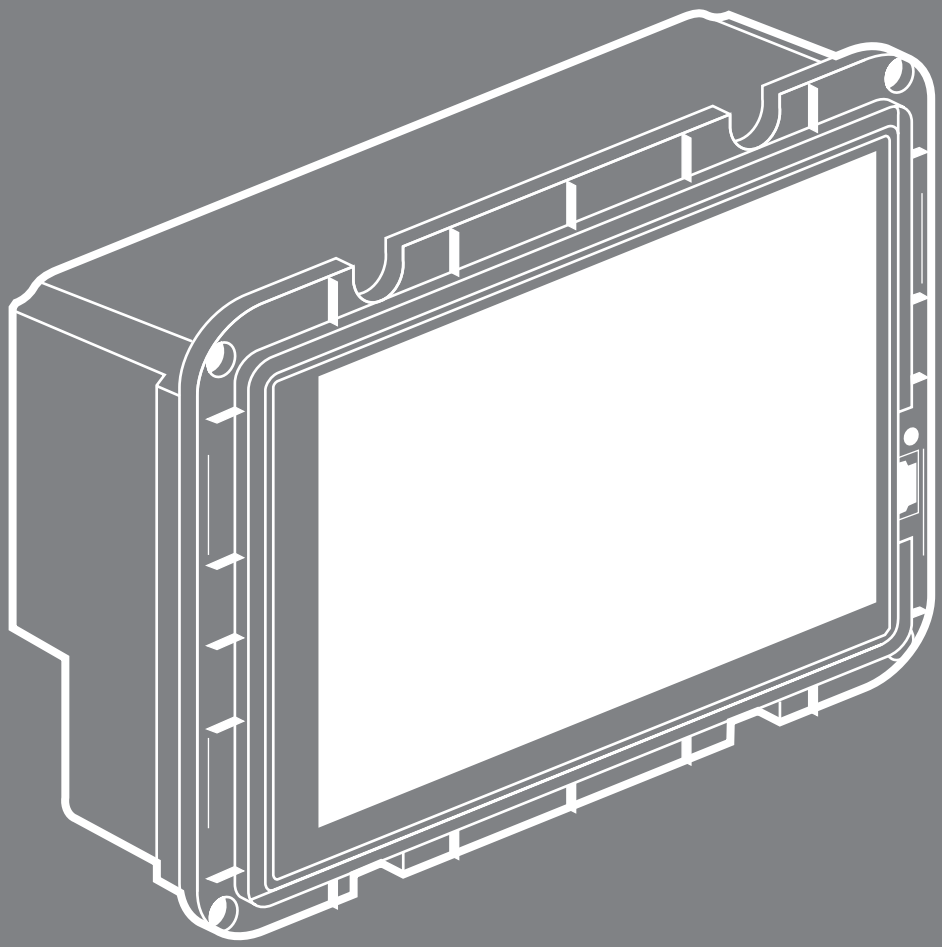
APPLICATION PROGRAM 048884-TouchScreen-01



SETUP MANUAL

Contents

Description of product functions

The touch screen is a compact multifunction control and display device offering up to 110 EIB functions in an easily-accessible format.

The touch screen can be used to display and access all the major standard functions and feedback in the EIB/KNX system. Actions, states and feedback/ acknowledgements are represented by symbols. Each function and each page can be described by a title of no more than 20 symbols in plain text. The symbols can then be modified or replaced via a USB connection.

The ten main runtime pages and also the configuration pages can be protected by a password.

Moreover, the various functions can be locked using a dedicated communication object.

Commands can also be disabled using a temporary disable function.

The device offers 64 easily-configurable scenes. Scenes are created directly on screen.

The integrated 7-day scheduling program can be used to create individual schedules. Moreover, the presence simulation function can be used to read previously recorded events while the user is on holiday.

The alarm module can be used to analyse and display up to 76 objects and their events in the form of alarms.

16 objects can be used as threshold value switches and limit indicators.

The logic module is configured directly on the device using the touch screen. It can be used to create a logic connection between up to 60 objects.

The device has a very high-quality LED-backlit colour TFT screen. The touch zones of the screen can also be used as a wall switch distinguishing between short and long presses. The screen buttons can also be used to adjust the brightness of luminaires or to actuate blinds/ shutters.

The device has an integrated slideshow function which can be used to display a series of photos when it is not in use. Up to 500 MB of memory can be assigned to the slideshow function. Images with a resolution of 320 x 240 pixels can be transferred to the device very easily via a USB connection. The scroll speed of the photos can be set on the device to suit the user's preferences.

Simply pressing the touch screen in sleep mode triggers an EIB communication object which can generate simple lighting or activate a particular lighting scene.

By default, the device offers four different function display styles. The configuration page can be used to select the desired style. The user can change the settings without the ETS software.

Description of product functions *(continued)*

The touch screen can only be configured using the ETS software. Simply select the required functions in the ETS application program. For each function, the corresponding communication objects are displayed in real time and have group addresses assigned to them.

Touch screen, display style with blue circles

A complete description of the device functions and the required ETS application program appears below. All the illustrations use the display style featuring blue circles. If you prefer a different display style, the screen can be given a different look.

General information concerning operation

The logo/slideshow is displayed during the initialisation process which follows device switch-on (the device starts up once the power supply and the KNX have been connected or after pressing the reset button). The boot process can last up to 1 minute. During this period, the device cannot be used.

Once the process is complete, the menu page is displayed on screen.

On the menu page, icons can be used to access main pages in order to control the KNX functions.

The buttons are named individually using the appropriate ETS parameters (see below).

Access to a page can be protected with a password. Password-protected pages are indicated by a padlock symbol on the left of the button.

Passwords are entered using a keypad (see below).

At the bottom of the menu page, there are 6 buttons for loading the configuration as well as the other device pages. The configuration pages can be protected by a password.

The various buttons can be used to enable the following functions:

	Opens the system parameters configuration page
	Opens the alarm page
	Opens the 7-day schedule configuration page
	Opens the scene configuration page
	Opens the presence simulation configuration page
	Opens the logo/slideshow page

Use of main pages and their functions

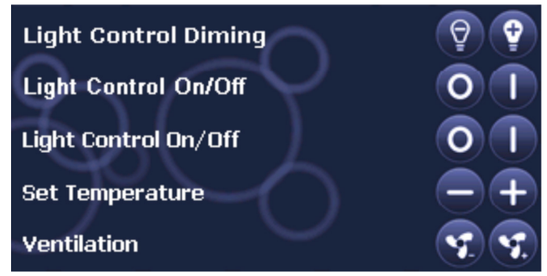
The device main pages are used to display and run the KNX functions and to navigate directly from one main page to another, as well as to other pages.

Main pages consist of three parts: the header, the KNX function block and the page footer.

The page name is indicated in the middle of the header.

The left and right arrows are used to access the next and previous main pages. The internal clock date and time are indicated in the right-hand section of the header. The date and time display format (country-specific 12/24 hr display) can be set directly on the device (see section concerning general device configuration). The Home button in the top left-hand corner can be used to return to the menu page.

The KNX function block on each page enables use of up to 5 KNX functions. The functions are selected and configured using the corresponding ETS parameters (see below).



The following functions are available:

- Switching
- Switching/dimming with stop telegram
- Switching by override instruction
- Shutters
- Set 1 byte value
- Set temperature (2 byte)
- Set reader value
- Scene call/program
- Set heating operating mode
- Set heating ventilation
- Status display 1 bit
- Status display 1 byte
- Status display 2 byte
- Status display 4 byte

Description of product functions *(continued)*

Each function has a descriptive text of 20 characters maximum, a 2-button control panel (these buttons can be hidden for purely status functions) and, if applicable, a feedback indicator between the control panel and the descriptive text. When a blank line is configured, a blank line is displayed. The control panels remain empty.

If text has been configured, it is displayed in the Description field. The control panels remain empty.

Depending on the type of function, up to 3 communication objects (see also standard functions) can be used to communicate with the bus.

The main page footer features 6 additional buttons.

These button functions as well as the symbols displayed can be set individually via the ETS parameters. As a rule, two different groups of functions are assigned to the additional buttons.

They can be used for direct access to a particular page or a configuration page from the main page (in addition to standard navigation from the menu page). The current functions and symbols used for this purpose are displayed in the table below:

Symbol 1 (enables sleep mode)	Symbol 2 (activates the slideshow)
Symbol 3 (cancel mode)	Symbol 4 (padlock)
Symbol 17 (opens the configuration page)	Symbol 18 (schedule configuration)
Symbol 19 (scene configuration)	Symbol 20 (logic configuration)
Symbol 21 (presence simulation)	

Additional buttons can be used for direct access to another main page, for example.

