KNX
Product documentation

GIRA

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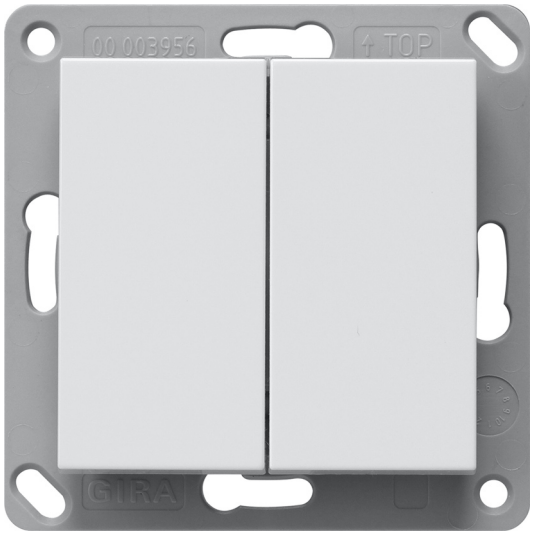
RF wall transmitter, 2-gang, for KNX
Order no. 5178 ..



1. Information about the product

1.1. Product catalogue

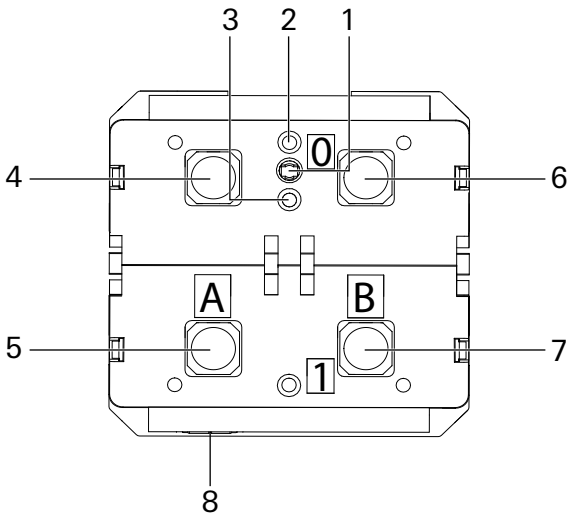
Product name:	RF wall transmitter, 2-gang
Order no.:	5178 ..
Use:	Sensor
Design:	Surface-mounted

1.2. Application

RF wall transmitter, 2-gang, for KNX with two pressure points each (top/bottom).

- The wall transmitter and base plate can be mounted on walls with screws or glued to smooth or transparent surfaces.
- Project planning, commissioning and parameter setting are performed using ETS (version 5.7 or later).
- Integrated Micro B USB interface for local programming and can be used as a KNX RF interface.
- Battery-operated device.
- Device supports KNX Secure.

1.3. Device components



1 KNX programming button
2 LED KNX
LED flashes green: The device displays a KNX communication, e.g. when transmitting telegrams or when an ETS download is active.
3 Programming LED
4 Upper left button (A0)
5 Lower left button (A1)
6 Upper right button (B0)
7 Lower right button (B1)
8 USB connection

1.4. State of delivery

KNX RF is configured wirelessly via the ETS or directly via the integrated USB interface (Micro USB). This interface can also be used to program other KNX devices wirelessly. The RF wall transmitter is powered by a standard CR2032 battery.

The RF wall transmitter has the physical address 15.15.255 and KNX Data Security is active.

1.5. Technical data

KNX medium:	RF1.R
Start-up mode:	S mode
Rated voltage:	DC 3 V
Batteries:	1 x CR 2032
Ambient temperature:	-5 to +45°C
Wireless frequency:	868.3 GHz
Transmission power:	max. 20 mW

2. Safety information

Safety information

Electrical devices may only be installed and connected by a qualified electrician.
Improper installation may result in serious injury, e.g. from electrical shock or fire, as well as equipment damage.
The device must not be opened or operated outside of the technical specification.
These instructions are an integral part of the product and must remain with the end customer.

2.1. Battery safety instructions

This device or its accessories are supplied with button cell batteries.

DANGER Batteries can be swallowed. This can lead directly to death by suffocation. Dangerous substances can cause severe internal burns leading to death within 2 hours.

Keep new and used batteries away from children.

Do not use any devices on which the battery compartment cannot be closed reliably, and keep them away from children.

If you suspect that a battery has been swallowed or is in any orifice of the body, seek medical attention immediately.

WARNING Improper handling of batteries may result in an explosion, fire or burns due to leakage.

Do not heat batteries or throw batteries into fires.

Do not reverse the polarity, short-circuit or recharge batteries.

Do not deform or disassemble batteries.

Only replace batteries with the same or equivalent type.

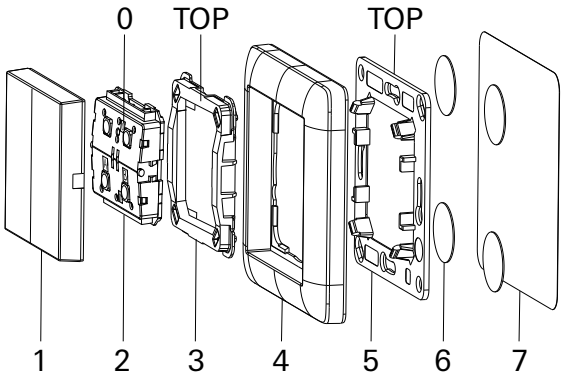
Remove flat batteries immediately and dispose of them in an environmentally sound manner.

3. Mounting and electrical connection

To achieve good transmission quality, ensure a sufficient distance to possible sources of interference, e.g. metal surfaces, microwave ovens, hi-fi systems, TV sets, ballasts and electronic transformers.
The range of a wireless system depends on various external factors. This range can be optimised by the ideal choice of the installation site.

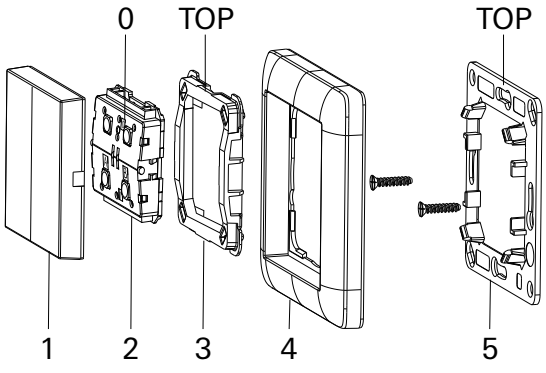
Material	Penetration
Wood, plaster, plasterboard	approx. 90%
Brick, pressboard	approx. 70%
Reinforced concrete	approx. 30%
Metal, metal mesh	approx. 10%
Rain, snow	approx. 1 to 40%

3.1. Adhesive mounting



- Ensure that the surface is clean, free of grease and able to bear the load.
- Apply the adhesive film (7) beforehand in the case of transparent surfaces.
- Apply adhesive points (6) to the surface or to the adhesive film (7) in the case of transparent surfaces.
- Press the base plate (5) firmly onto the adhesive points (6).
- Push the battery into the wireless module (2) using your finger.
- Push the cover frame (4) onto the base plate (5).
- Fit the holding frame (3) onto the cover frame (4). Note: A higher contact pressure is required for initial mounting.
- Press the wireless module (2) into the holding frame (3).
- Fit the rockers (1).

