25 C0 BTM Wall Switch 909301

Use of the application program

Product family: Push button
Product type: Push button, 1...4 fold
Manufacturer: Siemens

Name: DELTA i-system Wall switch, single UP 221/2
Order no.: 5WG1 221-2AB_2
Order no.: 5WG1 221-2DB_2

Name: DELTA i-system Wall switch, single UP 221/3, with status LED's
Order no.: 5WG1 221-2AB_3
Order no.: 5WG1 221-2DB_3

Name: DELTA i-system Wall switch, double UP 222/2
Order no.: 5WG1 222-2AB_2
Order no.: 5WG1 222-2DB_2

Name: DELTA i-system Wall switch, double UP 222/3, with status LED's
Order no.: 5WG1 222-2AB_3
Order no.: 5WG1 222-2DB_3

Name: DELTA i-system Wall switch, triple UP 223/2
Order no.: 5WG1 223-2AB_2
Order no.: 5WG1 223-2DB_2

Name: DELTA i-system Wall switch, triple UP 223/3, with status LED's
Order no.: 5WG1 223-2AB_3
Order no.: 5WG1 223-2DB_3

Name: DELTA i-system Wall switch, triple UP 223/4, with temperature sensor
Order no.: 5WG1 223-2AB_4

Name: DELTA i-system Wall switch, triple UP 223/5, with IR receiver-decoder
Order no.: 5WG1 223-2AB_5
Order no.: 5WG1 223-2DB_5

Name: DELTA profil Wall switch, single UP 241/2
Order no.: 5WG1 241-2AB_2

Name: DELTA profil Wall switch, single UP 241/3, with status LED's
Order no.: 5WG1 241-2AB_3

Name: DELTA profil Wall switch, double UP 243/2
Order no.: 5WG1 243-2AB_2

Name: DELTA profil Wall switch, double UP 243/3, with status LED's
Order no.: 5WG1 243-2AB_3

Name: DELTA profil Wall switch, quadruple UP 245/2
Order no.: 5WG1 245-2AB_2

Name: DELTA profil Wall switch, quadruple UP 245/3, with status LED's
Order no.: 5WG1 245-2AB_3

Name: DELTA profil Wall switch, quadruple UP 245/4, with temperature sensor
Order no.: 5WG1 245-2AB_4

Name: DELTA profil Wall switch, quadruple UP 245/5, with IR receiver-decoder
Order no.: 5WG1 245-2AB_5

Name: DELTA style Wall switch, single UP 285/2
Order no.: 5WG1 285-2AB_2
Order no.: 5WG1 285-2DB_2

Name: DELTA style Wall switch, single UP 285/3, with status LED's
Order no.: 5WG1 285-2AB_3
Order no.: 5WG1 285-2DB_3

Name: DELTA style Wall switch, double UP 286/2
Order no.: 5WG1 286-2AB_2
Order no.: 5WG1 286-2DB_2

Name: DELTA style Wall switch, double UP 286/3, with status LED's
Order no.: 5WG1 286-2AB_3
Order no.: 5WG1 286-2DB_3

Name: DELTA style Wall switch, quadruple UP 287/2
Order no.: 5WG1 287-2AB_2
Order no.: 5WG1 287-2DB_2

Name: DELTA style Wall switch, quadruple UP 287/3, with status LED's
Order no.: 5WG1 287-2AB_3
Order no.: 5WG1 287-2DB_3

Name: DELTA style Wall switch, quadruple UP 287/4, with temperature sensor
Order no.: 5WG1 287-2AB_4

GAMMA *instabus*

Application program description

February 2012

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Name: DELTA style Wall switch, quadruple
UP 287/5, with IR receiver-decoder
Order no.: 5WG1 287-2AB_5
Order no.: 5WG1 287-2DB_5

Functional description

The wall switches for the DELTA i-system (DELTA line, DELTA vita, DELTA miro) have one, two or three horizontally arranged pairs of buttons. A labelling field is placed in the middle between these buttons.

These types of wall switches are available:
- Wall switch single, double and triple, with one orientation LED, without status LED.
- Wall switch single, double and triple, with one orientation LED and with one status LED per button.
- Wall switch triple, with one orientation LED, with one status LED per button, scene controller, and room temperature sensor.
- Wall switch triple, with one orientation LED, with one status LED per button, scene controller, and IR receiver-decoder.

The wall switches in the designs DELTA profile and DELTA style have one, two or four vertically arranged pairs of buttons. A labeling field is placed in the middle between these buttons.

These types of wall switches are available:
- Wall switch single, double and quadruple, with one orientation LED, without status LED.
- Wall switch single, double and quadruple, with one orientation LED and with one status LED per button.
- Wall switch quadruple, with one orientation LED, with one status LED per button, scene controller, and room temperature sensor.
- Wall switch quadruple, with one status LED per button, scene controller, and IR receiver-decoder.

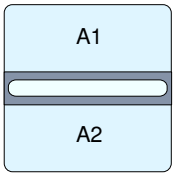
The wall switches UP 2xx (1-folf to 4-fold) are mounted together with the respective design frame DELTA line / vita / miro, DELTA profil or DELTA style onto a bus coupling unit (BTM) UP 117. At the same time the electrical connection between the wall switch and the bus coupling unit (BTM) is established via the Bus Transceiver Interface (BTI).
Bus coupling unit (BTM) and the fitting design frame are not included and therefore have to be ordered separately (see current catalog).
The wall switches in the designs DELTA profile and DELTA style have one, two or four vertically arranged pairs of buttons. The wall switches for the DELTA i-system (DELTA line, DELTA vita, DELTA miro) have one, two or three horizontally arranged pairs of buttons.
Push buttons aligned opposite to each other may be used as a pair of buttons (e.g. for defined switching/dimming, or control of shutters and blinds, i.e. with the upper button light is turned on and with the lower button light is turned off), or as single buttons for sending values, single-button switching/dimming or single button control of blinds. Buttons belonging together are interlocked via software avoiding false operation when pressed simultaneously.

The application program is universally applicable to the single, double and quadruple wall switches in the design DELTA profil / DELTA style and to the single, double and triple wall switches in the design DELTA i-system. The wall switch type (number of push button pairs) is selected via parameter. Only those communication objects and parameters are visible for which a pair of buttons (1, 2, 3 or 4 pairs) is present.

For a unique assignment of communication objects and parameters to the buttons respectively the pairs of buttons with vertically aligned pairs of buttons in the designs DELTA profil and style and with horizontally aligned pairs of buttons in the design DELTA i-system the buttons are labeled A1/A2, B1/B2, C1/C2 and D1/D2:

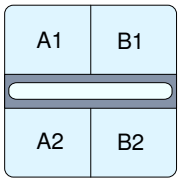
<u>Wall switch single DELTA profil / style</u>

button top	A1
button bottom	A2



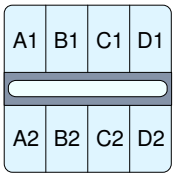
<u>Wall switch double DELTA profil / style</u>

button left top	A1
button left bottom	A2
button right top	B1
button right bottom	B2



<u>Wallswitch quadruple DELTA profil / style</u>

button left top	A1
button left bottom	A2
button middle-left top	B1
button middle left bottom	B2
button middle right top	C1
button middle right bottom	C2
button right top	D1
button right bottom	D2



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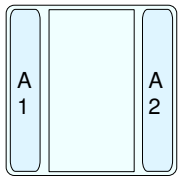
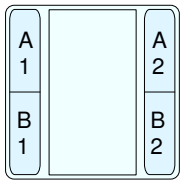
Wall switch single DELTA i-system

button left	A1
button right	A2



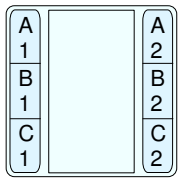
Wall switch double DELTA i-system

button top left	A1
button top right	A2
button bottom left	B1
button bottom right	B2



Wall switch triple DELTA i-system

button top left	A1
button top right	A2
button middle left	B1
button middle right	B2
button bottom left	C1
button bottom right	C2



Joint functions

Operation buttons

Depending on the device type the wall switch provides two to eight buttons (A1, A2, B1, B2, C1, C2, D1, D2). Push buttons aligned opposite to each other may be used as a pair of buttons (A, B, C, D) or as single push buttons.

Each individual switch button (A1, A2, B1, B2, C1, C2, D1, D2) may be assigned one of the following functions:

- Switching (on, off, toggle)
- door bell function
- single button dimming
- single button control of solar protection (blinds, roller shades)
- 1-bit scene control (scene 1 or 2: recall / save)
- 8-bit scene / effect control (recall, recall / save)
- Send value (8-bit value, percent)
- Send value (16-bit value, temperature value, brightness value)
- Forced control

Depending on the selected main function another function may be executed either additionally after a time delay (time delay configurable from 100ms to 6550s) or alternatively when the button is pressed for a longer period.

When switch buttons are configured as a pair then this button pair may be assigned one of the following functions:

- Dual-button dimming with stop telegram
- Dual-button control of solar protection (blinds, roller shades)
- Send variable percent value
- Send variable 8-bit value
- 1-bit scene control (scene 1 and 2: recall / save)
- 8-bit scene / effect control (recall / save)
- Forced control

Depending on the selected main function another function may be executed additionally after a time delay (time delay configurable from 100ms to 6550s).

These options are available as additional or alternative functions for single buttons or button pairs:

- Switching (on)
- Switching (off)
- Send percent value
- Send 8-bit value (0...255)
- Send temperature value
- Send brightness value
- Send 16-bit value (0...65535)
- 1-bit scene control (scene 1: recall / save)
- 1-bit scene control (scene 2: recall / save)
- 8-bit scene / effect control: recall
- Forced on
- Forced off
- Deactivate forced control

Orientation lighting

The orientation light (LED) of the device may be turned on or off continuously or depending on a status object. These configuration options are available for the orientation light (LED):

- LED permanently off
- LED permanently on
- LED indicates IR activity (only for switch with IR receiver)
- LED indicates user operation
- LED indicates long button press
- A binary status object controls the LED for each status value on (=1) or off (=0) respectively to either
  - on
  - off
  - flash, slowly (0,3 Hz)
  - flash, moderately (1 Hz)
  - flash, fast (5 Hz)
- An analog status object (8-bit value [0...255], percent value, 16-bit value [0...65535], temperature value [0°C....40°C], brightness value [0...2000 lux] controls the LED for each of up to three value ranges respectively to either
  - on

- off
- flash, slowly (0,3 Hz)
- flash, moderately (1 Hz)
- flash, fast (5 Hz)

The brightness of the orientation light is configurable and may be controlled via object (e.g. for night operation).
On bus voltage recovery the orientation light resumes with the status it had before bus voltage failure. This is achieved by requesting the status value via the bus. If a status value is not received the orientation LED remains off.

Locking of buttons
Operation of each push button respectively pair of buttons can be locked or unlocked via a communication object. A parameter determines whether the operation of the button respectively pair of buttons is always unlocked or is locked via the blocking object with a configurable blocking object value of 1 or 0.
There are no special actions associated with this function on bus voltage failure or recovery

Note

On devices with status LED's the LED associated with a button, which is locked, flashes when the button is pressed independent of the configuration of the status LED and the current LED display.

Additional functions of devices with status LED
Status LED
[applies to UP 2xx/3, UP 2xx/4 and UP 2xx/5]
The same configuration options as for the orientation LED are available for the status LED's of a device.

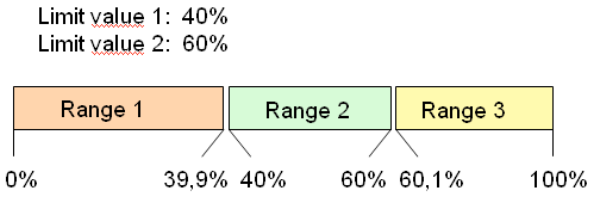
- LED permanently off
- LED permanently on
- LED indicates IR activity (only for switch with IR receiver)
- LED indicates user operation
- LED indicates long button press
- A binary status object controls the LED for each status value on (=1) or off (=0) respectively to either
  - on
  - off
  - flash, slowly (0,3 Hz)
  - flash, moderately (1 Hz)
  - flash, fast (5 Hz)
- An analog status object (8-bit value [0...255], percent value, 16-bit value [0...65535], temperature value [0°C....40°C], brightness value [0...2000 lux] controls the LED for each of up to three value ranges respectively to either
  - on
  - off
  - flash, slowly (0,3 Hz)
  - flash, moderately (1 Hz)
  - flash, fast (5 Hz)

The brightness of the status LED can be configured mutually for all status LED's and can be influenced via object (e.g. for night operation).
To find a switch when its associated status LED is turned off and it is dark, this LED may be configured to cyclically flash briefly.
There are no special actions associated with status LED's on bus voltage failure.
On bus voltage recovery, the current status values for the LED status displays (1 Bit, 8 Bit, 16 Bit) are requested via the bus if this function is configured in the parameter window "General- Timers".

Examples for value-dependent status display

When „value-dependent" is selected an 8-bit or 16-bit status object is available. Two limit values can be configured dividing the range of values into three status display ranges. For each status display range the LED display can be configured independently as On, Off or flashing.
Example: The status object receives a temperature value (2 byte). The limit values are set to 5°C and 35°. For display range 1 (< 5°C) the LED is configured to „flashing", for display range 2 (5°C ... 35°C) to „Off" and for display range 3 (> 35°C) to „flashing". With this setting the LED displays frost and heat protection.
The brightness of the status LED can be changed via a communication object.

(A) Display is determined by percentage value



The two limit values can be freely set within the configuration range i.e. limit value 1 may be smaller or larger than limit value 2).

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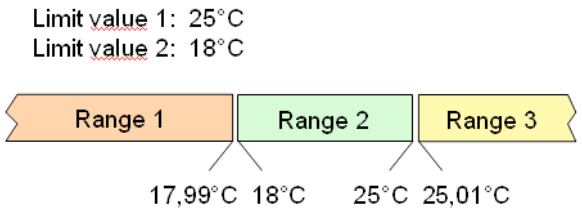
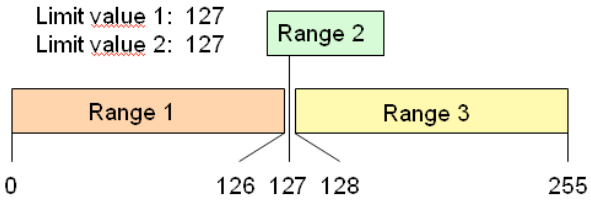
(B) Display is determined by temperature



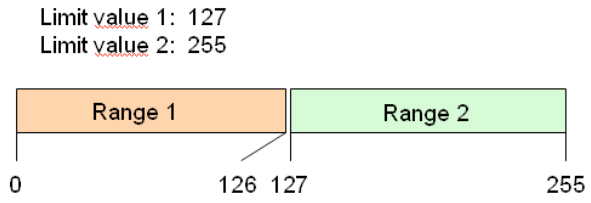
If both limit values are set to the same value then display range 2 only includes this single value.

(C) Display is determined by 8-bit value:

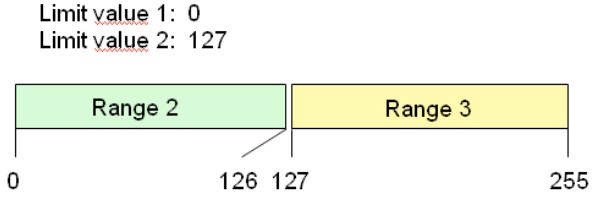


If the limit value 2 is set to the maximum possible value then display range 3 does not exist because no value can be received for that range.

(D) Display is determined by 8-bit value:



(E) Display is determined by 8-bit value:



Note

If the display is determined by temperature or brightness and the larger limit value is set to the maximum configurable value then display range 3 exists.

Scene control module

[only applies to UP 2xx/4 and UP 2xx/5]

A scene is defined as a set of predefined switching states and values that are sent to various actuators upon a scene control event e.g. pressing a wall switch button to set the lights and the venetian blinds in a presentation room to the preset settings for a presentation.

The application program defines eight scene channels (A to H) that each can be assigned to up to eight 8-bit scene numbers. Each scene number defines a separate state.

The scene control module allows including actuators that do not support 8-bit scene control into an 8-bit scene.

For scene channels that are enabled an associated parameter window and corresponding communication objects are displayed. For each channel one of these functions can be selected:

- Switching
- venetian blind
- forced control
- 8-bit value
- 16-bit value

Each channel can be assigned to up to eight different scene numbers (1...64).

The scenes for all scene channels are mutually recalled and saved via the 8-bit scene object.

Before saving a scene the actuators belonging to that scene must be set to the desired light levels and switching states. When receiving a save telegram scene controllers or actuators with 8-bit scene function are commanded to interrogate the current light levels and switching states of the actuators and save these as scene settings.

Saved scene values are only deleted by a new configuration of the device if the parameter "Delete scene memory after bus voltage recovery" is set to "Yes". When this parameter is set to "No", the saved values are retained even after a restart of the device (e.g. after bus voltage recovery) and when the device configuration is downloaded again.

Reading the states of the actuators that are part of a scene is executed via the group addresses that are assigned to the objects (e.g. "scene channel A save").

To enable the scene control module to read a status via a read request, the group address used must be configured as "sending address" in the switching, value or status object of an actuator and the read flag of the object must be set.

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Scenes are recalled and saved via 8-bit scene telegrams. Bits 0 through 5 of the 8-bit scene object contain the scene number (1…64). The most significant bit 7 determines if a scene is recalled (bit value = 0) or saved (bit value = 1). Bit 6 is not used.

Note

A scene setting can be recalled for the first time about 2 seconds after the 8-bit scene save command.

Note

If several scene save commands are triggered after each other the scene save commands are executed in the sequence of reception.

Room temperature measurement
[only applies to UP 2xx/4]
The room temperature can be sent cyclically or on change of value. For adaptation to local circumstances the measured room temperature can be adjusted by a configurable offset value.

IR receiver decoder
[only applies to UP 2xx/5]
The device offers a 16 channel IR receiver decoder.
As described above for the single buttons / button pairs functions can assigned to each of the 16 IR channels either for the single buttons or for the button pair. Likewise, additional functions can be selected dependent on the selected main function. With the 16 channel IR hand-held remote S 425/72 these possibilities can be fully utilized.
Additionally,the wallswitch can receive up to 16 brightness values and temperature values, motion detection messages and IR identification numbers from corresponding IR transmitters and send these messages onto the Bus.

Functions for single buttons
Switching
When the button is pressed the corresponding command telegram (ON / OFF/ Toggle) is sent immediately.
When the parameter „send additional telegram after delay (second telegram)" is selected then with one button operation two different switching commands can be sent with a time delay (100ms to 6550s) via two communication objects (e.g. "ON" via object 1, "OFF" via object 2). The second telegram can also contain a different function, e.g. 8-bit scene recall. If the button is pressed again before the configured delay time expires the time delay starts over.

When the parameter „send additional telegram on long key press (alternatively)" is selected then by the differentiation between short / long button operation two different communication objects can be sent (e.g. short button operation "ON" viaobject 1, long button operation "OFF" via object 2). The time determining the difference between short and long button operation is configurable.
The operation function can be disabled via a blocking object.
No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

Door bell function
When the button is pressed an "On" or "Off" message is sent. When the button is released the inverse message is sent.
An additional telegram for this function is not available.
The operation function can be disabled via a blocking object.
No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

1-button dimming
Using a single button, a short button operation can switch on respectively off (toggle) and with a long button operation dim brighter respectively darker. The dimming direction brighter / darker changes with each new long button operation. After switching on with a short button operation the dimming direction is preset to "darker" and after switching off it is preset to "brighter". The time that determines the difference between a short and a long button operation is configurable in general for the functions dimming / solar protection (parameter window "General – Timers").
An additional telegram for this function is not available.
The operation function can be disabled via a blocking object.
No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

1-button solar protection control
Using a single button, a long button operation moves the solar protection down or up (the movement direction changes with each new long button operation). Via a short button operation the movement can be stopped respectively the slats can be opened or closed by a step. With a short button operation a solar protection moving downward is stopped and with each further short operation the slats are opened step-by-step. With a short button operation a solar protection moving upward is stopped and with each further short operation the slats are closed step-by-step.
The time that determines the difference between a short and a long button operation is configurable in general

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for the functions dimming / solar protection (parameter window "General – Timers").
An additional telegram for this function is not available.
The operation function can be disabled via a blocking object.
No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

1-bit scene 1 recall / save
1-bit scene 2 recall / save
The "1-bit scenen recall / save" function allows the user to change the char-acteristics of a preset scene, i.e. brightness levels and switching states of the groups within a scene, without using the ETS.
Using a single button (configurable for scene 1 or scene 2), a short button operation recalls the scene and a long button operation saves the scene. There is a communication object for saving a scene and a second object for recalling the saved scene.
Recalling a scene happens with a 1-bit switching telegram, where a "0"-telegram recalls scene 1 and a "1"-telegram recalls scene 2. A parameter determines which scene number is assigned to the button.
A scene is saved via a 1-bit switching telegram, where a "0"-telegram saves scene 1 and a "1"-telegram saves scene 2. The scene controller must have a functionally corresponding application program.
Before saving a scene the actuators belonging to that scene must be set to the desired light levels and switching states. When receiving a save telegram a scene controller is commanded to interrogate the current light levels and switching states of the actuators and save these as scene settings.
If a button has an associated LED, that LED, if configured accordingly, signals the long button operation.
The time that determines the difference between a short and a long button operation is configurable in general for the function save scene (parameter window "General – Timers").
An additional telegram for this function is not available.
The operation function can be disabled via a blocking object.
No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

8-bit scene recall / save
The "8-bit scene recall / save" function allows for changing the characteristics of a preset scene, i.e. brightness levels and switching states of the groups within a scene, without using the ETS.
Using a single button configured for a scene number (1...64), a short button operation recalls the scene and a long button operation saves the scene. It is possible to configure only recalling the 8-bit scene. There is only one communication object for saving the 8-bit scene and recalling the saved scene using the target scene number.
Recalling a scene happens with an 8-bit telegram, where the lower 6 bits (bit 0-5) contain the scene number, bit 6 is reserved, and bit 7 is set to "0" (recall).
A scene is saved via an 8-bit telegram, where the lower 6 bits (bit 0-5) contain the scene number, bit 6 is reserved, and bit 7 is set to "1" (save). The scene controller or actuators with an 8-bit scene function must have a functionally corresponding application program.
Before saving a scene the actuators belonging to that scene must be set to the desired light levels and switching states. When receiving a save telegram scene controllers or actuators with 8-bit scene function are commanded to interrogate the current light levels and switching states of the actuators and save these as scene settings.
If a button has an associated LED, that LED, if configured accordingly, signals the long button operation.
The time that determines the difference between a short and a long button operation is configurable in general for the function save scene (parameter window "General – Timers").
An additional telegram for this function is not available.
The operation function can be disabled via a blocking object.
No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

Send value (8 bit)
This function is used to send 8-bit values in the range 0...255 or 0...100%.
An 8-bit value is assigned to the button so that with a short operation of this button e.g. the associated lights are dimmed to the configured value or the speed of a fan is controlled.
When the parameter „send additional telegram after delay (second telegram)" is selected then with one button operation two different values can be sent with a time delay (100ms to 6550s) via two communication objects (e.g. "100%" via object 1, "0%" via object 2). The second telegram can also contain a different function, e.g. 8-bit scene recall. If the button is pressed again before the configured delay time expires the time delay starts over.
When the parameter „send additional telegram on long key press (alternatively)" is selected then by the differentiation between short / long button operation two different communication objects can be sent (e.g. short button operation "100%" via object 1, long button operation "127" via object 2). The time determining the difference between short and long button operation is configurable.
The operation function can be disabled via a blocking object.
No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

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Send value (16-Bit)
This function is used to send 2 byte floating point values for temperature (0...40°C), brightness level (0...2000 Lux) or any value in the range 0...65535.
An 16-bit value is assigned to the button so that with a short operation of this button e.g. the setpoint temperature is set to the configured value.
When the parameter „send additional telegram after delay (second telegram)" is selected then with one button operation two different values can be sent with a time delay (100ms to 6550s) via two communication objects (e.g. "21°C" via object 1, "18°C" via object 2). The second telegram can also contain a different function, e.g. 8-bit scene recall. If the button is pressed again before the configured delay time expires the time delay starts over.
When the parameter „send additional telegram on long key press (alternatively)" is selected then by the differentiation between short / long button operation two different communication objects can be sent (e.g. short button operation "21°C" via object 1, long button operation "500 Lux" via object 2). The time determining the difference between short and long button operation is configurable.
The operation function can be disabled via a blocking object.
No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

Forced control
A short operation of the button immediately sends the configured telegram ("forced on" respectively "forced off") onto the bus. A long operation of the button sends a telegram that deactivates the forced control and at the same time may send an on or off signal.
The time that determines the difference between a short and a long button operation is configurable in general for the function forced control (parameter window "General – Timers").
Actuators with a forced control input allow for overriding specific actuator outputs by central control commands. This may prohibit e.g. turning selected lights on during energy savings or night mode. In night mode a forced control off telegram may be sent at 20:00 and at 06:00 a forced control telegram may deactivate the forced control. Using the forced control function allows manually activating forced control or deactivating an automatically activated forced control.
Via an additional communication object, for actuators without 2-bit forced control, a short button operation sends a switching command "ON" (or alternatively "OFF") and a long button operation sends a switching command "OFF" (or alternatively "ON").
The operation function can be disabled via a blocking object.
No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

Functions for button pairs
2-button dimming
With a button pair, short operation of the buttons provides defined on and off switching whereas long operation of the buttons provides defined brighter and darker dimming. Which button of the pair switches off and dimsdarker respectively switches on and dims brighter can be configured.
The function "Dimming with stop telegram" sends a dimming "brighter" respectively "darker" as soon as a long button operation is detected on one of the two buttons and a stop telegram when that button is released.
The time that determines the difference between a short and a long button operation is configurable in general for the functions dimming / solar protection (parameter window "General – Timers").
When the parameter „Send second telegram" is selected then with one button operation two different switching commands can be sent with a time delay (100ms to 6550s) via two communication objects (e.g. "ON" via object 1, "OFF" via object 2). The second telegram can also contain a different function, e.g. 8-bit scene recall. If the button of a button pair is pressed again before the configured delay time expires the time delay starts over.
The operation function can be disabled via a blocking object.
No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

Solar protection control (venetian blind) for button pair
With a button pair, long operation of the buttons provides defined up and down movement of the solar protection whereas short operation of the buttons provides stopping the movement respectively opens or closes the slats step-by-step. Which button of the pair moves the solar protection up or down respectively opens or closes the slats step-by-step can be configured.
The time that determines the difference between a short and a long button operation is configurable in general for the functions dimming / solar protection (parameter window "General – Timers").
When the parameter „Send second telegram" is selected then with one button operation two different switching commands can be sent with a time delay (100ms to 6550s) via two communication objects (e.g. "ON" via object 1, "OFF" via object 2). The second telegram can also contain a different function, e.g. 8-bit scene recall. If the button of a button pair is pressed again before the configured delay time expires the time delay starts over.