Description of product functions *(continued)*

In order to simplify navigation, the additional button symbols can be general (a page number, for example) or indicate a room function more specifically:

The symbols available are as follows:

Symbol 6 (opens previous page)	Symbol 7 (opens main page 1)
Symbol 8 (opens main page 2)	Symbol 9 (opens main page 3)
Symbol 10 (opens main page 4)	Symbol 11 (opens main page 5)
Symbol 12 (opens main page 6)	Symbol 13 (opens main page 7)
Symbol 14 (opens main page 8)	Symbol 15 (opens main page 9)
Symbol 16 (opens main page 10)	Symbol 22 (weather data)
Symbol 23 (audio control)	Symbol 24 (lighting)

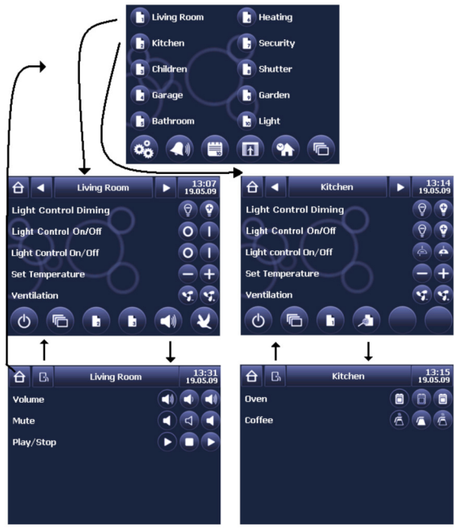
Symbol 25 (protection from the sun)	Symbol 26 (heating, ventilation, air conditioning)
Symbol 27 (central control units)	Symbol 28 (system functions)
Symbol 29 (office)	Symbol 30 (living room)
Symbol 31 (dining room)	Symbol 32 (children)
Symbol 33 (bedroom)	Symbol 34 (kitchen)
Symbol 35 (bathroom)	Symbol 36 (WC)
Symbol 37 (gym)	Symbol 38 (cellar)
Symbol 39 (workshop)	Symbol 40 (outbuildings)
Symbol 41 (stairs)	Symbol 42 (garage)

Finally, additional buttons can be used to open another function page attached to the main page (see next section). The following symbols are used for this purpose:

Symbol 5
(opens a detailed configuration page)

Detailed configuration pages

In addition to the main pages, other detailed configuration pages can be used to enable the KNX functions. The detailed configuration pages are attached to a main page and can only be accessed using the additional buttons in the menu page. For example:



Up to 60 additional KNX functions can be displayed on the detailed configuration pages. These functions differ from the main functions in that a single communication object is available for each of them (see below).

The following functions are available:

- Switching
- Switching by override instruction
- Set 1 byte value
- Set temperature (2 byte)
- Set reader value
- Scene call/program
- Set heating operating mode
- Set heating ventilation
- Status display 1 bit
- Status display 1 byte
- Status display 2 byte

The detailed configuration pages consist of a header and a KNX function block. The name of the main page to which the detailed configuration page is attached is indicated in the middle of the header. As on the main page, the date and time are displayed on the right.

There are two buttons on the left of the header. The Home button is used to return to the menu page and the Back button is used to return to the main page (see illustration below).

Up to 60 additional functions can be displayed in the KNX function block. If more than 6 functions are placed on a detailed configuration page, a scroll bar is displayed to enable selection of functions that are not displayed.

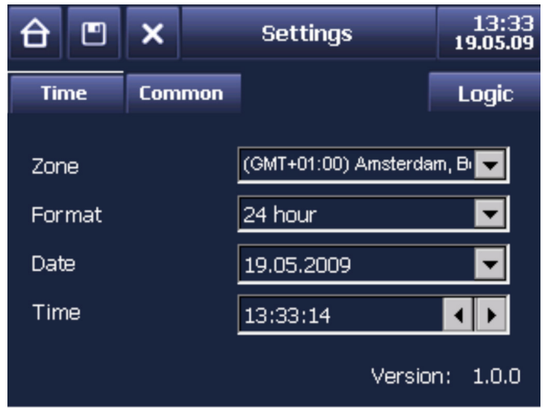
Description of product functions *(continued)*

System parameters configuration page

The configuration page is accessed from the menu page using the button below:

It is also possible to configure the parameters to access this page using an additional button on one of the main pages.

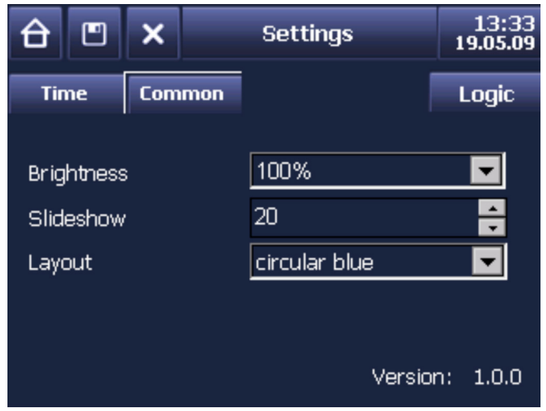
The system parameters configuration page allows the user to enter settings without ETS. Once the page opens, the following is displayed:



The current device firmware version is indicated at the bottom of the page. If firmware updates are available, it is possible to update the USB interface (see section concerning the USB interface).

Two tabs are available for entering settings. The Time tab can be used to set the time zone and the time display format (12/24 hr display). If the device is configured to supply the reference time to the KNX system (settings via the ETS parameters, see below), the date and time can be set here.

The Common tab is used to set the general settings.



The first field is used to set the backlighting brightness level in normal mode. This brightness level can be set to a value between 50 and 100%. If you want the logo/slideshow to be displayed with low backlighting when the device is in sleep mode, you can set the desired brightness level in the ETS parameters.

The second field is used to set the scroll speed of the slideshow photos. Indicate the time in seconds before the next photo is displayed.

All changes made on the page must be confirmed by pressing the Save button in the header:

To cancel changes, press the Cancel button:

Modifications will only be taken into account once they have been saved and after restarting the device or resetting the system.

Use the Home button to return to the menu page:

Logic functions configuration page

In principle, up to 32 logic functions can be integrated in the device. Use the Logic button on the system parameters page to open the logic functions configuration page:

All additional function objects enabled for use in logic programs can be configured on the device. They are enabled when a function is defined using ETS. Only additional function 1-bit objects can be used in logic programs.

Each logic element consists of up to 4 inputs and one output. The inputs/outputs are selected using a dropdown menu which displays a description of all enabled objects.

Objects already used for the output of a previous logic function are no longer displayed and cannot therefore be selected for the next output.

The inputs and outputs can be inverted, which means that not only both standard AND and OR elements can be enabled, but also all possible types of element.

Description of product functions *(continued)*

The element function can be enabled/disabled using the Enabled tick box.

Each event on the input trips a sending to output event, whether the output value has changed or not.

Use the – button if you wish to delete logic equations or inputs and outputs and clear the element in order to enter a new setting. All new settings must be saved using the Save button (floppy disk symbol).

Logic elements which have already been programmed are indicated in the dropdown list by the "*" symbol. It is therefore very easy to know which of the 32 elements have already been used.

After restarting the device, the state of all inputs is set to "undefined". This input logic can only be enabled if an event occurs in the appropriate object.

The logic element sends the output value when a valid input condition is satisfied.

OR example:

Once at least one input displays the value "1", the output is set to "1". To set the output to "0", all the inputs must display the value "0".

AND example:

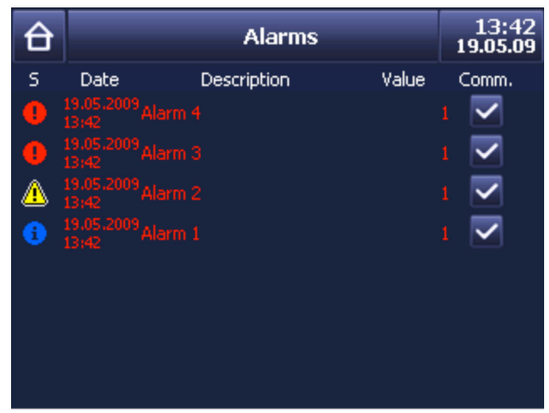
Once at least one input displays the value "0", the output is set to "0". To set the output to "1", all the inputs must display the value "1".

Alarm page

16 general alarm functions are available. In addition to the standard alarms, the 60 additional functions can also be used as alarm functions.

This means that in total up to 76 alarm notifications can be displayed on the alarm page.

When an alarm trips, the device automatically displays the alarm page. However, this page can also be accessed using the menu page function button. The alarm page structure is as follows:



All the current alarms are displayed on the alarm page in order of arrival.

An alarm line consists of the symbols chosen in ETS, an alarm text also configured in ETS, the value and an acknowledgement button in the right-hand margin.

Description of product functions *(continued)*

Don't forget that the alarm list only consists of alarms. If objects are used as events (settings via parameters, see below), they are not displayed in the alarm list. Only events are added to the device logic functions.

The symbols below are available for alarm notifications (in addition, customised symbols can be loaded in the device via a USB connection - see section devoted to USB connection):

Symbol 1 (general alarm)	Symbol 2 (power on)
Symbol 3 (alarm signal)	Symbol 4 (illuminated warning)
Symbol 5 (warning)	Symbol 6 (warning ?)
Symbol 7 (window)	Symbol 8 (door)
Symbol 9 (information message)	Symbol 10 (wind)
Symbol 11 (rain)	Symbol 12 (power on)
Symbol 13 (temperature)	Symbol 14 (first aid)
Symbol 15 (fire)	Symbol 16 (repair/maintenance)

Each time the alarm page is displayed, the current object value is indicated in the alarm list. While the object is in an alarm state, the value is displayed in red. Once the object value reverts to normal, the value is displayed in green and the value and the date are frozen on the change of status.

Alarms stay in the list until their status changes and they have been acknowledged.

Waiting alarms can be acknowledged individually using the Commit button or (if this function is defined in ETS) collectively using the general feedback button in the header:

Once the user has acknowledged an alarm, the acoustic alarm stops immediately if this function has been configured in ETS.