3.2. Screw mounting



- Mount the base plate (5) on a device box or directly on the wall.
- Push the battery into the wireless module (2) using your finger.
- Place the cover frame (4) on the base plate.
- Fit the holding frame (3) onto the cover frame (4). Note: A higher contact pressure is required for initial mounting.
- Press the wireless module (2) into the holding frame (3).
- Fit the rockers (1).

4. Start-up

Note

Project planning and start-up with ETS version 5.7. or higher.

The KNX programming mode can be activated or deactivated using the recessed programming button or by pressing the upper left (A0) and upper right (B0) buttons simultaneously for 6 seconds.
When the programming mode is active, the programming LED lights up red.
The option to operate the programming mode using the front panel (upper left (A0) and upper right (B0) buttons) can be activated or deactivated via the ETS in the general parameters.

4.1. Programming LED

States of the programming LED:

LED behaviour	Meaning
LED lights up red	The programming mode is active.
LED flashes red (fast)	The programming mode is not active. The device is not loaded correctly, e.g. after a download has been interrupted.
LED flashes red (slow)	The device is awake and can receive KNX telegrams, e.g. via USB connection.
LED flashes red once	After a button press (KNX mode).
LED flashes red once (every 5 sec.)	Battery voltage is less than 2.6 V.
LED is off	The device is in sleep mode.

The RF wall transmitter is unidirectional in normal operation, and bidirectional only in programming mode. Therefore, the programming mode must be activated (programming LED lights up red) before the ETS configuration is loaded.

4.2. Resetting to factory settings

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

- Remove the battery from the device.
- Press the KNX programming button to discharge all capacitors.
- Press and hold the KNX programming button.
- Insert the battery into the device.
- Hold the KNX programming button for at least a further 6 seconds.
- When all LEDs briefly flash, this indicates that factory settings have been successfully reset.

In factory settings, the device has the physical address 15.15.255 and group addresses are no longer connected. In addition, KNX Data Security is active and the device certificate must be used for secure start-up.

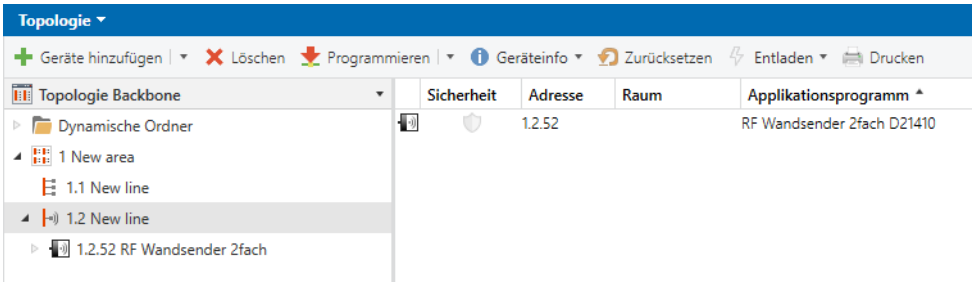
5. Interface settings in the ETS

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

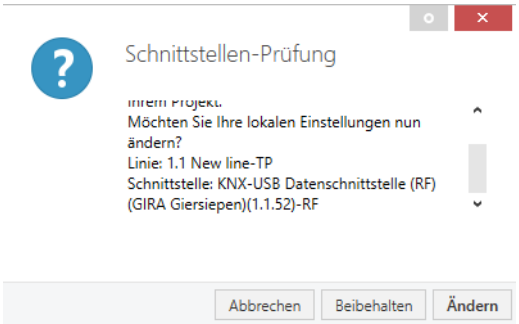
The physical KNX address that is currently in use can be changed under the section “Physical address”. The “Address free?” button can be pressed to check whether the desired physical address is already in use in your KNX installation.
The “Domain address” can also be changed in the next section.

5.1. Local programming

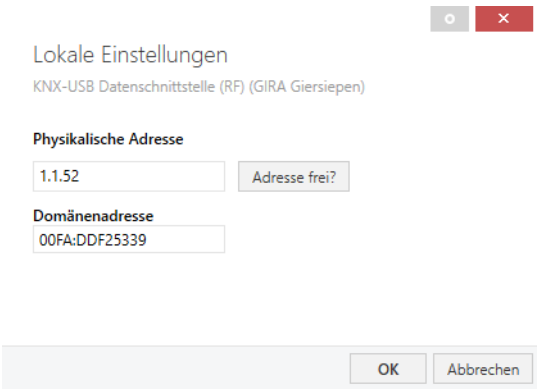
With the RF wall transmitter, it is possible to program the device via the integrated USB interface (ETS version 5.7.5 or later). This saves battery life and significantly reduces the programming time. In order to be able to charge the RF wall transmitter via the integrated USB interface, this must be set as the standard interface in the ETS. See the section “Interface settings in the ETS”.



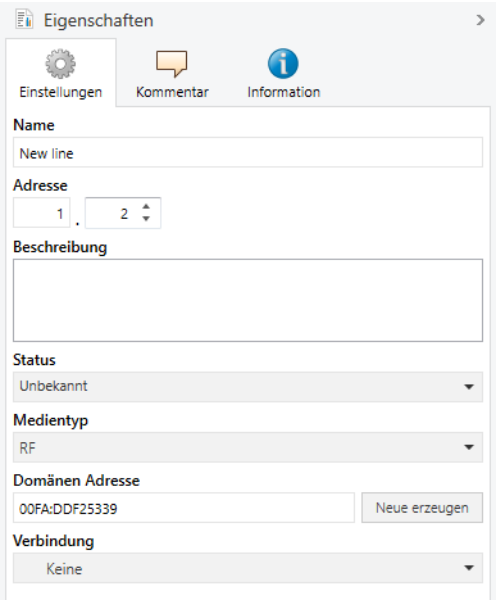
If you then select the RF wall transmitter in the project and press “Program”, a dialogue will appear where you can change the physical address and the domain address of the interface.