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The operation function can be disabled via a blocking object.
No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

1-bit scene recall / save
The "1-bit scenen recall / save" function allows the user to change the char-acteristics of a preset scene, i.e. brightness levels and switching states of the groups within a scene, without using the ETS.
Using a button pair (scene 1 on button 1, scene 2 on button 2), a short button operation recalls the associated scene and a long button operation saves the associated scene. There is a communication object each for saving a scene and a second object for recalling the saved scene.
Recalling a scene happens with a 1-bit switching telegram, where a "0"-telegram recalls scene 1 and a "1"-telegram recalls scene 2.
A scene is saved via a 1-bit switching telegram, where a "0"-telegram saves scene 1 and a "1"-telegram saves scene 2. The scene controller must have a functionally corresponding application program.
Before saving a scene the actuators belonging to that scene must be set to the desired light levels and switching states. When receiving a save telegram a scene controller is commanded to interrogate the current light levels and switching states of the actuators and save these as scene settings.
If a button has an associated LED, that LED, if configured accordingly, signals the long button operation.
The time that determines the difference between a short and a long button operation is configurable in general for the function save scene (parameter window "General – Timers").
When the parameter „Send second telegram" is selected then with one button operation two different scene control commands can be sent with a time delay (100ms to 6550s) via two communication objects (e.g. "scene 1 recall" via object 1, "scene 2 recall" via object 2). The second telegram can also contain a different function, e.g. 8-bit scene recall. If the button of a button pair is pressed again before the configured delay time expires the time delay starts over.
The operation function can be disabled via a blocking object.
No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

8-bit scene recall / save
The "8-bit scene recall / save" function allows for changing the characteristics of a preset scene, i.e. brightness levels and switching states of the groups within a scene, without using the ETS.
Each button of a button pair can be configured for a scene number (1...64), a short button operation recalls the scene and a long button operation saves the scene.
There is only one communication object for saving the 8-bit scene and recalling the saved scene using the target scene number.
Recalling a scene happens with an 8-bit telegram, where the lower 6 bits (bit 0-5) contain the scene number, bit 6 is reserved, and bit 7 is set to "0" (recall).
A scene is saved via an 8-bit telegram, where the lower 6 bits (bit 0-5) contain the scene number, bit 6 is reserved, and bit 7 is set to "1" (save). The scene controller or actuators with an 8-bit scene function must have a functionally corresponding application program.
Before saving a scene the actuators belonging to that scene must be set to the desired light levels and switching states. When receiving a save telegram scene controllers or actuators with 8-bit scene function are commanded to interrogate the current light levels and switching states of the actuators and save these as scene settings.
If a button has an associated LED, that LED, if configured accordingly, signals the long button operation.
The time that determines the difference between a short and a long button operation is configurable in general for the function save scene (parameter window "General – Timers").
When the parameter „Send second telegram" is selected then with one button operation two different scene control commands can be sent with a time delay (100ms to 6550s) via two communication objects (e.g. "scene 11 recall" via object 1, "scene 22 recall" via object 2). The second telegram can also contain a different function, e.g. switching "ON". If the button of a button pair is pressed again before the configured delay time expires the time delay starts over.
The operation function can be disabled via a blocking object.
No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

Send variable value (8 bit)
This function offers sending variable 8-bit values in the range from 0...255 or 0...100%. With a short operation of one button (button 1 or 2) of a button pair the current value of the communication object is incremented respectively decrmented and sent onto the bus. With a long operation of button 1 or 2 the value is incremented respectively decremented step-by-step and sent cyclically as long as the button is pressed. When the variable value reaches or falls below the lower limit or reaches or rises above the upper limit then the lower respectively upper limit value is sent.
The time that determines the difference between a short and a long button operation as well as the iteration

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period are configurable in general for the function send variable value (parameter window "General – Timers").
The upper limit value (button 1) and the lower limit value (button 2) as well as the step are configurable.
When the parameter „Send second telegram" is selected then an additional command can be sent with a time delay (100ms to 6550s) via a second communication object (e.g. "scene 22 recall" via object 2). If the additional command shall be sent after releasing the button the delay time for sending the additional command must be selected such that it is greater than the time differentiating between a short and a long button operation and greater than the time between sending variable value telegrams while pressing the button.
If the button of a button pair is pressed again or a variable value telegram is sent before the configured delay time expires the time delay starts over.
The operation function can be disabled via a blocking object.
No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

Forced control
A short operation of a button of the button pair immediately sends the configured telegram (e.g. button 1: "forced on"; button 2: "forced off") onto the bus. A long operation of a button sends a telegram that deactivates the forced control and at the same time may send an on or off signal.
The time that determines the difference between a short and a long button operation is configurable in general for the function forced control (parameter window "General – Timers").
Actuators with a forced control input allow for overriding specific actuator outputs by central control commands. This may prohibit e.g. turning selected lights on during energy savings or night mode. In night mode a forced control off telegram may be sent at 20:00 and at 06:00 a forced control telegram may deactivate the forced control. Using the forced control function allows manually activating forced control or deactivating an automatically activated forced control.
When the parameter „Send second telegram" is selected then with one button operation two different scene control commands can be sent with a time delay (100ms to 6550s) via two communication objects (e.g. "forced ON" via object 1, "ON" via object 2). The second telegram can also contain a different function, e.g. 8-bit scene recall. If the button of a button pair is pressed again before the configured delay time expires the time delay starts over.
The operation function can be disabled via a blocking object.
No special actions are assigned to this function for bus voltage failure or bus voltage recovery.

Building site function
The building site function enables switching the building site lighting on and off via bus wall switches and actuators, even if these devices have not yet been commissioned with ETS.
All button pairs are preconfigured with the building site function for switching (top On, bottom Off).

Behavior on bus voltage failure / recovery
The behavior on bus voltage failure and recovery is covered in the functional descriptions of the single button and button pair functions.
In the parameter window "General – Timers" the behavior on bus voltage recovery with respect to reading the status values is configured for the following functions :
- LED status display (1 Bit, 8 Bit, 16 Bit)
- Send variable value
- Blocking object

Additionally, the delay time until status objects are interrogated can be configured.

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Communication objects

Maximum number of group addresses: 250
Maximum number of assignments: 250

Note

The number and names of communication objects visible can vary depending on the parameter settings.

The application program already has been loaded in the factory.
With the ETS (Engineering Tool Software) the specific parameters and addresses are assigned appropriately, and downloaded into the device.
Downloading the application programm requires Engineering Tool Software (ETS) version ETS3.0e or higher.

No.	Object name	Function	Number Bit	Flags
0	Button A1, switching	On	1 Bit	CT
1	Button A1, 2nd telegram, percentage	Value	1 Byte	CT
2	Button A2, switching	Off	1 Bit	CT
3	Button A2, 2nd telegram, percentage	Value	1 Byte	CT
4	Status LED A1	On / Off	1 Bit	CRWTU
5	Status LED A2	8-bit value	1 Byte	CRWTU
6	Brightness of status LED's	0=min / 1=max	1 Bit	CRWTU
7	Button pair B, switching	On / Off	1 Bit	CT
8	Button B1, 2nd telegram, 8-bit scene	recall / save	1 Byte	CT
9	Button pair B, dimming	brighter / darker	4 Bit	CT
10	Button B2, 2nd telegram, Brightness	value	2 Byte	CT
11	Status LED B1	On / Off	1 Bit	CRWTU
12	Status LED B2	8-bit value	1 Byte	CRWTU
13	Brightness of orientation LED	0=min / 1=max	1 Bit	CRWTU
14	Button C1, switching	Toggle	1 Bit	CWT
15	Button C1, dimming	brighter / darker	4 Bit	CT
16	Button C2, slats	stop / open / close	1 Bit	CT
17	Button C2, solar protection	up/ down	1 Bit	CT
18	Status LED C1	On / Off	1 Bit	CRWTU
19	Status LED C2	8-bit value	1 Byte	CRWTU
20	Orientation LED	On / Off	1 Bit	CRWTU
21	Button D1, switching	Toggle	1 Bit	CWT
22	Button D1, dimming	brighter / darker	4 Bit	CT
23	Button D2, slats	stop / open / close	1 Bit	CT
24	Button D2, solar protection	up/ down	1 Bit	CT
25	Status LED D1	On / Off	1 Bit	CRWTU
26	Status LED D2	8-bit value	1 Byte	CRWTU
27	LED flashing	0=normal / 1=flashing	1 Bit	CRWT
28	C00/16/32/48 >>1, switching	On	1 Bit	CT
29	C00/16/32/48 >>1, 2nd telegram, switching	On	1 Bit	CWT
30	C00/16/32/48 <<0, switching	Off	1 Bit	CT
31	C00/16/32/48 <<0, 2nd telegram, switching	On	1 Bit	CT
32	C00/16/32/48, temperature	value	2 Byte	CRT
33	C00/16/32/48, Brightness	value	2 Byte	CRT
34	C00/16/32/48, presence	1=presence	1 Bit	CRT
35	C01/17/33/49 >>1, switching	On	1 Bit	CT
36	C01/17/33/49 >>1, 2nd telegram, switching	On	1 Bit	CWT
37	C01/17/33/49 <<0, switching	Off	1 Bit	CT
38	C01/17/33/49 <<0, 2nd telegram, switching	On	1 Bit	CT
39	C01/17/33/49, temperature	value	2 Byte	CRT
40	C01/17/33/49, Brightness	value	2 Byte	CRT
41	C01/17/33/49, presence	1=presence	1 Bit	CRT
...	...	...	...	...
133	C15/31/47/63 >>1, switching	On	1 Bit	CT
134	C15/31/47/63 >>1, 2nd telegram, switching	On	1 Bit	CWT
135	C15/31/47/63 <<0, switching	Off	1 Bit	CT
136	C15/31/47/63 <<0, 2nd telegram, switching	On	1 Bit	CT
137	C15/31/47/63, temperature	value	2 Byte	CRT
138	C15/31/47/63, Brightness	value	2 Byte	CRT
139	C15/31/47/63, presence	1=presence	1 Bit	CRT
140	8-bit scene, Scene channel A-H	recall / save	1 Byte	CRWT
141	Scene channel A, switching	save	1 Bit	CRWTU
142	Scene channel B, solar protection	save	1 Bit	CRWTU
143	Scene channel C, forced control	save	2 Bit	CRWTU
144	Scene channel D, 8-bit value	save	1 Byte	CRWTU
145	Scene channel E, 16-Bit value	save	2 Byte	CRWTU
146	Scene channel F, switching	save	1 Bit	CRWTU
147	Scene channel G, solar protection	save	1 Bit	CRWTU
148	Scene channel H, forced control	save	2 Bit	CRWTU
149	Scene channel A, switching	recall	1 Bit	CRWT
150	Scene channel B, solar protection	recall	1 Bit	CRWT
151	Scene channel C, forced control	recall	2 Bit	CRWT
152	Scene channel D, 8-bit value	recall	1 Byte	CRWT
153	Scene channel E, 16-Bit value	recall	2 Byte	CRWT
154	Scene channel F, switching	recall	1 Bit	CRWT
155	Scene channel G, solar protection	recall	1 Bit	CRWT
156	Scene channel H, forced control	recall	2 Bit	CRWT
157	IR-ID	Number	2 Byte	CRWT
158	blocking object (buttons and IR)	disable / enable	1 Bit	CRWTU
159	blocking object (IR presence)	disable / enable	1 Bit	CRWTU
160	Internal temperature	Value degree °C	2 Byte	CRWT

General objects

Brightness of LED's

Obj	Name	Funktion	Length	Flag
6	Brightness of status LED's	0=min / 1=max	1 bit	CRWTU
Via this object the brightness of the status LED's can be set via the bus. The minimum and maximum brightness of the status LED is determined via respective parameters.				
13	Brightness Orientation LED	0=min / 1=max	1bit	CRWTU
Via this object the brightness of the orientation LED can be set via the bus. The minimum and maximum brightness of the orientation light is determined via respective parameters.				

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Orientation LED

Obj	Name	Function	Length	Flag
20	Orientation LED	On / Off	1 Bit	CRWTU
20	Orientation LED	8-bit value	1 Byte	CRWTU
Via this object the orientation light can be turned on or off. This object is visible if in the parameter window „General - LED's" the setting "status object" or "dependent on value" is configured. Otherwise, this object is not visible and hence without function.				

Flashing of status LED's

Obj	Name	Function	Length	Flag
27	LED flashing	0=normal / 1=flashing	1 Bit	CRWTU
27	LED flashing	1=normal / 0=flashing	1 Bit	CRWTU
Via this object the status LEDs can be forced to flash independent of other settings for the status LEDs. If flashing is enabled when an On telegram (object value = 1) is received via this object all status LEDs flash with a frequency of approx. 0.5Hz (1 second On, 1 second Off). If flashing is enabled when an Off telegram (object value = 0) is received via this object all status LEDs flash with a frequency of approx. 0.5Hz (1 second On, 1 second Off).				

Security / blocking object

Obj	Name	Function	Length	Flag
158	blocking object (Button pairs and IR)	disable / enable	1 Bit	CRWTU
Via this object the operation functions of the buttons are enabled or disabled according to the parameter settings.				

Temperature sensor

Obj	Name	Function	Length	Flag
160	Internal temperature	Value degree °C	2 Byte	CRWTU
This object holds the current temperature value of the sensor. The value is determined taking the configured offset into account and is transmitted according to the configuration on change of value and/or cyclically.				

Objects Buttons

The top and bottom buttons of the design DELTA profil / style as well as the left and right buttons of the design DELTA i-system can each be either used as "pair of buttons" or as "single buttons". Dependent on this setting the available functions change.

Functions when using „single buttons"

Note:

Objects for buttons B1/B2, C1/C2 and D1/D2 are only present, when parameter „Device type" is set to double, triple or quadruple.

Switching: On

Obj	Name	Function	Length	Flag
0	Button A1, switching	On	1 Bit	CT
2	Button A2, switching	On	1 Bit	CT
7	Button B1, switching	On	1 Bit	CT
9	Button B2, switching	On	1 Bit	CT
14	Button C1, switching	On	1 Bit	CT
16	Button C2, switching	On	1 Bit	CT
21	Button D1, switching	On	1 Bit	CT
23	Button D2, switching	On	1 Bit	CT
When one of the buttons is pressed an "On" switching telegram is sent via the corresponding object.				

For each button with this function an additonal function may be configured. For more information about the additional objects see description under "Functions second telegram".

Switching: Off

Obj	Name	Function	Length	Flag
0	Button A1, switching	Off	1 Bit	CT
2	Button A2, switching	Off	1 Bit	CT
7	Button B1, switching	Off	1 Bit	CT
9	Button B2, switching	Off	1 Bit	CT
14	Button C1, switching	Off	1 Bit	CT
16	Button C2, switching	Off	1 Bit	CT
21	Button D1, switching	Off	1 Bit	CT
23	Button D2, switching	Off	1 Bit	CT
When one of the buttons is pressed an "Off" switching telegram is sent via the corresponding object.				

For each button with this function an additonal function may be configured. For more information about the

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additional objects see description under "Functions second telegram".

Switching: Toggle

Obj	Name	Function	Length	Flag
0	Button A1, switching	Toggle	1 Bit	CWT
2	Button A2, switching	Toggle	1 Bit	CWT
7	Button B1, switching	Toggle	1 Bit	CWT
9	Button B2, switching	Toggle	1 Bit	CWT
14	Button C1, switching	Toggle	1 Bit	CWT
16	Button C2, switching	Toggle	1 Bit	CWT
21	Button D1, switching	Toggle	1 Bit	CWT
23	Button D2, switching	Toggle	1 Bit	CWT
On the first operation of a button an „On" telegram is sent via the corresponding object and on the next operation of the same button an "Off" telegram is sent. On each following operation the value is inverted and then sent (toggle function).				

Switching, dimming: Toggle, brighter / darker (1-button dimming)

Obj	Name	Function	Length	Flag
0	Button A1, switching	Toggle	1 Bit	CWT
1	Button A1, dimming	brighter / darker	4 Bit	CT
2	Button A2, switching	Toggle	1 Bit	CWT
3	Button A2, dimming	brighter / darker	4 Bit	CT
7	Button B1, switching	Toggle	1 Bit	CWT
8	Button B1, dimming	brighter / darker	4 Bit	CT
9	Button B2, switching	Toggle	1 Bit	CWT
10	Button B2, dimming	brighter / darker	4 Bit	CT
14	Button C1, switching	Toggle	1 Bit	CWT
15	Button C1, dimming	brighter / darker	4 Bit	CT
16	Button C2, switching	Toggle	1 Bit	CWT
17	Button C2, dimming	brighter / darker	4 Bit	CT
21	Button D1, switching	Toggle	1 Bit	CWT
22	Button D1, dimming	brighter / darker	4 Bit	CT
23	Button D2, switching	Toggle	1 Bit	CWT
24	Button D2, dimming	brighter / darker	4 Bit	CT
On the first operation of a button an „On" telegram is sent via the corresponding object and on the next operation of the same button an "Off" telegram is sent. On each following operation the value is inverted and then sent (toggle function).				

Obj	Name	Function	Length	Flag
On a long operation of a button a "brighter" dimming telegram is sent via the corrseponding object and on the next operation of the same button a "darker" dimming telegram is sent. On each following long operation the dimming direction (brighter / darker) is changed. After a switching on command the dimming direction is preset to „darker" and after a switching off command the dimming direction is preset to "brighter". A short press of a button generates a switching command and a long press of a button generates a dimming command.				

Door bell function: press = On, release = Off

Obj	Name	Function	Length	Flag
0	Button A1, bell function	On / Off	1 Bit	CT
2	Button A2, bell function	On / Off	1 Bit	CT
7	Button B1, bell function	On / Off	1 Bit	CT
9	Button B2, bell function	On / Off	1 Bit	CT
14	Button C1, bell function	On / Off	1 Bit	CT
16	Button C2, bell function	On / Off	1 Bit	CT
21	Button D1, bell function	On / Off	1 Bit	CT
23	Button D2, bell function	On / Off	1 Bit	CT
On pressing a button a switching „On" telegram is sent via the corresonding object and on releasing the button a telegram "Off" is sent.				

Door bell function: press = Off, release = On

Obj	Name	Function	Length	Flag
0	Button A1, bell function	Off /On	1 Bit	CT
2	Button A2, bell function	Off /On	1 Bit	CT
7	Button B1, bell function	Off /On	1 Bit	CT
9	Button B2, bell function	Off /On	1 Bit	CT
14	Button C1, bell function	Off /On	1 Bit	CT
16	Button C2, bell function	Off /On	1 Bit	CT
21	Button D1, bell function	Off /On	1 Bit	CT
23	Button D2, bell function	Off /On	1 Bit	CT
On pressing a button a switching „Off" telegram is sent via the corresonding object and on releasing the button a telegram "On" is sent.				

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Solar protection, Slats: up / down / stop (1-button solar protection control)

Obj	Name	Function	Length	Flag
0	Button A1, slats	stop / open / close	1 Bit	CT
1	Button A1, venetian blind	up/ down	1 Bit	CWT
2	Button A2, slats	stop / open / close	1 Bit	CT
3	Button A2, venetian blind	up/ down	1 Bit	CWT
7	Button B1, slats	stop / open / close	1 Bit	CT
8	Button B1, venetian blind	up/ down	1 Bit	CWT
9	Button B2, slats	stop / open / close	1 Bit	CT
10	Button B2, venetian blind	up/ down	1 Bit	CWT
14	Button C1, slats	stop / open / close	1 Bit	CT
15	Button C1, venetian blind	up/ down	1 Bit	CWT
16	Button C2, slats	stop / open / close	1 Bit	CT
17	Button C2, venetian blind	up/ down	1 Bit	CWT
21	Button D1, slats	stop / open / close	1 Bit	CT
22	Button D1, venetian blind	up/ down	1 Bit	CWT
23	Button D2, slats	stop / open / close	1 Bit	CT
23	Button D2, venetian blind	up/ down	1 Bit	CWT

On the first long operation of a button a move solar protection „Down" telegram is sent via the corresponding object and on the next long operation of the same button a move solar protection "Up" telegram is sent. On each following long operation the motion direction (Up/Down) is changed.
On each short operation of a button a command "stop / slats open" is sent via the corresponding object if previously the solar protection was moved down. If previously the solar protection was moved up, on each short operation of a button a command "stop / slat close" is sent. The motion direction of the slat command (open / close) is always opposite to the direction of the last motion (down / up) command.
A long press of a button generates a command to move the solar protection and a short press of a button generates a command stopping the motion of the solar protection or adjusting the slats by a step.

Roller shutter control: up / down / stop (1 –button roller shutter control)

Obj	Name	Function	Length	Flag
0	Button A1, roller shutter	stop	1 Bit	CT
1	Button A1, roller shutter	up/ down	1 Bit	CT
2	Button A2, roller shutter	stop	1 Bit	CT
3	Button A2, roller shutter	up/ down	1 Bit	CT
7	Button B1, roller shutter	stop	1 Bit	CT
8	Button B1, roller shutter	up/ down	1 Bit	CT
9	Button B2, roller shutter	stop	1 Bit	CT
10	Button B2, roller shutter	up/ down	1 Bit	CT
14	Button C1, roller shutter	stop	1 Bit	CT
15	Button C1, roller shutter	up/ down	1 Bit	CT
16	Button C2, roller shutter	stop	1 Bit	CT
17	Button C2, roller shutter	up/ down	1 Bit	CT
21	Button D1, roller shutter	stop	1 Bit	CT
22	Button D1, roller shutter	up/ down	1 Bit	CT
23	Button D2, roller shutter	stop	1 Bit	CT
24	Button D2, roller shutter	up/ down	1 Bit	CT

On the first long operation of a button a move roller shutter „Down" telegram is sent via the corresponding object and on the next long operation of the same button a move roller shutter "Up" telegram is sent. On each following long operation the motion direction (Up/Down) is changed.
On each short operation of a button a command "stop" is sent via the corresponding object.
A long press of a button generates a command to move the roller shutter and a short press of a button generates a command stopping the motion of the roller shutter.