If there are several waiting alarms, acknowledgement of the first alarm also stops the acoustic alarm of the other waiting alarms.

The waiting alarm acknowledgement button disappears once the acknowledgement has been sent.

Once an alarm acknowledgement has been sent and the status has reverted to normal, the alarm is automatically deleted from the alarm list.

At the end of a previously defined time, the slideshow is displayed above the alarm page. However, if a new alarm occurs, the slideshow disappears and makes way for the alarm page.

The slideshow can be ended manually, just like all the other pages.

Description of product functions *(continued)*

Once the device has been restarted, the alarm list is deleted. However, the value of all objects is checked after restarting (if this function has been enabled in ETS) to avoid alarms tripping. This ensures the alarm list is kept up to date.

Alarm tripping can be set individually in the form of parameters via ETS :

Trips when the value:

- is the same as the threshold value (always)
- is higher than the threshold value
- is lower than the threshold value
- is higher than or the same as the threshold value
- is lower than or the same as the threshold value
- **same as the threshold value (once)** exceeds the threshold value (rising)
- **drops below the threshold value (falling)**

Is the same as the threshold value (always):
An alarm trips each time the value of an object is the same as the threshold value. The alarm time-stamp is updated on each of these events.

Is higher than the threshold value:
An alarm trips each time the value of an object is higher than the threshold value. The alarm time-stamp is updated on each of these events.

Is lower than the threshold value:
An alarm trips each time the value of an object is lower than the threshold value. The alarm time-stamp is updated on each of these events.

Is higher than or the same as the threshold value:
An alarm trips each time the value of an object is higher than or the same as the threshold value. The alarm time-stamp is updated on each of these events.

Is lower than or the same as the threshold value:
An alarm trips each time the value of an object is lower than or the same as the threshold value. The alarm time-stamp is updated on each of these events.

Is the same as the threshold value (once):
An alarm trips the first time the threshold value is the same as the value of the object. The alarm time-stamp is updated on this event. However, any later event with the same value will not be seen as an alarm and will not result in updating of the alarm list or time-stamping. A value other than the threshold value must be received to disable the alarm. Only then can a new alarm be generated.

Exceeds the threshold value (rising):
An alarm trips the first time the threshold value is exceeded. The alarm time-stamp is updated on this event.
However, any later event with a value higher than the threshold value will not be seen as an alarm and will not result in updating of the alarm list or time-stamping. A value lower than the threshold value must be received to disable the alarm. Only then can a new alarm be generated.

Description of product functions *(continued)*

Drops below the threshold value (falling):
An alarm trips when the value drops below the threshold value for the first time. The alarm time-stamp is updated on this event.
However, any later event with a value lower than the threshold value will not be seen as an alarm and will not result in updating of the alarm list or time-stamping. A value higher than the threshold value must be received to disable the alarm. Only then can a new alarm be generated.

After the device has been restarted/reset, the value of all the objects is set to "undefined".

Each of the events received generates an alarm if the alarm trip conditions are satisfied. This also applies to the following scenarios:

- the value of the object is higher than the threshold value (rising)
- the value of the object is lower than the threshold value (falling)

For safety reasons, these conditions immediately generate an alarm, since the value rises above the threshold value in this device operating mode.

This guarantees that each alarm status is automatically displayed, even after a restart, while the device is configured in ETS to "read requests after a restart".

The project manager must also ensure that the read flag for these group addresses is set on the appropriate KNX devices.

The alarm list is updated when:

- The alarm page is already displayed:
  - A new alarm trips.
  - An existing alarm is updated.
  - An alarm reverts to normal.
- The alarm page is not displayed:
  - A new alarm trips.
  - An existing alarm is updated.
  - The alarm page opens manually.

Displaying text messages:
The first two alarm objects can be defined as a message in the form of text in the ETS configuration. On receipt, it is displayed in the form of descriptive text in the alarm list. This text message is handled in the same way as any alarm notification. When the user acknowledges message receipt, it is deleted from the alarm list.

Using the "Status display 1 bit" additional function as an alarm function:
The alarm trips for a 1-bit function when the value reaches TRUE "1".

The change from normal status "0" to alarm status "1" is interpreted as an alarm. The event is integrated in the alarm list and the time-stamp indicates the moment when the value changed from "0" to "1". Other alarm events do not alter the time-stamp. No acoustic alarm is emitted.

If the value of the Status display 1 bit function changes to = "0" and the alarm acknowledgement signal has not yet been sent, the value is displayed in green. Other alarm events with the same value do not alter the time-stamp.

Description of product functions *(continued)*

The time-stamp will only be updated if an alarm event occurs during which the value of the Status display 1 bit additional function becomes = TRUE "1".

This function corresponds to the alarm function **Exceeds the threshold value (rising)**.

Schedule configuration page

The touch screen can be used to configure 7-day schedules for all functions. However, the function must first be enabled by the installer in ETS (see below). Each function can then have any number of time switch points assigned to it.

The time switch points are defined in the schedule configuration page.

The configuration page can be accessed using the menu page function button or, if this option has been configured, using one of the main page function buttons. The configuration page structure is as follows:

Select the required function from the dropdown menu in the device header. The menu displays all the functions which have been enabled for the schedules.
All functions which have been enabled in ETS and are displayed on a main page are displayed in the object selection box. In the selection box, the page headers are indicated by the "--" symbol. Underneath, you will find all the functions belonging to this page if they have been enabled in the ETS configuration for use with this module.
Any additional functions which do not belong to a page are displayed at the end of the selection box.

Once the required object has been selected, the commands already defined for this object is displayed (see illustration below).

Press the **Add** button to add a new time switch button.

Click on an entry to open an additional entry field and change the time, day of the week or value:

You can change the time, click on a day of the week and activate a time switch point directly via the window.

The values can be set using the slider. The scale corresponds to the ETS configuration.

Examples:

On/off switching
Scale from 0 to 1 in increments of: 1

Set value (100%) in increments of 10%
Scale from 0 to 100 in increments of: 10

Change in temperature +/- 3 in increments of 1K
Scale from -3 to 3 in increments of: 1

Set fixed values
Set to fixed values, no change possible.

Entries can be either accepted, or deleted. The control buttons are located in the header:

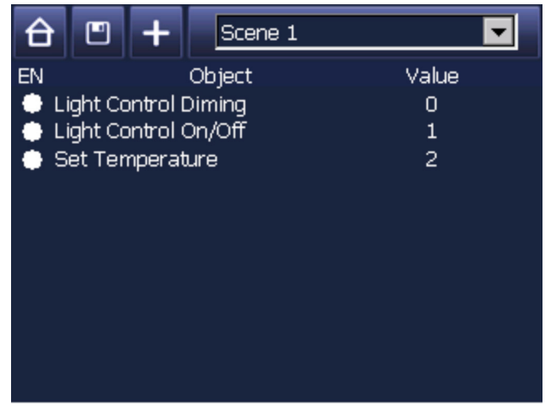
From the main 7-day schedule page, you can return to the menu page, save current settings and add other switching commands.

Scene programming configuration page

The touch screen can be used to program up to 64 scenes. Any function used in a scene program must first be enabled in ETS (see below). Each scene can then have KNX functions assigned to it.

The end user can program scenes directly on the device via the scene programming configuration page.

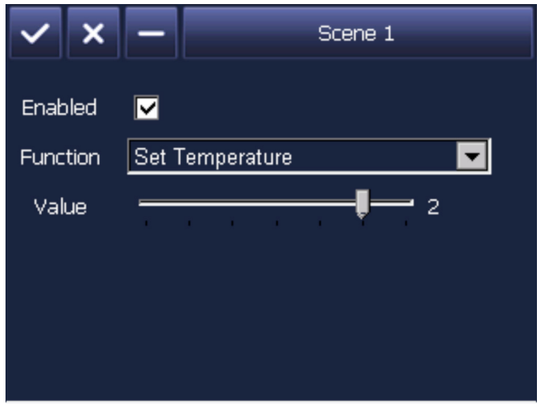
The configuration page can be loaded using the menu page function button or, if this option has been configured, using one of the main page function buttons. The scene configuration page is structured as follows:



To select a scene, use the dropdown menu in the device header. All the scenes (descriptive text supplied by ETS) are displayed in the menu.

Once a scene has been selected, the commands programmed earlier for this scene are displayed (see illustration below).

Use the Add button to add another entry.
Click on an existing entry to open the modification window.



The modification field can be used to modify the object and the value.
All functions which have been enabled in ETS and are displayed on a main page are displayed in the object selection box. In the selection box, the page headers are indicated by the "--" symbol. Underneath, you will find all the functions belonging to this page if they have been enabled in the ETS configuration for use with this module.
Any additional functions which do not belong to a page are displayed at the end of the selection box.

The values can be set using the slider. The scale corresponds to the ETS configuration.

Examples:

On/off switching
Scale from 0 to 1 in increments of: 1

Set value (100%) in increments of 10%
Scale from 0 to 100 in increments of: 10

Change in temperature +/- 3 in increments of 1K
Scale from -3 to 3 in increments of: 1

Set fixed values
Set to fixed values, no change possible.

Entries can be either accepted, or deleted. The control buttons are located in the header:

From the main scene programming page, you can return to the menu page, save current settings and add other switching commands.