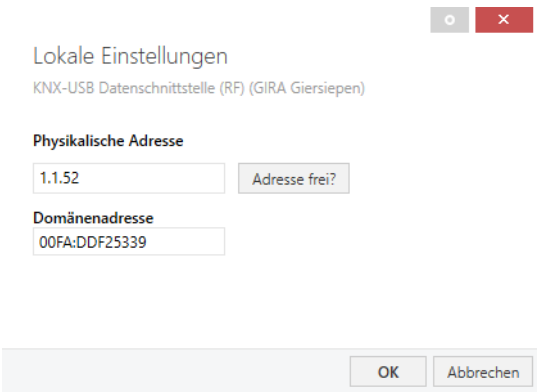
The addresses can be entered in the following dialogue.



The “Physical address” of the interface should correspond to the device address in the project, e.g. 1.1.52.
The “Domain address” to be set can be taken from the properties dialogue for the corresponding data line.



For this example, the settings should look as follows.



Once confirmed, in the next step the ETS offers the option of programming the device via the local USB interface.

Note

If the local interface is activated in the group monitor of the ETS, then local programming will not be possible.

6. Application program

ETS search paths: Wireless/Pushbutton sensors/RF wall transmitter, 2-gang
Configuration: S mode standard

Available application program

Name: RF wall transmitter, 2-gang, D21410
Version: ETS 5.7 or later
Brief description: Multifunctional RF wall transmitter application for switching, dimming, shading, value transmitting, colour control, and scenes. KNX Data Secure compatible.

6.1. Range of functions

- The wall transmitter and base plate can be mounted on walls with screws or glued to smooth or transparent surfaces.
- Project planning, commissioning and parameter setting are performed using ETS (version 5.7 or later).
- Integrated Micro B USB interface for local programming and can be used as a KNX RF interface.
- Battery-operated device.
- Device supports KNX Secure.
- “Switching” function.
- “Dimming” function.
- “Blind” function.
- “Value transmitter”, “Scene auxiliary unit” and “Colour control” functions.
- With scene auxiliary unit: Memory function possible.

7. General information

The “Information” parameter page has information on ETS compatibility and KNX Secure. Parameterisation does not take place on this parameter page.

The following subchapters describe the device functions. Each subchapter is made up of the following sections:

- Functional description
- Parameter table
- Object list

Functional description

The functional description explains the function and gives useful tips for project planning and for using the function. Cross references make it easier to search for additional information.

Parameter table

The parameter table lists all parameters associated with the function. Each parameter is documented in a table as follows.

Name of the parameter	Values of the parameter
Description of the parameter	

Object list

The object list lists and describes all communication objects associated with the function. Each communication object is documented in a table.

Object no.	This column contains the object number of the communication object.
Function	This column contains the function of the communication object.
Name	This column contains the name of the communication object.
Type	This column contains the length of the communication object.
DPT	This column contains the assignment of a data point type to a communication object. Data point types are standardised to ensure the interaction of KNX devices.
Flag	This column contains the assignment of the communication flags according to the KNX specification.
C flag	activates/deactivates the communication of the communication object
R flag	allows the value of the communication object to be read as a result of an external trigger
W flag	allows the value to be written to the communication object as a result of an external trigger
T flag	enables a value to be transmitted
U flag	allows an object value to be updated in response to feedback
I flag	forces an update of the value from the communication object when the device is switched on (read at init)

8. General

On the “General” parameter page, general settings of the RF wall transmitter can be parameterised and general functions enabled.

8.1. Parameter table

The following parameters apply to the entire RF wall transmitter.

Device name	**RF wall transmitter, 2-gang** max. 30 characters
Any name can be assigned to the RF wall transmitter, 2-gang. The device name should be meaningful, e.g. “Ground-floor living room”. This ensures clarity in the ETS project.	

Prog. mode (press A0+B0 for 6 sec.)	Deactivated **Activated**
In addition to the KNX programming button, the device also allows the programming mode to be activated without the rocker needing to be removed. The programming mode can be activated and deactivated by simultaneously pressing the A0 (upper left) and B0 (upper right) buttons for 6 seconds. This function can be activated and deactivated via the “prog. mode (press A0+B0 for 6 sec.)” parameter. The recessed KNX programming button is always activated and is not affected by this parameter. The prog. mode (A0+B0) should be deactivated if button functions are configured to be pressed for more than 6 seconds (e.g. blind movement via dead man mode).	

Battery status cycle time	**Deactivated** 1 h. 6 h. 12 h. 24 h.
Transmits the battery status good (1) or low (0) to the KNX bus cyclically. The cycle time can be selected to be between 1 and 24 hours.	

Long button press from	0.6 sec. 0.8 sec. 1.0 sec. **1.2 sec.** 1.4 sec. 1.6 sec. 1.8 sec. 2.0 sec.
The time frame for detecting a long actuation can be set here; this time applies to all buttons.	

8.2. Object list

The following communication object is available depending on the battery status set.

Object no.	Function	Name	Type	DPT	Flag
1	Battery status	Battery status – good	1 bit	1.001	C, T
Transmits the battery status good (1) or low (0) to the KNX bus cyclically. The cycle time can be selected to be between 1 and 24 hours.					

9. Button 1-4 (e.g. upper left button (A0))

The function to be used for each button can be set independently. The ETS displays different communication objects and parameter pages depending on this setting. The first button (upper left button (A0)) is described below. The remaining three buttons function in the same way.

Name	... (Empty, no name assigned) 30 characters
Any name can be assigned to the button. However, this name should be unique and meaningful, as this makes it easier to work with the button in question later on, since the name assigned here appears again in the names of the parameter pages and in the group objects.	

Button function	**Deactivated** Switching Dimming Blind/shutter/awning/roof window Value transmitter Colour Scene auxiliary unit Individual functions
Each button can perform one of these functions. On the basis of this selection, the ETS compiles the parameters and objects that match the function.	

9.1. Switching

If the switching button function is selected, up to two binary switching telegrams can be transmitted when the button is pressed, object a or object b.

9.1.1. Parameter table

Operating mode	**Press/release** Short/long button press
The operating mode parameter is used to specify whether telegrams are transmitted when the input state changes (e.g. key switch) or with a short/long actuation (e.g. button for switching/dimming).	

Object a action when pressed Object a action with a short button press	**No reaction** Switch on Switch off Toggle
For object a, it is possible to set which telegram is transmitted when the button is pressed or with a short button press.	

Object a action when released Object a action with a long button press	**No reaction** Switch on Switch off Toggle
For object a, it is possible to set which telegram is transmitted when the button is released or with a long button press.	

Object b	**Deactivated** Activated
Object b can be switched on and configured here.	

Object b action when pressed Object b action with a short button press	**No reaction** Switch on Switch off Toggle
For object b, it is possible to set which telegram is transmitted when the button is pressed or with a short button press. Object b is only visible when activated by parameter.	