1-bit scene 1 recall / save

Obj	Name	Function	Length	Flag
0	Button A1, scene 1	recall	1 Bit	CT
1	Button A1, scene 1	save	1 Bit	CT
2	Button A2, scene 1	recall	1 Bit	CT
3	Button A2, scene 1	save	1 Bit	CT
7	Button B1, scene 1	recall	1 Bit	CT
8	Button B1, scene 1	save	1 Bit	CT
9	Button B2, scene 1	recall	1 Bit	CT
10	Button B2, scene 1	save	1 Bit	CT
14	Button C1, scene 1	recall	1 Bit	CT
15	Button C1, scene 1	save	1 Bit	CT
16	Button C2, scene 1	recall	1 Bit	CT
17	Button C2, scene 1	save	1 Bit	CT
21	Button D1, scene 1	recall	1 Bit	CT
22	Button D1, scene 1	save	1 Bit	CT

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Obj	Name	Function	Length	Flag
23	Button D2, scene 1	recall	1 Bit	CT
24	Button D2, scene 1	save	1 Bit	CT
On short operation of a button a telegram „scene 1 recall" is sent via the corresponding object and on long operation of the button a telegram "scene 1 save" (object value = 0) is sent. A short operation of a button generates a command recalling a preset scene and a long operation of a button generates a command saving the current settings of a scene.				

1-bit scene 2 recall / save

Obj	Name	Function	Length	Flag
0	Button A1, scene 2	recall	1 Bit	CT
1	Button A1, scene 2	save	1 Bit	CT
2	Button A2, scene 2	recall	1 Bit	CT
3	Button A2, scene 2	save	1 Bit	CT
7	Button B1, scene 2	recall	1 Bit	CT
8	Button B1, scene 2	save	1 Bit	CT
9	Button B2, scene 2	recall	1 Bit	CT
10	Button B2, scene 2	save	1 Bit	CT
14	Button C1, scene 2	recall	1 Bit	CT
15	Button C1, scene 2	save	1 Bit	CT
16	Button C2, scene 2	recall	1 Bit	CT
17	Button C2, scene 2	save	1 Bit	CT
21	Button D1, scene 2	recall	1 Bit	CT
22	Button D1, scene 2	save	1 Bit	CT
23	Button D2, scene 2	recall	1 Bit	CT
24	Button D2, scene 2	save	1 Bit	CT
On short operation of a button a telegram „scene 2 recall" is sent via the corresponding object and on long operation of the button a telegram "scene 2 save" (object value = 1) is sent. A short operation of a button generates a command recalling a preset scene and a long operation of a button generates a command saving the current settings of a scene.				

8-bit scene recall or save

Obj	Name	Function	Length	Flag
0	Button A1, 8-bit scene	recall / save	1 Byte	CT
2	Button A2, 8-bit scene	recall / save	1 Byte	CT
7	Button B1, 8-bit scene	recall / save	1 Byte	CT
9	Button B2, 8-bit scene	recall / save	1 Byte	CT
14	Button C1, 8-bit scene	recall / save	1 Byte	CT
16	Button C2, 8-bit scene	recall / save	1 Byte	CT
21	Button D1, 8-bit scene	recall / save	1 Byte	CT
23	Button D2, 8-bit scene	recall / save	1 Byte	CT
On operation of a button the scene with the configured scene number (scene 1 .... scene 64) is recalled or saved via the corresponding object.				

Obj	Name	Function	Length	Flag
Bits 0 through 5 of the 8-bit scene object contain the scene number (1...64). The most significant bit 7 determines if a scene is recalled (bit value = 0) or saved (bit value = 1). Bit 6 is not used.				

Send 8-bit value: percentage value

Obj	Name	Function	Length	Flag
0	Button A1, 8-bit value	value	1 Byte	CT
2	Button A2, 8-bit value	value	1 Byte	CT
7	Button B1, 8-bit value	value	1 Byte	CT
9	Button B2, 8-bit value	value	1 Byte	CT
14	Button C1, 8-bit value	value	1 Byte	CT
16	Button C2, 8-bit value	value	1 Byte	CT
21	Button D1, 8-bit value	value	1 Byte	CT
23	Button D2, 8-bit value	value	1 Byte	CT
On operation of a button the percentage value (0 ... 100%) configured for this button is sent via the corresponding object.				

For each button with this function an additonal function may be configured. For more information about the additional objects see description under "Functions second telegram".

Send 8-bit value: decimal value

Obj	Name	Function	Length	Flag
0	Button A1, 8-bit value	value	1 Byte	CT
2	Button A2, 8-bit value	value	1 Byte	CT
7	Button B1, 8-bit value	value	1 Byte	CT
9	Button B2, 8-bit value	value	1 Byte	CT
14	Button C1, 8-bit value	value	1 Byte	CT
16	Button C2, 8-bit value	value	1 Byte	CT
21	Button D1, 8-bit value	value	1 Byte	CT
23	Button D2, 8-bit value	value	1 Byte	CT
On operation of a button the 8-bit value (0 ... 255) configured for this button is sent via the corresponding object.				

For each button with this function an additonal function may be configured. For more information about the additional objects see description under "Functions second telegram".

Send 16-bit value: temperature value

Obj	Name	Function	Length	Flag
0	Button A1, temperature	value	2 Byte	CT
2	Button A2, temperature	value	2 Byte	CT
7	Button B, temperature	value	2 Byte	CT
9	Button B2, temperature	value	2 Byte	CT

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14	Button C1, temperature	value	2 Byte	CT
16	Button C2, temperature	value	2 Byte	CT
21	Button D1, temperature	value	2 Byte	CT
23	Button D2, temperature	value	2 Byte	CT
On operation of a button the temperature value (0 ... 40°C) configured for this button is sent via the corresponding object.				

For each button with this function an additonal function may be configured. For more information about the additional objects see description under "Functions second telegram".

Send 16-bit value: brightness value

Obj	Name	Function	Length	Flag
0	Button A1, Brightness	value	2 Byte	CT
2	Button A2, Brightness	value	2 Byte	CT
7	Button B1, Brightness	value	2 Byte	CT
9	Button B2, Brightness	value	2 Byte	CT
14	Button C1, Brightness	value	2 Byte	CT
16	Button C2, Brightness	value	2 Byte	CT
21	Button D1, Brightness	value	2 Byte	CT
23	Button D2, Brightness	value	2 Byte	CT
On operation of a button the brightness value (0 ... 2000 lux) configured for this button is sent via the corresponding object.				

For each button with this function an additonal function may be configured. For more information about the additional objects see description under "Functions second telegram".

Send 16-bit value: decimal value

Obj	Name	Function	Length	Flag
0	Button A1, 16-bit value	value	2 Byte	CT
2	Button A2, 16-bit value	value	2 Byte	CT
7	Button B1, 16-bit value	value	2 Byte	CT
9	Button B2, 16-bit value	value	2 Byte	CT
14	Button C1, 16-bit value	value	2 Byte	CT
16	Button CA2, 16-bit value	value	2 Byte	CT
21	Button D1, 16-bit value	value	2 Byte	CT
23	Button D2, 16-bit value	value	2 Byte	CT
On operation of a button the percentage value (0 ... + 65535) configured for this button is sent via the corresponding object.				

For each button with this function an additonal function may be configured. For more information about the additional objects see description under "Functions second telegram".

Forced on, inactive / off, inactive

For each button with this function an additonal function may be configured. These are described in this section as the possible objects only appear in this context and are different from those described under "Functions second telegram".

Obj	Name	Function	Length	Flag
0	Button A1, forced control	On / Off / inactive	2 Bit	CT
1	Button A1, 2nd telegram, switching	On / Off	1 Bit	CT
2	Button A2, forced control	On / Off / inactive	2 Bit	CT
3	Button A2, 2nd telegram, switching	On / Off	1 Bit	CT
7	Button B1, forced control	On / Off / inactive	2 Bit	CT
8	Button B1, 2nd telegram, switching	On / Off	1 Bit	CT
9	Button B2, forced control	On / Off / inactive	2 Bit	CT
10	Button B2, 2nd telegram, switching	On / Off	1 Bit	CT
14	Button C1, forced control	On / Off / inactive	2 Bit	CT
15	Button C1, 2nd telegram, switching	On / Off	1 Bit	CT
16	Button C2, forced control	On / Off / inactive	2 Bit	CT
17	Button C2, 2nd telegram, switching	On / Off	1 Bit	CT
21	Button D1, forced control	On / Off / inactive	2 Bit	CT
22	Button D1, 2nd telegram, switching	On / Off	1 Bit	CT
23	Button D2, forced control	On / Off / inactive	2 Bit	CT
24	Button D2, 2nd telegram, switching	On / Off	1 Bit	CT
On short operation of one of the buttons A1, B1, C1 or D1 a "forced on" (binary value = 11) telegram and on short operation of one of the buttons A2, B2, C2 and D2 a "forced off" (binary value = 10) is sent via the corresponding object. Additionally, depending on the configuration an "On" or "Off" switching command is sent via the corresponding object for the second telegram of each button. On long operation of one of the buttons A1, B1, C1 or D1 a "deactivate forced control" (binary value = 01) telegram and on long operation of one of the buttons A2, B2, C2 and D2 a				

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Obj	Name	Function	Length	Flag
"deactivate forced control" (binary value = 00) is sent via the corresponding object. Additionally, depending on the configuration an "On" or "Off" switching command is sent via the corresponding object for the second telegram of each button. The second telegram can be activated with the following settings: short button operation = On long button operation = On short button operation = On long button operation = Off short button operation = Off long button operation = On short button operation = Off long button operation = Off E.g. when forced control is activated (short operation of button) then switching "On" and when forced control is deactivated (long operation of button) then switching "Off" can be sent via the corresponding object for the second telegram. These switching commands can be used to control actuators without 2-bit forced control object. A short button operation generates a command activating and a long button operation generates a command deactivating forced control.				

Forced off, inactive / on, inactive

For each button with this function an additonal function may be configured. These are described in this section as the possible objects only appear in this context and are different from those described under "Functions second telegram".

Obj	Name	Function	Length	Flag
0	Button A1, forced control	On / Off / inactive	2 Bit	CT
1	Button A1, 2nd telegram, switching	On / Off	1 Bit	CT
2	Button A2, forced control	On / Off / inactive	2 Bit	CT
3	Button A2, 2nd telegram, switching	On / Off	1 Bit	CT
7	Button B1, forced control	On / Off / inactive	2 Bit	CT
8	Button B1, 2nd telegram, switching	On / Off	1 Bit	CT
9	Button B2, forced control	On / Off / inactive	2 Bit	CT
10	Button B2, 2nd telegram, switching	On / Off	1 Bit	CT
14	Button C1, forced control	On / Off / inactive	2 Bit	CT
15	Button C1, 2nd telegram, switching	On / Off	1 Bit	CT
16	Button C2, forced control	On / Off / inactive	2 Bit	CT
17	Button C2, 2nd telegram, switching	On / Off	1 Bit	CT
21	Button D1, forced control	On / Off / inactive	2 Bit	CT
22	Button D1, 2nd telegram, switching	On / Off	1 Bit	CT
23	Button D2, forced control	On / Off / inactive	2 Bit	CT
24	Button D2, 2nd telegram, switching	On / Off	1 Bit	CT
On short operation of one of the buttons A1, B1, C1 or D1 a "forced off" (binary value = 10) telegram and on short operation of one of the buttons A2, B2, C2 and D2 a "forced on" (binary value = 11) is sent via the corresponding object. Additionally, depending on the configuration an "On" or "Off" switching command is sent via the corresponding object for the second telegram of each button. On long operation of one of the buttons A1, B1, C1 or D1 a "deactivate forced control" (binary value = 00) telegram and on long operation of one of the buttons A2, B2, C2 and D2 a "deactivate forced control" (binary value = 01) is sent via the corresponding object. Additionally, depending on the configuration an "On" or "Off" switching command is sent via the corresponding object for the second telegram of each button. The second telegram can be activated with the following settings: short button operation = On long button operation = On short button operation = On long button operation = Off short button operation = Off long button operation = On short button operation = Off long button operation = Off E.g. when forced control is activated (short operation of button) then switching "On" and when forced control is deactivated (long operation of button) then switching "Off" can be sent via the corresponding object for the second telegram. These switching commands can be used to control actuators without 2-bit forced control object. A short button operation generates a command activating and a long button operation generates a command deactivating forced control.				

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Functions/Objects when using „button pair"

Note:

Objects for buttons B1/B2, C1/C2 and D1/D2 are only present, when parameter „Device type" is set to double, triple or quadruple.

For all "button pair" functions an additonal time-delayed function may be configured for each button. The time delay starts with release of the button. For more information about the additional objects see description under "Functions second telegram".

Switching, dimming: On, brighter / Off, darker

Obj	Name	Function	Length	Flag
0	Button pair A, switching	On / Off	1 Bit	CT
2	Button pair A, dimming	brighter / darker	4 Bit	CT
7	Button pair B, switching	On / Off	1 Bit	CT
9	Button pair B, dimming	brighter / darker	4 Bit	CT
14	Button pair C, switching	On / Off	1 Bit	CT
16	Button pair C, dimming	brighter / darker	4 Bit	CT
21	Button pair D, switching	On / Off	1 Bit	CT
23	Button pair D, dimming	brighter / darker	4 Bit	CT
On a short operation of the buttons A1, B1, C1 or D1 an "On" switching telegram is sent via the corresponding object and on long operation a dimming "brighter" telegram is sent via the corresponding object. On a short operation of the buttons A2, B2, C2 or D2 an "Off" switching telegram is sent via the corresponding object and on long operation a dimming "darker" telegram is sent via the corresponding object. A short button operation generates a command for switching and a long button operation one for dimming the lighting.				

Switching, dimming: Off, darker / On, brighter

Obj	Name	Function	Length	Flag
0	Button pair A, switching	Off /On	1 Bit	CT
2	Button pair A, dimming	darker / brighter	4 Bit	CT
7	Button pair B, switching	Off /On	1 Bit	CT
9	Button pair B, dimming	darker / brighter	4 Bit	CT
14	Button pair C, switching	Off /On	1 Bit	CT
16	Button pair C, dimming	darker / brighter	4 Bit	CT
21	Button pair D, switching	Off /On	1 Bit	CT
23	Button pair D, dimming	darker / brighter	4 Bit	CT
On a short operation of the buttons A1, B1, C1 or D1 an "Off" switching telegram is sent via the corresponding object and on long operation a dimming "darker" telegram is sent via the corresponding object. On a short operation of the buttons A2, B2, C2 or D2 an "On" switching telegram is sent via the corresponding object and on long operation a dimming "brighter" telegram is sent via the corresponding object. A short button operation generates a command for switching and a long button operation one for dimming the lighting.				

Switching, dimming: Toggle, brighter / Toggle, darker

Obj	Name	Function	Length	Flag
0	Button pair A, switching	Toggle	1 Bit	CWT
2	Button pair A, dimming	brighter / darker	4 Bit	CT
7	Button pair B, switching	Toggle	1 Bit	CWT
9	Button pair B, dimming	brighter / darker	4 Bit	CT
14	Button pair C, switching	Toggle	1 Bit	CWT
16	Button pair C, dimming	brighter / darker	4 Bit	CT
21	Button pair D, switching	Toggle	1 Bit	CWT
23	Button pair D, dimming	brighter / darker	4 Bit	CT
On the first short operation of a button an „On" telegram is sent via the corresponding object and on the next short operation of the same button an "Off" telegram is sent. On each following short operation the value is inverted and then sent (toggle function). On a long operation of a button A1, B1, C1 or D1 a "brighter" dimming telegram is sent via the corrseponding object and likewise on long operation of a button A2, B2, C2 or D2 a "darker" dimming telegram is sent. A short press of a button generates a command switching and a long press of a button a command dimming the lighting.				

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Switching, dimming: Toggle, darker / Toggle, brighter

Obj	Name	Function	Length	Flag
0	Button pair A, switching	Toggle	1 Bit	CWT
2	Button pair A, dimming	darker / brighter	4 Bit	CT
7	Button pair B, switching	Toggle	1 Bit	CWT
9	Button pair B, dimming	darker / brighter	4 Bit	CT
14	Button pair C, switching	Toggle	1 Bit	CWT
16	Button pair C, dimming	darker / brighter	4 Bit	CT
21	Button pair D, switching	Toggle	1 Bit	CWT
23	Button pair D, dimming	darker / brighter	4 Bit	CT

On the first short operation of a button an „On" telegram is sent via the corresponding object and on the next short operation of the same button an "Off" telegram is sent. On each following short operation the value is inverted and then sent (toggle function).
On a long operation of a button A1, B1, C1 or D1 a "darker" dimming telegram is sent via the corrseponding object and likewise on long operation of a button A2, B2, C2 or D2 a "brighter" dimming telegram is sent.
A short press of a button generates a command switching and a long press of a button a command dimming the lighting.

Solar protection, slats: up / down

Obj	Name	Function	Length	Flag
0	Button pair A, slats	stop / open / close	1 Bit	CT
2	Button pair A, venetian blind	up/ down	1 Bit	CT
7	Button pair B, slats	stop / open / close	1 Bit	CT
9	Button pair B, venetian blind	up/ down	1 Bit	CT
14	Button pair C, slats	stop / open / close	1 Bit	CT
16	Button pair C, venetian blind	up/ down	1 Bit	CT
21	Button pair D, slats	stop / open / close	1 Bit	CT
23	Button pair D, venetian blind	up/ down	1 Bit	CT

On long operation of buttons A1, B1, C1 or D1 a move solar protection „Up" telegram is sent via the corresponding object and on short operation a command "stop / slats open".
On long operation of buttons A2, B2, C2 or D2 a move solar protection „Down" telegram is sent via the corresponding object and on short operation a command "stop / slats close".
A long press of a button generates a command to move the solar protection and a short press of a button generates a command stopping the motion of the solar protection or adjusting the slats by a step.

Solar protection, Slats: down / up

Obj	Name	Function	Length	Flag
0	Button pair A, slats	stop / close / open	1 Bit	CT
2	Button pair A, venetian blind	down / up	1 Bit	CT
7	Button pair B, slats	stop / close / open	1 Bit	CT
9	Button pair B, venetian blind	down / up	1 Bit	CT
14	Button pair C, slats	stop / close / open	1 Bit	CT
16	Button pair C, venetian blind	down / up	1 Bit	CT
21	Button pair D, slats	stop / close / open	1 Bit	CT
23	Button pair D, venetian blind	down / up	1 Bit	CT

On long operation of buttons A1, B1, C1 or D1 a move solar protection „Down" telegram is sent via the corresponding object and on short operation a command "stop / slats close".
On long operation of buttons A2, B2, C2 or D2 a move solar protection „Up" telegram is sent via the corresponding object and on short operation a command "stop / slats open".
A long press of a button generates a command to move the solar protection and a short press of a button generates a command stopping the motion of the solar protection or adjusting the slats by a step.

Roller shutter: Up, stop / Down, stop

Obj	Name	Function	Length	Flag
0	Button pair A, roller shutter	stop	1 Bit	CT
2	Button pair A, roller shutter	up/ down	1 Bit	CT
7	Button pair B, roller shutter	stop	1 Bit	CT
9	Button pair B, roller shutter	up/ down	1 Bit	CT
14	Button pair C, roller shutter	stop	1 Bit	CT
16	Button pair C, roller shutter	up/ down	1 Bit	CT

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Obj	Name	Function	Length	Flag
21	Button pair D, roller shutter	stop	1 Bit	CT
23	Button pair D, roller shutter	up/ down	1 Bit	CT
On long operation of buttons A1, B1, C1 or D1 a move roller shutter „Down" telegram is sent via the corresponding object and on short operation a command "stop". On long operation of buttons A2, B2, C2 or D2 a move roller shutter „Up" telegram is sent via the corresponding object and on short operation a command "stop". A long press of a button generates a command to move the roller shutter and a short press of a button generates a command stopping the motion of the roller shutter.				

Roller shutter: Down, stop / Up, stop

Obj	Name	Function	Length	Flag
0	Button pair A, roller shutter	stop	1 Bit	CT
2	Button pair A, roller shutter	down / up	1 Bit	CT
7	Button pair B, roller shutter	stop	1 Bit	CT
9	Button pair B, roller shutter	down / up	1 Bit	CT
14	Button pair C, roller shutter	stop	1 Bit	CT
16	Button pair C, roller shutter	down / up	1 Bit	CT
21	Button pair D, roller shutter	stop	1 Bit	CT
23	Button pair D, roller shutter	down / up	1 Bit	CT
On long operation of buttons A1, B1, C1 or D1 a move roller shutter „Up" telegram is sent via the corresponding object and on short operation a command "stop". On long operation of buttons A2, B2, C2 or D2 a move roller shutter „Down" telegram is sent via the corresponding object and on short operation a command "stop". A long press of a button generates a command to move the roller shutter and a short press of a button generates a command stopping the motion of the roller shutter.				

Send percent value variable (increment / decrement)

Obj	Name	Function	Length	Flag
0	Button pair A, percentage (variable)	value	1 Byte	CWTU
7	Button pair B, percentage (variable)	value	1 Byte	CWTU
14	Button pair C, percentage (variable)	value	1 Byte	CWTU
21	Button pair D, percentage (variable)	value	1 Byte	CWTU
On short operation of buttons A1, B1, C1 or D1 a telegram is sent via the corresponding object with a percentage value (0...100%) incremented by the configured percentage step. On short operation of buttons A2, B2, C2 or D2 a telegram is sent via the corresponding object with a percentage value (0...100%) decremented by the configured percentage step. On long operation of buttons A1, B1, C1 or D1 the percentage value is incremented step by step and sent cyclically via the corresponding object as long as the button is pressed. On long operation of buttons A2, B2, C2 or D2 the percentage value is decremented step by step and sent cyclically via the corresponding object as long as the button is pressed.				

Send percent value variable (decrement / increment)

Obj	Name	Function	Length	Flag
0	Button pair A, percentage (variable)	value	1 Byte	CWTU
7	Button pair B, percentage (variable)	value	1 Byte	CWTU
14	Button pair C, percentage (variable)	value	1 Byte	CWTU
21	Button pair D, percentage (variable)	value	1 Byte	CWTU
On short operation of buttons A1, B1, C1 or D1 a telegram is sent via the corresponding object with a percentage value (0...100%) decremented by the configured percentage step. On short operation of buttons A2, B2, C2 or D2 a telegram is sent via the corresponding object with a percentage value (0...100%) incremented by the configured percentage step. On long operation of buttons A1, B1, C1 or D1 the percentage value is decremented step by step and sent cyclically via the corresponding object as long as the button is pressed. On long operation of buttons A2, B2, C2 or D2 the percentage value is incremented step by step and sent cyclically via the corresponding object as long as the button is pressed.				

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Send 8-bit value variable (increment / decrement)

Obj	Name	Function	Length	Flag
0	Button pair A, 8-bit value (variable)	value	1 Byte	CWTU
7	Button pair B, 8-bit value (variable)	value	1 Byte	CWTU
14	Button pair C, 8-bit value (variabel)	value	1 Byte	CWTU
21	Button pair D, 8-bit value (variabel)	value	1 Byte	CWTU

On short operation of buttons A1, B1, C1 or D1 a telegram is sent via the corresponding object with an 8-bit value (0...255) incremented by the configured step.
On short operation of buttons A2, B2, C2 or D2 a telegram is sent via the corresponding object with an 8-bit value (0...255) decremented by the configured step.
On long operation of buttons A1, B1, C1 or D1 the 8-bit value is incremented step by step and sent cyclically via the corresponding object as long as the button is pressed.
On long operation of buttons A2, B2, C2 or D2 the 8-bit value is decremented step by step and sent cyclically via the corresponding object as long as the button is pressed.

Send 8-bit value variable (decrement / increment)

Obj	Name	Function	Length	Flag
0	Button pair A, 8-bit value (variable)	value	1 Byte	CWTU
7	Button pair B, 8-bit value (variable)	value	1 Byte	CWTU
14	Button pair C, 8-bit value (variable)	value	1 Byte	CWTU
21	Button pair D, 8-bit value (variable)	value	1 Byte	CWTU

On short operation of buttons A1, B1, C1 or D1 a telegram is sent via the corresponding object with an 8-bit value (0...255) decremented by the configured step.
On short operation of buttons A2, B2, C2 or D2 a telegram is sent via the corresponding object with an 8-bit value (0...255) incremented by the configured step.
On long operation of buttons A1, B1, C1 or D1 the 8-bit value is decremented step by step and sent cyclically via the corresponding object as long as the button is pressed.
On long operation of buttons A2, B2, C2 or D2 the 8-bit value is incremented step by step and sent cyclically via the corresponding object as long as the button is pressed.

