressing the corresponding button of a programmed transmitter, the functions are transferred to the KNX bus by the gateway.

A corresponding 4-channel transmitter is required to be able to use all four objects of a channel.

### 4.2.2  Switch

| Data type | 1 Bit | |
|---|---|---|
| Number of objects | 2 | (A/B) switch, (C/D) switch |
| Object behaviour upon receiving | | (A/B):  (A=[1]; B=[0]) <br> (C/D):  (C=[1]; D=[0]) |



In this operating mode, two 1-bit objects are created for the respective channel. These represent the keycodes A, B, C and D of one Easywave serial number.

If the keycode A or C is received, the gateway sends [1] to the respective group objects of the KNX bus. If the keycode B or D is received, the gateway sends [0] to the respec-tive group objects of the KNX bus.

After pressing the corresponding button of a programmed transmitter, the functions are transferred to the KNX bus by the gateway.

A corresponding 4-channel transmitter is required to be able to use all four objects of a channel.

### 4.2.3 Dim

| Data type | 4 Bit | |
|---|---|---|
| Number of objects | 2 | (A/B) dim; (C/D) dim |
| Optional objects | 1 | (A/B) switch |
| Object behaviour upon receiving | **Dim** | (A/B):  (A=[UP]; B=[DOWN])<br>(C/D):  (C=[UP]; D=[DOWN]) |
| | **Dim** and **Switch** | Short-time object:     Press button < 1,6s<br>(A/B):  (A=[1]; B=[0])            Switch<br>(C/D):  (C=[UP]; D=[DOWN])  Dim<br>Long-time object:     Press button > 1,6s<br>(A/B):  (A=[UP]; B=[DOWN])   Dim |
| Parameters | Dim stages<br>Function A/B: | [1 to 64]<br>[Dim] or [Dim and switch] |
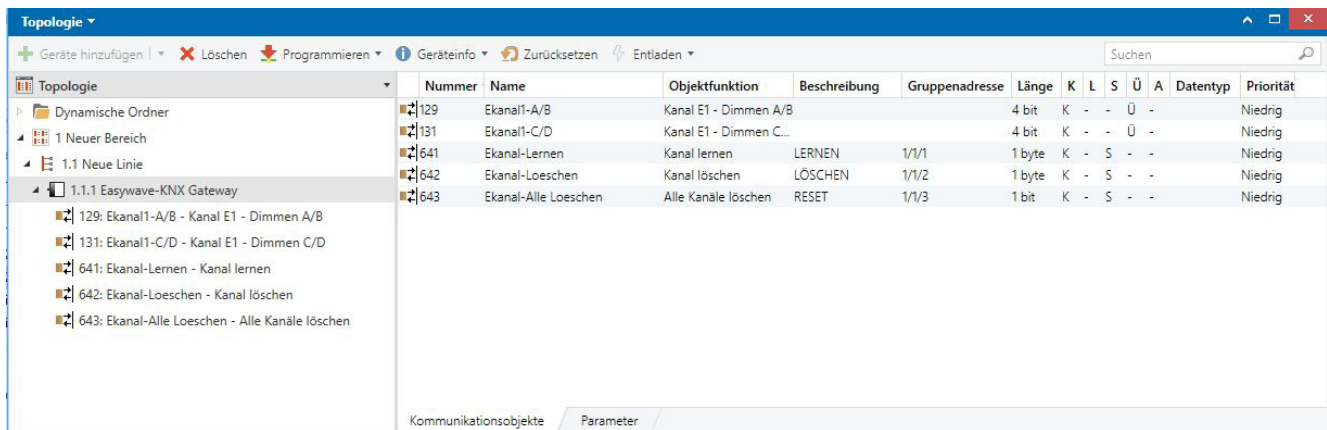


This operating mode serves to address KNX dimmers. When receiving the keycode A or C, the command dim up is sent to the bus, when receiving the keycode B or D, the command dim down.

By setting the parameter [dim and switch], a short-time object for switch commands for channel A/B is created in addition to the dim object.  The switch command for the keycodes A/B is then triggered when the button is pushed <1.6 seconds. If the button is pressed longer, the dim function is used.

**Attention!** If the execution of this function should lead to interference on the radio line, the secure distinction between long-time and short-time objects cannot be guaranteed.

In case of an error, a switch command would be sent instead of a dim command. This leads to the complete ON/OFF of the KNX actor, independent of the current dim stage.