Object b action when released Object b action with a long button press	**No reaction** Switch on Switch off Toggle
For object b, it is possible to set which telegram is transmitted when the button is released or with a long button press. Object b is only visible when activated by parameter.	

Cyclical transmission	**Deactivated** Activated
Cyclical transmission can be configured independently for state 0 and 1.	

Transmission interval for state 0	1 h. 6 h. 12 h. 24 h.
The transmission frequency for each state is set here.	

Transmission interval for state 1	1 h. 6 h. 12 h. 24 h.
The transmission frequency for each state is set here.	

9.1.2. Object list

Object no.	Function	Name	Type	DPT	Flag
11	Switching	Upper left button (A0): Object a – Switching	1 bit	1.001	C, T
1 bit object for transmitting switching telegrams (ON, OFF, TOGGLE).					

Object no.	Function	Name	Type	DPT	Flag
12	Switching	Upper left button (A0): Object b – Switching	1 bit	1.001	C, T
1 bit object for transmitting switching telegrams (ON, OFF, TOGGLE). Object b is only visible when activated by parameter.					

9.2. Dimming

The device transmits switch-on, switch-off or alternating switch-on and switch-off telegrams ("TOGGLE") each time the button is pressed. With a long button press, "brighter", "darker" or alternating "brighter" and "darker" telegrams are transmitted. This behaviour depends on the parameterisation of the dimming function.

9.2.1. Parameter table

Dimming function	**Brighter (ON)** Darker (OFF) Brighter/darker (TOGGLE)
The dimming function parameter is used to specify whether only one switching/dimming direction or one-button operation is to be used. With a short button press, a switching telegram is transmitted via object 11. With a long button press, a relative dimming is transmitted over the entire dimming range on object 12. When the button is released after a long button press, a dimming stop telegram is transmitted via object 12.	

Brighter/darker (TOGGLE)	**Dim darker (default)** Dim brighter
This parameter is only visible with "Brighter/darker (TOGGLE)" and determines the dimming direction of the next dimming command following an ON telegram.	

9.2.2. Object list

Object no.	Function	Name	Type	DPT	Flag
11	Switching	Upper left button (A0): Dimming on/off – Switching	1 bit	1.001	C, T
1 bit object for transmitting switching telegrams (ON, OFF).					

Object no.	Function	Name	Type	DPT	Flag
12	Dimming	Upper left button (A0): Relative dimming – Brighter/darker	4 bit	3.007	C, T
4 bit object for transmitting relative dimming telegrams to adjust the brightness.					

9.3. Blind/shutter/awning/roof window

Various different operating concepts are supported for controlling blind, shutter, awning or similar drives, in which the telegrams are transmitted with different time sequences. This allows a wide variety of different drive concepts to be implemented using the RF wall transmitter.

9.3.1. Parameter table

Movement direction	**UP** DOWN UP/DOWN (TOGGLE)
The movement direction parameter is used to specify whether only one movement direction or one-button operation is to be used.	

Operating mode	**KNX standard: Long/short** KNX standard with reversal time KNX inverted: Short/long Short/short Short/short plus long with reversal time Hold (dead man mode) Hold with reversal time Hold, delayed with reversal time

The operating mode parameter determines the transmission of telegrams in the event of corresponding actuation.

<u>KNX standard: Long/short</u>

Long actuation:	Movement command via object 11
Short actuation:	Stop/step command via object 12
Very long actuation:	Additional function

<u>KNX standard with reversal time</u>

Long actuation:	Movement command via object 11
Release after long actuation within reversal time:	Stop/step command via object 12
Release after long actuation outside reversal time:	No reaction
Short actuation:	Stop/step command via object 12
Very long actuation:	Additional function

<u>KNX inverted: Short/long</u>

Short actuation:	Movement command via object 11
Long actuation:	Stop/step command via object 12
Actuation during movement:	Stop/step command via object 12
Very long actuation:	Additional function

<u>Short/short</u>

Short actuation:	Movement command via object 11
Actuation during movement:	Stop/step command via object 12
Long actuation:	Additional function

Short/short plus long with reversal time	
Short actuation:	Movement command via object 11
Long actuation:	Movement command via object 11
Release after long actuation within reversal time:	Stop/step command via object 12
Release after long actuation outside reversal time:	No reaction
Actuation during movement:	Stop/step command via object 12
Very long actuation:	Additional function
Hold (dead man mode)	
During actuation:	Movement command via object 11
When released:	Stop/step command via object 12
Hold with reversal time	
During actuation:	Movement command via object 11
When released within reversal time:	Stop/step command via object 12
When released outside reversal time:	No reaction
Hold, delayed with reversal time	
Long actuation:	Movement command via object 11
Release after long actuation within reversal time:	Stop/step command via object 12
Release after long actuation outside reversal time:	No reaction
Short actuation:	Additional function
Actuation during movement:	Stop/step command via object 12

Running time (time window for stop) [sec.]	120
Displayed in operating modes with “KNX inverted: Short/long”, “Short/short”, “Short/short plus long with reversal time” and “Hold, delayed with reversal time”. The time window for actuation, during which a stop/step command is transmitted, is set here.	

Reversal time [sec.]	5
Only displayed in operating modes with reversal time. Operating modes: “KNX standard with reversal time”, “Short/short plus long with reversal time”, “Hold with reversal time” and “Hold, delayed with reversal time”. The blind can generally be stopped by releasing within the reversal time, whereas it will continue to move after the reversal time.	

Additional function	**No reaction** Switch on Switch off Toggle Dim brighter Dim darker Move up Move down Step up/stop Step down/stop Transmit value Retrieve scene Save scene

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

Switch on, switch off, toggle
Telegram transmitted with a long button press.

Dim brighter, dim darker
A dimming telegram is transmitted after a long button press.

Move up, move down
A movement command is transmitted after a long button press.

Step up/stop, step down/stop
After a long button press, step telegrams are transmitted to adjust a blind.

Transmit value
This function can be used to transmit a byte value; a parameter for selecting the value is displayed.

Retrieve scene
This function can be used to transmit a scene; a parameter for selecting the scene is displayed.

Save scene
This parameter is only visible when: “Operating mode = Short/short” and “Operating mode = Hold, delayed with reversal time”. This function can be used to save a scene; a parameter for selecting the scene is displayed.

Value	0...100%
This parameter is only visible when: “Additional function = Transmit value”.	

Scene	1...64
This parameter is only visible when: “Additional function = Retrieve scene” and “Additional function = Save scene”.	

9.3.2. Object list

Object no.	Function	Name	Type	DPT	Flag
11	Long-term operation	Upper left button (A0): Movement command start – Up/down	1 bit	1.008	C, T
1 bit object for transmitting telegrams to move a blind or shutter drive up or down.					