1-bit scene 1 / 2: recall / save

Obj	Name	Function	Length	Flag
0	Button pair A, scene 1 / 2	recall	1 Bit	CT
2	Button pair A, scene 1 / 2	save	1 Bit	CT
7	Button pair B, scene 1 / 2	recall	1 Bit	CT
9	Button pair B, scene 1 / 2	save	1 Bit	CT
14	Button pair C, scene 1 / 2	recall	1 Bit	CT
16	Button pair C, scene 1 / 2	save	1 Bit	CT
21	Button pair D, scene 1 / 2	recall	1 Bit	CT
23	Button pair D, scene 1 / 2	save	1 Bit	CT

On short operation of buttons A1, B1, C1 or D1 a telegram „scene 1 recall" is sent via the corresponding object and on long operation of the button a telegram "scene 1 save" (object value = 0) is sent.
On short operation of buttons A2, B2, C2 or D2 a telegram „scene 2 recall" is sent via the corresponding object and on long operation of the button a telegram "scene 2 save" (object value = 1) is sent.
A short operation of a button generates a command recalling a preset scene and a long operation of a button generates a command saving the current settings of a scene.

1-bit scene 2 / 1: recall / save

Obj	Name	Function	Length	Flag
0	Button pair A, scene 2 / 1	recall	1 Bit	CT
2	Button pair A, scene 2 / 1	save	1 Bit	CT
7	Button pair B, scene 2 / 1	recall	1 Bit	CT
9	Button pair B, scene 2 / 1	save	1 Bit	CT
14	Button pair C, scene 2 / 1	recall	1 Bit	CT
16	Button pair C, scene 2 / 1	save	1 Bit	CT
21	Button pair D, scene 2 / 1	recall	1 Bit	CT
23	Button pair D, scene 2 / 1	save	1 Bit	CT

On short operation of buttons A1, B1, C1 or D1 a telegram „scene 2 recall" is sent via the corresponding object and on long operation of the button a telegram "scene 2 save" (object value = 1) is sent.
On short operation of buttons A2, B2, C2 or D2 a telegram „scene 1 recall" is sent via the corresponding object and on long operation of the button a telegram "scene 1 save" (object value = 0) is sent.
A short operation of a button generates a command recalling a preset scene and a long operation of a button generates a command saving the current settings of a scene.

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8-bit scene recall and save

Obj	Name	Function	Length	Flag
0	Button A1, 8-bit scene	recall / save	1 Byte	CT
2	Button A2, 8-bit scene	recall / save	1 Byte	CT
7	Button B1, 8-bit scene	recall / save	1 Byte	CT
9	Button B2, 8-bit scene	recall / save	1 Byte	CT
14	Button C1, 8-bit scene	recall / save	1 Byte	CT
16	Button C2, 8-bit scene	recall / save	1 Byte	CT
21	Button D1, 8-bit scene	recall / save	1 Byte	CT
23	Button D2, 8-bit scene	recall / save	1 Byte	CT

On short operation of a button the scene with the configured scene number (scene 1 .... scene 64) is recalled and on long operation of the button the scene is saved via the corresponding object.
Bits 0 through 5 of the 8-bit scene object contain the scene number (1...64). The most significant bit 7 determines if a scene is recalled (bit value = 0) or saved (bit value = 1).
Bit 6 is not used.
A short operation of a button generates a command recalling a preset scene and a long operation of a button generates a command saving the current settings of a scene.

Forced on, inactive / off, inactive

Obj	Name	Function	Length	Flag
0	Button A1, forced control	forced On / inactive	2 Bit	CT
2	Button A2, forced control	forced Off / inactive	2 Bit	CT
7	Button B1, forced control	forced On / inactive	2 Bit	CT
9	Button B2, forced control	forced Off / inactive	2 Bit	CT
14	Button C1, forced control	forced On / inactive	2 Bit	CT
16	Button C2, forced control	forced Off / inactive	2 Bit	CT
21	Button D1, forced control	forced On / inactive	2 Bit	CT
23	Button D2, forced control	forced Off / inactive	2 Bit	CT

On short operation of one of the buttons A1, B1, C1 or D1 a “forced on” (binary value = 11) telegram and on short operation of one of the buttons A2, B2, C2 and D2 a “forced off” (binary value = 10) is sent via the corresponding object.
On long operation of one of the buttons A1, B1, C1 or D1 a “deactivate forced control” (binary value = 01) telegram and on long operation of one of the buttons A2, B2, C2 and D2 a “deactivate forced control” (binary value = 00) is sent via the corresponding object.
A short button operation generates a command activating and a long button operation generates a command deactivating forced control.

Forced off, inactive / on, inactive

Obj	Name	Function	Length	Flag
0	Button A1, forced control	forced Off / inactive	2 Bit	CT
2	Button A2, forced control	forced On / inactive	2 Bit	CT
7	Button B1, forced control	forced Off / inactive	2 Bit	CT
9	Button B2, forced control	forced On / inactive	2 Bit	CT
14	Button C1, forced control	forced Off / inactive	2 Bit	CT
16	Button C2, forced control	forced On / inactive	2 Bit	CT
21	Button D1, forced control	forced Off / inactive	2 Bit	CT
23	Button D2, forced control	forced On / inactive	2 Bit	CT

On short operation of one of the buttons A1, B1, C1 or D1 a “forced off” (binary value = 10) telegram and on short operation of one of the buttons A2, B2, C2 and D2 a “forced on” (binary value = 11) is sent via the corresponding object.
On long operation of one of the buttons A1, B1, C1 or D1 a “deactivate forced control” (binary value = 00) telegram and on long operation of one of the buttons A2, B2, C2 and D2 a “deactivate forced control” (binary value = 01) is sent via the corresponding object.
A short button operation generates a command activating and a long button operation generates a command deactivating forced control.

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Functions/Objects for an additional button function (send additional or second telegram) for single buttons and button pairs

Note:

Objects for buttons B1/B2, C1/C2 and D1/D2 are only present, when parameter „Device type" is set to double, triple or quadruple.

If an additional function per button can be selected when configuring single buttons or button pairs, then one of these additional functions may be sent after a time delay or on long operation of a button via a second communication object per button:

- Switching On
- Switching Off
- Send percentage
- Send 8-bit value
- Send temperature value
- Send brightness value
- Send 16-bit value
- 1-bit scene: recall / save scene 1
- 1-bit scene: recall / save scene 2
- 8-bit scene: recall
- Forced on
- Forced off
- Forced control off

Additonal button function, Switching: On

Obj	Name	Function	Length	Flag
1	Button A1, 2nd telegram, switching	On	1 Bit	CT
3	Button A2, 2nd telegram, switching	On	1 Bit	CT
8	Button B1, 2nd telegram, switching	On	1 Bit	CT
10	Button B2, 2nd telegram, switching	On	1 Bit	CT
15	Button C1, 2nd telegram, switching	On	1 Bit	CT
17	Button C2, 2nd telegram, switching	On	1 Bit	CT
22	Button D1, 2nd telegram, switching	On	1 Bit	CT
24	Button D2, 2nd telegram, switching	On	1 Bit	CT
On operation of one of the buttons the switching "on" command configured as second telegram for this button is sent immediately or time delayed via the corresponding second object.				

Additonal button function, Switching: Off

Obj	Name	Function	Length	Flag
1	Button A1, 2nd telegram, switching	Off	1 Bit	CT
3	Button A2, 2nd telegram, switching	Off	1 Bit	CT
8	Button B1, 2nd telegram, switching	Off	1 Bit	CT
10	Button B2, 2nd telegram, switching	Off	1 Bit	CT
15	Button C1, 2nd telegram, switching	Off	1 Bit	CT
17	Button C2, 2nd telegram, switching	Off	1 Bit	CT
22	Button D1, 2nd telegram, switching	Off	1 Bit	CT
24	Button D2, 2nd telegram, switching	Off	1 Bit	CT
On operation of one of the buttons the switching "off" command configured as second telegram for this button is sent immediately or time delayed via the corresponding second object.				

Additonal button function, Send percentage

Obj	Name	Function	Length	Flag
1	Button A1, 2nd telegram, Percentage value	value	1 Byte	CT
3	Button A2, 2nd telegram, Percentage value	value	1 Byte	CT
8	Button B1, 2nd telegram, Percentage value	value	1 Byte	CT
10	Button B2, 2nd telegram, Percentage value	value	1 Byte	CT
15	Button C1, 2nd telegram, Percentage value	value	1 Byte	CT
17	Button C2, 2nd telegram, Percentage value	value	1 Byte	CT
22	Button D1, 2nd telegram, Percentage value	value	1 Byte	CT
24	Button D2, 2nd telegram, Percentage value	value	1 Byte	CT
On operation of one of the buttons the percent value (0...100%) configured as second telegram for this button is sent immediately or time delayed via the corresponding second object.				

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Additonal button function, Send 8-bit value

Obj	Name	Function	Length	Flag
1	Button A1, 2nd telegram, 8-bit value	value	1 Byte	CT
3	Button A2, 2nd telegram, 8-bit value	value	1 Byte	CT
8	Button B1, 2nd telegram, 8-bit value	value	1 Byte	CT
10	Button B2, 2nd telegram, 8-bit value	value	1 Byte	CT
15	Button C1, 2nd telegram, 8-bit value	value	1 Byte	CT
17	Button C2, 2nd telegram, 8-bit value	value	1 Byte	CT
22	Button D1, 2nd telegram, 8-bit value	value	1 Byte	CT
24	Button D2, 2nd telegram, 8-bit value	value	1 Byte	CT
On operation of one of the buttons the 8-bit value (0...255) configured as second telegram for this button is sent immediately or time delayed via the corresponding second object.				

Additonal button function, Send temperature value

Obj	Name	Function	Length	Flag
1	Button A1, 2nd telegram, temperature	value	2 Byte	CT
3	Button A2, 2nd telegram, temperature	value	2 Byte	CT
8	Button B1, 2nd telegram, temperature	value	2 Byte	CT
10	Button B2, 2nd telegram, temperature	value	2 Byte	CT
15	Button C1, 2nd telegram, temperature	value	2 Byte	CT
17	Button C2, 2nd telegram, temperature	value	2 Byte	CT
22	Button D1, 2nd telegram, temperature	value	2 Byte	CT
24	Button D2, 2nd telegram, temperature	value	2 Byte	CT
On operation of one of the buttons the temperature value (0...40°C) configured as second telegram for this button is sent immediately or time delayed via the corresponding second object.				

Additonal button function, Send brightness value

Obj	Name	Function	Length	Flag
1	Button A1, 2nd telegram, Brightness	value	2 Byte	CT
3	Button A2, 2nd telegram, Brightness	value	2 Byte	CT
8	Button B1, 2nd telegram, Brightness	value	2 Byte	CT
10	Button B2, 2nd telegram, Brightness	value	2 Byte	CT
15	Button C1, 2nd telegram, Brightness	value	2 Byte	CT
17	Button C2, 2nd telegram, Brightness	value	2 Byte	CT
22	Button D1, 2nd telegram, Brightness	value	2 Byte	CT
24	Button D2, 2nd telegram, Brightness	value	2 Byte	CT
On operation of one of the buttons the brightness value (0...2000 Lux) configured as second telegram for this button is sent immediately or time delayed via the corresponding second object.				

Additonal button function, Send 16-bit value

Obj	Name	Function	Length	Flag
1	Button A1, 2nd telegram, 16-bit value	value	2 Byte	CT
3	Button A2, 2nd telegram, 16-bit value	value	2 Byte	CT
8	Button B1, 2nd telegram, 16-bit value	value	2 Byte	CT
10	Button B2, 2nd telegram, 16-bit value	value	2 Byte	CT
15	Button C1, 2nd telegram, 16-bit value	value	2 Byte	CT
17	Button C2, 2nd telegram, 16-bit value	value	2 Byte	CT
22	Button D1, 2nd telegram, 16-bit value	value	2 Byte	CT
24	Button D2, 2nd telegram, 16-bit value	value	2 Byte	CT
On operation of one of the buttons the 16-bit value (0...65535) configured as second telegram for this button is sent immediately or time delayed via the corresponding second object.				

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Additonal button function, 1-bit scene: recall / save scene 1

Obj	Name	Function	Length	Flag
1	Button A1, 2nd telegram, scene 1	recall / save	1 Bit	CT
3	Button A2, 2nd telegram, scene 1	recall / save	1 Bit	CT
8	Button B1, 2nd telegram, scene 1	recall / save	1 Bit	CT
10	Button B2, 2nd telegram, scene 1	recall / save	1 Bit	CT
15	Button C1, 2nd telegram, scene 1	recall / save	1 Bit	CT
17	Button C2, 2nd telegram, scene 1	recall / save	1 Bit	CT
22	Button D1, 2nd telegram, scene 1	recall / save	1 Bit	CT
24	Button D2, 2nd telegram, scene 1	recall / save	1 Bit	CT

On operation of one of the buttons the scene 1 (object value = 0) configured as second telegram for this button is sent immediately or time delayed via the corresponding second object. Scene 1 is recalled if this object is connected to a 1-bit scene object for recalling a scene. Scene 1 is saved if this object is connected to a 1-bit scene object for saving a scene.

Additonal button function, 1-bit scene: recall / save scene 2

Obj	Name	Function	Length	Flag
1	Button A1, 2nd telegram, scene 2	recall / save	1 Bit	CT
3	Button A2, 2nd telegram, scene 2	recall / save	1 Bit	CT
8	Button B1, 2nd telegram, scene 2	recall / save	1 Bit	CT
10	Button B2, 2nd telegram, scene 2	recall / save	1 Bit	CT
15	Button C1, 2nd telegram, scene 2	recall / save	1 Bit	CT
17	Button C2, 2nd telegram, scene 2	recall / save	1 Bit	CT
22	Button D1, 2nd telegram, scene 2	recall / save	1 Bit	CT
24	Button D2, 2nd telegram, scene 2	recall / save	1 Bit	CT

On operation of one of the buttons the scene 2 (object value = 1) configured as second telegram for this button is sent immediately or time delayed via the corresponding second object. Scene 2 is recalled if this object is connected to a 1-bit scene object for recalling a scene. Scene 2 is saved if this object is connected to a 1-bit scene object for saving a scene.

Additonal button function, 8-bit scene recall

Obj	Name	Function	Length	Flag
1	Button A1, 2nd telegram, 8-bit scene	recall	1 Byte	CT
3	Button A2, 2nd telegram, 8-bit scene	recall	1 Byte	CT
8	Button B1, 2nd telegram, 8-bit scene	recall	1 Byte	CT
10	Button B2, 2nd telegram, 8-bit scene	recall	1 Byte	CT
15	Button C1, 2nd telegram, 8-bit scene	recall	1 Byte	CT
17	Button C2, 2nd telegram, 8-bit scene	recall	1 Byte	CT
22	Button D1, 2nd telegram, 8-bit scene	recall	1 Byte	CT
24	Button D2, 2nd telegram, 8-bit scene	recall	1 Byte	CT

On operation of one of the buttons the scene with the preset number (scene 1 ... scene 64) configured as second telegram for this button is recalled immediately or time delayed via the corresponding second object.
Bits 0 through 5 of the 8-bit scene object contain the scene number (1...64). The most significant bit 7 determines if a scene is recalled (bit value = 0) or saved (bit value = 1).
Bit 6 is not used.

Additonal button function, forced on

Obj	Name	Function	Length	Flag
1	Button A1, 2nd telegram, forced control	forced On	2 Bit	CT
3	Button A2, 2nd telegram, forced control	forced On	2 Bit	CT
8	Button B1, 2nd telegram, forced control	forced On	2 Bit	CT
10	Button B2, 2nd telegram, forced control	forced On	2 Bit	CT
15	Button C1, 2nd telegram, forced control	forced On	2 Bit	CT
17	Button C2, 2nd telegram, forced control	forced On	2 Bit	CT
22	Button D1, 2nd telegram, forced control	forced On	2 Bit	CT
24	Button D2, 2nd telegram, forced control	forced On	2 Bit	CT

On operation of one of the buttons the “forced on” command (binary value = 11) configured as second telegram for this button is sent immediately or time delayed via the corresponding second object.

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Additonal button function, forced off

Obj	Name	Function	Length	Flag
1	Button A1, 2nd telegram, forced control	forced Off	2 Bit	CT
3	Button A2, 2nd telegram, forced control	forced Off	2 Bit	CT
8	Button B1, 2nd telegram, forced control	forced Off	2 Bit	CT
10	Button B2, 2nd telegram, forced control	forced Off	2 Bit	CT
15	Button C1, 2nd telegram, forced control	forced Off	2 Bit	CT
17	Button C2, 2nd telegram, forced control	forced Off	2 Bit	CT
22	Button D1, 2nd telegram, forced control	forced Off	2 Bit	CT
24	Button D2, 2nd telegram, forced control	forced Off	2 Bit	CT
On operation of one of the buttons the "forced off" command (binary value = 10) configured as second telegram for this button is sent immediately or time delayed via the corresponding second object.				

Additonal button function, forced control off

Obj	Name	Function	Length	Flag
1	Button A1, 2nd telegram, forced control	forced control off	2 Bit	CT
3	Button A2, 2nd telegram, forced control	forced control off	2 Bit	CT
8	Button B1, 2nd telegram, forced control	forced control off	2 Bit	CT
10	Button B2, 2nd telegram, forced control	forced control off	2 Bit	CT
15	Button C1, 2nd telegram, forced control	forced control off	2 Bit	CT
17	Button C2, 2nd telegram, forced control	forced control off	2 Bit	CT
22	Button D1, 2nd telegram, forced control	forced control off	2 Bit	CT
24	Button D2, 2nd telegram, forced control	forced control off	2 Bit	CT
On operation of one of the buttons the "forced control off" command (binary value = 00) configured as second telegram for this button is sent immediately or time delayed via the corresponding second object.				

Objects Status LEDs

Obj	Name	Function	Length	Flag
4	Status LED A1	On / Off	1 Bit	CRWTU
		8-Bit value	1 Byte	
		Lux value	2 Byte	
		Temperature value		
		16-Bit value		
5	Status LED A2	On / Off	1 Bit	CRWTU
		8-Bit value	1 Byte	
		Lux value	2 Byte	
		Temperature value		
		16-Bit value		
11	Status LED B1	On / Off	1 Bit	CRWTU
		8-Bit value	1 Byte	
		Lux value	2 Byte	
		Temperature value		
		16-Bit value		
12	Status LED B2	On / Off	1 Bit	CRWTU
		8-Bit value	1 Byte	
		Lux value	2 Byte	
		Temperature value		
		16-Bit value		
18	Status LED C1	On / Off	1 Bit	CRWTU
		8-Bit value	1 Byte	
		Lux value	2 Byte	
		Temperature value		
		16-Bit value		
19	Status LED C2	On / Off	1 Bit	CRWTU
		8-Bit value	1 Byte	
		Lux value	2 Byte	
		Temperature value		
		16-Bit value		
25	Status LED D1	On / Off	1 Bit	CRWTU
		8-Bit value	1 Byte	
		Lux value	2 Byte	
		Temperature value		
		16-Bit value		
26	Status LED D2	On / Off	1 Bit	CRWTU
		8-Bit value	1 Byte	
		Lux value	2 Byte	
		Temperature value		
		16-Bit value		
The status to be displayed by the LED is received via the group address assigned to this object If the object is configured as type "1 Byte" or "2 Byte" then the LED can be switched on, off or flashing dependent on two threshold values.				

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Objects IR receiver decoder

As described for single buttons / button pairs above, for each of the 16 IR channels functions can be assigned to the individual buttons of an IR channel or to the button pair. Likewise, additional functions can be selected dependent on the selected main functions.
Additionally, the wall switch can receive each up to 16 brightness values, temperature values, motion detections and IR ID numbers from corresponding IR transmitters and send these onto the bus.
The following documents these functions only for the first and the sixteenth IR channel.
Depending on the selected IR channel block the number of the first IR channel is 0, 16, 32, or 48. Accordingly this first channel is named as C00/16/32/48.
The naming ">>1" corresponds with the IR hand-held remote button labeled with "1" or with an arrow pointing up.
The naming "<<0" corresponds with the IR hand-held remote button labeled with "0" or with an arrow pointing down.

For all IR decoder functions for "button pair" an additonal time-delayed function may be configured for each button. The time delay starts with release of the button. For more information about the additional objects see description under "Functions second telegram".

IR decoder functions, single buttons - Switching: On

Obj	Name	Function	Length	Flag
28	C00/16/32/48 >>1, switching	On	1 Bit	CT
30	C00/16/32/48 <<0, switching	On	1 Bit	CT
...	...	...	...	...
133	C15/31/47/63 >>1, switching	On	1 Bit	CT
135	C15/31/47/63 <<0, switching	On	1 Bit	CT
When one of the buttons is pressed an "On" switching telegram is sent via the corresponding object.				

For each button with this function an additonal function may be configured. For more information about the additional objects see description under "Functions second telegram".

IR decoder functions, single buttons - Switching: Off

Obj	Name	Function	Length	Flag
28	C00/16/32/48 >>1, switching	Off	1 Bit	CT
30	C00/16/32/48 <<0, switching	Off	1 Bit	CT
...	...	...	...	...
133	C15/31/47/63 >>1, switching	Off	1 Bit	CT
135	C15/31/47/63 <<0, switching	Off	1 Bit	CT
When one of the buttons is pressed an "Off" switching telegram is sent via the corresponding object.				

For each button with this function an additonal function may be configured. For more information about the additional objects see description under "Functions second telegram".

IR decoder functions, single buttons - Switching: Toggle

Obj	Name	Function	Length	Flag
28	C00/16/32/48 >>1, switching	Toggle	1 Bit	CWT
30	C00/16/32/48 <<0, switching	Toggle	1 Bit	CWT
...	...	...	...	...
133	C15/31/47/63 >>1, switching	Toggle	1 Bit	CWT
135	C15/31/47/63 <<0, switching	Toggle	1 Bit	CWT
On the first operation of a button an „On" telegram is sent via the corresponding object and on the next operation of the same button an "Off" telegram is sent. On each following operation the value is inverted and then sent (toggle function).				

IR decoder functions, single buttons - Switching, dimming: Toggle, brighter / darker (1-button dimming)

Obj	Name	Function	Length	Flag
28	C00/16/32/48 >>1, switching	Toggle	1 Bit	CWT
29	C00/16/32/48 >>1, dimming	brighter / darker	4 Bit	CT
30	C00/16/32/48 <<0, switching	Toggle	1 Bit	CWT
31	C00/16/32/48 <<0, dimming	brighter / darker	4 Bit	CT
...	...	...	...	...

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Obj	Name	Function	Length	Flag
133	C15/31/47/63 >>1, switching	Toggle	1 Bit	CWT
134	C15/31/47/63 >>1, dimming	brighter / darker	4 Bit	CT
135	C15/31/47/63 <<0, switching	Toggle	1 Bit	CWT
136	C15/31/47/63 <<0, dimming	brighter / darker	4 Bit	CT
On the first operation of a button an „On" telegram is sent via the corresponding object and on the next operation of the same button an "Off" telegram is sent. On each following operation the value is inverted and then sent (toggle function). On a long operation of a button a "brighter" dimming telegram is sent via the corrseponding object and on the next operation of the same button a "darker" dimming telegram is sent. On each following long operation the dimming direction (brighter / darker) is changed. After a switching on command the dimming direction is preset to „darker" and after a switching off command the dimming direction is preset to "brighter". A short press of a button generates a switching command and a long press of a button generates a dimming command.				

IR decoder functions, single buttons - Door bell function: drücken = On, loslassen = Off

Obj	Name	Function	Length	Flag
28	C00/16/32/48 >>1, bell function	On / Off	1 Bit	CT
30	C00/16/32/48 <<0, bell function	On / Off	1 Bit	CT
...	...	...	...	...
133	C15/31/47/63 >>1, bell function	On / Off	1 Bit	CT
135	C15/31/47/63 <<0, bell function	On / Off	1 Bit	CT
On pressing a button a switching „On" telegram is sent via the corresonding object and on releasing the button a telegram "Off" is sent.				

IR decoder functions, single buttons - Door bell function: press = Off, release = On

Obj	Name	Function	Length	Flag
28	C00/16/32/48 >>1, bell function	Off /On	1 Bit	CT
30	C00/16/32/48 <<0, bell function	Off /On	1 Bit	CT
...	...	...	...	...
133	C15/31/47/63 >>1, bell function	Off /On	1 Bit	CT
135	C15/31/47/63 <<0, bell function	Off /On	1 Bit	CT
On pressing a button a switching „Off" telegram is sent via the corresonding object and on releasing the button a telegram "On" is sent.				