This option is not available for dimming with the buttons C/D.

After pressing the corresponding button of a programmed transmitter, the functions are transferred to the KNX bus by the gateway.

### 4.2.4　Shutters

| Data type | 1 Bit | |
|---|---|---|
| Number of objects | 2 | (A/B) shutter short-time;<br>(A/B) shutter long-time |
| Optional objects | 3 | (C) shutter stop; (C/D) shutter short-time;<br>(C/D) shutter long-time |
| Object behaviour upon receiving | | Short-time object:   Press button < 1.6s<br>(A/B):  (A=[0]; B=[1])<br>(C):     (C=[0])<br>(C/D):  (C=[0]; D=[1])<br>Long-time object:    Press button > 1.6s<br>(A/B):  (A=[0]; B=[1])<br>(C/D):  (C=[0]; D=[1]) |
| Parameters | Shutter command | Long-time command; short-time command;<br>short and long-time command |
| | Button C | Extra stop command; additional short and long-time command; no utilisation |



This operating mode serves to address KNX shutter actors.

A short-time object A/B and a long-time object A/B are generated by default, whereby [0] is sent when receiving a keycode A and [1] when receiving a keycode B to the respective group objects of the KNX bus.

In the operating mode [short and long-time command], the system evaluates PRIOR to triggering the KNX command whether the respective object is a long or a short-time object. Pressing the button for <1.6 s is interpreted as a short-time command, pressing the button for >1.6 s as a long-time command.

Optionally, you can define only a short or only a long-time command for the buttons A/B, which is then executed directly. This way it is not necessary to press a button for 1.6 s to trigger a long-time command.

In addition, it is also possible to define both another short and a long-time object for the send code C/D OR a separate STOP command (C only). By default, this option is set to „no utilisation".

After pressing the corresponding button of a programmed transmitter, the functions are transferred to the KNX bus by the gateway.

### 4.2.5  Setting a value

| Data type | 1 byte | |
|---|---|---|
| Number of objects | 1 | (A) value A |
| Object behaviour upon receiving | | (A):      (A=[VALUE]) |
| Parameters | Value in % | Adjustable in 5%-steps |



This operating mode allows you to send a value in percent in a range from 0% to 100% to the KNX bus. The value can be selected in 5%-steps.

The command is uniquely triggered by keycode A of the programmed send telegram.

After pressing the corresponding button of a programmed transmitter, the function is transferred to the KNX bus by the gateway.

### 4.2.6  Send signal

| Data type | 1 bit | |
|---|---|---|
| Number of objects | 4 | (A) signal, (B) signal, (C) signal, (D) signal |
| Optional objectse | none | |
| Object behaviour upon receiving | | (A):     (A=[1]\|[0])<br>(C):     (C=[1]\|[0])<br>(B):     (B=[1]\|[0])<br>(D):     (D=[1]\|[0]) |
| Parameters | Signal type | [0] or [1] |



Four 1-bit objects (one object for each keycode) are generated in this operating mode.

This operating mode allows you to send [1] or [0] to the KNX bus. The command is triggered with each keycode (A, B, C or D) of a programmed Easywave serial number.

Per programmed Easywave serial number, you can now send either [1] or [0] to the bus. All keycodes always send the same value to the KNX bus, but are represented by different group objects.

After pressing the corresponding button of a programmed transmitter, the ob-jects/functions are trans-ferred to the KNX bus by the gateway.

## 4.3    Creating send objects

The send objects serve to address Easywave receivers from the KNX bus.

Altogether 32 send objects are available in the gateway. Each object can send out an Easywave serial number with up to four different keycodes depending on the selected function.

Evaluation of the transmitted send codes is done by the Easywave receivers depending on their selected operating mode.

The send objects are divided into four groups (A, B, C and D). Each group contains eight send channels to which one function each can be assigned.

Only send group A is activated by default. If more send functions are required, further groups must be activated in the menu „Send groups".

As soon as a send group was set to „Utilise" in the menu item „Send groups",, this ap-pears as a new parameter setting option in the parameter dialog:

After activation of an additional send group, this is displayed in the configuration menu, however the eight functions of the group are set to "No utilisation". So in order to add additional group objects, these must be assigned a function first.

The send objects can be programmed to one of the following operating modes. The operating mode set here should correspond to the operating mode of the addressed receiver.