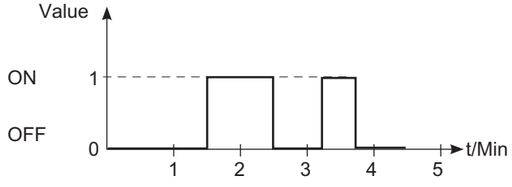
Presence simulation configuration page

The touch screen can be used to simulate presence of the KNX system. During simulation, previously recorded or manually entered events are read at predefined times. This means that simulation corresponds to a series of time switch commands executed at predefined moments. Time switch commands are only linked to objects which have been configured as functions on screen. Other objects in the KNX system are not recorded by the screen.

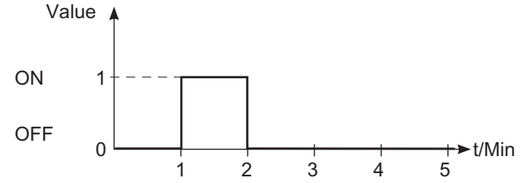
The duration of recording or reading is 1 minute. This means that modifications made to the value of an object in the space of a minute may not be recorded.

The graphic below shows the function for recording brief changes in value:

Lighting recording



Lighting simulation



Simulation is started and stopped manually. Recording is also started manually. Recording stops automatically after a week or after recording 1000 events if it has not already been stopped manually. Simulation is controlled using the presence simulation configuration page.

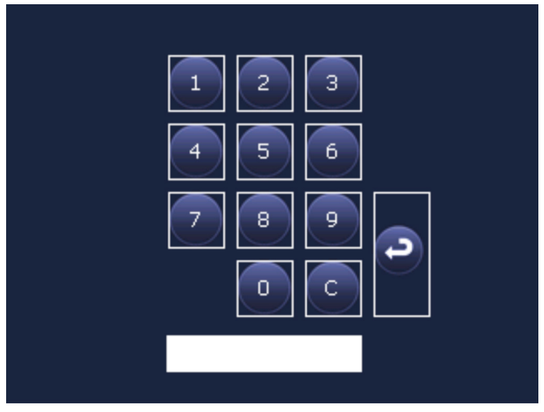
Use the Stop and Start buttons to start simulation. A green LED on the left of the header is displayed if the device is in simulation mode (read). Use the Record button to start recording a simulation. A red LED is displayed in the header during recording.

If you wish to change the recording, you can change the list of events as indicated for schedule configuration as described earlier. For example, it is possible to disable undesirable events or manually add other events.

If there is a power cut during a simulation, simulation continues.
If there is a power cut during recording, the interrupted recording is deleted and the previous complete recording is used.

Entering a password via the password page

The main pages and configuration pages can be protected by a password. Different passwords can be used for different pages. The passwords are set as parameters in ETS (see below). Once a main page or configuration page protected by a password has been opened, the keypad below is displayed:



Use the numeric keys to enter the password and press Enter to confirm your entry. If the password is incorrect, the system automatically returns to the menu page. If the password is correct, the device opens the desired page.

Passwords can consists of up to 5 digits: 1…99999. They must correspond exactly, in other words a password configured as "123" in ETS must be entered in an identical way to the password entry page.

Types of function

The following functions are available:
- Switching
- Switching/dimming with stop telegram
- Switching by override instruction
- Shutters
- 1-byte setting value (0 to 100%)
- Set temperature (2 byte)
- Set reader value
- Scene call/program
- Set heating operating mode
- Set heating ventilation
- Status display 1 bit
- Status display 1 byte
- Status display 2 byte
- Status display 4 byte

■ Switching
Depending on the configuration, a button (toggle) or two buttons (ON/OFF) appear. The feedback is displayed on the left of the buttons.

■ Switching/dimming with stop telegram
There are always two buttons. A short press indicates switching, a long press indicates dimming.

■ Switching by override instruction
There are always two buttons. A short press activates restrictions whereas a long press switches restrictions to ON or OFF.

■ Shutters
There are always two main buttons. A short press changes the slat position, a long press is used to raise or lower the shutters.

■ 1-byte setting value (0 to 100%)
Depending on the configuration, one or two buttons appear. Each time the button is pressed, the corresponding command is sent (see ETS parameters).

■ Set temperature (2 byte)
Depending on the configuration, one or two buttons appear. Each time the button is pressed, the corresponding command is sent (see ETS parameters).

■ Set reader value
Depending on the configuration, one or two buttons appear. Each time the button is pressed, the corresponding command is sent (see ETS parameters).

■ Scene call/program
Depending on the configuration, one or two buttons appear. Each time the button is pressed, the corresponding command is sent (see ETS parameters).
To program a scene, a very long press (approximately twice as long as for a dimming command) is required.

■ Set heating operating mode
There are always two buttons. Depending on the configuration, the heating mode is set on a rotating basis. This means that each press of the button moves onto the next heating mode. Once the highest mode is reached, the cycle starts again with the lowest cycle.

■ Set heating ventilation
There are always two buttons. Depending on the configuration (with or without automatic mode), the ventilation levels are increased or decreased. If the ventilation is on its highest level (100%), repeatedly pressing the "+" button will deliver 100%. The same function applies to the lowest level (0%).

If "with automatic" is configured, the device automatically switches to automatic mode once the highest (100%) or lowest (0%) level is reached. Repeatedly pressing the button returns to the previously defined level.

■ **Status display 1 bit**

No control button is displayed for the status display. Only states corresponding to the configuration are displayed.

■ **Status display 1 byte**

No control button is displayed for the status display. Only states corresponding to the configuration are displayed.

■ **Status display 2 byte**

No control button is displayed for the status display. Only states corresponding to the configuration are displayed.

■ **Status display 4 byte**

No control button is displayed for the status display. Only states corresponding to the configuration are displayed.

Keypad locking

If, in the ETS configuration, some functions are configured with locking objects, these functions are locked when the value "1" is received. In this state, the control buttons are not displayed. The buttons will only be displayed again if the value "0" is received.

This status is saved on the device. After a restart, the locked status is immediately active again.

General parameters and communication objects

The following communication objects are available for the colour touch screen.

The parameter settings determine which are visible and those linked to group addresses.

Maximum number of group addresses: 254
Maximum number of links: 255

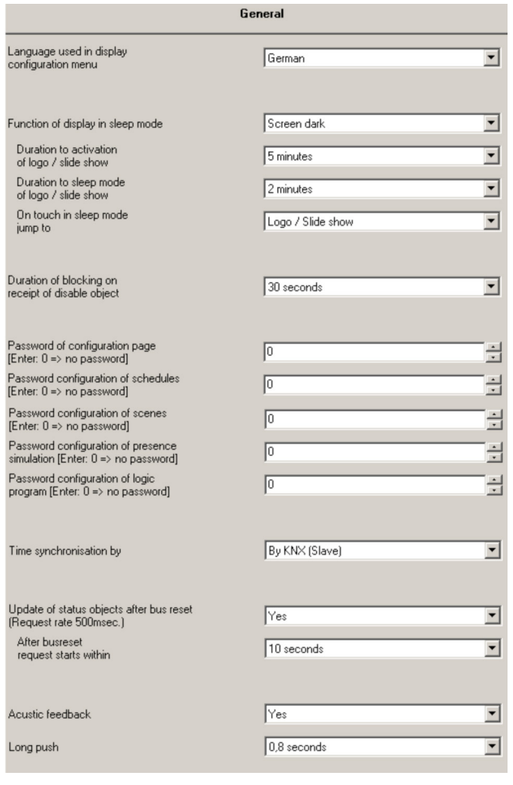
The number of visible objects and their type can vary. The objects are never all available at the same time.

The following communication objects are available for the device general functions:

Obj.	Function	Object name	Type	Flags
0	Set time	Time	3 byte	CWTU CRT
This object is used to receive and synchronise the time received from an external source via the KNX (configuration "via slave KNX") or to send the time to the bus cyclically (configuration "via master device").				
1	Set date	Date	3 byte	CWTU CRT
This object is used to receive and synchronise the date received from an external source via the KNX (configuration "via slave KNX") or to send the date to the bus cyclically (configuration "via master device").				
2	Enable sleep mode	Enable/Disable	1 bit	CW
This object is used to enable (value 1) or disable (value 0) the device sleep mode via the bus.				
3	Touch screen in sleep mode	Switching, On	1 bit	CW
Simply pressing the screen when the device is in sleep mode sends a telegram -1 via this object. It can, for example, be used to switch on basic lighting.				
4	Button operation	Blocking, Starting	1 bit	CW
When a telegram -1 is received on this object, the device keypad is locked for a configurable period (disable function). During this time, the slideshow is displayed on the device. If the value "0" is received via this object, the control panel can be used again and the logo/slideshow can be disabled by touching the touch screen.				