IR decoder functions, single buttons - Solar protection, Slats: up / down / stop (1-button solar protection control)

Obj	Name	Function	Length	Flag
28	C00/16/32/48 >>1, slats	stop / open / close	1 Bit	CT
29	C00/16/32/48 >>1, venetian blind	up/ down	1 Bit	CWT
30	C00/16/32/48 <<0, slats	stop / open / close	1 Bit	CT
31	C00/16/32/48 <<0, venetian blind	up/ down	1 Bit	CWT
...	...	...	...	...
133	C15/31/47/63 >>1, slats	stop / open / close	1 Bit	CT
134	C15/31/47/63 >>1, venetian blind	up/ down	1 Bit	CWT
135	C15/31/47/63 <<0, slats	stop / open / close	1 Bit	CT
136	C15/31/47/63 <<0, solar protection	up/ down	1 Bit	CWT
On the first long operation of a button a move solar protection „Down" telegram is sent via the corresponding object and on the next long operation of the same button a move solar protection "Up" telegram is sent. On each following long operation the motion direction (Up/Down) is changed. On each short operation of a button a command "stop / slats open" is sent via the corresponding object if previously the solar protection was moved down. If previously the solar protection was moved up, on each short operation of a button a command "stop / slat close" is sent. The motion direction of the slat command (open / close) is always opposite to the direction of the last motion (down / up) command. A long press of a button generates a command to move the solar protection and a short press of a button generates a command stopping the motion of the solar protection or adjusting the slats by a step.				

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IR decoder functions, single buttons - Roller shutter control: up / down / stop (1 –button roller shutter control)

Obj	Name	Function	Length	Flag
28	C00/16/32/48 >>1, roller shutter	stop	1 Bit	CT
29	C00/16/32/48 >>1, roller shutter	up/ down	1 Bit	CT
30	C00/16/32/48 <<0, roller shutter	stop	1 Bit	CT
31	C00/16/32/48 <<0, roller shutter	up/ down	1 Bit	CT
...	...	...	...	...
133	C15/31/47/63 >>1, roller shutter	stop	1 Bit	CT
134	C15/31/47/63 >>1, roller shutter	up/ down	1 Bit	CT
135	C15/31/47/63 <<0, roller shutter	stop	1 Bit	CT
136	C15/31/47/63 <<0, roller shutter	up/ down	1 Bit	CT
On the first long operation of a button a move roller shutter „Down" telegram is sent via the corresponding object and on the next long operation of the same button a move roller shutter "Up" telegram is sent. On each following long operation the motion direction (Up/Down) is changed. On each short operation of a button a command "stop" is sent via the corresponding object. A long press of a button generates a command to move the roller shutter and a short press of a button generates a command stopping the motion of the roller shutter.				

IR decoder functions, single buttons - 1-bit scene 1: recall / save

Obj	Name	Function	Length	Flag
28	C00/16/32/48 >>1, scene 1	recall	1 Bit	CT
29	C00/16/32/48 >>1, scene 1	save	1 Bit	CT
30	C00/16/32/48 <<0, scene 1	recall	1 Bit	CT
31	C00/16/32/48 <<0, scene 1	save	1 Bit	CT
...	...	...	...	...
133	C15/31/47/63 >>1, scene 1	recall	1 Bit	CT
134	C15/31/47/63 >>1, scene 1	save	1 Bit	CT
135	C15/31/47/63 <<0, scene 1	recall	1 Bit	CT
136	C15/31/47/63 <<0, scene 1	save	1 Bit	CT
On short operation of a button a telegram „scene 1 recall" is sent via the corresponding object and on long operation of the button a telegram "scene 1 save" (object value = 0) is sent. A short operation of a button generates a command recalling a preset scene and a long operation of a button generates a command saving the current settings of a scene.				

IR decoder functions, single buttons - 1-bit scene 2: recall / save

Obj	Name	Function	Length	Flag
28	C00/16/32/48 >>1, scene 2	recall	1 Bit	CT
29	C00/16/32/48 >>1, scene 2	save	1 Bit	CT
30	C00/16/32/48 <<0, scene 2	recall	1 Bit	CT
31	C00/16/32/48 <<0, scene 2	save	1 Bit	CT
...	...	...	...	...
133	C15/31/47/63 >>1, scene 2	recall	1 Bit	CT
134	C15/31/47/63 >>1, scene 2	save	1 Bit	CT
135	C15/31/47/63 <<0, scene 2	recall	1 Bit	CT
136	C15/31/47/63 <<0, scene 2	save	1 Bit	CT
On short operation of a button a telegram „scene 2 recall" is sent via the corresponding object and on long operation of the button a telegram "scene 2 save" (object value = 1) is sent. A short operation of a button generates a command recalling a preset scene and a long operation of a button generates a command saving the current settings of a scene.				

IR decoder functions, single buttons - 8-bit scene: recall respectively recall or save

Obj	Name	Function	Length	Flag
28	C00/16/32/48 >>1, 8-bit scene	recall / save	1 Byte	CT
30	C00/16/32/48 <<0, 8-bit scene	recall / save	1 Byte	CT
...	...	...	...	...
133	C15/31/47/63 >>1, 8-bit scene	recall / save	1 Byte	CT
135	C15/31/47/63 <<0, 8-bit scene	recall / save	1 Byte	CT
On operation of a button the scene with the configured scene number (scene 1 .... scene 64) is recalled or saved via the corresponding object. Bits 0 through 5 of the 8-bit scene object contain the scene number (1...64). The most significant bit 7 determines if a scene is recalled (bit value = 0) or saved (bit value = 1). Bit 6 is not used.				

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IR decoder functions, single buttons - Send 8-bit value: percentage value

Obj	Name	Function	Length	Flag
28	C00/16/32/48 >>1, 8-bit value	value	1 Byte	CT
30	C00/16/32/48 <<0, 8-bit value	value	1 Byte	CT
...	...	...	...	...
133	C15/31/47/63 >>1, 8-bit value	value	1 Byte	CT
135	C15/31/47/63 <<0, 8-bit value	value	1 Byte	CT
On operation of a button the percentage value (0 ... 100%) configured for this button is sent via the corresponding object.				

For each button with this function an additonal function may be configured. For more information about the additional objects see description under "Functions second telegram".

IR decoder functions, single buttons - Send 8-bit value: decimal value

Obj	Name	Function	Length	Flag
28	C00/16/32/48 >>1, 8-bit value	value	1 Byte	CT
30	C00/16/32/48 <<0, 8-bit value	value	1 Byte	CT
...	...	...	...	...
133	C15/31/47/63 >>1, 8-bit value	value	1 Byte	CT
135	C15/31/47/63 <<0, 8-bit value	value	1 Byte	CT
On operation of a button the 8-bit value (0 ... 255) configured for this button is sent via the corresponding object.				

For each button with this function an additonal function may be configured. For more information about the additional objects see description under "Functions second telegram".

IR decoder functions, single buttons - Send 16-bit value: temperature value

Obj	Name	Function	Length	Flag
28	C00/16/32/48 >>1, temperature	value	2 Byte	CT
30	C00/16/32/48 <<0, temperature	value	2 Byte	CT
...	...	...	...	...
133	C15/31/47/63 >>1, temperature	value	2 Byte	CT
135	C15/31/47/63 <<0, temperature	value	2 Byte	CT
On operation of a button the temperature value (0 ... 40°C) configured for this button is sent via the corresponding object.				

For each button with this function an additonal function may be configured. For more information about the additional objects see description under "Functions second telegram".

IR decoder functions, single buttons - Send 16-bit value: brightness value

Obj	Name	Function	Length	Flag
28	C00/16/32/48 >>1, Brightness	value	2 Byte	CT
30	C00/16/32/48 <<0, Brightness	value	2 Byte	CT
...	...	...	...	...
133	C15/31/47/63 >>1, Brightness	value	2 Byte	CT
135	C15/31/47/63 <<0, Brightness	value	2 Byte	CT
On operation of a button the brightness value (0 ... 2000 lux) configured for this button is sent via the corresponding object.				

For each button with this function an additonal function may be configured. For more information about the additional objects see description under "Functions second telegram".

IR decoder functions, single buttons - Send 16-bit value: decimal value

Obj	Name	Function	Length	Flag
28	C00/16/32/48 >>1, 16-bit value	value	2 Byte	CT
30	C00/16/32/48 <<0, 16-bit value	value	2 Byte	CT
...	...	...	...	...
133	C15/31/47/63 >>1, 16-bit value	value	2 Byte	CT
135	C15/31/47/63 <<0, 16-bit value	value	2 Byte	CT
On operation of a button the percentage value (0 ... + 65535) configured for this button is sent via the corresponding object.				

For each button with this function an additonal function may be configured. For more information about the additional objects see description under "Functions second telegram".

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IR decoder functions, single buttons - Forced on, inactive / off, inactive

For each button with this function an additonal function may be configured. These are described in this section as the possible objects only appear in this context and are different from those described under "Functions second telegram".

Obj	Name	Function	Length	Flag
28	C00/16/32/48 >>1, forced control	On / Off / inactive	2 Bit	CT
29	C00/16/32/48 >>1, 2nd telegram, Switching	On / Off	1 Bit	CT
30	C00/16/32/48 <<0, forced control	On / Off / inactive	2 Bit	CT
31	C00/16/32/48 <<0, 2nd telegram, Switching	On / Off	1 Bit	CT
...	...	...	...	...
133	C15/31/47/63 >>1, forced control	On / Off / inactive	2 Bit	CT
134	C15/31/47/63 >>1, 2nd telegram, Switching	On / Off	1 Bit	CT
135	C15/31/47/63 <<0, forced control	On / Off / inactive	2 Bit	CT
136	C15/31/47/63 <<0, 2nd telegram, Switching	On / Off	1 Bit	CT

On short operation of the IR channel button „>>1" a "forced on" (binary value = 11) telegram and on short operation of the IR channel button „<<0" a "forced off" (binary value = 10) is sent via the corresponding object.
Additionally, depending on the configuration an "On" or "Off" switching command is sent via the corresponding object for the second telegram of each button.
On long operation of the IR channel button „>>1" a "deactivate forced control" (binary value = 01) telegram and on long operation of the IR channel button „<<0" a "deactivate forced control" (binary value = 00) is sent via the corresponding object.
Additionally, depending on the configuration an "On" or "Off" switching command is sent via the corresponding object for the second telegram of each button.
The second telegram can be activated with the following settings:
short button operation = On long button operation = On
short button operation = On long button operation = Off
short button operation = Off long button operation = On
short button operation = Off long button operation = Off
E.g. when forced control is activated (short operation of button) then switching "On" and when forced control is deactivated (long operation of button) then switching "Off" can be sent via the corresponding object for the second telegram.
These switching commands can be used to control actuators without 2-bit forced control object.
A short button operation generates a command activating and a long button operation generates a command deactivating forced control.

IR decoder functions, single buttons - Forced off, inactive / on, inactive

For each button with this function an additonal function may be configured. These are described in this section as the possible objects only appear in this context and are different from those described under "Functions second telegram".

Obj	Name	Function	Length	Flag
28	C00/16/32/48 >>1, forced control	On / Off / inactive	2 Bit	CT
29	C00/16/32/48 >>1, 2nd telegram, Switching	On / Off	1 Bit	CT
30	C00/16/32/48 <<0, forced control	On / Off / inactive	2 Bit	CT
31	C00/16/32/48 <<0, 2nd telegram, Switching	On / Off	1 Bit	CT
...	...	...	...	...
133	C15/31/47/63 >>1, forced control	On / Off / inactive	2 Bit	CT
134	C15/31/47/63 >>1, 2nd telegram, Switching	On / Off	1 Bit	CT
135	C15/31/47/63 <<0, forced control	On / Off / inactive	2 Bit	CT
136	C15/31/47/63 <<0, 2nd telegram, Switching	On / Off	1 Bit	CT

On short operation of the IR channel button „>>1" a "forced off" (binary value = 10) telegram and on short operation of the IR channel button „<<0" a "forced on" (binary value = 11) is sent via the corresponding object.
Additionally, depending on the configuration an "On" or "Off" switching command is sent via the corresponding object for the second telegram of each button.
On long operation of the IR channel button „>>1" a "deactivate forced control" (binary value = 00) telegram and on long operation of the IR channel button „<<0" a "deactivate forced control" (binary value = 01) is sent via the corresponding object.
Additionally, depending on the configuration an "On" or "Off" switching command is sent via the corresponding object for the second telegram of each button.
The second telegram can be activated with the following settings:
short button operation = On long button operation = On
short button operation = On long button operation = Off
short button operation = Off long button operation = On

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Obj	Name	Function	Length	Flag
short button operation = Off long button operation = Off E.g. when forced control is activated (short operation of button) then switching "On" and when forced control is deactivated (long operation of button) then switching "Off" can be sent via the corresponding object for the second telegram. These switching commands can be used to control actuators without 2-bit forced control object. A short button operation generates a command activating and a long button operation generates a command deactivating forced control.				

IR decoder functions, button pairs - Switching, dimming: On, brighter / Off, darker

Obj	Name	Function	Length	Flag
28	C00/16/32/48, switching	On / Off	1 Bit	CT
30	C00/16/32/48, dimming	brighter / darker	4 Bit	CT
...	...	...	...	...
133	C15/31/47/63, switching	On / Off	1 Bit	CT
135	C15/31/47/63, dimming	brighter / darker	4 Bit	CT
On a short operation of the buttons A1, B1, C1 or D1 an "On" switching telegram is sent via the corresponding object and on long operation a dimming "brighter" telegram is sent via the corresponding object. On a short operation of the buttons A2, B2, C2 or D2 an "Off" switching telegram is sent via the corresponding object and on long operation a dimming "darker" telegram is sent via the corresponding object. A short button operation generates a command for switching and a long button operation one for dimming the lighting.				

IR decoder functions, button pairs - Switching, dimming: Off, darker / On, brighter

Obj	Name	Function	Length	Flag
28	C00/16/32/48, switching	Off /On	1 Bit	CT
30	C00/16/32/48, dimming	darker / brighter	4 Bit	CT
...	...	...	...	...
133	C15/31/47/63, switching	Off /On	1 Bit	CT
135	C15/31/47/63, dimming	darker / brighter	4 Bit	CT
On a short operation of the buttons A1, B1, C1 or D1 an "Off" switching telegram is sent via the corresponding object and on long operation a dimming "darker" telegram is sent via the corresponding object. On a short operation of the buttons A2, B2, C2 or D2 an "On" switching telegram is sent via the corresponding object and on long operation a dimming "brighter" telegram is sent via the corresponding object. A short button operation generates a command for switching and a long button operation one for dimming the lighting.				

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IR decoder functions, button pairs - Switching, dimming: Toggle, brighter / Toggle, darker

Obj	Name	Function	Length	Flag
28	C00/16/32/48, switching	Toggle	1 Bit	CWT
30	C00/16/32/48, dimming	brighter / darker	4 Bit	CT
...	...	...	...	...
133	C15/31/47/63, switching	Toggle	1 Bit	CWT
135	C15/31/47/63, dimming	brighter / darker	4 Bit	CT

On the first short operation of a button an „On" telegram is sent via the corresponding object and on the next short operation of the same button an "Off" telegram is sent. On each following short operation the value is inverted and then sent (toggle function).
On a long operation of a button A1, B1, C1 or D1 a "brighter" dimming telegram is sent via the corrseponding object and likewise on long operation of a button A2, B2, C2 or D2 a "darker" dimming telegram is sent.
A short press of a button generates a command switching and a long press of a button a command dimming the lighting.

IR decoder functions, button pairs - Switching, dimming: Toggle, darker / Toggle, brighter

Obj	Name	Function	Length	Flag
28	C00/16/32/48, switching	Toggle	1 Bit	CWT
30	C00/16/32/48, dimming	darker / brighter	4 Bit	CT
...	...	...	...	...
133	C15/31/47/63, switching	Toggle	1 Bit	CWT
135	C15/31/47/63, dimming	darker / brighter	4 Bit	CT

On the first short operation of a button an „On" telegram is sent via the corresponding object and on the next short operation of the same button an "Off" telegram is sent. On each following short operation the value is inverted and then sent (toggle function).
On a long operation of a button A1, B1, C1 or D1 a "darker" dimming telegram is sent via the corrseponding object and likewise on long operation of a button A2, B2, C2 or D2 a "brighter" dimming telegram is sent.
A short press of a button generates a command switching and a long press of a button a command dimming the lighting.

IR decoder functions, button pairs - Solar protection, slats: up / down

Obj	Name	Function	Length	Flag
28	C00/16/32/48, slats	stop / open / close	1 Bit	CT
30	C00/16/32/48, venetian blind	up/ down	1 Bit	CT
...	...	...	...	...
133	C15/31/47/63, slats	stop / open / close	1 Bit	CT
135	C15/31/47/63, venetian blind	up/ down	1 Bit	CT

On long operation of buttons A1, B1, C1 or D1 a move solar protection „Up" telegram is sent via the corresponding object and on short operation a command "stop / slats open".
On long operation of buttons A2, B2, C2 or D2 a move solar protection „Down" telegram is sent via the corresponding object and on short operation a command "stop / slats close".
A long press of a button generates a command to move the solar protection and a short press of a button generates a command stopping the motion of the solar protection or adjusting the slats by a step.

IR decoder functions, button pairs - Solar protection, slats: down / up

Obj	Name	Function	Length	Flag
28	C00/16/32/48, slats	stop / close / open	1 Bit	CT
30	C00/16/32/48, venetian blind	down / up	1 Bit	CT
...	...	...	...	...
133	C15/31/47/63, slats	stop / close / open	1 Bit	CT
135	C15/31/47/63, venetian blind	down / up	1 Bit	CT

On long operation of buttons A1, B1, C1 or D1 a move solar protection „Down" telegram is sent via the corresponding object and on short operation a command "stop / slats close".
On long operation of buttons A2, B2, C2 or D2 a move solar protection „Up" telegram is sent via the corresponding object and on short operation a command "stop / slats open".
A long press of a button generates a command to move the solar protection and a short press of a button generates a command stopping the motion of the solar protection or adjusting the slats by a step.

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IR decoder functions, button pairs - roller shutter: up, stop / down, stop

Obj	Name	Function	Length	Flag
28	C00/16/32/48, roller shutter	stop	1 Bit	CT
30	C00/16/32/48, roller shutter	up/ down	1 Bit	CT
...	...	...	...	...
133	C15/31/47/63, roller shutter	stop	1 Bit	CT
135	C15/31/47/63, roller shutter	up/ down	1 Bit	CT

On long operation of buttons A1, B1, C1 or D1 a move roller shutter „Down" telegram is sent via the corresponding object and on short operation a command "stop".
On long operation of buttons A2, B2, C2 or D2 a move roller shutter „Up" telegram is sent via the corresponding object and on short operation a command "stop".
A long press of a button generates a command to move the roller shutter and a short press of a button generates a command stopping the motion of the roller shutter.

IR decoder functions, button pairs - roller shutter: down, stop / up, stop

Obj	Name	Function	Length	Flag
28	C00/16/32/48, roller shutter	stop	1 Bit	CT
30	C00/16/32/48, roller shutter	down / up	1 Bit	CT
...	...	...	...	...
133	C15/31/47/63, roller shutter	stop	1 Bit	CT
135	C15/31/47/63, roller shutter	down / up	1 Bit	CT

On long operation of buttons A1, B1, C1 or D1 a move roller shutter „Up" telegram is sent via the corresponding object and on short operation a command "stop".
On long operation of buttons A2, B2, C2 or D2 a move roller shutter „Down" telegram is sent via the corresponding object and on short operation a command "stop".
A long press of a button generates a command to move the roller shutter and a short press of a button generates a command stopping the motion of the roller shutter.

IR decoder functions, button pairs - Send percent value variable (increment / decrement)

Obj	Name	Function	Length	Flag
28	C00/16/32/48, percentage (variable)	value	1 Byte	CWTU
...	...	...	...	...
133	C15/31/47/63, percentage (variable)	value	1 Byte	CWTU

On short operation of buttons A1, B1, C1 or D1 a telegram is sent via the corresponding object with a percentage value (0...100%) incremented by the configured percentage step.
On short operation of buttons A2, B2, C2 or D2 a telegram is sent via the corresponding object with a percentage value (0...100%) decremented by the configured percentage step.
On long operation of buttons A1, B1, C1 or D1 the percentage value is incremented step by step and sent cyclically via the corresponding object as long as the button is pressed.
On long operation of buttons A2, B2, C2 or D2 the percentage value is decremented step by step and sent cyclically via the corresponding object as long as the button is pressed.

IR decoder functions, button pairs - Send percent value variable (decrement / increment)

Obj	Name	Function	Length	Flag
28	C00/16/32/48, percentage (variable)	value	1 Byte	CWTU
...	...	...	...	...
133	C15/31/47/63, percentage (variable)	value	1 Byte	CWTU

On short operation of buttons A1, B1, C1 or D1 a telegram is sent via the corresponding object with a percentage value (0...100%) decremented by the configured percentage step.
On short operation of buttons A2, B2, C2 or D2 a telegram is sent via the corresponding object with a percentage value (0...100%) incremented by the configured percentage step.
On long operation of buttons A1, B1, C1 or D1 the percentage value is decremented step by step and sent cyclically via the corresponding object as long as the button is pressed.
On long operation of buttons A2, B2, C2 or D2 the percentage value is incremented step by step and sent cyclically via the corresponding object as long as the button is pressed.

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IR decoder functions, button pairs - Send 8-bit value variable (increment / decrement)

Obj	Name	Function	Length	Flag
28	C00/16/32/48, 8-bit value (variable)	value	1 Byte	CWTU
...	...	...	...	...
133	C15/31/47/63, 8-bit value (variable)	value	1 Byte	CWTU

On short operation of buttons A1, B1, C1 or D1 a telegram is sent via the corresponding object with an 8-bit value (0...255) incremented by the configured step.
On short operation of buttons A2, B2, C2 or D2 a telegram is sent via the corresponding object with an 8-bit value (0...255) decremented by the configured step.
On long operation of buttons A1, B1, C1 or D1 the 8-bit value is incremented step by step and sent cyclically via the corresponding object as long as the button is pressed.
On long operation of buttons A2, B2, C2 or D2 the 8-bit value is decremented step by step and sent cyclically via the corresponding object as long as the button is pressed.

IR decoder functions, button pairs - Send 8-bit value variable (decrement / increment)

Obj	Name	Function	Length	Flag
28	C00/16/32/48, 8-bit value (variable)	value	1 Byte	CWTU
...	...	...	...	...
133	C15/31/47/63, 8-bit value (variable)	value	1 Byte	CWTU

On short operation of buttons A1, B1, C1 or D1 a telegram is sent via the corresponding object with an 8-bit value (0...255) decremented by the configured step.
On short operation of buttons A2, B2, C2 or D2 a telegram is sent via the corresponding object with an 8-bit value (0...255) incremented by the configured step.
On long operation of buttons A1, B1, C1 or D1 the 8-bit value is decremented step by step and sent cyclically via the corresponding object as long as the button is pressed.
On long operation of buttons A2, B2, C2 or D2 the 8-bit value is incremented step by step and sent cyclically via the corresponding object as long as the button is pressed.

IR decoder functions, button pairs - 1-bit scene 1 / 2 recall / save

Obj	Name	Function	Length	Flag
28	C00/16/32/48, scene 1 / 2	recall	1 Bit	CT
30	C00/16/32/48, scene 1 / 2	save	1 Bit	CT
...	...	...	...	...
133	C15/31/47/63, scene 1 / 2	recall	1 Bit	CT
135	C15/31/47/63, scene 1 / 2	save	1 Bit	CT

On short operation of buttons A1, B1, C1 or D1 a telegram „scene 1 recall" is sent via the corresponding object and on long operation of the button a telegram "scene 1 save" (object value = 0) is sent.
On short operation of buttons A2, B2, C2 or D2 a telegram „scene 2 recall" is sent via the corresponding object and on long operation of the button a telegram "scene 2 save" (object value = 1) is sent.
A short operation of a button generates a command recalling a preset scene and a long operation of a button generates a command saving the current settings of a scene.

IR decoder functions, button pairs - 1-bit scene 2 / 1 recall / save

Obj	Name	Function	Length	Flag
28	C00/16/32/48, scene 2 / 1	recall	1 Bit	CT
30	C00/16/32/48, scene 2 / 1	save	1 Bit	CT
...	...	...	...	...
133	C15/31/47/63, scene 2 / 1	recall	1 Bit	CT
135	C15/31/47/63, scene 2 / 1	save	1 Bit	CT

On short operation of buttons A1, B1, C1 or D1 a telegram „scene 2 recall" is sent via the corresponding object and on long operation of the button a telegram "scene 2 save" (object value = 1) is sent.
On short operation of buttons A2, B2, C2 or D2 a telegram „scene 1 recall" is sent via the corresponding object and on long operation of the button a telegram "scene 1 save" (object value = 0) is sent.
A short operation of a button generates a command recalling a preset scene and a long operation of a button generates a command saving the current settings of a scene.