Object no.	Function	Name	Type	DPT	Flag
12	Short-term operation	Upper left button (A0): Movement command stop – Step/stop	1 bit	1.007	C, T
1 bit object for transmitting telegrams to stop a blind or shutter drive or to temporarily adjust the blind slats.					

Object no.	Function	Name	Type	DPT	Flag
13	Switching	Upper left button (A0): Additional function – Switching	1 bit	1.001	C, T
1 bit object for transmitting switching telegrams (ON, OFF, TOGGLE). This object is only visible when: “Additional function = Switch on, switch off or toggle”.					

Object no.	Function	Name	Type	DPT	Flag
13	Dimming	Upper left button (A0): Additional function – Relative dimming	4 bit	3.007	C, T
4 bit object for transmitting relative dimming telegrams to adjust the brightness. This object is only visible when: “Additional function = Dim brighter or dim darker”.					

Object no.	Function	Name	Type	DPT	Flag
13	Long-term operation	Upper left button (A0): Additional function – Up/down	1 bit	1.008	C, T
1 bit object for transmitting telegrams to move a blind or shutter drive up or down. This object is only visible when: “Additional function = Move up or move down”.					

Object no.	Function	Name	Type	DPT	Flag
13	Short-term operation	Upper left button (A0): Additional function – Step/stop	1 bit	1.007	C, T
1 bit object for transmitting telegrams to stop a blind or shutter drive or to temporarily adjust the blind slats. This object is only visible when: “Additional function = Step up/stop or step down/stop”.					

Object no.	Function	Name	Type	DPT	Flag
13	Value transmitter 0...100%	Upper left button (A0): Additional function – Transmit value	1 byte	5.001	C, T
1 byte object for transmitting values from 0 to 100%. This object is only visible when: “Additional function = Transmit value”.					

Object no.	Function	Name	Type	DPT	Flag
13	Retrieve scene	Upper left button (A0): Additional function – Retrieve scene	1 byte	18.001	C, T
1 byte object for retrieving a maximum of 64 scenes on a scene touch sensor. This object is only visible when: “Additional function = Retrieve scene”.					

Object no.	Function	Name	Type	DPT	Flag
13	Save scene	Upper left button (A0): Additional function – Save scene	1 byte	18.001	C, T
1 byte object for saving one of a maximum of 64 scenes on a scene touch sensor. This object is only visible when: “Additional function = Save scene”.					

9.4. Value transmitter

With the “Value transmitter” function, the device transmits parameterised values to the KNX bus when the button is pressed.

9.4.1. Parameter table

Transmit value	1 byte – Integer value/hex/percent 2 bytes – Integer value 2 bytes – Floating decimal value 3 bytes – RGB colour value 14 bytes – ASCII character string Curtain position
For the button, the ETS displays an object for transmitting the parameterised value. When the button is pressed, the parameterised value is transmitted to the KNX bus.	
<u>Value ranges:</u>	
1 byte – Integer value/hex/percent:	0/0x00/0.0% to 255/0xFF/100.0%
2 bytes – Integer value:	0 to 65535
2 bytes – Floating decimal value:	-670760 to 670760
3 bytes – RGB colour value:	#000000 to +FFFFFF
14 bytes – ASCII character string:	max. 14 ASCII characters
Curtain position:	Curtain height and slat position 0 to 100%

9.4.2. Object table

Object no.	Function	Name	Type	DPT	Flag
11	Value transmitter 0/0x00/0.0% to 255/0xFF/100.0%	Upper left button (A0): Transmit integer value (1 byte) – Set value	1 byte	5.001	C, T
1 byte object for transmitting values. This object is only visible when “Transmit value = 1 byte – Integer value/hex/percent”.					

Object no.	Function	Name	Type	DPT	Flag
11	Value transmitter 0...65535	Upper left button (A0): Transmit integer value (2 bytes) – Set value	2 byte	7.001	C, T
2 byte object for transmitting values from 0 to 65535. This object is only visible when “Transmit value = 2 bytes – Integer value”.					

Object no.	Function	Name	Type	DPT	Flag
11	Floating decimal value -670760...670760	Upper left button (A0): Transmit decimal value (2 bytes) – Set value	2 byte	9.001	C, T
2 byte object for transmitting values from -670760 to 670760. This object is only visible when “Transmit value = 2 bytes – Floating decimal value”.					

Object no.	Function	Name	Type	DPT	Flag
11	RGB colour value transmitter	Upper left button (A0): Transmit RGB colour value (3 bytes) – Set value	3 byte	232.600	C, T
3 byte object for transmitting Red, Green and Blue colour information in a communication object. This object is only visible when “Transmit value = 3 bytes – RGB colour value”.					

Object no.	Function	Name	Type	DPT	Flag
11	ASCII character string	Upper left button (A0): Transmit ASCII character string (14 bytes) – Set value	14 byte	16.000	C, T
Transmit a 14-character ASCII character string to the KNX bus. This object is only visible when “Transmit value = 14 bytes – ASCII character string”.					

Object no.	Function	Name	Type	DPT	Flag
11	Curtain position 0...100%	Upper left button (A0): Transmit curtain length – Set position	1 byte	5.001	C, T
1 byte object for transmitting values from 0 to 100%. The curtain height (object 11) is transmitted first when the button is pressed and the slat position (object 12) is transmitted when the button is released, if the value in question is used. This object is only visible when “Transmit value = Curtain position”.					

Object no.	Function	Name	Type	DPT	Flag
12	Slat position 0...100%	Upper left button (A0): Transmit slat position – Set position	1 byte	5.001	C, T
1 byte object for transmitting values from 0 to 100%. The curtain height (object 11) is transmitted first when the button is pressed and the slat position (object 12) is transmitted when the button is released, if the value in question is used. This object is only visible when “Transmit value = Curtain position”.					

9.5. Colour

The “Colour” function can be set for each button. Colour control takes place after parameterisation either as single-colour control in the RGB (3 data points) or RGBW (4 data points) colour spectrum or as RGB colour control (1 data point). Up to eight colour values can be assigned to the button, which transmits the next colour value to the KNX bus with each short button press.

9.5.1. Parameter table

Data point type	**RGB single-colour control (3 x DPT 5.010)** RGBW single-colour control (4 x DPT 5.010) RGB colour control (DPT 232.600)
Different objects and parameters are available for colour control depending on this parameter.	

Colour value 1 to 8	**Deactivated** Activated
Up to eight different colour values can be selected. If only one colour value is activated, this is transmitted with each short button press. If multiple colour values are used, each short button press will cycle through the activated positions. The behaviour for selecting and transmitting the colour values can be determined via the “Reset colour value” parameter.	