−    1-button operation (A, B, C, D)
−    2-button operation (A/B,C/D)
−    3-button operation (A/C, B/C)
−    Deadman (A, B, C, D)
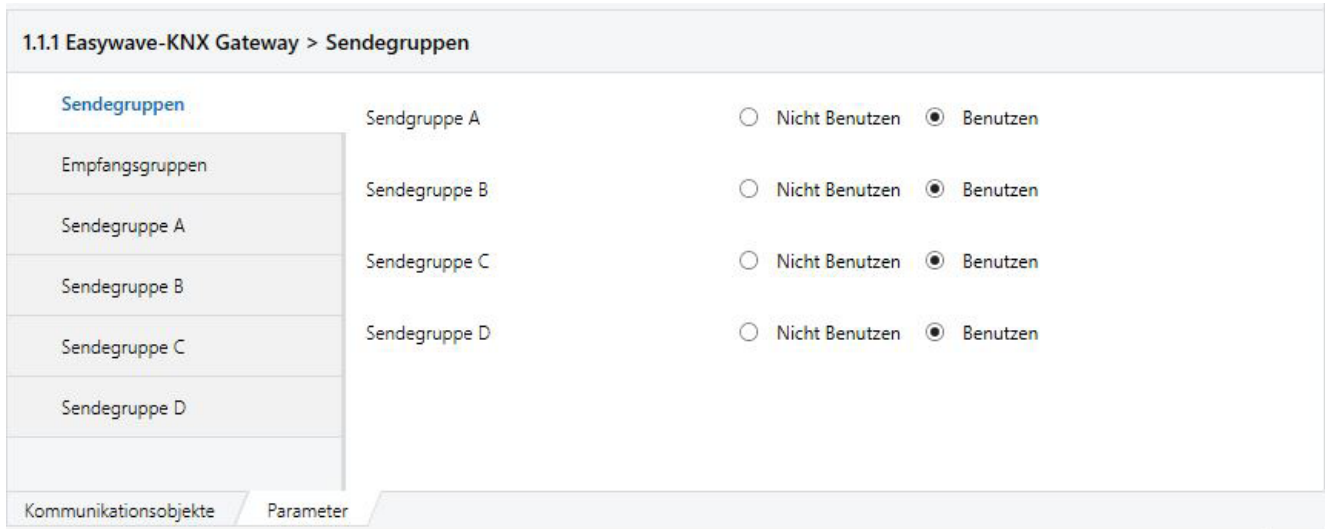
### 4.3.1  1-button operation

| Data type | 1 bit | |
|---|---|---|
| Number of objects | 4 | (A) 1-button, (B) 1-button, (C) 1-button, (D) 1-button |
| Object behaviour | at [0] | Sending of the respective keycode |
| | at [1] | Sending of the respective keycode |
| Easywave operating modes | | Impulse, timer ON/OFF (1-button operation) |
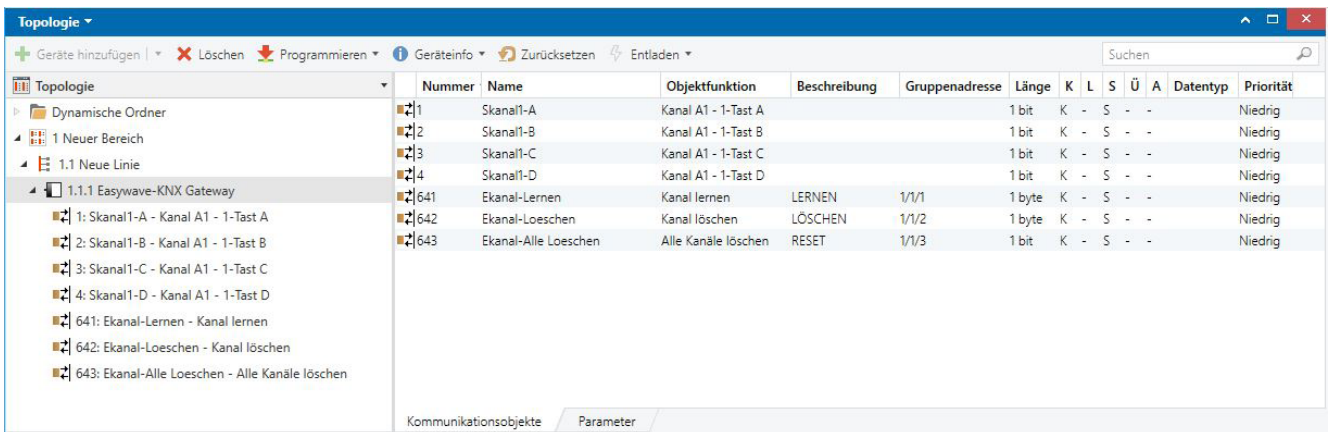


In this operating mode, four 1 bit objects are created for the respective channel.