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IR decoder functions, button pairs - 8-bit scene recall and save

Obj	Name	Function	Length	Flag
28	C00/16/32/48 >>1, 8-bit scene	recall / save	1 Byte	CT
30	C00/16/32/48 <<0, 8-bit scene	recall / save	1 Byte	CT
...	...	...	...	...
133	C15/31/47/63 >>1, 8-bit scene	recall / save	1 Byte	CT
135	C15/31/47/63 <<0, 8-bit scene	recall / save	1 Byte	CT

On short operation of a button the scene with the configured scene number (scene 1 .... scene 64) is recalled and on long operation of the button the scene is saved via the corresponding object.
Bits 0 through 5 of the 8-bit scene object contain the scene number (1...64). The most significant bit 7 determines if a scene is recalled (bit value = 0) or saved (bit value = 1).
Bit 6 is not used.
A short operation of a button generates a command recalling a preset scene and a long operation of a button generates a command saving the current settings of a scene.

IR decoder functions, button pairs - Forced on, inactive / off, inactive

Obj	Name	Function	Length	Flag
28	C00/16/32/48 >>1, forced control	forced On / inactive	2 Bit	CT
30	C00/16/32/48 <<0, forced control	forced Off / inactive	2 Bit	CT
...	...	...	...	...
133	C15/31/47/63 >>1, forced control	forced On / inactive	2 Bit	CT
135	C15/31/47/63 <<0, forced control	forced Off / inactive	2 Bit	CT

On short operation of the IR channel button „>>1“ a “forced on” (binary value = 11) telegram and on short operation of the IR channel button „<<0“ a “forced off” (binary value = 10) is sent via the corresponding object.
On long operation of the IR channel button „>>1“ a “deactivate forced control” (binary value = 01) telegram and on long operation of the IR channel button „<<0“ a “deactivate forced control” (binary value = 00) is sent via the corresponding object.
A short button operation generates a command activating and a long button operation generates a command deactivating forced control.

IR decoder functions, button pairs - Forced off, inactive / on, inactive

Obj	Name	Function	Length	Flag
28	C00/16/32/48 >>1, forced control	forced Off / inactive	2 Bit	CT
30	C00/16/32/48 <<0, forced control	forced On / inactive	2 Bit	CT
...	...	...	...	...
133	C15/31/47/63 >>1, forced control	forced Off / inactive	2 Bit	CT
135	C15/31/47/63 <<0, forced control	forced On / inactive	2 Bit	CT

On short operation of the IR channel button „>>1“ a “forced off” (binary value = 10) telegram and on short operation of the IR channel button „<<0“ a “forced on” (binary value = 11) is sent via the corresponding object.
On long operation of the IR channel button „>>1“ a “deactivate forced control” (binary value = 00) telegram and on long operation of the IR channel button „<<0“ a “deactivate forced control” (binary value = 01) is sent via the corresponding object.
A short button operation generates a command activating and a long button operation generates a command deactivating forced control.

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Functions/Objects for an additional button function (send additional or second telegram) for IR channels

If an additional function per button can be selected when configuring single buttons or button pairs, then one of these additional functions may be sent after a time delay or on long operation of a button via a second communication object per button:

- Switching On
- Switching Off
- Send percentage
- Send 8-bit value
- Send temperature value
- Send brightness value
- Send 16-bit value
- 1-bit scene: recall / save scene 1
- 1-bit scene: recall / save scene 2
- 8-bit scene: recall
- Forced on
- Forced off
- Forced control off

IR decoder functions, additional button functions – Switching: On

Obj	Name	Function	Length	Flag
29	C00/16/32/48 >>1, 2nd telegram, switching	On	1 Bit	CT
31	C00/16/32/48 <<0, 2nd telegram, switching	On	1 Bit	CT
...	...	...	...	...
134	C15/31/47/63 >>1, 2nd telegram, switching	On	1 Bit	CT
136	C15/31/47/63 <<0, 2nd telegram, switching	On	1 Bit	CT
On operation of one of the buttons the switching "on" command configured as second telegram for this button is sent immediately or time delayed via the corresponding second object.				

IR decoder functions, additional button functions – Switching: Off

Obj	Name	Function	Length	Flag
29	C00/16/32/48 >>1, 2nd telegram, switching	Off	1 Bit	CT
31	C00/16/32/48 <<0, 2nd telegram, switching	Off	1 Bit	CT
...	...	...	...	...
134	C15/31/47/63 >>1, 2nd telegram, switching	Off	1 Bit	CT
136	C15/31/47/63 <<0, 2nd telegram, switching	Off	1 Bit	CT
On operation of one of the buttons the switching "off" command configured as second telegram for this button is sent immediately or time delayed via the corresponding second object.				

IR decoder functions, additional button functions – Send percentage

Obj	Name	Function	Length	Flag
29	C00/16/32/48 >>1, 2nd telegram, Percentage value	value	1 Byte	CT
31	C00/16/32/48 <<0, 2nd telegram, Percentage value	value	1 Byte	CT
...	...	...	...	...
134	C15/31/47/63 >>1, 2nd telegram, Percentage value	value	1 Byte	CT
136	C15/31/47/63 <<0, 2nd telegram, Percentage value	value	1 Byte	CT
On operation of one of the buttons the percent value (0...100%) configured as second telegram for this button is sent immediately or time delayed via the corresponding second object.				

IR decoder functions, additional button functions – Send 8-bit value

Obj	Name	Function	Length	Flag
29	C00/16/32/48 >>1, 2nd telegram, 8-bit value	value	1 Byte	CT
31	C00/16/32/48 <<0, 2nd telegram, 8-bit value	value	1 Byte	CT
...	...	...	...	...
134	C15/31/47/63 >>1, 2nd telegram, 8-bit value	value	1 Byte	CT
136	C15/31/47/63 <<0, 2nd telegram, 8-bit value	value	1 Byte	CT
On operation of one of the buttons the 8-bit value (0...255) configured as second telegram for this button is sent immediately or time delayed via the corresponding second object.				

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IR decoder functions, additional button functions – Send temperature value

Obj	Name	Function	Length	Flag
29	C00/16/32/48 >>1, 2nd telegram, temperature	value	2 Byte	CT
31	C00/16/32/48 <<0, 2nd telegram, temperature	value	2 Byte	CT
...	...	...	...	...
134	C15/31/47/63 >>1, 2nd telegram, temperature	value	2 Byte	CT
136	C15/31/47/63 <<0, 2nd telegram, temperature	value	2 Byte	CT
On operation of one of the buttons the temperature value (0...40°C) configured as second telegram for this button is sent immediately or time delayed via the corresponding second object.				

IR decoder functions, additional button functions – Send brightness value

Obj	Name	Function	Length	Flag
29	C00/16/32/48 >>1, 2nd telegram, Brightness	value	2 Byte	CT
31	C00/16/32/48 <<0, 2nd telegram, Brightness	value	2 Byte	CT
...	...	...	...	...
134	C15/31/47/63 >>1, 2nd telegram, Brightness	value	2 Byte	CT
136	C15/31/47/63 <<0, 2nd telegram, Brightness	value	2 Byte	CT
On operation of one of the buttons the brightness value (0...1000 Lux) configured as second telegram for this button is sent immediately or time delayed via the corresponding second object.				

IR decoder functions, additional button functions – Send 16-bit value

Obj	Name	Function	Length	Flag
29	C00/16/32/48 >>1, 2nd telegram, 16-bit value	value	2 Byte	CT
31	C00/16/32/48 <<0, 2nd telegram, 16-bit value	value	2 Byte	CT
...	...	...	...	...
134	C15/31/47/63 >>1, 2nd telegram, 16-bit value	value	2 Byte	CT
136	C15/31/47/63 <<0, 2nd telegram, 16-bit value	value	2 Byte	CT
On operation of one of the buttons the 16-bit value (0...65535) configured as second telegram for this button is sent immediately or time delayed via the corresponding second object.				

IR decoder functions, additional button functions – 1-bit scene: recall / save scene 1

Obj	Name	Function	Length	Flag
29	C00/16/32/48 >>1, 2nd telegram, scene 1	recall / save	1 Bit	CT
31	C00/16/32/48 <<0, 2nd telegram, scene 1	recall / save	1 Bit	CT
...	...	...	...	...
134	C15/31/47/63 >>1, 2nd telegram, scene 1	recall / save	1 Bit	CT
136	C15/31/47/63 <<0, 2nd telegram, scene 1	recall / save	1 Bit	CT
On operation of one of the buttons the scene 1 (object value = 0) configured as second telegram for this button is sent immediately or time delayed via the corresponding second object. Scene 1 is recalled if this object is connected to a 1-bit scene object for recalling a scene. Scene 1 is saved if this object is connected to a 1-bit scene object for saving a scene.				

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IR decoder functions, additional button functions – 1-bit scene: recall / save scene 2

Obj	Name	Function	Length	Flag
29	C00/16/32/48 >>1, 2nd telegram, scene 2	recall / save	1 Bit	CT
31	C00/16/32/48 <<0, 2nd telegram, scene 2	recall / save	1 Bit	CT
...	...	...	...	...
134	C15/31/47/63 >>1, 2nd telegram, scene 2	recall / save	1 Bit	CT
136	C15/31/47/63 <<0, 2nd telegram, scene 2	recall / save	1 Bit	CT
On operation of one of the buttons the scene 2 (object value = 1) configured as second telegram for this button is sent immediately or time delayed via the corresponding second object. Scene 2 is recalled if this object is connected to a 1-bit scene object for recalling a scene. Scene 2 is saved if this object is connected to a 1-bit scene object for saving a scene.				

IR decoder functions, additional button functions – 8-bit scene recall

Obj	Name	Function	Length	Flag
29	C00/16/32/48 >>1, 2nd telegram, 8-bit scene	recall / save	1 Byte	CT
31	C00/16/32/48 <<0, 2nd telegram, 8-bit scene	recall / save	1 Byte	CT
...	...	...	...	...
134	C15/31/47/63 >>1, 2nd telegram, 8-bit scene	recall / save	1 Byte	CT
136	C15/31/47/63 <<0, 2nd telegram, 8-bit scene	recall / save	1 Byte	CT
On operation of one of the buttons the scene with the preset number (scene 1 ... scene 64) configured as second telegram for this button is recalled or saved immediately or time delayed via the corresponding second object. Bits 0 through 5 of the 8-bit scene object contain the scene number (1...64). The most significant bit 7 determines if a scene is recalled (bit value = 0) or saved (bit value = 1). Bit 6 is not used.				

IR decoder functions, additional button functions – forced on

Obj	Name	Function	Length	Flag
29	C00/16/32/48 >>1, 2nd telegram, forced control	forced On	2 Bit	CT
31	C00/16/32/48 <<0, 2nd telegram, forced control	forced On	2 Bit	CT
...	...	...	...	...
134	C15/31/47/63 >>1, 2nd telegram, forced control	forced On	2 Bit	CT
136	C15/31/47/63 <<0, 2nd telegram, forced control	forced On	2 Bit	CT
On operation of one of the buttons the “forced on” command (binary value = 11) configured as second telegram for this button is sent immediately or time delayed via the corresponding second object.				

IR decoder functions, additional button functions – forced off

Obj	Name	Function	Length	Flag
29	C00/16/32/48 >>1, 2nd telegram, forced control	forced Off	2 Bit	CT
31	C00/16/32/48 <<0, 2nd telegram, forced control	forced Off	2 Bit	CT
...	...	...	...	...
134	C15/31/47/63 >>1, 2nd telegram, forced control	forced Off	2 Bit	CT
136	C15/31/47/63 <<0, 2nd telegram, forced control	forced Off	2 Bit	CT
On operation of one of the buttons the “forced on” command (binary value = 10) configured as second telegram for this button is sent immediately or time delayed via the corresponding second object.				

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IR decoder functions, additional button functions – forced control off

Obj	Name	Function	Length	Flag
29	C00/16/32/48 >>1, 2nd telegram, forced control	forced control off	2 Bit	CT
31	C00/16/32/48 <<0, 2nd telegram, forced control	forced control off	2 Bit	CT
...	...	...	...	...
134	C15/31/47/63 >>1, 2nd telegram, forced control	forced control off	2 Bit	CT
136	C15/31/47/63 <<0, 2nd telegram, forced control	forced control off	2 Bit	CT
On operation of one of the buttons the "forced control off" command (binary value = 00) configured as second telegram for this button is sent immediately or time delayed via the corresponding second object.				

IR decoder functions – IR temperature

Obj	Name	Function	Length	Flag
32	C00/16/32/48, temperature	value	2 Byte	CRT
39	C01/17/33/49, temperature	value	2 Byte	CRT
46	C02/18/34/50, temperature	value	2 Byte	CRT
53	C03/19/35/51, temperature	value	2 Byte	CRT
60	C04/20/36/52, temperature	value	2 Byte	CRT
67	C05/21/37/53, temperature	value	2 Byte	CRT
74	C06/22/38/54, temperature	value	2 Byte	CRT
81	C07/23/39/55, temperature	value	2 Byte	CRT
88	C08/24/40/56, temperature	value	2 Byte	CRT
95	C09/25/41/57, temperature	value	2 Byte	CRT
102	C10/26/42/58, temperature	value	2 Byte	CRT
109	C11/27/43/59, temperature	value	2 Byte	CRT
116	C12/28/44/60, temperature	value	2 Byte	CRT
123	C13/29/45/61, temperature	value	2 Byte	CRT
130	C14/30/46/62, temperature	value	2 Byte	CRT
137	C15/31/47/63, temperature	value	2 Byte	CRT
On reception of the respective IR signals a telegram with the temperature value received is sent onto the bus.				

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IR decoder functions – IR brightness

Obj	Name	Function	Length	Flag
33	C00/16/32/48, Brightness	value	2 Byte	CRT
40	C01/17/33/49, Brightness	value	2 Byte	CRT
47	C02/18/34/50, Brightness	value	2 Byte	CRT
54	C03/19/35/51, Brightness	value	2 Byte	CRT
61	C04/20/36/52, Brightness	value	2 Byte	CRT
68	C05/21/37/53, Brightness	value	2 Byte	CRT
75	C06/22/38/54, Brightness	value	2 Byte	CRT
82	C07/23/39/55, Brightness	value	2 Byte	CRT
89	C08/24/40/56, Brightness	value	2 Byte	CRT
96	C09/25/41/57, Brightness	value	2 Byte	CRT
103	C10/26/42/58, Brightness	value	2 Byte	CRT
110	C11/27/43/59, Brightness	value	2 Byte	CRT
117	C12/28/44/60, Brightness	value	2 Byte	CRT
124	C13/29/45/61, Brightness	value	2 Byte	CRT
131	C14/30/46/62, Brightness	value	2 Byte	CRT
138	C15/31/47/63, Brightness	value	2 Byte	CRT
On reception of the respective IR signals a telegram with the brightness value received is sent onto the bus.				

IR decoder functions – IR presence

Obj	Name	Function	Length	Flag
34	C00/16/32/48, presence	1 = presence	1 Bit	CRT
41	C01/17/33/49, presence	1 = presence	1 Bit	CRT
48	C02/18/34/50, presence	1 = presence	1 Bit	CRT
55	C03/19/35/51, presence	1 = presence	1 Bit	CRT
62	C04/20/36/52, presence	1 = presence	1 Bit	CRT
69	C05/21/37/53, presence	1 = presence	1 Bit	CRT
76	C06/22/38/54, presence	1 = presence	1 Bit	CRT
83	C07/23/39/55, presence	1 = presence	1 Bit	CRT
90	C08/24/40/56, presence	1 = presence	1 Bit	CRT
97	C09/25/41/57, presence	1 = presence	1 Bit	CRT
104	C10/26/42/58, presence	1 = presence	1 Bit	CRT
111	C11/27/43/59, presence	1 = presence	1 Bit	CRT
118	C12/28/44/60, presence	1 = presence	1 Bit	CRT
125	C13/29/45/61, presence	1 = presence	1 Bit	CRT
132	C14/30/46/62, presence	1 = presence	1 Bit	CRT
139	C15/31/47/63, presence	1 = presence	1 Bit	CRT
On reception of the respective IR signals a telegram with the presence value received is sent onto the bus.				

IR decoder functions – IR ID

Obj	Name	Function	Length	Flag
157	IR-ID	Nummer	2 Byte	CRWT
On reception of the respective IR signals a telegram with the ID number received is sent onto the bus.				

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Objects Scene control

Note

Scene control can only be activated for wallswitches with IR receiver decoder or with temperature sensor.

The following communication objects are only present when "scene control" is selected on the parameter tab "Device selection".

Obj	Name	Function	Length	Flag
140	8-bit scene, Scene channel A-H	recall/ save	1 Byte	CRWT
Scenes for scene channels A-H of the scene control are recalled and saved via the group address assigned to this object. Bits 0 through 5 of the 8-bit scene object contain the scene number (1...64). The most significant bit 7 determines if a scene is recalled (bit value = 0) or saved (bit value = 1). Bit 6 is not used. The scene control module integrated in the wall switch interprets the scene number (1-64) received via telegram according to the configuration. If a scene is recalled then the associated values are sent via the objects "scene channel x, recall". If a scene shall be saved the current status values are read from the actuators via the objects "scene channel x, save".				

8-bit scenenfunktion, switching

Obj	Name	Function	Length	Flag
141	Scene channel A, switching	save	1 Bit	CRWTU
142	Scene channel B, switching	save	1 Bit	CRWTU
143	Scene channel C, switching	save	1 Bit	CRWTU
144	Scene channel D, switching	save	1 Bit	CRWTU
145	Scene channel E, switching	save	1 Bit	CRWTU
146	Scene channel F, switching	save	1 Bit	CRWTU
147	Scene channel G, switching	save	1 Bit	CRWTU
148	Scene channel H, switching	save	1 Bit	CRWTU
When an 8-bit scene save command is received the associated value of the 8-bit scene for scene channel A (B...H) is read from the actuator via the group address assigned to this object. The group address must also be assigned depending on the data type (e.g. switching, venetian blind up/down, forced control, 8-bit value (decimal or percent value), 16-bit value (brightness, temperature, decimal value)) to the corresponding objects in the target actuators or sensors.				
149	Scene channel A, switching	recall	1 Bit	CRWT
150	Scene channel B, switching	recall	1 Bit	CRWT
151	Scene channel C, switching	recall	1 Bit	CRWT
152	Scene channel D, switching	recall	1 Bit	CRWT
153	Scene channel E, switching	recall	1 Bit	CRWT
154	Scene channel F, switching	recall	1 Bit	CRWT
155	Scene channel G, switching	recall	1 Bit	CRWT
156	Scene channel H, switching	recall	1 Bit	CRWT
When an 8-bit scene recall command is received the associated value of the 8-bit scene for scene channel A (B...H) is sent to the actuators via the group address assigned to this object. The group address must also be assigned depending on the data type (e.g. switching, venetian blind up/down, forced control, 8-bit value (decimal or percent value), 16-bit value (brightness, temperature, decimal value)) to the corresponding objects in the target actuators.				

8-bit scene function, solar protection

Obj	Name	Function	Length	Flag
141	Scene channel A, solar protection	save	1 Bit	CRWTU
142	Scene channel B, solar protection	save	1 Bit	CRWTU
143	Scene channel C, solar protection	save	1 Bit	CRWTU
144	Scene channel D, solar protection	save	1 Bit	CRWTU
145	Scene channel E, solar protection	save	1 Bit	CRWTU
146	Scene channel F, solar protection	save	1 Bit	CRWTU
147	Scene channel G, solar protection	save	1 Bit	CRWTU
148	Scene channel H, solar protection	save	1 Bit	CRWTU
When an 8-bit scene save command is received the associated				

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Obj	Name	Function	Length	Flag
value of the 8-bit scene for scene channel A (B...H) is read from the actuator via the group address assigned to this object. The group address must also be assigned depending on the data type (e.g. switching, venetian blind up/down, forced control, 8-bit value (decimal or percent value), 16-bit value (brightness, temperature, decimal value)) to the corresponding objects in the target actuators or sensors.				
149	Scene channel A, solar protection	recall	1 Bit	CRWT
150	Scene channel B, solar protection	recall	1 Bit	CRWT
151	Scene channel C, solar protection	recall	1 Bit	CRWT
152	Scene channel D, solar protection	recall	1 Bit	CRWT
153	Scene channel E, solar protection	recall	1 Bit	CRWT
154	Scene channel F, solar protection	recall	1 Bit	CRWT
155	Scene channel G, solar protection	recall	1 Bit	CRWT
156	Scene channel H, solar protection	recall	1 Bit	CRWT
When an 8-bit scene recall command is received the associated value of the 8-bit scene for scene channel A (B...H) is sent to the actuators via the group address assigned to this object. The group address must also be assigned depending on the data type (e.g. switching, venetian blind up/down, forced control, 8-bit value (decimal or percent value), 16-bit value (brightness, temperature, decimal value)) to the corresponding objects in the target actuators.				

8-bit scene function, forced control

Obj	Name	Function	Length	Flag
141	Scene channel A, forced control	save	2 Bit	CRWTU
142	Scene channel B, forced control	save	2 Bit	CRWTU
143	Scene channel C, forced control	save	2 Bit	CRWTU
144	Scene channel D, forced control	save	2 Bit	CRWTU
145	Scene channel E, forced control	save	2 Bit	CRWTU
146	Scene channel F, forced control	save	2 Bit	CRWTU
147	Scene channel G, forced control	save	2 Bit	CRWTU
148	Scene channel H, forced control	save	2 Bit	CRWTU
When an 8-bit scene save command is received the associated value of the 8-bit scene for scene channel A (B...H) is read from the actuator via the group address assigned to this object. The group address must also be assigned depending on the data type (e.g. switching, venetian blind up/down, forced control, 8-bit value (decimal or percent value), 16-bit value (brightness, temperature, decimal value)) to the corresponding objects in the target actuators or sensors.				
149	Scene channel A, forced control	recall	2 Bit	CRWT
150	Scene channel B, forced control	recall	2 Bit	CRWT
151	Scene channel C, forced control	recall	2 Bit	CRWT
152	Scene channel D, forced control	recall	2 Bit	CRWT
153	Scene channel E, forced control	recall	2 Bit	CRWT
154	Scene channel F, forced control	recall	2 Bit	CRWT
155	Scene channel G, forced control	recall	2 Bit	CRWT
156	Scene channel H, forced control	recall	2 Bit	CRWT
When an 8-bit scene recall command is received the associated value of the 8-bit scene for scene channel A (B...H) is sent to the actuators via the group address assigned to this object. The group address must also be assigned depending on the data type (e.g. switching, venetian blind up/down, forced control, 8-bit value (decimal or percent value), 16-bit value (brightness, temperature, decimal value)) to the corresponding objects in the target actuators.				

8-bit scenenfunktion, 8-bit value

Obj	Name	Function	Length	Flag
141	Scene channel A, 8-bit value	save	1 Byte	CRWTU
142	Scene channel B, 8-bit value	save	1 Byte	CRWTU
143	Scene channel C, 8-bit value	save	1 Byte	CRWTU
144	Scene channel D, 8-bit value	save	1 Byte	CRWTU
145	Scene channel E, 8-bit value	save	1 Byte	CRWTU

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Obj	Name	Function	Length	Flag
146	Scene channel F, 8-bit value	save	1 Byte	CRWTU
147	Scene channel G, 8-bit value	save	1 Byte	CRWTU
148	Scene channel H, 8-bit value	save	1 Byte	CRWTU
When an 8-bit scene save command is received the associated value of the 8-bit scene for scene channel A (B...H) is read from the actuator via the group address assigned to this object. The group address must also be assigned depending on the data type (e.g. switching, venetian blind up/down, forced control, 8-bit value (decimal or percent value), 16-bit value (brightness, temperature, decimal value)) to the corresponding objects in the target actuators or sensors.				
149	Scene channel A, 8-bit value	recall	1 Byte	CRWT
150	Scene channel B, 8-bit value	recall	1 Byte	CRWT
151	Scene channel C, 8-bit value	recall	1 Byte	CRWT
152	Scene channel D, 8-bit value	recall	1 Byte	CRWT
153	Scene channel E, 8-bit value	recall	1 Byte	CRWT
154	Scene channel F, 8-bit value	recall	1 Byte	CRWT
155	Scene channel G, 8-bit value	recall	1 Byte	CRWT
156	Scene channel H, 8-bit value	recall	1 Byte	CRWT
When an 8-bit scene recall command is received the associated value of the 8-bit scene for scene channel A (B...H) is sent to the actuators via the group address assigned to this object. The group address must also be assigned depending on the data type (e.g. switching, venetian blind up/down, forced control, 8-bit value (decimal or percent value), 16-bit value (brightness, temperature, decimal value)) to the corresponding objects in the target actuators.				