Reset colour value	Never After execution 5 sec., 10 sec., 20 sec., **30 sec.**, 1 min., 2 min., 5 min., 10 min.
Never Starting with the first colour value, the next colour value in the list is transmitted with each short button press. Once the last colour value has been transmitted, the list starts again from the beginning. After execution This selection enables the “execution delay” parameter. Starting with the first colour value, each short button press within the execution delay advances the colour value one position at a time. At the end of the execution delay, the current colour value is transmitted. 5 sec. to 10 min. The parameterised delay time begins each time the button is pressed. During the delay time, starting with the first colour position, the next position in the list is transmitted with each short button press. Once the last colour position has been transmitted, the list starts again from the beginning. Once the delay time has elapsed, the list starts again at the first colour position with the next short button press.	

Execution delay	0.5 sec., **1 sec.**, 2 sec., 3 sec.
Once the execution delay has elapsed, the selected colour value is transmitted. This parameter is only visible when: “Reset colour value = After execution”.	

Behaviour with a long button press	**No reaction** Reset position Switch off colour Transmit colour value Additional function
Reset position This function is used to override the behaviour set in the “reset colour value” parameter. Switch off colour The colour value 0/0/0 for black is transmitted. Transmit colour The selected colour value is transmitted. Additional function The “additional function” parameter is activated.	

Behaviour with a very long button press	**No reaction** Reset position Switch off colour Transmit colour value Additional function
The “very long button press from [sec.]” parameter is activated. Reset position This function is used to override the behaviour set in the “reset colour value” parameter. Switch off colour The colour value 0/0/0 for black is transmitted. Transmit colour The selected colour value is transmitted. Additional function The “additional function” parameter is activated.	

Very long button press from [sec.]	2 ... **5 sec.** ... 20 sec.
This parameter is only visible when using very long actuation; the time frame for detecting a very long button press can be configured here.	

Additional function	**Switch on** Switch off Toggle Dim brighter Dim darker Dim brighter/darker Dim darker/brighter Move up Move down Step up/stop Step down/stop Transmit value Retrieve scene Save scene

The following functions can be triggered after a long or very long button press.

Switch on, switch off, toggle
Telegram transmitted with a long button press.

Dim brighter, dim darker
A dimming telegram is transmitted after a long button press.

Dim brighter/darker, dim darker/brighter
A dimming telegram is transmitted after a long button press. After reaching the maximum or minimum brightness, the dimming direction is reversed.

Move up, move down
A movement command is transmitted after a long button press.

Step up/stop, step down/stop
After a long button press, step telegrams are transmitted to adjust a blind.

Transmit value
This function can be used to transmit a byte value; a parameter for selecting the value is displayed.

Retrieve scene
This function can be used to transmit a scene; a parameter for selecting the scene is displayed.

Save scene
This function can be used to save a scene; a parameter for selecting the scene is displayed.

Value	0...100%
This parameter is only visible when: “Additional function = Transmit value”.	

Scene	1...64
This parameter is only visible when: “Additional function = Retrieve scene” and “Additional function = Save scene”.	

9.5.2. Object list

Object no.	Function	Name	Type	DPT	Flag
11	Red colour value	Upper left button (A0): R value – Set colour value	1 byte	5.010	C, T
12	Green colour value	Upper left button (A0): G value – Set colour value	1 byte	5.010	C, T
13	Blue colour value	Upper left button (A0): B value – Set colour value	1 byte	5.010	C, T
Each 1 byte object for transmitting the Red, Green and Blue colour value. This object is only visible when: “Data point type = RGB single-colour control (3 x DPT 5.010)”.					

Object no.	Function	Name	Type	DPT	Flag
11	Red colour value	Upper left button (A0): R value – Set colour value	1 byte	5.010	C, T
12	Green colour value	Upper left button (A0): G value – Set colour value	1 byte	5.010	C, T
13	Blue colour value	Upper left button (A0): B value – Set colour value	1 byte	5.010	C, T
14	White colour value	Upper left button (A0): W value – Set colour value	1 byte	5.010	C, T
Each 1 byte object for transmitting the Red, Green, Blue and White colour value. This object is only visible when: “Data point type = RGBW single-colour control (4 x DPT 5.010)”.					

Object no.	Function	Name	Type	DPT	Flag
11	RGB colour value	Upper left button (A0): RGB value (3 bytes) – Set colour value	3 byte	232.600	C, T
3 byte object for transmitting the RGB colour values. This object is only visible when: “Data point type = RGB colour control (DPT 232.600)”.					

Object no.	Function	Name	Type	DPT	Flag
15	Switching	Upper left button (A0): Additional function – Switching	1 bit	1.001	C, T
1 bit object for transmitting switching telegrams (ON, OFF, TOGGLE). This object is only visible when: “Additional function = Switch on, switch off or toggle”.					

Object no.	Function	Name	Type	DPT	Flag
15	Dimming	Upper left button (A0): Additional function – Relative dimming	4 bit	3.007	C, T
4 bit object for transmitting relative dimming telegrams to adjust the brightness. This object is only visible when: “Additional function = Dim brighter, dim darker, dim brighter/darker and dim darker/brighter”					

Object no.	Function	Name	Type	DPT	Flag
15	Long-term operation	Upper left button (A0): Additional function – Up/down	1 bit	1.008	C, T
1 bit object for transmitting telegrams to move a blind or shutter drive up or down. This object is only visible when: “Additional function = Move up or move down”.					

Object no.	Function	Name	Type	DPT	Flag
15	Short-term operation	Upper left button (A0): Additional function – Step/stop	1 bit	1.007	C, T
1 bit object for transmitting telegrams to stop a blind or shutter drive or to temporarily adjust the blind slats. This object is only visible when: “Additional function = Step up/stop or step down/stop”.					

Object no.	Function	Name	Type	DPT	Flag
15	Value transmitter 0...100%	Upper left button (A0): Additional function – Transmit value	1 byte	5.001	C, T
1 byte object for transmitting values from 0 to 100%. This object is only visible when: “Additional function = Transmit value”.					

Object no.	Function	Name	Type	DPT	Flag
15	Retrieve scene	Upper left button (A0): Additional function – Retrieve scene	1 byte	18.001	C, T
1 byte object for retrieving a maximum of 64 scenes on a scene touch sensor. This object is only visible when: “Additional function = Retrieve scene”.					

Object no.	Function	Name	Type	DPT	Flag
15	Save scene	Upper left button (A0): Additional function – Save scene	1 byte	18.001	C, T
1 byte object for saving one of a maximum of 64 scenes on a scene touch sensor. This object is only visible when: “Additional function = Save scene”.					

9.6. Scene auxiliary unit

In the scene auxiliary unit function, the RF wall transmitter transmits a preset scene number (1...64) to the bus via a separate communication object when the button is pressed. This makes it possible to retrieve scenes that are saved on other devices or even save them when using the save function. Up to eight scene numbers can be assigned to the button, which transmits the next scene number to the KNX bus with each short button press.