Function control *(continued)*

Use the "General" page to set the general device functions:

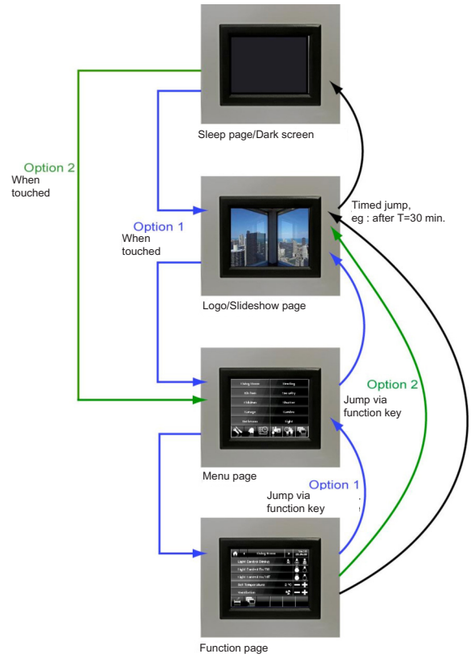


The parameter meanings are as follows:

Parameter	Settings
Configuration menu display language	German English **French** Dutch Italian Spanish Portuguese Greek Turkish Swedish Chinese
Use this parameter to set the configuration page display language. The control panels, headers and descriptions for these pages are displayed in the language defined. The language of the menu page, main pages and detailed configuration pages (headers and descriptive function texts) is independent of the parameter settings. It results from the text entered in the descriptive fields.	
Screen operation in sleep mode	**Dark screen** Screen backlighting value set to 5% Screen backlighting value set to 10% Screen backlighting value set to 20% Screen backlighting value set to 30%
Used to determine whether the screen should be dark in sleep mode or whether the logo/slideshow should be displayed with low backlighting.	

Parameter	Settings
Duration to activation of logo/slideshow	10 seconds 30 seconds 1 minute 2 minutes 3 minutes 4 minutes **5 minutes** 6 minutes 10 minutes 15 minutes 20 minutes 25 minutes 30 minutes
Use this parameter to set a duration. If the device is not used during this time, the logo/slideshow starts automatically. If you touch the screen, the logo/slideshow stops and the last page used is displayed.	
Duration to sleep mode of logo/ slideshow	10 seconds 30 seconds 1 minute **2 minutes** 3 minutes 4 minutes 5 minutes 6 minutes 10 minutes 15 minutes 20 minutes 25 minutes 30 minutes No automatic jump
Use this parameter to set the logo/slideshow duration. If display of the logo/slideshow is not interrupted, the screen automatically reverts to sleep mode. If you choose the latter option, the logo/ slideshow remains continuously displayed. If you touch the screen, the logo/slideshow stops and the last page used is displayed.	
If the screen is touched in sleep mode, display	**Logo/Slideshow** Last page used
Here, you can determine the page which should be displayed when the screen is touched in sleep mode.	

The figure below shows the options which can be set via the above parameters.



Function control *(continued)*

Object no. 4 is used to lock the keypad temporarily:

Parameter	Settings
Locking duration if a disable object is received	10 seconds 20 seconds **30 seconds** 1 minute
Use this parameter to set a duration. If the value "1" is received in object 4 (keypad control), the control panel is locked for the defined duration. During this time, the logo/slideshow is displayed. During this period, the screen can be cleaned without triggering an undesired function (disable function). If the disable function is enabled via the main page additional buttons, the configured duration is the same.	

The configuration pages can be protected individually by passwords. Passwords can be entered in ETS in the form of numbers between 0 and 99,999. Entering 0 signifies no password protection.

The device has an internal real-time clock and can therefore be used as the main clock for the connected KNX system. However, due to its limited accuracy

Parameter	Settings
Configuration page password	0..99,999 **[by default: 0]**
Here, you can define the configuration page password. The value 0 means: no password protection.	
Schedule configuration password	0..99,999 **[by default: 0]**
Here, you can define the schedule configuration password. The value 0 means: no password protection.	
Scene configuration password	0..99,999 **[by default: 0]**
Here, you can define the scene configuration password. The value 0 means: no password protection.	
Presence simulation configuration password	0..99,999 **[by default: 0]**
Here, you can define the password for the start and end of presence simulation. The value 0 means: no password protection.	
Logic program configuration password	0..99,999 **[by default: 0]**
Here, you can define the logic program configuration password. The value 0 means: no password protection.	

(accuracy > 5 seconds per week), we recommend using an external KNX timer (with a DCF-77 receiver, for example). Use the following parameters to set the timer functions:

Parameter	Settings
Time synchronisation:	By the device (master) **By the KNX (slave)**
Determines whether the internal real-time clock time signal should be used to synchronise the time or whether an external KNX timer should synchronise the system time.	

Function control *(continued)*

Parameter	Settings
If the parameter is set to "by the device (master)"	
Time interval for periodically sending the date and time	1 minute 2 minutes … **1 hour** … 12 hours 24 hours
This parameter is only displayed if "by the device (master)" has been selected in the above configuration. Use this parameter to set the cycle according to whether the date and time should be sent via the KNX bus. Use communication objects 0 and 1 for this purpose.	

Once the bus has been reset, the device can automatically ask for the status of all configured status objects. Given that more than 100 status objects need to be checked, this process may subject the bus to a higher load. This is particularly the case if several touch screens are being used within a KNX system. In this case, the request should be sent at different times.

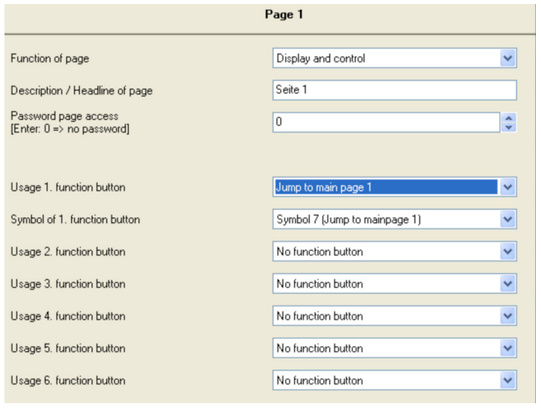
Parameter	Settings
Update of status objects after bus reset [Request rate 500 ms]	No **Yes**
Determines whether a status request should be sent.	
After bus reset, request is sent after	**10 seconds** 20 seconds 30 seconds 1 minute 2 minutes 3 minutes 4 minutes 5 minutes
Determines the time after which the status request is sent once the bus has been reset.	

The device has an internal signal transmitter which can be used to make button presses and alarm notifications audible.

Parameter	Settings
Acoustic warning	No **Yes**
Determines whether pressing a button should generate an acoustic signal.	
Long press	0.5 seconds **0.8 seconds** 1 second 1.2 seconds 1.5 seconds
Determines the duration for a long press on a button.	

Parameters concerning construction of pages 1 to 10

The 10 pages maximum displayed on screen with the standard EIB functions are defined via the corresponding parameter-setting pages marked 1 to 10.



The parameter meanings are as follows:

Parameter	Settings
Function of page	Page inactive **Display and control**

Determines whether the corresponding main page should be displayed or if it should remain inactive. If this parameter is set to "inactive", the following main button settings are not available. The "Display and control" setting creates the corresponding page. It is possible to define the functions for this setting.

The "Display and control" preset only applies to page 1. By default, pages 2 to 10 are inactive.

Parameter	Settings
Description/Page header	**Page 1**

Use this entry field to enter a name with 20 characters maximum for each page. The name is displayed in the corresponding main page header and in the menu page.

Page access password	0..99,999 **[by default: 0]**

Each page can be protected individually by a password. The password for each page can be defined here. The value 0 means: no password protection.

Usage 1. Function button	**No function button** Start sleep mode Start logo/slideshow Temporary blocking of buttons (cleaning) Access detailed configuration page Access last page used **Access main page 1** **Access main page 2** **Access main page 3** **Access main page 4** **Access main page 5** **Access main page 6** **Access main page 7** **Access main page 8** **Access main page 9** **Access main page 10** Access configuration page Schedule configuration Scene configuration Logic program configuration Presence simulation configuration

Determines the function of the first additional button displayed on a page.

Parameter	Settings
Function 1 button symbol	Symbol 1 Symbol 2 .... Symbol 47 Symbol 48

This parameter is only displayed if a function has been selected in the above configuration.

Via this parameter, it is possible to select a symbol for the first additional button function. In the initial setting, a symbol corresponding to the function is suggested.

Usages 2 to 6. Function button	Analogue (see above).

Determines the functions of additional functions 2 to 6 of a page.

Symbol for function buttons 2 to 6	Analogue (see above).

Determines the symbols of additional functions 2 to 6 of a page.

Parameters and communication objects for standard functions 1 to 10

5 standard KNX functions can be created on each of the 10 main pages. The function is chosen via a parameter:

Parameter	Settings
1. function 2. function .... 49. function 50. function	**No function** Text Switching Switching/dimming Forced switching Shutters 1-byte setting value (0 to 100%) Set temperature (2 byte) Set counter value Scene call/program Set heating mode Set ventilation speed Status display 1 bit Status display 1 byte Status display 2 byte Status display 4 byte

The main function is set via this parameter.

Function control *(continued)*

Depending on the standard function selected, up to 5 sub-parameters and the required communication objects are displayed. A standard function contains up to 4 sub-parameters and 3 objects.

The following sub-parameters and communication objects are available for a function:

■ Standard function: No function

This function is used to structure the page. When it is selected, the following parameters appear:

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be entered. The descriptive text is displayed on screen.	

The communication objects are not displayed for this function.

■ Standard function: Text

This function is used to structure the page. When it is selected, the following parameters appear:

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be entered. The descriptive text is displayed on screen.	

The communication objects are not displayed for this function.

■ Standard function: Switching

This function is used to switch functions with one or two buttons.