These represent the keycodes A, B, C and D of one Easywave serial number.

If an assigned KNX sensor is operated, the gateway sends the respective send code.

Here, the individual objects and/or keycodes do not depend on each other and can be assigned to separate group addresses.

### 4.3.2  2-button operation

| Data type | 1 Bit | |
|---|---|---|
| Number of objects | 2 | (A/B) 2-button + (C/D) 2-button |
| Object behaviour | at [0] | Sending of [B] or [D] |
| | at [1] | Sending of [A] or [C] |
| Easywave operating modes | | ON/OFF (2-button operation) UP/DOWN (2-button operation) |



Two objects (A/B and C/D) are generated in this operating mode for the respective channel.

These represent the keycodes (A/B) or (C/D) of one Easywave serial number.
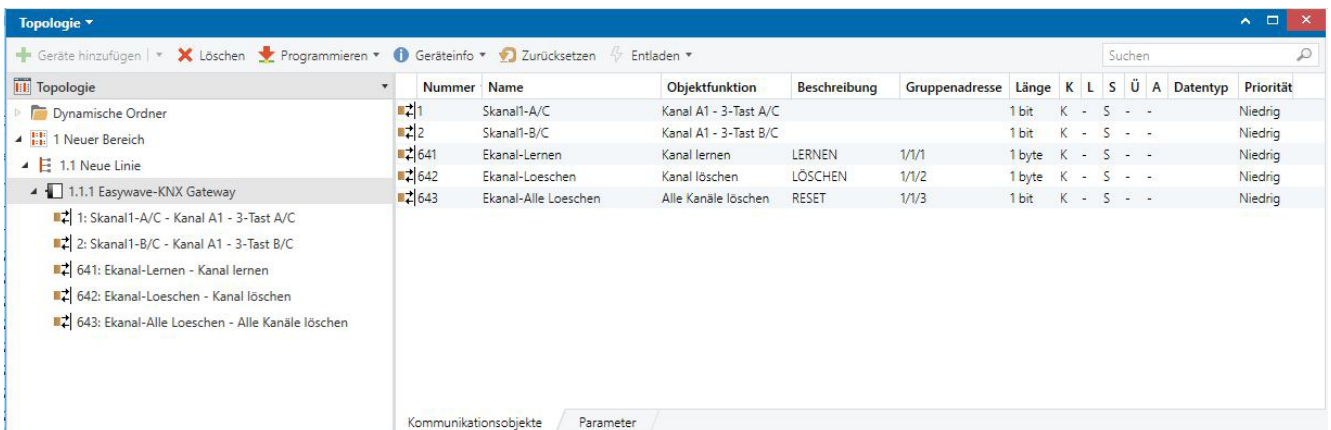
If an assigned KNX sensor is operated, the gateway sends the respective send code.

If the KNX bus receives a [1], the keycode A or C is sent out depending on the selected object. When receiving a [0], the keycode B or D is sent analogue.

### 4.3.3  3-button operation

| Datentyp | 1 Bit | |
|---|---|---|
| Number of objects | 2 | (A/C) 3-button and (B/C) 3-button |
| Object behaviour | at [0] | Sending of [C ] |
| | at [1] | Sending of [A] or [B] (depending on the object) |
| Easywave operating modes | | UP/STOP/DOWN (3-button operation) |



Two objects (A/C and B/C) are generated in this operating mode for the respective channel.