8-bit scenenfunktion, 16-bit value (Temp / Lux)

Obj	Name	Function	Length	Flag
141	Scene channel A, 16-Bit value	save	2 Byte	CRWTU
142	Scene channel B, 16-Bit value	save	2 Byte	CRWTU
143	Scene channel C, 16-Bit value	save	2 Byte	CRWTU
144	Scene channel D, 16-Bit value	save	2 Byte	CRWTU
145	Scene channel E, 16-Bit value	save	2 Byte	CRWTU
146	Scene channel F, 16-Bit value	save	2 Byte	CRWTU
147	Scene channel G, 16-Bit value	save	2 Byte	CRWTU
148	Scene channel H, 16-Bit value	save	2 Byte	CRWTU
When an 8-bit scene save command is received the associated value of the 8-bit scene for scene channel A (B...H) is read from the actuator via the group address assigned to this object. The group address must also be assigned depending on the data type (e.g. switching, venetian blind up/down, forced control, 8-bit value (decimal or percent value), 16-bit value (brightness, temperature, decimal value)) to the corresponding objects in the target actuators or sensors.				
149	Scene channel A, 16-Bit value	recall	2 Byte	CRWT
150	Scene channel B, 16-Bit value	recall	2 Byte	CRWT
151	Scene channel C, 16-Bit value	recall	2 Byte	CRWT
152	Scene channel D, 16-Bit value	recall	2 Byte	CRWT
153	Scene channel E, 16-Bit value	recall	2 Byte	CRWT
154	Scene channel F, 16-Bit value	recall	2 Byte	CRWT
155	Scene channel G, 16-Bit value	recall	2 Byte	CRWT
156	Scene channel H, 16-Bit value	recall	2 Byte	CRWT
When an 8-bit scene recall command is received the associated value of the 8-bit scene for scene channel A (B...H) is sent to the actuators via the group address assigned to this object. The group address must also be assigned depending on the data type (e.g. switching, venetian blind up/down, forced control, 8-bit value (decimal or percent value), 16-bit value (brightness, temperature, decimal value)) to the corresponding objects in the target actuators.				

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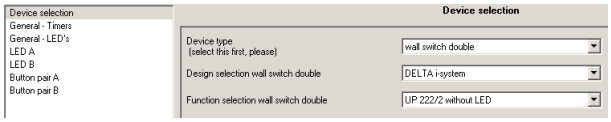
Parameter

Note

The number of parameter tabs presented in the ETS menu and their names may vary as they are controlled by the parameter settings.

Device selection



Parameter	Settings
Device type (select this first, please)	Wall switch single **Wall switch double** Wall switch triple / quadruple
With this parameter the number of button pairs for the wall switch is selected. With the selection "Wall switch single" these parameters are present Design selection Wall switch single Function selection Wall switch single With the selection "Wall switch double" these parameters are present Design selection Wall switch double Function selection Wall switch double With the selection "Wall switch triple / quadruple" these parameters are present Design selection Wall switch triple / quadruple Function selection Wall switch triple / quadruple Scene control	
Design selection Wall switch single	DELTA profil / style **DELTA i-system**
Design selection Wall switch double	DELTA profil / style **DELTA i-system**
Design selection Wall switch triple / quadruple	DELTA profil / style (quadruple) **DELTA i-system (triple)**
This parameter determines the selection options with the parameter „Function selection" and the number of parameter tabs for status LED and button pairs.	

Parameter	Settings
Function selection Wall switch single (Design: DELTA i-system)	**UP 221/2 (without LED)** UP 221/3 (with LED)
Function selection Wall switch single (Design: DELTA profil / style)	**UP 241/2 (profil) / UP 285/2 (style), without LED** UP 241/3 (profil) / UP 285/3 (style), with LED
Function selection Wall switch double (Design: DELTA i-system)	**UP 222/2 (without LED)** UP 222/3 (with LED)
Function selection Wall switch double (Design: DELTA profil / style)	**UP 243/2 (profil) / UP 286/2 (style), without LED** UP 243/3 (profil) / UP 286/3 (style), with LED
Function selection Wall switch triple (Design: DELTA i-system)	**UP 223/2 (i-system) without LED** UP 223/3 with LED UP 223/4 with LED and Temp. UP 223/5 with LED and IR
Function selection Taster quadruple (Design: DELTA profil / style)	**UP 241/2 (profil) / UP 285/2 (style), without LED** UP 241/3 / UP 285/3, with LED UP 241/3; UP 285/3, with LED and Temp. UP 241/3; UP 285/3, with LED and IR
This parameter determines the device type and thus the device function. When the wall switch UP 2xx/4 (with temperature sensor) is selected the parameter tab for configuration of the temperature sensor appears. When the wall switch UP 2xx/5 (with IR) is selected the parameter tab for configuration of the IR receiver decoder appears.	
scene control **(only available for wall switches with IR or Temp)**	**No** Yes
This parameter determines if the scene control module for the wall switches UP 2xx/4 and 2xx/5 is activated. When „Yes" is selected the parameter tab „General – scene" and possibly further parameter tabs for configuration of scene control appear.	

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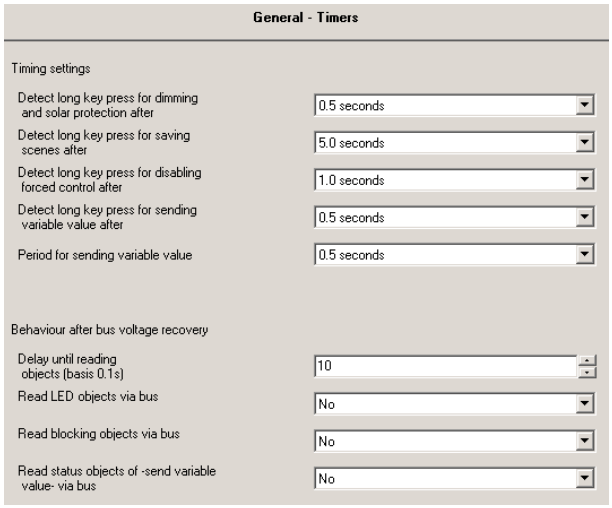
General – Timers



Timing Settings

Parameter	Settings
Detect long key press for dimming and solar protection after	**0.5**; 0.6; 0.8; 1.0; 1.2; 1.5; 2.0; 2.5; 3.0; 4.0; 5.0; 6.0; 7.0; 10.0 seconds
This parameter determines the time for distinguishing between short / long button operation for switching / dimming respectively solar protection control. If a button is pressed shorter than the configured time then a switching respectively slat control command is executed. If pressed longer a dimming respectively venetian blind or roller shutter control command is executed.	
Detect long key press for saving scenes after	0.5; 0.6; 0.8; 1.0; 1.2; 1.5; 2.0; 2.5; 3.0; 4.0; **5.0**; 6.0; 7.0; 10.0 seconds
This parameter determines the time for distinguishing between short / long button operation for recalling / saving a scene. If a button is pressed shorter than the configured time then the corresponding scene is recalled. If pressed longer the scene is saved. When the command for saving a scene is executed the status LED of the button flashes for the duration of about 2 seconds.	
Detect long key press for disabling forced control after	0.5; 0.6; 0.8; **1.0**; 1.2; 1.5; 2.0; 2.5; 3.0; 4.0; 5.0; 6.0; 7.0; 10.0 seconds
This parameter determines the time for distinguishing between short / long button operation for activating / deactivating forced control. If a button is pressed shorter than the configured time then the corresponding forced control command (forced on respectively forced off) is sent. If pressed longer a forced control off command is sent.	
Detect long key press for sending variable value after	**0.5**; 0.6; 0.8; 1.0; 1.2; 1.5; 2.0; 2.5; 3.0; 4.0; 5.0; 6.0; 7.0; 10.0 seconds
This parameter determines the time for distinguishing between short / long button operation for sending variable values. If a button is pressed shorter than the configured time then the current value of the communication object is sent. If pressed longer the current value is sent first and subsequently, for as long as the button is pressed, the current value incremented or decremented by the configured step value is sent cyclically.	
Period for sending variable value	**0.5**; 0.6; 0.8; 1.0; 1.2; 1.5; 2.0; 2.5; 3.0; 4.0; 5.0; 6.0; 7.0; 10.0 seconds
This parameter determines the cycle time for sending the variable value incremented respectively decremented by the configured step value.	

Behavior after bus voltage recovery

Parameter	Settings
Delay until reading objects (basis 0.1s)	**10** 0...255
This parameter determines the period after bus voltage recovery while the device does not send status read requests to avoid high bus load after bus voltage recovery.	
Read LED objects via bus	**No** Yes
This parameter determines if the status values required for LED status display respectively value dependent display shall be read after bus voltage recovery. If the status values are automatically sent by the actuators then this parameter can be set to "No". If the status values are not automatically sent and not read then after bus voltage recovery the LED displays "off".	
Read blocking objects via bus	**No** Yes
This parameter determines if the value for the blocking object shall be read after bus voltage recovery. If the status values for the blocking objects are automatically sent by the actuators then this parameter can be set to "No". If the status values are not automatically sent and not read then after bus voltage recovery the starting value for the blocking object is "0".	
Read status objects of send variable value via bus	**No** Yes
This parameter determines for the functions "send variable value" if the values for the status objects shall be read after bus voltage recovery. If the status values are automatically sent by the actuators then this parameter can be set to "No". If the status values are not automatically sent and not read then after bus voltage recovery the starting value for the variable value object is "0".	

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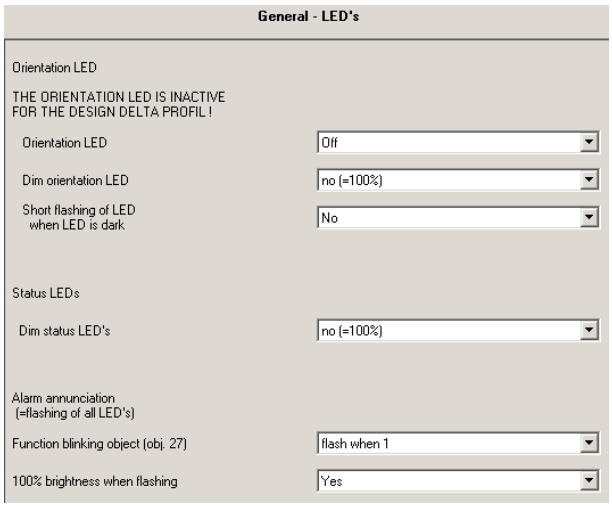
General – LED's



Orientation LED

Parameter	Settings
Orientation LED	**Off** On Status object IR activity (only for wall switches with IR) operation feedback dependent on value ON on long keypress
This parameter determines the function of the orientation LED. Depending on the selection further parameters may appear. When "Off" is selected the orientation LED is permanently off. When "On" is selected the orientation LED is permanently on. When "Status object" is selected the display of the orientation LED depends on a 1-bit status value, for which an object appears. When "IR activity" is selected the orientation LED signals when an IR telegram is received. When "operation feedback" is selected the orientation LED signals when any of the buttons is pressed. When "dependent on value" is selected the display of the orientation LED depends on an 8-bit or 16-bit status value, for which an object appears. With two configurable threshold values the object value range can be divided into three display ranges. For each display range one of the LED states "On", "Off" or "flashing" can be configured. This allows displaying if a received value is below the lower threshold value, is between both thresholds, or is above the upper threshold value. When "ON on long keypress" is selected then while a button is pressed the associated status LED signals when the condition for a long button operation is fulfilled.	

Parameter	Settings
Short flashing of LED when LED is dark	**No** Yes
When „Yes" is selected the orientation LED flashes cyclically (0.5Hz) for about 50ms allowing for orientation that is not disturbing like a permanently lit LED.	

Setting „Status object"

Parameter	Settings
Behavior of LED when ON (1)	Off **On** flash slowly (0.3 Hz) flash moderately (1 Hz) flash fast (5 Hz)
Behavior of LED when Off (0)	**Off** On flash slowly (0.3 Hz) flash moderately (1 Hz) flash fast (5 Hz)
This parameter determines the behavior of the orientation LED dependent on the value (ON or OFF) of the status object.	

Setting „Dependent on value"

Parameter	Settings
Display is dependent on	percentage value 8-bit value brightness value temperature value **16-bit value**
Upper limit value	
(0...100%)	70
(0...255)	200
(0 . . . 2000 Lux)	900 Lux
(0 ... 40°C)	2°C
(0 ... 65535)	0
Lower limit value	
(0...100%)	10
(0...255)	10
(0 . . . 2000 Lux)	4 Lux
(0 ... 40°C)	2°C
(0 ... 65535)	0
Behavior of LED when value is greater than upper threshold value	Off On **flash slowly (0.3 Hz)** flash moderately (1 Hz) flash fast (5 Hz)

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Parameter	Settings
Behavior of LED when value is between the threshold values	Off **On** flash slowly (0.3 Hz) flash moderately (1 Hz) flash fast (5 Hz)
Behavior of LED when value is lower than lower threshold value	**Off** On flash slowly (0.3 Hz) flash moderately (1 Hz) flash fast (5 Hz)
This parameter determines the behavior of the orientation LED for the setting "Dependent on value".	

Note

Following are the possible settings of value dependent LED display for status and orientation LED's
Temperature:
0°C ... 40°C, in 0.5K steps
Brightness:
0; 1; 2; 3, 4; 5; 7; 10; 20; 50; 100; 150; 200; 250; 300; 350; 400; 450; 500; 550; 600; 650; 700; 750; 800; 850; 900; 950; **1000;** 2000 (Lux)

Parameter	Settings
Dim orientation LED	**no (=100%)** Yes, constant value Yes, variable value (via object)
These parameters determine the brightness of the orientation light. When "no (=100%)" is selected the orientation LED output is set to maximum brightness. When "Yes, constant value" is selected the orientation LED output can be set to fixed percentage of the maximum brightness. This allows for adapting the orientation LED brightness to the ambient brightness. When "Yes, variable value (via object)" is selected the orientation LED output can be set to two different percentages of the maximum brightness for On and Off. This allows for choosing a lower brightness at night than during the day.	
Brightness value (5...100%)	**90** 5...100
This parameter appears when the parameter „Dim orientation LED" is set to „Yes, constant value".	
Brightness value when On (5...100%)	**90** 5...100
Brightness value when Off (5...100%)	**20** 5...100
These parameters appear when the parameter „Dim orientation LED" is set to „Yes, variable value (via object)".	

Status LED's

Parameter	Settings
Dim status LED's	**no (=100%)** Yes, constant value Yes, variable value (via object)
These parameters determine the brightness of the status LED's. When "no (=100%)" is selected the status LED output is set to maximum brightness. When "Yes, constant value" is selected the status LED output can be set to fixed percentage of the maximum brightness. This allows for adapting the status LED brightness to the ambient brightness. When "Yes, variable value (via object)" is selected the status LED output can be set to two different percentages of the maximum brightness for On and Off. This allows for choosing a lower brightness at night than during the day.	
Brightness value (5...100%)	**90** 5...100
This parameter appears when the parameter „Dim status LED's" is set to „Yes, constant value".	
Brightness value when On (5...100%)	**90** 5...100
Brightness value when Off (5...100%)	**20** 5...100
These parameters appear when the parameter „Dim status LED's" is set to „Yes, variable value (via object)".	

Alarm annunciation (flashing of all LED's)

Parameter	Settings
Function blinking object (obj. 27)	**flash when 1** flash when 0
This parameter determines which value received by the object 27 "LED flashing" triggers flashing of all LED's.	
100% brightness when flashing	**Yes** No
This parameter determines whether the LED's flash with full brightness or not.	

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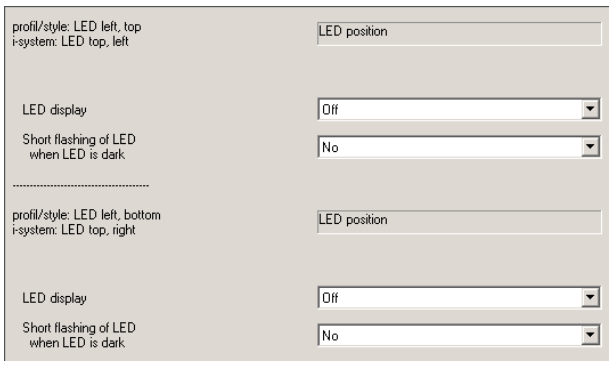
LED A (B, C, D)

Note

The parameter tabs for setting the functions of the LED's associated with buttons A1, A2, B1, B2, C1, C2, D1 and D2 are identical. Hence, only the settings for LED A1 are described here.



LED A1

Parameter	Settings
LED display	**Off** On Status object IR activity (only for wall switches with IR) operation feedback dependent on value ON on long keypress
This parameter determines the function of the status LED. Depending on the selection further parameters may appear. Off The status LED is permanently off. On The status LED is permanently on. Status object The display of the status LED depends on a 1-bit status value, for which an object appears. IR activity The status LED signals when an IR telegram is received. Operation feedback The status LED signals when any of the buttons is pressed. Dependent on value The display of the status LED depends on an 8-bit or 16-bit status value, for which an object appears. With two configurable threshold values the object value range can be divided into three display ranges. For each display range one of the LED states "On", "Off" or "flashing" can be configured. This allows displaying if a received value is below the lower threshold value, is between both thresholds, or is above the upper threshold value. ON on long keypress	

Parameter	Settings
While a button is pressed the associated status LED signals when the condition for a long button operation is fulfilled.	

Setting „Status object"

Parameter	Settings
Behavior of LED when ON (1)	Off **On** flash slowly (0.3 Hz) flash moderately (1 Hz) flash fast (5 Hz)
Behavior of LED when Off (0)	**Off** On flash slowly (0.3 Hz) flash moderately (1 Hz) flash fast (5 Hz)
This parameter determines the behavior of the status LED dependent on the value (ON or OFF) of the status object. After bus voltage recovery the current state of the status LED is recovered by reading the status via the bus.	

Setting „Dependent on value"

Parameter	Settings
Display is dependent on	percentage value 8-bit value brightness value temperature value **16-bit value**
Upper limit value	
(0...100%)	70
(0...255)	200
(0 . . . 2000 Lux)	900 Lux
(0 ... 40°C)	2°C
(0 ... 65535)	0
Lower limit value	
(0...100%)	10
(0...255)	10
(0 . . . 2000 Lux)	4 Lux
(0 ... 40°C)	0,5°C
(0 ... 65535)	0
Behavior of LED when value is greater than upper threshold value	Off On **flash slowly (0.3 Hz)** flash moderately (1 Hz) flash fast (5 Hz)

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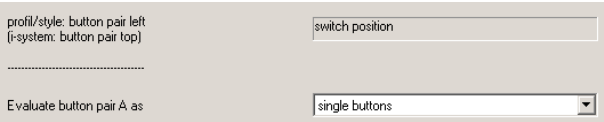
Parameter	Settings
Behavior of LED when value is between the threshold values	Off **On** flash slowly (0.3 Hz) flash moderately (1 Hz) flash fast (5 Hz)
Behavior of LED when value is lower than lower threshold value	**Off** On flash slowly (0.3 Hz) flash moderately (1 Hz) flash fast (5 Hz)
This parameter determines the behavior of the status LED for the setting "Dependent on value". The parameters "Upper limit value" and "Lower limit value" determine the two thresholds that divide the object value range into three display ranges. "Display range 1" is the range with values, which are below the lower value of the two limit values. "Display range 2" is the range with values, which are between and including both limit values. "Display range 3" is the range with values, which are above the higher value of the two limit values. After bus voltage recovery the current state of the status LED is recovered by reading the status via the bus.	

Parameter	Settings
Short flashing of LED when LED is dark	**No** Yes
When „Yes" is selected the status LED flashes cyclically (0.5Hz) for about 50ms allowing for orientation that is not disturbing like a permanently lit LED.	

Button pair A (B, C, D)

Note

The parameter tabs for setting the functions of buttons A1, A2, B1, B2, C1, C2, D1 and D2 respectively of the button pairs A, B, C and D are identical. Hence, only the settings for button A1 respectively button pair A are described here.



Parameter	Settings
Evaluate button pair A as	disabled button pair **single buttons**
This parameter determines if the two buttons are disabled or shall be configured jointly as button pair or separately as single buttons each with its own function. The parameter window changes depending on the selection and dependent on the selected function the possible parameters and settings are displayed. When "disabled" is selected the buttons cannot be configured further.	

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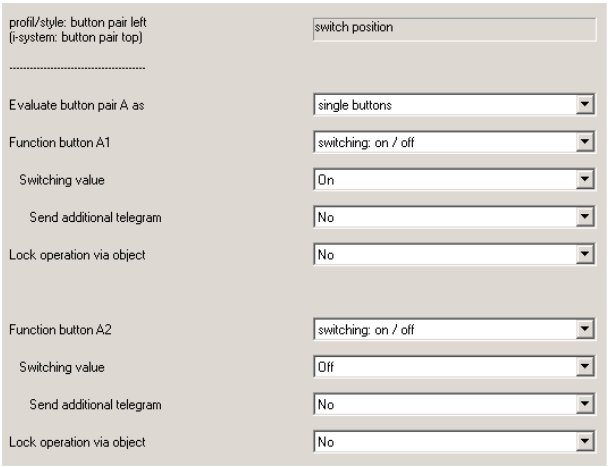
Button A1 (Settings for single buttons)

Note

In the following the parameter settings for single buttons are described.
The settings for buttons A1, A2, B1, B2, C1, C2, D1 and D2 are identical.



Parameter	Settings
Function Button A1	no function **Switching: On / Off** Switching: Toggle 1-button dimming Bell function: press = On, release = Off Bell function: press = Off, release = On 1- button solar protection control 1- button roller shutter control 1-bit scene 1: recall / save 1-bit scene 2: recall / save 8-bit scene: recall 8-bit scene: recall, save send 8-bit value send 16-bit value forced control
This parameter determines the function assigned to the button. Depending on the selected function the parameter window changes and the associated parameters are presented with their default settings.	
Lock operation via object	**No** Yes, if blocking object = 0 Yes, if blocking object = 1
This parameter determines if and under which conditions the operation of a button is locked via the blocking object.	

Note

There are no further parameters for the following single-button settings:
„Switching: Toggle“
„1-button dimming“
„Door bell function: press = On, release = Off“
„Door bell function: press = Off, release = On“
„1- button solar protection control“
„1- button roller shutter control“
„1-bit scene 1: recall / save“
„1-bit scene 2: recall / save“

Single button, setting „Switching On / Off“

Parameter	Settings
Switching value	Off **On**
The configured value is sent on short button operation. Note: The default value for buttons A2, B2, C2 or D2 is „Off“.	
Send additional telegram	**No** Yes
When „Yes“ is selected the following parameters appear.	
Send	after delay (second telegram) **on long key press (alternatively)**
When „after delay (second telegram)“ is selected the parameter „Transmission delay for the second telegram (factor 100ms)“ is visible. Otherwise, parameter „Long push button action min.“ is visible.	
Transmission delay for the second telegram (factor 100ms)	**1** 1...65500
Releasing the button starts the time delay (100ms ... 6550s). After the time delay expires a second telegram is sent. When the button is pressed again before the time delay expires the time delay is started over again. The second telegram is configured using the parameter „Function of the second telegram“ and maybe further parameters.	
Long push button action min.	**0,5**; 0,6; 0,8; 1,0; 1,2; 1,5; 2,0; 2,5; 3,0; 4,0; 5,0; 6,0; 7,0; 10,0 seconds
This parameter determines how long at least the button has to be pressed before the alternative telegram is sent. The alternative telegram is configured using the parameter „Function of the second telegram“ and maybe further parameters.	

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Parameter	Settings
Function of the second telegram	**Switching: On** Switching: Off Send percentage send 8-bit value send temperature value send brightness value send 16-bit value 1-bit scene: scene 1 recall / save 1-bit scene: scene 2 recall / save 8-bit scene: recall forced on forced off forced control off
This parameter determines the function of the second telegram.	
Percentage value (0...100%)	**0**
[Additional parameter for second telegramm „Send percentage“]	
8-bit value (0...255)	**0**
[Additional parameter for second telegramm „send 8-bit value“]	
temperature value	**0.0 °C / 32F**
[Additional parameter for second telegramm „send temperature value“] The value can be set as 0°C ... 40°C in 0.5K steps.	
brightness value	**0 Lux**
[Additional parameter for second telegramm „send brightness value“] A brightness value can be selected from this list: **0**; 1; 2; 3, 4; 5; 7; 10; 20; 50; 100; 150; 200; 250; 300; 350; 400; 450; 500; 550; 600; 650; 700; 750; 800; 850; 900; 950; 1000; 2000 (Lux)	
16-bit value (0...65535)	**0**
[Additional parameter for second telegramm „send 16-bit value“]	
Scene number	**scene 1 recall**
[Additional parameter for second telegramm „8-bit scene recall“] A scene number out of 1 to 64 can be selected.	