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be entered. The descriptive text is displayed on screen.	
Type of button	On/Off **Off/On** On Off Toggle
Defines the switching direction and type of button. Two "On/Off" buttons are used for switching on and off. Two "On/Off" buttons are used for switching off and on. A large "On" button is used for switching on. A large "Off" button is used for switching off. A large "Toggle" button is used for switching off/on.	
Feedback	None **Symbol type feedback** Current value (0 to 100%)
The type of feedback is set via this parameter. Depending on this setting, the communication object data type is displayed. The feedback is received via this object's group address. If it is set to "None", the object is hidden.	
Button symbol	**Symbol 1 (Gen. on/off style 1)** .... **Symbol 4 (Lighting style 1)** .... Symbol 64
Defines the symbols used on the buttons.	

Function control *(continued)*

Parameter	Settings
If the parameter is set to "Symbol type feedback"	
Feedback symbol	**Symbol 1 (Gen. on/off style 1)** .... **Symbol 4 (Lighting style 1)** .... Symbol 64
Used to define the symbols representing feedback.	
Function enabled for	**No use in programs** Programmed scenes Programmed schedules Programmed scenes and schedules Presence simulation Scene and presence simulation Schedules and presence simulation Scenes, schedules and presence simulation
Determines whether this function is used in programmed scenes and/or programmed schedules and/or in presence simulation. The functions are displayed in sequence in the various programs.	

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
5	Switching, On/Off	Page 1, Function 1	1 bit	CWT
This object is used to send the switching telegram generated by pressing a button.				
6	Dimming, Lighter/Darker	Page 1, Function 1	4 byte	CT
This object is used to lock a function. If the message "value = 1" is received via this object, the screen control buttons are hidden.				
If the parameter is set to "Symbol type feedback"				
7	Status, On/Off	Page 1, Function 1	1 bit	CWTU
This object is used to define the feedback symbol displayed on screen.				
If the parameter is set to "Current value (0 to 100%)"				
7	Status, Value	Page 1, Function 1	1 byte	CWTU
This object is used to define the feedback value displayed on screen.				

■ Standard function: Switching/dimming with stop telegram

This function is used to switch luminaires on/off and increase/reduce the lighting value using two buttons. A short press on each pair of buttons is used to switch a luminaire on/off and a long press is used to increase/reduce its brightness. It is possible to define which button should be used for switching on and off and which button for increasing/reducing brightness.
For dimming, a "lighter" or "darker" dimming telegram is sent after a long press on the button. A stop telegram is sent when the button is released.

Parameter	Settings
Description	**1. Function**

A description of 20 characters maximum can be entered.
The descriptive text is displayed on screen.

Use of buttons	On/Off - Lighter/Darker **Off/On - Darker/Lighter**

This parameter defines the button switching direction.
The "On/Off – Lighter/Darker" switching direction with a short press on the button is used to switch the luminaire on or off. The left-hand button is used to switch on the luminaire and the right-hand button to switch it off.
The "On/Off – Lighter/Darker" switching direction with a long press on the button is used to increase or reduce the luminaire brightness. The left-hand button is used to increase the brightness and the right-hand button to reduce it.
The "Off/On - Darker/Lighter" switching direction with a short press on the button is used to switch the luminaire off or on. The left-hand button is used to switch off the luminaire and the right-hand button to switch it on.
The "Off/On - Darker/Lighter" switching direction with a long press on the button is used to reduce or increase the luminaire brightness. The left-hand button is used to reduce the brightness and the right-hand button to increase it.

Parameter	Settings
Feedback	No feedback/No disable object No feedback, with disable object **Symbol type feedback** Current value (0 to 100%)

This parameter is used to determine whether there is a locking object or a feedback object. The Feedback can be displayed in the form of a symbol or in the form of a value (0 to 100%). Depending on this setting, the communication object data type is displayed.
The feedback is received via this object's group address.

Button symbols	**Symbol 1 (Gen. on/off style 1)** …. **Symbol 4 (Lighting style 1)** .... Symbol 64

Defines the symbols used on the buttons.

If the parameter is set to "Symbol type feedback"

Feedback symbols	**Symbol 1 (Gen. on/off style 1)** …. **Symbol 4 (Lighting style 1)** .... Symbol 64

Used to define symbols representing feedback.

Function enabled for	**No use in programs** Programmed scenes Programmed schedules Programmed scenes and schedules Presence simulation Scene and presence simulation Schedules and presence simulation Scenes, schedules and presence simulation

Used to determine whether this function is enabled for use in programmed scenes and schedules.

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
5	Switching, On/Off	Page 1, Function 1	1 bit	CWT

This object is used to send the switching telegram generated by pressing a button.

6	Dimming, Lighter/Darker	Page 1, Function 1	4 bit	CT

This object is used to send the dimming telegram generated by a press on the button.

If the parameter is set to "No feedback, with locking object"

7	Disable, Disabled/ Enabled	Page 1, Function 1	1 bit	CWTU

This object is only displayed if the "No feedback, with locking object" option has been selected in the above configuration.

This object is used to lock a function. If the message "value = 1" is received via this object, the screen control buttons are hidden.

If the parameter is set to "Symbol type feedback"

7	Status, On/Off	Page 1, Function 1	1 bit	CWTU

This object is used to define the feedback symbol displayed on screen.

If the parameter is set to "Current value (0 to 100%)"

7	Status, Value	Page 1, Function 1	1 byte	CWTU

This object is used to define the feedback value on screen.

■ Standard function: Forced switching

This function is used to switch a luminaire on and off by means of an override instruction. The override instruction can also be disabled. A short press on the button is used to send the corresponding command immediately. A long press on the button is used to send an override instruction disable command.
Actuators with a forced switching input take priority over certain actuator outputs by means of a central intervention. For example, in Night or Energy-saving mode, certain luminaires can be prevented from switching on. The control panel is used to enable the override command manually or disable an automatically-activated command.

Parameter	Settings
Description	**1. Function**

A description of 20 characters maximum can be entered.
The descriptive text is displayed on screen.

Type of button	On/Off **Off/On**

This parameter defines the button switching direction.
In the "On/Off" switching direction, a short press on the left-hand button is used to enable the switch on by override instruction function.
In the "On/Off"switching direction, a short press on the left-hand button is used to enable the switch off by override instruction function.
In the "Off/On"switching direction, a short press on the left-hand button is used to enable the switch off by override instruction function.
In the "Off/On"switching direction, a short press on the right-hand button is used to enable the switch on by override instruction function.
A long press (> 2 s.) on the left-hand or right-hand button is used to disable the override instruction.

Parameter	Settings
Feedback	No feedback/No disable object No feedback, with disable object **Symbol type feedback** Current value (0 to 100%)

The type of feedback is defined here. The communication object is displayed according to this parameter.

Button symbols	**Symbol 1 (Gen. on/off style 1)** .... **Symbol 4 (Lighting style 1)** .... Symbol 64

Defines the symbols used on the buttons.

If the parameter is set to "Symbol type feedback"

Feedback symbols	**Symbol 1 (Gen. on/off style 1)** .... **Symbol 4 (Lighting style 1)** .... Symbol 64

Used to define the symbols to be used for feedback.

Function enabled for	**No use in programs** Programmed scenes Programmed schedules Programmed scenes and schedules Presence simulation Scene and presence simulation Schedules and presence simulation Scenes, schedules and presence simulation

Used to determine whether this function is enabled for use in programmed scenes and schedules.

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
5	Override, On/Off	Page 1, Function 1	2 bit	CWT

A short press on the button sends a 2-bit object with a defined MSB (value 2, 3) and a very long press (> 2 seconds) sends a 2-bit object with a deleted MSB (value 0, 1).

6	Disable, Disabled/ Enabled	Page 1, Function 1	1 bit	CWT

A short press on one of the two buttons sends a locking telegram (value 1) and a long press sends an unlocking telegram (value 0).

If the parameter is set to "Symbol type feedback"

7	Status, On/Off	Page 1, Function 1	1 bit	CWTU

This object is used to define the symbol representing the feedback on screen.

If the parameter is set to "Current value (0 to 100%)"

7	Status, Value	Page 1, Function 1	1 byte	CWTU

This object is used to define the feedback value displayed on screen.

■ **Standard function: Windows**

This function is used to control shutters using two buttons.
Two buttons are used to raise and lower the shutters (long press) and to stop gradual opening/closing of the slats (short press).
You can choose which button is used to raise/lower the shutters and which button to gradually open/close the slats.

Parameter	Settings
Description	**1. Function**

A description of 20 characters maximum can be entered.
The descriptive text is displayed on screen.

Use of buttons	Move-up/Move-down – Open/Close **Move-down/Move-up – Close/Open**

This parameter defines the button switching direction.
The "Move-up/Move-down – Open/Close" switching direction by means of a long press is used to lower the shutters. The left-hand button is used to raise the shutters and the right-hand button to lower them.
The "Move-up/Move-down – Open/Close" switching direction by means of a short press is used to gradually alter the slat position.
The "Move-down/Move-up – Close/Open" switching direction by means of a long press is used to lower the shutters. The left-hand button is used to lower the shutters and the right-hand button to raise them.
The "Move-down/Move-up – Close/Open" switching direction by means of a short press is used to gradually alter the slat position.

Feedback	No feedback/No disable object No feedback, with disable object **Symbol type feedback** Current value (0 to 100%)

Used to determine whether a locking object or a feedback object, as well as the type of feedback indicator, is available. The communication object is displayed according to this parameter.