9.6.1. Parameter table

Scene position 1 to 8	**Deactivated** Scene 1 to scene 64
Up to eight different scene numbers can be selected. If only one scene position is activated, this is transmitted with each short button press. If multiple scene positions are used, each short button press will cycle through the activated positions. The behaviour for selecting and transmitting the scene position can be determined via the “reset scene position” parameter.	

Reset colour value	Never After execution 5 sec., 10 sec., 20 sec., **30 sec.**, 1 min., 2 min., 5 min., 10 min.
Never Starting with the first scene position, the next scene position in the list is transmitted with each short button press. Once the last scene position has been transmitted, the list starts again from the beginning. After execution This selection enables the “execution delay” parameter. Starting with the first scene position, each short button press within the execution delay advances the scene position one position at a time. At the end of the execution delay, the current scene position is transmitted. 5 sec. to 10 min. The parameterised delay time begins each time the button is pressed. During the delay time, starting with the first scene position, the next scene position in the list is transmitted with each short button press. Once the last scene position has been transmitted, the list starts again from the beginning. Once the delay time has elapsed, the list starts again at the first colour position with the next short button press.	

Execution delay	0.5 sec., **1 sec.**, 2 sec., 3 sec.
Once the execution delay has elapsed, the selected scene position is transmitted. This parameter is only visible when: “Reset scene position = After execution”.	

Behaviour with a long button press	**No reaction** Reset position Retrieve scene Save last scene Additional function
Reset position This function is used to override the behaviour set in the “reset scene position” parameter. Retrieve scene The scene number set in the “scene” parameter is transmitted. Save last scene A “save scene” telegram for the last scene transmitted is triggered. Additional function The “additional function” parameter is activated.	

Behaviour with a very long button press	**No reaction** Reset position Retrieve scene Save last scene Additional function
The “very long button press from [sec.]” parameter is activated. Reset position This function is used to override the behaviour set in the “reset scene position” parameter. Retrieve scene The scene number set in the “scene” parameter is transmitted. Save last scene A “save scene” telegram for the last scene transmitted is triggered. Additional function The “additional function” parameter is activated.	

Very long button press from [sec.]	2 ... **5 sec.** ... 20 sec.
This parameter is only visible when using very long actuation; the time frame for detecting a very long button press can be configured here.	

Additional function	**Switch on** Switch off Toggle Dim brighter Dim darker Dim brighter/darker Dim darker/brighter Move up Move down Step up/stop Step down/stop Transmit value

The following functions can be triggered after a long or very long button press.

Switch on, switch off, toggle
Telegram transmitted with a long button press.

Dim brighter, dim darker
A dimming telegram is transmitted after a long button press.

Dim brighter/darker, dim darker/brighter
A dimming telegram is transmitted after a long button press. After reaching the maximum or minimum brightness, the dimming direction is reversed.

Move up, move down
A movement command is transmitted after a long button press.

Step up/stop, step down/stop
After a long button press, step telegrams are transmitted to adjust a blind.

Transmit value
This function can be used to transmit a byte value; a parameter for selecting the value is displayed.

Value	0...100%

This parameter is only visible when: “Additional function = Transmit value”.

9.6.2. Object list

Object no.	Function	Name	Type	DPT	Flag
11	Scene auxiliary unit	Upper left button (A0): Scene – Retrieve/save	1 byte	18.001	C, T
3 byte object for transmitting the RGB colour values. This object is only visible when: “Data point type = RGB colour control (DPT 232.600)”.					

Object no.	Function	Name	Type	DPT	Flag
12	Switching	Upper left button (A0): Additional function – Switching	1 bit	1.001	C, T
1 bit object for transmitting switching telegrams (ON, OFF, TOGGLE). This object is only visible when: “Additional function = Switch on, switch off or toggle”.					

Object no.	Function	Name	Type	DPT	Flag
12	Dimming	Upper left button (A0): Additional function – Relative dimming	4 bit	3.007	C, T
4 bit object for transmitting relative dimming telegrams to adjust the brightness. This object is only visible when: “Additional function = Dim brighter, dim darker, dim brighter/darker and dim darker/brighter”.					

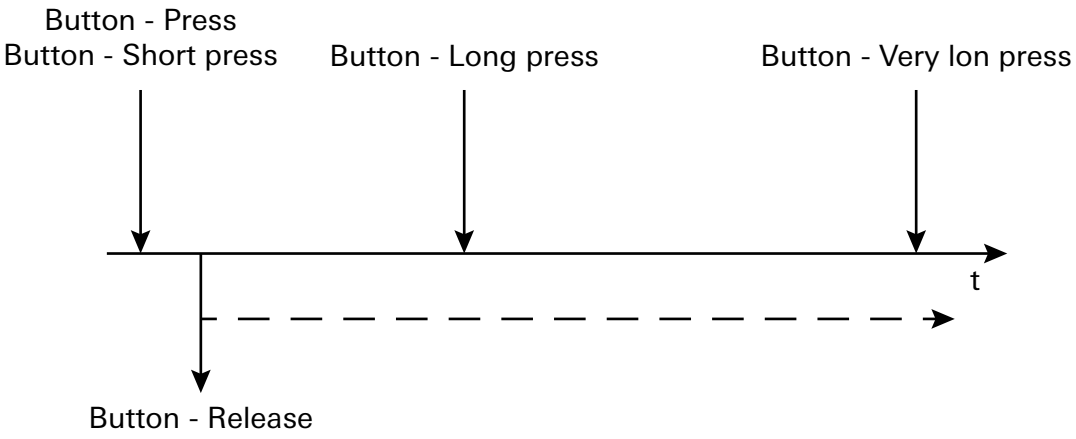
Object no.	Function	Name	Type	DPT	Flag
12	Long-term operation	Upper left button (A0): Additional function – Up/down	1 bit	1.008	C, T
1 bit object for transmitting telegrams to move a blind or shutter drive up or down. This object is only visible when: “Additional function = Move up or move down”.					

Object no.	Function	Name	Type	DPT	Flag
12	Short-term operation	Upper left button (A0): Additional function – Step/stop	1 bit	1.007	C, T
1 bit object for transmitting telegrams to stop a blind or shutter drive or to temporarily adjust the blind slats. This object is only visible when: “Additional function = Step up/stop or step down/stop”.					

Object no.	Function	Name	Type	DPT	Flag
12	Value transmitter 0...100%	Upper left button (A0): Additional function – Transmit value	1 byte	5.001	C, T
1 byte object for transmitting values from 0 to 100%. This object is only visible when: “Additional function = Transmit value”.					

9.7. Individual functions

With this button function, a separate object is available for each event on the button so that the function of the button can be set individually. A distinction is made between five different events: Button – Press, Button – Release, Button – Short press, Button – Long press, and Button – Very long press.