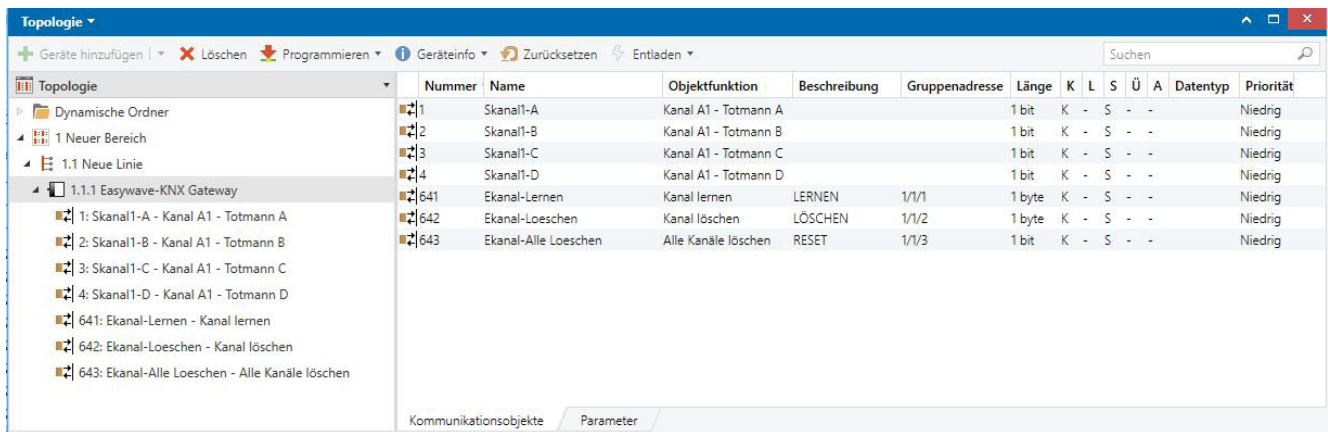These represent the keycodes A, B and C of one Easywave serial number.

If an assigned KNX sensor is operated, the gateway sends the respective send code.

If the KNX bus receives a [1], the keycode A or B is sent out depending on the selected object. When receiving a [0], the keycode D is sent analogue.

### 4.3.4  Deadman

| Data type | 1 Bit | |
|---|---|---|
| Number of objects | 4 | (A) deadman, (B) deadman, (C) deadman, (D) deadman |
| Object behaviour | at [0] | Stop sending |
| | at [1] | Start sending the respective keycode for the set duration |
| Easywave operating modes | | Deadman |
| Parameters | Deadman duration | [1-31] in seconds |



In this operating mode, four 1 bit objects are created for the respective channel. These represent the keycodes A, B, C and D of an Easywave send code.

If an assigned KNX sensor is operated, the gateway sends the corresponding send code for the duration the button is pressed, however at most up to the set send duration.

**IMPORTANT! The KNX sensor must be configured in such a way that it sends [1] when operated and [0] when released to the KNX bus and/or to the respective group object! Au-tomated permanent transmission is not admissible!**

The maximum send duration is set to a value between 1 and 31 seconds in the pa-rameters. The standard value is 3 seconds. When receiving [1], the gateway starts transmitting the send code and stops when receiving [0]. After expiration of the set maximum send duration, the gateway automatically stops the transmission process.

**ATTENTION!** During the transmission process, the gateway cannot process any other commands! The transmission process is stopped by sending [0] to the deadman object. All incom-ing KNX commands are buffered. At most eight commands can be buffered; if more commands come in, these expire.

Easywave commands cannot be received during the entire transmission duration and expire generally.

## 5        General notices

### 5.1        Disposal

**Obsolete devices may not be disposed of in the household waste!**

Please dispose of obsolete devices at a collection point for electronic waste or your retailers.

Dispose of packaging materials in special containers for card-board, paper and plastic.

### 5.2        Warranty

We will remedy defects on the device based on material or production errors within

the statutory warranty period or exchange the device.

In case of unauthorised tampering with the device, the warranty is void.

### 5.3        Conformity

The product fulfils the essential requirements of the RED directive 2014/53/EU

as well as EN 50090-2-2.

The declaration of conformity can be called up on the following Internet page: www.eldat.de

**KNX**        is a registered trademark of KONNEX ASSOCIATION.

**ETS**™        is a registered trademark of EIBA cvba.

### 5.4        Customer service

If the device does not work properly despite proper handling or in case of damage, please contact your retailer.

**ELDAT GmbH**

Im Gewerbepark 14

15711 Königs Wusterhausen

Germany

Phone:     + 49 (0) 33 75 / 90 37-0

Fax:          + 49 (0) 33 75 / 90 37-90

Internet:   www.eldat.de

E-Mail:     info@eldat.de