Parameter	Settings
Button symbols	**Symbol 1 (Gen. on/off style 1)** .... **Symbol 10 (Shutter style 1)** .... Symbol 64

Defines the symbols used on the buttons.

If the parameter is set to "Symbol type feedback"

Feedback symbols	**Symbol 1 (Gen. on/off style 1)** .... **Symbol 10 (Shutter style 1)** .... Symbol 64

Used to define the symbols used for feedback.

Function enabled for	**No use in programs** Programmed scenes Programmed schedules Programmed scenes and schedules Presence simulation Scene and presence simulation Schedules and presence simulation Scenes, schedules and presence simulation

Used to determine whether this function is enabled for use in programmed scenes and schedules.

Function control *(continued)*

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
5	Shutters, Open/Close	Page 1, Function 1	1 bit	CWT
This object sends a 1-bit switching telegram after a short press on the button. If the shutters have already been raised, each short press on the button generates a "Stop/Slats closed" command. If the shutters have already been lowered, each short press on the button generates a "Stop/Slats open" command.				
6	Shutters, Move-up/Move-down	Page 1, Function 1	1 bit	CWT
This object sends a 1-bit move command after a long press on the button. The shutters receive the "Move-up" or "Move-down" command.				

If the parameter is set to "No feedback, with locking object"

7	Disable, Disabled/ Enabled	Page 1, Function 1	1 bit	CWTU
This object is only displayed if "No feedback, with locking object" has been selected in the above configuration. This object is used to lock a function. If the message "value = 1" is received via this object, the screen control buttons are hidden.				

If the parameter is set to "Symbol type feedback"

7	Status, On/Off	Page 1, Function 1	1 bit	CWTU
This object is used to define the feedback symbol displayed on screen.				

If the parameter is set to "Current value (0 to 100%)"

7	Status, Value	Page 1, Function 1	1 byte	CWTU
This object is used to define the feedback value displayed on screen.				

■ **Standard function: 1 byte setting value (0 to 100%)**

This function is used to send 1-byte fixed and variable values between 0 and 100%.
A button can be assigned its own 1-byte value to in order, for example, to reduce the brightness of the corresponding luminaires to a configured value or define the rotation speed of a fan.
When a 1-byte variable value is sent, the value increases and decreases in increments by means of two buttons. The increments can be configured. The left-hand button is used to reduce the increment value. The right-hand button is used to increase the increment value. The value can only be increased or reduced by pressing the button again.

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be entered. The descriptive text is displayed on screen.	
Button functions	Sending a constant value **Variable value (+/-)**
Used to determine whether to send a fixed value or a value varying in increments.	

If the "Send a fixed value" parameter has been defined:

Constant value on pressing button	0...100 (by default: **0**)
This object is only displayed if "Send a fixed value" has been selected in the above configuration. This parameter is used to assign a 1-byte fixed value and send it with a simple press on a button.	

Function control *(continued)*

Parameter	Settings

If the "Variable value (+/-)" parameter has been defined:

Increment interval on every button press	1% 5% **10%** 20% 25% 33% 50%
This object is only displayed if "Variable value (+/-)" has been selected in the above configuration. This parameter is used to set the increment interval used to reduce (left-hand button) or increase (right-hand button) the value.	
Feedback	None **Current value (0 to 100%)**
This parameter is used to configure feedback. If it is set to "Current value (0 to 100%)", the current value between 0 and 100% is displayed. If it is set to "No feedback", no feedback indicator is displayed.	
Function enabled for	**No use in programs** Programmed scenes Programmed schedules Programmed scenes and schedules Presence simulation Scene and presence simulation Schedules and presence simulation Scenes, schedules and presence simulation
Used to determine whether this function is enabled for use in programmed scenes and schedules.	

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
5	Setting value, Value	Page 1, Function 1	1 byte	CWTU
This object is used to send the value setting telegram generated by a press on a button.				
6	Disable, Disabled/ Enabled	Page 1, Function 1	1 bit	CWTU
This object is used to lock the keypad.				

■ Standard function: Set temperature (2 byte)

This function is used to send 2-byte fixed floating point temperature values and values varying in increments of +/- 3 in the following ranges: 0°C, -5 to 50°C and 0 to 150°C.
A button can be assigned its own 2-byte temperature value to in order, for example, to set the reference temperature with a simple press on a button.
When a 2-byte variable temperature value is sent, the value in the configured temperature range is modified in increments using two buttons. The increment interval can be configured. The left-hand button is used to reduce the temperature value in increments. The right-hand button is used to increase this value. The value can only be increased or reduced by pressing the button again.

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be entered. The descriptive text is displayed on screen.	
Button functions	**Sending a constant value** Value varying in increments of +/- 3 Value varying from -5 to 50°C **Value varying from -5 to 150°C**
This parameter allows you to determine whether the value sent should be a fixed individual value or a value varying in increments.	

Parameter	Settings
If the "Send a fixed value" parameter has been defined:	
Constant value on pressing button	-5°C **[20°C by default]** -4°C ... 0°C 1°C ... 39°C 40°C 45°C 50°C 60°C ... 140°C 150°C
This object is only displayed if "Send a fixed value" has been selected in the above configuration. This parameter is used to assign a 2-byte fixed decimal temperature value and send it with a simple press on a button.	
If the "Variable value (+/-)" parameter has been defined:	
Increment interval	Increment of 0.5°C **Increment of 1°C** Increment of 2°C Increment of 3°C Increment of 5°C Increment of 10°C Increment of 15°C
This object is only displayed if "Value varying in increments of +/- 3", "Value varying between -5 and 50°C" or "Value varying between 0 and 150°C" has been selected in the above configuration. This parameter is used to set the increment interval used to reduce (left-hand button) or increase (right-hand button) the temperature value to be sent.	

Parameter	Settings
Feedback	None **Current value (temperature)**
This parameter is used to define the type of feedback. The communication objects displayed depend on this parameter.	
Function enabled for	**No use in programs** Programmed scenes Programmed schedules Programmed scenes and schedules Presence simulation Scene and presence simulation Schedules and presence simulation Scenes, schedules and presence simulation
Used to determine whether this function is enabled for use in programmed scenes and schedules.	

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
5	Temperature, Value	Page 1, Function 1	2 byte	CWTU
This object is used to send the value setting telegram generated by a press on a button.				
6	Disable, Disabled/ Enabled	Page 1, Function 1	1 bit	CWTU
This object is used to lock the keypad.				

■ Standard function: Set counter value

This function is used to send the reader fixed values. It is possible to define the type of object.

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be entered. The descriptive text is displayed on screen.	
Button functions	**Set a 1 byte constant value** Set a 2 byte constant value Set a 4 byte constant value
Used to define the type of data used.	
If the parameter is set to "Send a 1 byte fixed value":	
Constant value on pressing button	0...255 (by default: 0]
This object is only displayed if "Send a 1 byte fixed value" has been selected in the above configuration. This parameter is used to assign a 1-byte fixed reader value between 0 and 255 and send it with a simple press on a button.	
If the parameter is set to "Send a 2 byte fixed value":	
Constant value x 100 on pressing button	0…100 [by default: 0]
This object is only displayed if "Send a 2 byte fixed value" has been selected in the above configuration. This parameter is used to assign a 2-byte fixed reader value between 0 and 10,000. The reader values entered are automatically multiplied by 100. The reader value is sent with a simple press on a button.	

Function control *(continued)*

Parameter	Settings
If the parameter is set to "Send a 4 byte fixed value":	
Constant value x 1000 on pressing button	0…100 [by default: 0]
This object is only displayed if "Send a 4 byte fixed value" has been selected in the above configuration. This parameter is used to assign a 4-byte fixed reader value between 0 and 100,000. The reader values entered are automatically multiplied by 1000. The reader value is sent with a simple press on a button.	
Function enabled for	**No use in programs** Programmed scenes Programmed schedules Programmed scenes and schedules Presence simulation Scene and presence simulation Schedules and presence simulation Scenes, schedules and presence simulation
Used to determine whether this function is enabled for use in programmed scenes and schedules.	

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
5	Setting value, Value	Page 1, Function 1	1 byte 2 byte 4 byte	CWTU
This object is used to send the value setting telegram generated by a press on a button. The type of object changes according to the selected parameter.				
6	Disable, Disabled/ Enabled	Page 1, Function 1	1 bit	CWTU
This object is used to lock the keypad.				

■ **Standard function: Scene call/program**

The scene call/program 1 bit and scene call/program 1 byte functions allow the user to reprogram a device for controlling 1-bit scenes or scene elements for controlling 1-byte scenes or even actuators with integrated 1-byte scene control without modifying projection into ETS. This means that different brightness levels or a different switching status can be assigned to different groups in a scene.

1-bit scenes can be called by pressing the button briefly or programmed by pressing and holding down the button. One communication object is used to program a scene and a second to call a scene.
Scenes are called and programmed using a 1-bit switching command. Scene 1 is called or programmed by means of a "0" telegram and scene 2 by means of a "1" telegram.

For 1-byte scenes, the scene and the configured number (1 to 64) can be called by pressing the button briefly or programmed by pressing and holding down the button.
A single communication object is used to program a scene and to call a programmed scene as well as to transmit the required scene number. Bits 0 to 5 of the 1-byte scene telegram determine the scene number (1 to 64). Bit 7 (the last bit) determines whether the scene needs to be called (bit = 0) or programmed (bit = 1). Bit 6 is not used.