Time sequence of events when the button is pressed

9.7.1. Parameter table

Function	**Deactivated** Switch on Switch off Toggle Dim brighter (without stop) Dim darker (without stop) Stop dimming Move up Move down Step up/stop Step down/stop Transmit value Retrieve scene Save scene
The following functions can be triggered after the button is pressed. <u>Switch on, switch off, toggle</u> Telegram transmitted when the button is pressed. <u>Dim brighter (without stop), dim darker (without stop), stop dimming</u> A dimming telegram is transmitted after a long button press. <u>Move up, move down</u> A movement command is transmitted after a long button press. <u>Step up/stop, step down/stop</u> After a long button press, step telegrams are transmitted to adjust a blind.	

Transmit value
This function can be used to transmit a byte value; a parameter for selecting the value is displayed.

Retrieve scene
This function can be used to transmit a scene; a parameter for selecting the scene is displayed.

Save scene
This function can be used to save a scene; a parameter for selecting the scene is displayed.

Value	0...100%
This parameter is only visible when: “Function = Transmit value”.	

Scene	1...64
This parameter is only visible when: “Function = Retrieve scene” and “Function = Save scene”.	

Very long button press from [sec.]	2 ... **5 sec.** ... 20 sec.
This parameter is only visible when using very long actuation; the time frame for detecting a very long button press can be configured here.	

Trigger long (for a very long press)	**Activated** Deactivated
This parameter is only visible when using the long (Button – Long press) and very long (Button – Very long press) actuation at the same time. If this parameter is activated, both events will always be triggered after a very long actuation; if it is deactivated, the time frame for activation will be evaluated: If it is between the time frame for a long and very long actuation, only the function for a long actuation is triggered. If the time frame for a very long actuation is exceeded, only the function for very long actuation is triggered.	

9.7.2. Object list

Object no.	Function	Name	Type	DPT	Flag
11	Switching	Upper left button (A0): Press – Switching	1 bit	1.001	C, T
12	Switching	Upper left button (A0): Release – Switching	1 bit	1.001	C, T
13	Switching	Upper left button (A0): Short press – Switching	1 bit	1.001	C, T
14	Switching	Upper left button (A0): Long press – Switching	1 bit	1.001	C, T
15	Switching	Upper left button (A0): Very long press – Switching	1 bit	1.001	C, T
1 bit object for transmitting switching telegrams (ON, OFF, TOGGLE). This object is only visible when: “Function = Switch on, switch off or toggle”.					

Object no.	Function	Name	Type	DPT	Flag
11	Dimming	Upper left button (A0): Press – Relative dimming	4 bit	3.007	C, T
12	Dimming	Upper left button (A0): Release – Relative dimming	4 bit	3.007	C, T
13	Dimming	Upper left button (A0): Short press – Relative dimming	4 bit	3.007	C, T
14	Dimming	Upper left button (A0): Long press – Relative dimming	4 bit	3.007	C, T
15	Dimming	Upper left button (A0): Very long press – Relative dimming	4 bit	3.007	C, T
4 bit object for transmitting relative dimming telegrams to adjust the brightness. This object is only visible when: Function = Dim brighter (without stop), dim darker (without stop), stop dimming"					

Object no.	Function	Name	Type	DPT	Flag
11	Long-term operation	Upper left button (A0): Press – Up/down	1 bit	1.008	C, T
12	Long-term operation	Upper left button (A0): Release – Up/down	1 bit	1.008	C, T
13	Long-term operation	Upper left button (A0): Short press – Up/down	1 bit	1.008	C, T
14	Long-term operation	Upper left button (A0): Long press – Up/down	1 bit	1.008	C, T
15	Long-term operation	Upper left button (A0): Very long press – Up/down	1 bit	1.008	C, T
1 bit object for transmitting telegrams to move a blind or shutter drive up or down. This object is only visible when: "Function = Move up or move down".					

Object no.	Function	Name	Type	DPT	Flag
11	Short-term operation	Upper left button (A0): Press – Step/stop	1 bit	1.007	C, T
12	Short-term operation	Upper left button (A0): Release – Step/stop	1 bit	1.007	C, T
13	Short-term operation	Upper left button (A0): Short press – Step/stop	1 bit	1.007	C, T
14	Short-term operation	Upper left button (A0): Long press – Step/stop	1 bit	1.007	C, T
15	Short-term operation	Upper left button (A0): Very long press – Step/stop	1 bit	1.007	C, T
1 bit object for transmitting telegrams to stop a blind or shutter drive or to temporarily adjust the blind slats. This object is only visible when: "Function = Step up/stop or step down/stop".					

Object no.	Function	Name	Type	DPT	Flag
11	Value transmitter 0...100%	Upper left button (A0): Press – Transmit value	1 byte	5.001	C, T
12	Value transmitter 0...100%	Upper left button (A0): Release – Transmit value	1 byte	5.001	C, T
13	Value transmitter 0...100%	Upper left button (A0): Short press – Transmit value	1 byte	5.001	C, T
14	Value transmitter 0...100%	Upper left button (A0): Long press – Transmit value	1 byte	5.001	C, T
15	Value transmitter 0...100%	Upper left button (A0): Very long press – Transmit value	1 byte	5.001	C, T
1 byte object for transmitting values from 0 to 100%. This object is only visible when: “Function = Transmit value”.					

Object no.	Function	Name	Type	DPT	Flag
11	Retrieve scene	Upper left button (A0): Press – Retrieve scene	1 byte	18.001	C, T
12	Retrieve scene	Upper left button (A0): Release – Retrieve scene	1 byte	18.001	C, T
13	Retrieve scene	Upper left button (A0): Short press – Retrieve scene	1 byte	18.001	C, T
14	Retrieve scene	Upper left button (A0): Long press – Retrieve scene	1 byte	18.001	C, T
15	Retrieve scene	Upper left button (A0): Very long press – Retrieve scene	1 byte	18.001	C, T
1 byte object for retrieving a maximum of 64 scenes on a scene touch sensor. This object is only visible when: “Function = Retrieve scene”.					

Object no.	Function	Name	Type	DPT	Flag
11	Save scene	Upper left button (A0): Press – Save scene	1 byte	18.001	C, T
12	Save scene	Upper left button (A0): Release – Save scene	1 byte	18.001	C, T
13	Save scene	Upper left button (A0): Short press – Save scene	1 byte	18.001	C, T
14	Save scene	Upper left button (A0): Long press – Save scene	1 byte	18.001	C, T
15	Save scene	Upper left button (A0): Very long press – Save scene	1 byte	18.001	C, T
1 byte object for saving one of a maximum of 64 scenes on a scene touch sensor. This object is only visible when: “Function = Save scene”.					

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