Single button, setting „8-bit scene: recall“

Parameter	Settings
Scene number	**recall scene 1**
With this parameter a scene number is selected out of 64. The 8-bit scene is recalled with a short operation of the button.	

Single button, setting „8-bit scene: recall / save“

Parameter	Settings
Scene number (save on long key press)	**scene 1**
With this parameter a scene number is selected out of 64. With a short operation of the button the 8-bit scene is recalled. With a long operation of the button the 8-bit scene is saved in the actuators belonging to this 8-bit scene.	

Single button, setting „send 8-bit value“

Parameter	Settings
Input	**Percentage value** Decimal value
Percentage value (0...100%)	**0**
8-bit value (0...255)	**0**
The 8-bit value to be sent on short button operation can be entered as percentage value (0...100%) or as decimal value (0...255).	
send additional telegram	**No** Yes
When „Yes“ is selected the following parameters appear.	
Send	after delay (second telegram) **on long key press (alternatively)**
When „after delay (second telegram)“ is selected the parameter „Transmission delay for the second telegram (factor 100ms)“ is visible. Otherwise, parameter „Long push button action min.“ is visible.	
Transmission delay for the second telegram (factor 100ms)	**1** 1...65500
Releasing the button starts the time delay (100ms ... 6550s). After the time delay expires a second telegram is sent. When the button is pressed again before the time delay expires the time delay is started over again. The second telegram is configured using the parameter „Function of the second telegram“ and maybe further parameters.	
Long push button action min.	**0.5**; 0.6; 0.8; 1.0; 1.2; 1.5; 2.0; 2.5; 3.0; 4.0; 5.0; 6.0; 7.0; 10.0 seconds
This parameter determines how long at least the button has to be pressed before the alternative telegram is sent. The alternative telegram is configured using the parameter „Function of the second telegram“ and maybe further parameters.	

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Parameter	Settings
Function of the second telegram	**Switching: On** Switching: Off Send percentage send 8-bit value send temperature value send brightness value send 16-bit value 1-bit scene: scene 1 recall / save 1-bit scene: scene 2 recall / save 8-bit scene: recall forced on forced off forced control off
This parameter determines the function of the second telegram.	
Percentage value (0...100%)	**0**
[Additional parameter for second telegramm „Send percentage“]	
8-bit value (0...255)	**0**
[Additional parameter for second telegramm „send 8-bit value“]	
Temperature value	**0.0 °C / 32F**
[Additional parameter for second telegramm „send temperature value“] The value can be set as 0°C ... 40°C in 0.5K steps.	
Brightness value	**0 Lux**
[Additional parameter for second telegramm „send brightness value“] A brightness value can be selected from this list: **0**; 1; 2; 3, 4; 5; 7; 10; 20; 50; 100; 150; 200; 250; 300; 350; 400; 450; 500; 550; 600; 650; 700; 750; 800; 850; 900; 950; 1000; 2000 (Lux)	
16-bit value (0...65535)	**0**
[Additional parameter for second telegramm „send 16-bit value“]	
Scene number	**recall scene 1**
[Additional parameter for second telegramm „8-bit scene recall“] A scene number out of 1 to 64 can be selected.	

Single button, setting „16-bit value senden“

Parameter	Settings
Input	**temperature value** brightness value Decimal value
Temperature value	**0.0 °C / 32F**
brightness value	**0 Lux**
16-bit value (0...65535)	**0**

Parameter	Settings
The 16-bit value to be sent on short button operation can be entered as temperature value (0...40°C), as brightness value (0...2000 Lux) or as decimal value (0...65535).	
Send additional telegram	**No** Yes
When „Yes“ is selected the following parameters appear.	
Send	after delay (second telegram) **on long key press (alternatively)**
When „after delay (second telegram)“ is selected the parameter „Transmission delay for the second telegram (factor 100ms)“ is visible. Otherwise, parameter „Long push button action min.“ is visible.	
Transmission delay for the second telegram (factor 100ms)	**1** 1...65500
Releasing the button starts the time delay (100ms ... 6550s). After the time delay expires a second telegram is sent. When the button is pressed again before the time delay expires the time delay is started over again. The second telegram is configured using the parameter „Function of the second telegram“ and maybe further parameters.	
Long push button action min.	**0.5**; 0.6; 0.8; 1.0; 1.2; 1.5; 2.0; 2.5; 3.0; 4.0; 5.0; 6.0; 7.0; 10.0 seconds
This parameter determines how long at least the button has to be pressed before the alternative telegram is sent. The alternative telegram is configured using the parameter „Function of the second telegram“ and maybe further parameters.	
Function of the second telegram	**Switching: On** Switching: Off Send percentage send 8-bit value send temperature value send brightness value 16-bit value senden 1-bit scene: scene 1 recall / save 1-bit scene: scene 2 recall / save 8-bit scene: recall forced on forced off forced control off
This parameter determines the function of the second telegram.	
Percentage value (0...100%)	**0**
[Additional parameter for second telegramm „Send percentage“]	
8-bit value (0...255)	**0**
[Additional parameter for second telegramm „send 8-bit value“]	

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Parameter	Settings
Temperature value	**0.0 °C / 32F**
[Additional parameter for second telegramm „send temperature value“] The value can be set as 0°C ... 40°C in 0.5K steps.	
Brightness value	**0 Lux**
[Additional parameter for second telegramm „send brightness value“] A brightness value can be selected from this list: **0**; 1; 2; 3, 4; 5; 7; 10; 20; 50; 100; 150; 200; 250; 300; 350; 400; 450; 500; 550; 600; 650; 700; 750; 800; 850; 900; 950; 1000; 2000 (Lux)	
16-bit value (0...65535)	**0**
[Additional parameter for second telegramm „send 16-bit value“]	
Scene number	**recall scene 1**
[Additional parameter for second telegramm „8-bit scene recall“] A scene number out of 1 to 64 can be selected.	

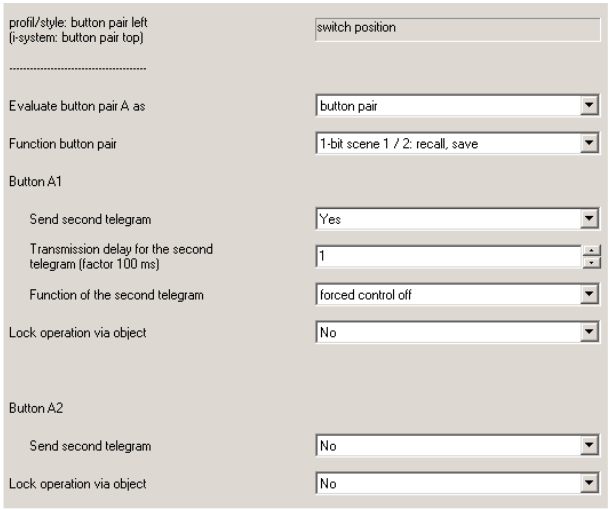
Single button, setting „forced control“

Parameter	Settings
Type of forced control	forced Off / inactive; **forced On / inactive**
This parameter determines the forced controlcommand to be sent on short button operation. On long button operation forced control is deactivated.	
Send additional telegrams	No **Yes**
When „Yes“ is selected the following parameter appears.	
Behaviour of sending	short: Off / long: Off **short: Off / long: On** short: On / long: Off short: On / long: On
The additional telegrams are sent with the respective forced control telegram without time delay. This allows for a 1-bit blocking object to be controlled parallel to the forced control. The default setting “short: Off / long:On” set the blocking object to “0” on activated forced control and sets it to “1” on deactivated forced control.	

Button pair A (Settings for button pairs)

Note

This section describes the parameter settings for button pair A. The settings for button pairs A, B, C and D are identical.



Parameter	Settings
Function button pair	**Switching, dimming: On, brighter / Off, darker** Switching, dimming: Off, darker / On, brighter Switching, dimming: Toggle, brighter / Toggle, darker Switching, dimming: Toggle, darker / Toggle, brighter Solar protection, Slats: up/ down Solar protection, Slats: down / up Roller shutters: up/ down Roller shutters: down / up Send percentage [variable] (top/left increment) Send percentage [variable] (bottom/right increment) Send 8-bit value [variable] (top/left increment) Send 8-bit value [variable] (bottom/right increment) 1-bit scene 1 / 2: recall / save 1-bit scene 2 / 1: recall / save 8-bit scene: recall, save Forced on, inactive / off, inactive Forced off, inactive / forced on,

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Parameter	Settings
	inactive
This parameter determines the function of the button pair. Depending on the selected function the parameter window changes and the corresponding default parameters are displayed. Those parameter settings that are identical for all functions are following immediately below. The parameters are identical for button A1 [upper (left)] and button A2 [lower (right)] so that these are displayed only once. If these exist, function specific settings are listed individually after the general settings.	

Independent settings for button A1
(this also applies to the parameters with the same name for button A2)

Parameter	Settings
Send second telegram	**No** Yes
When „Yes“ is selected the following parameters appear.	
Transmission delay for the second telegram (factor 100ms)	**1** [1...65500]
Releasing the button starts the time delay (100ms ... 6550s). After the time delay expires a second telegram is sent. When the button is pressed again before the time delay expires the time delay is started over again. The second telegram is configured using the parameter „Function of the second telegram“ and maybe further parameters.	
Function of the second telegram	**Switching: On** Switching: Off Send percentage Send 8-bit value Send temperature value Send brightness value Send 16-bit value 1-bit scene: scene 1 recall / save 1-bit scene: scene 2 recall / save 8-bit scene: recall Forced on Forced off Forced control off
This parameter determines the function of the second telegram.	
Percentage value (0...100%)	**0**
[Additional parameter for second telegramm „Send percentage“]	
8-bit value (0...255)	**0**
[Additional parameter for second telegramm „send 8-bit value“]	

Parameter	Settings
temperature value	**0.0 °C / 32F**
[Additional parameter for second telegramm „send temperature value“] The value can be set as 0°C ... 40°C in 0.5K steps.	
brightness value	**0 Lux**
[Additional parameter for second telegramm „send brightness value“] A brightness value can be selected from this list: **0**; 1; 2; 3, 4; 5; 7; 10; 20; 50; 100; 150; 200; 250; 300; 350; 400; 450; 500; 550; 600; 650; 700; 750; 800; 850; 900; 950; 1000; 2000 (Lux)	
16-bit value (0...65535)	**0**
[Additional parameter for second telegramm „send 16-bit value“]	
Scene number	**recall scene 1**
[Additional parameter for second telegramm „8-bit scene recall“] A scene number out of 1 to 64 can be selected.	
Lock operation via object	**No** Yes, if blocking object = 0 Yes, if blocking object = 1
This parameter determines if and under which conditions the operation of a button is locked via the blocking object.	

Note

There are no further parameters for the following button pair settings:
„Switching, dimming: On, brighter / Off, darker“
„Switching, dimming: Off, darker / On, brighter „
„Switching, dimming: Toggle, brighter / Toggle, darker“
„Switching, dimming: Toggle, darker / Toggle, brighter“
„Solar protection, Slats: up/ down“
„Solar protection, Slats: down / up“
„Roller shutters: up/ down“
„Roller shutters: down / up“
„1-bit scene 1 / 2: recall / save“
„1-bit scene 2 / 1: recall / save“
„Forced on, inactive / off, inactive“
„Forced off, inactive / forced on, inactive“

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Button pair, setting „Send percentage [variable] (top/left increment)“

Settings Button A1

Parameter	Settings
Upper threshold (0...100%)	100
Step (0...100%)	1
On long operation of button A1 a percentage value, starting with the last status value and incremented by the step value until reaching the upper threshold, is sent cyclically onto the bus. If the last status value is already higher than the upper threshold then nothing is sent.	

Settings Button A2

Parameter	Settings
Lower threshold (0...100%)	0
Step (0...100%)	1
On long operation of button A2 a percentage value, starting with the last status value and decremented by the step value until reaching the lower threshold, is sent cyclically onto the bus. If the last status value is already lower than the upper threshold then nothing is sent.	

Button pair, setting „Send percentage [variable] (bottom/right increment)“

Settings Button A1

Parameter	Settings
Lower threshold (0...100%)	0
Step (0...100%)	1
On long operation of button A1 a percentage value, starting with the last status value and decremented by the step value until reaching the lower threshold, is sent cyclically onto the bus. If the last status value is already lower than the upper threshold then nothing is sent.	

Settings Button A2

Parameter	Settings
Upper threshold (0...100%)	100
Step (0...100%)	1
On long operation of button A2 a percentage value, starting with the last status value and incremented by the step value until reaching the upper threshold, is sent cyclically onto the bus. If the last status value is already higher than the upper threshold then nothing is sent.	

Button pair, setting „Send 8-bit value [variable] (top/left increment)“

Settings Button A1

Parameter	Settings
Upper threshold (0...255)	255
Step (0...255)	1
On long operation of button A1 an 8-bit value, starting with the last status value and incremented by the step value until reaching the upper threshold, is sent cyclically onto the bus. If the last status value is already higher than the upper threshold then nothing is sent.	

Settings Button A2

Parameter	Settings
Lower threshold (0...255)	0
Step (0...255)	1
On long operation of button A2 an 8-bit value, starting with the last status value and decremented by the step value until reaching the lower threshold, is sent cyclically onto the bus. If the last status value is already lower than the upper threshold then nothing is sent.	

Button pair, setting „Send 8-bit value [variable] (bottom/right increment)“

Settings Button A1

Parameter	Settings
Lower threshold (0...255)	0
Step (0...255)	1
On long operation of button A1 an 8-bit value, starting with the last status value and decremented by the step value until reaching the lower threshold, is sent cyclically onto the bus. If the last status value is already lower than the upper threshold then nothing is sent.	

Settings Button A2

Parameter	Settings
Upper threshold (0...255)	255
Step (0...255)	1
On long operation of button A2 an 8-bit value, starting with the last status value and incremented by the step value until reaching the upper threshold, is sent cyclically onto the bus. If the last status value is already higher than the upper threshold then nothing is sent.	

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Button pair, setting „8-bit scene: recall / save“

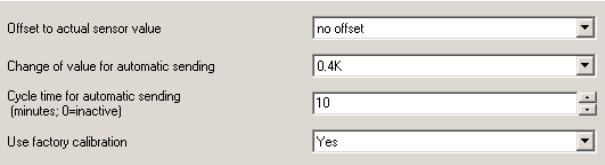
Settings Button A1

Parameter	Settings
Scene number	**scene 1**
With this parameter a scene number is selected out of 64. With a short operation of the button the 8-bit scene is recalled. With a long operation of the button the 8-bit scene is saved in the actuators belonging to this 8-bit scene.	

Settings Button A2

Parameter	Settings
Scene number	**scene 1**
With this parameter a scene number is selected out of 64. With a short operation of the button the 8-bit scene is recalled. With a long operation of the button the 8-bit scene is saved in the actuators belonging to this 8-bit scene.	

Temperature



Parameter	Settings
Offset to actual-sensor value	+10K; +8.0K; +7.0K; +6.5K; +6.0K; +5.5K; +5.0K; +4.5K; +4.0K; +3.5K; +3.0K; +2.5K; +2.0K; +1.5K; +1.2K; +1.0K; +0.8K; +0.6K; +0.5K; +0.4K; +0.3K; +0.2K; 0.1K; **no offset** - 0.1K; -0.2K; -0.3K; -0.4K; -0.5K; -0.6K; -0.8K; --1.0K; -1.5K; -2.0K; -2.5K; -3.0K; -3.5K; -4.0K; -4.5K; -5.0K; -5.5K; -6.0K; -6.5K; -7.0K; -8.0K; -10K;
This parameter determines an offset for the temperature measurement for adjustment to local conditions.	
Change of value for automatic sending	0.1K; 0.2K; 0.3K; 0.4K; 0.5K; 0.6K; 0.7K; 0.8K; 0.9K; 1.0K; 1.2K; 1.5K; 1.8K; 2.0K; 2.5K; 3.0K; 3.5K; 4.0K; 4.5K; 5.0K; **deactivated**
Cycletime for automatic sending (minutes; 0 = inactive)	**10** [0...115]
These parameters determine the send conditions change-of-value and cycle time for sending of temperature.	

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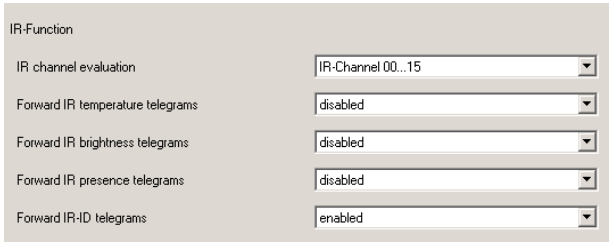
General – IR



Parameter	Settings
IR channel evaluation	**IR channel 00...15** IR channel 16...31 IR channel 32...47 IR channel 48...63
This parameter determines the IR channels, which shall be decoded in the wall switch with IR receiver decoder. Select from 4channel blocks, each with up to 16 IR channels that can be used.	
Forward IR temperature telegrams	**disabled** enabled
This parameter determines whether IR temperature telegrams are decoded and sent onto the bus.	
Forward IR brightness telegrams	**disabled** enabled
This parameter determines whether IR brightness telegrams are decoded and sent onto the bus.	
Forward IR presence telegrams	**disabled** enabled
This parameter determines whether IR presence telegrams are decoded and sent onto the bus.	
Lock IR presence telegrams via object	**No** Yes, if blocking object = 0 Yes, if blocking object = 1
This parameter determines if and under which conditions sending of IR presence telegrams is disabled via the blocking object.	
Forward IR ID telegrams	**disabled** enabled
This parameter determines whether IR ID telegrams are decoded and sent onto the bus.	

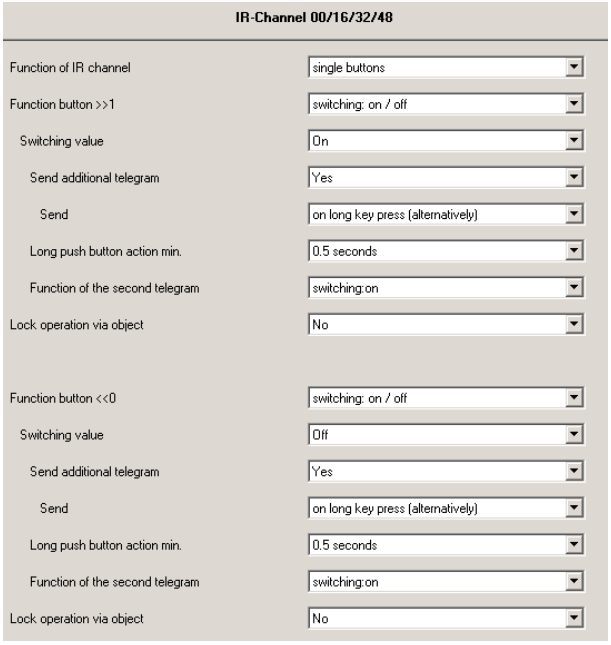
Setting IR channels

Note

The parameter windows for configuration of the functions of the IR channels are identical with those for the single buttons A1, A2, B1, B2, C1, C2, D1 and D2 respectively the button pairs A, B, C and D.
Button A1 corresponds with the upper IR button of the IR wall switch and with the button of the IR hand-held remote with an upward-pointing arrow respectively a „1“ .
Button A2 corresponds with the lower IR button of the IR wall switch and with the button of the IR hand-held remote with a downward-pointing arrow respectively a „0“.

Parameter	Settings
Function of IR channel	disabled button pair **single buttons**
This parameter determines whether both buttons of an IR channel are either disabled, configured as a button pair , or configured as single buttons each with a separate function. Depending on the selected function the parameter window changes and the corresponding default parameters are displayed. When disabled is selected no parameters can be set for the buttons.	

When „single buttons“ is selected this parameter window appears for IR channel 00, 16, 32 or 48.



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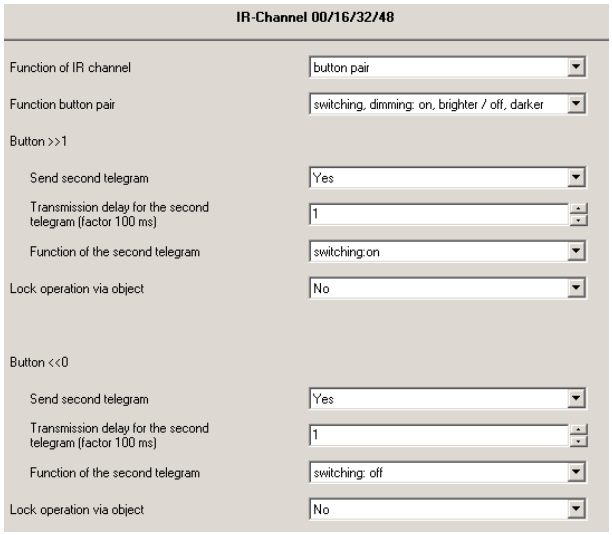
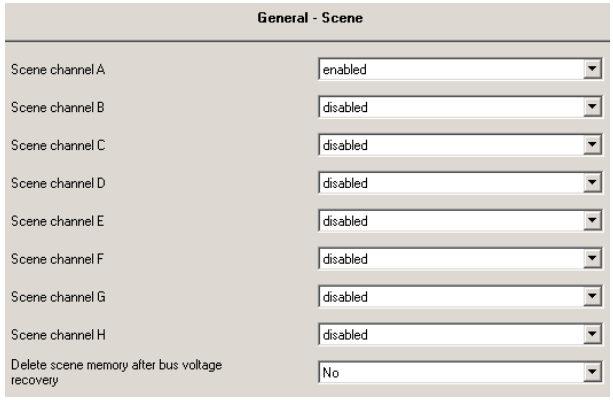
Further settings are identical to those for single buttons and arenot repeated here.

When „button pair" is selected this parameter window appears for IR channel 00, 16, 32 or 48.



Further settings are identical to those for button pairs and are not repeated here.

General – Scene



Parameter	Settings
Scene channel A	**disabled** enabled
Scene channel B	**disabled** enabled
Scene channel C	**disabled** enabled
Scene channel D	**disabled** enabled
Scene channel E	**disabled** enabled
Scene channel F	**disabled** enabled
Scene channel G	**disabled** enabled
Scene channel H	**disabled** enabled
These parameters determine the activated scene channels. For each activated scene channel a parameter window appears for configuration of the scene channel.	
Delete scene memory after bus voltage recovery	**No** Yes
This parameter determines whether the scene settings saved in memory are deleted after bus voltage recovery.	

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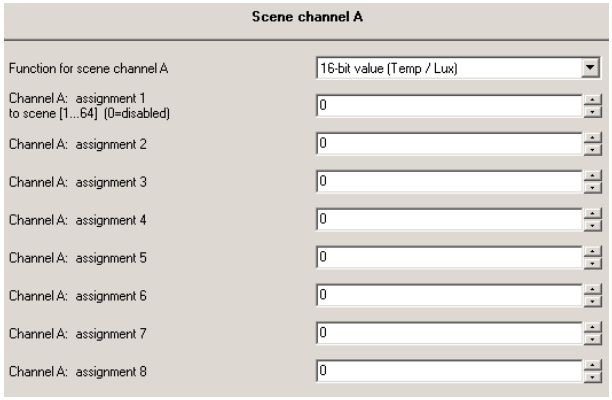
Setting scene channels



Note

The parameter window for configuration of scene channel A is identical with the parameter windows for scene channels B, C, D, E, F, G and H.

Parameter	Settings
Function for Scene channel A	**Switching** shutter forced control 8-bit value 16-bit value (Temp / Lux)
This parameter determines the function of the scene channel. Saving of 8-bit scene values is executed during device operation.	
Channel A: assignment 1 to scene [1...64] (0=disabled)	**0** [1...64]
Channel A: assignment 2	**0** [1...64]
Channel A: assignment 3	**0** [1...64]
Channel A: assignment 4	**0** [1...64]
Channel A: assignment 5	**0** [1...64]
Channel A: assignment 6	**0** [1...64]
Channel A: assignment 7	**0** [1...64]
Channel A: assignment 8	**0** [1...64]
This parameter determines, which 8-bit scenes are assigned to channel A.	

Space for notes