Before a scene is programmed, the actuators must be set to the required switching status or brightness levels using the appropriate sensors/buttons. After receipt of a program telegram, the interrogated scene elements or actuators with integrated scene control ask for the

Function control *(continued)*

switching status or brightness levels currently defined in the actuators and program them in the appropriate scene.

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be entered. The descriptive text is displayed on screen.	
Scene function	Scenes 1 bit **Scene call only, 1 byte** Scene call/program, 1 byte Scenes called internally
The scene logic and button function are defined here.	
If the parameter is set to "Scenes 1 bit":	
Object value for a 1 bit scene (0: Scene 1, 1: Scene 2)	**0** 1
Used to define the object value or scene number sent after pressing the button.	
If the parameter is set to "Call 1 byte scenes only": If the parameter is set to "Call/program 1 byte scenes": If the parameter is set to "Call scenes internally":	
Scene number (scene 1 to 64)	1…64 [by default: 1]
Used to define the object value or scene number sent after pressing the button.	
Button symbols	Symbol 1 (Gen. on/off style 1) …. **Symbol 51 (scene call)** …. Symbol 64
Used to define the symbols used on the buttons or as feedback.	

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
If the parameter is set to "Scenes 1 bit":				
5	Scene call, Scene 1/2	Page 1, Function 1	1 bit	CWT
A short press sends the scene call telegram via this object. **(0: Scene 1, 1: Scene 2)**				
6	Scene program, Scene 1/2	Page 1, Function 1	1 bit	CWT
A long press sends the scene programming object.				
If the parameter is set to "Call 1 byte scenes only":				
5	Scene call, Scene 1…64	Page 1, Function 1	1 byte	CWT
This object is only displayed if "Call 1 byte scenes only" has been selected in the above configuration. This object is used to send a 1-byte command for calling scenes 1 to 64.				

Function control *(continued)*

Obj.	Function	Object name	Type	Flags
If the parameter is set to "Call/program 1 byte scenes":				
5	Scene call/ program	Page 1, Function 1	1 byte	CWT
This object is only displayed if "Call/program 1 byte scenes" has been selected in the above configuration. A short press sends a 1-byte command for calling scenes 1 to 64 whereas a long press sends a 1-byte command for programming scenes 1 to 64.				

■ **Standard function: Set heating operating mode**

This function is used to set the heating system operating mode. Each operating mode defines its own setting value for the heating.

There are three 1-bit objects for the operating mode: one for Comfort mode, one for Standby mode and one for Night mode.

The operating mode can also be transmitted by a 1-byte object. In this case, the operating mode can also be set to frost/heat protection. The control unit can be configured with or without automatic mode.

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be entered. The descriptive text is displayed on screen.	
Adjustment of the operating mode	**1 bit objects: Comfort, Standby, Night** 1 byte object with auto mode 1 byte object without auto mode
Depending on the controller, the type of setting can be selected here. For the setting via three 1-bit objects, the possible operating modes are Comfort, Standby and Night. For the setting via 1-byte objects, the possible operating modes are Auto, Comfort, Standby, Night and Protection.	
Function enabled for	**No use in programs** Programmed scenes Programmed schedules Programmed scenes and schedules
Used to determine whether this function is enabled for use in programmed scenes and schedules.	

Function control *(continued)*

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
Only if the parameter is set to "Operating mode via 1 bit objects"				
5	Comfort mode, Active	Page 1, Function 1	1 bit	CWT
In Comfort mode, this object sends value 1.				
6	Standby mode, Active	Page 1, Function 1	1 bit	CWT
In Standby mode, this object sends value 1.				
7	Night mode, Active	Page 1, Function 1	1 bit	CWT
In Night mode, this object sends value 1.				
Only if the parameter is set to "Operating mode via a 1 byte object"				
5	Heating mode, Value	Page 1, Function 1	1 byte	CWTU
Depending on the operating mode, this object sends the following values: Auto: Object value = 0 Comfort: Object value = 1 Standby: Object value = 2 Night: Object value = 3 Protection: Object value = 4 For the "1 byte object without auto operating mode" setting, the value "0" is not sent.				

■ **Standard function: Set heating ventilation**

This function is used to set the rotation speed of the heating system ventilation. Depending on the type of ventilation, up to 5 speed levels are available.

The levels are transmitted as a percentage by a 1-byte object. In addition, automatic operating mode can be set and enabled by means of a different 1-bit object.

The selected ventilation level is displayed by means of a feedback symbol.

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be entered. The descriptive text is displayed on screen.	
Type of fan	**Fan 1 level (0%, 100%)** Fan 2 levels (0%, 50%, 100%) Fan 3 levels (0%, 33.3%...) 100%) Fan 4 levels (0%, 25%...100%) Fan 5 levels (0%, 20%...100%)
Used to define the type of ventilation (number of levels).	
Auto mode possible	Yes **No**
Used to define whether automatic mode can be enabled by means of an additional object.	
Function enabled for	**No use in programs** Programmed scenes Programmed schedules Programmed scenes and schedules
Used to determine whether this function is enabled for use in programmed scenes and schedules.	

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
5	Ventilation level, Value	Page 1, Function 1	1 byte	CWT
The desired ventilation level can be set manually via this object.				
Only if the parameter is set to "Automatic mode: Yes"				
6	Auto ventilation, On/Off	Page 1, Function 1	1 bit	CWT
Automatic mode can be enabled/disabled via this object.				

■ **Standard function: Status display 1 bit**

This function is used to display the status of a 1-bit object.

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be entered. The descriptive text is displayed on screen.	
Type of feedback	**Symbol** Value (0/1)
Used to define the type of feedback displayed.	
If the parameter is set to "Symbol type feedback"	
Symbol	**Symbol 1 (Gen. on/off style 1)** .... Symbol 64
Used to define symbols representing states.	

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
5	Status, On/Off	Page 1, Function 1	1 bit	CWTU
The status displayed is defined via this object.				

■ **Standard function: Status display 1 byte**

This function is used to display 1-byte object feedback. Feedback can be displayed in the form of floating point numbers between 0 and 255 or a percentage between 0 and 100%. This allows the user to view, for example, the brightness level of a dimmer or rotation speed of a fan.

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be entered. The descriptive text is displayed on screen.	
Type of feedback	**Percentage (0…100%)** Absolute value (0...255)
The feedback is set via this parameter. For the "Percentage (0…100%)" configuration, the value of the 1-byte object is displayed in the form of a percentage between 0 and 100%. For the "Absolute value (0…255)" configuration, the value of the 1-byte object is displayed in the form of a floating point number between 0 and 255.	

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
5	Status, Value	Page 1, Function 1	1 byte	CWTU
The status display type is defined via this object.				

■ **Standard function: Status display 2 byte**

This function is used to display feedback in the form of 2-byte decimal numbers. The number of digits after the decimal point can be adjusted. The unit for this value can be selected and displayed after the numerical value. It can be used to view, for example, the temperature in °C, the wind speed in m/s or the brightness in lux.

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be entered. The descriptive text is displayed on screen.	
Unit	**No unit (floating value)** No unit (counter value) °C °F hPa Pa kW W/m² m/s km/h lx % humidity S A V

This parameter is used to define the unit to be displayed after the numerical value. On selecting "none (float)", a decimal value without a unit is displayed. On selecting "none (reader value)", a reader value without a unit is displayed. The following units or types of data can be selected:
Temperature in °C.....ID: 9,001
Temperature in °F .....(converted from the °C value)
Pressure in hPa.....(converted from the Pa value)
Pressure in Pa.....ID: 9,006
Power in kW .....ID: 9,024
Electromagnetic radiation in W/m².....ID: 9,022
Speed in m/s .....ID: 9,005

Parameter	Settings
Speed in km/h	(converted from the m/s value)
Brightness in lux	ID: 9,004
Humidity as a %	ID: 9,007
Duration in s	D: 9,010
Current in A	(converted from the mA value)
Voltage in V	(converted from the mV value)
Number of decimal places	0…2 **(by default: 1)**
Used to define the number of digits displayed after the decimal point.	

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
5	Status, Value	Page 1, Function 1	2 byte	CWTU
The status displayed is defined via this object.				

■ **Standard function: Status display 4 byte**

This function is used to display feedback indicators in the form of 4-byte floating point numbers. The number of digits after the decimal point can be adjusted. The unit for this value can be selected and displayed after the numerical value. It is used to view, for example, the electrical energy or the electrical power of a multimeter.

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be entered. The descriptive text is displayed on screen.	
Unit	No unit (floating value) No unit (counter value) **°C** °F hPa Pa kWh (value in J) kWh (value in Wh) kW m³ Hz
This parameter is used to define the unit to be displayed after the feedback numerical value. On selecting "none (float)", a decimal value without a unit is displayed. On selecting "none (reader value)", a reader value without a unit is displayed. The following units or types of data can be selected: Temperature in °C ... ID: 14,068 Temperature in °F ... (converted from the °C value) Pressure in hPa ... (converted from the Pa value) Pressure in Pa ... ID: 14,058 Energy in kWh ... (converted from the J value) Energy in kWh ... (converted from the Wh value) Power in kW ... (converted from the W value) Volume in m³ ... ID: 14,076 Frequency in Hz ... ID: 14,033	

Parameter	Settings
Number of decimal places	0…2 **(by default: 1)**
Used to define the number of digits displayed after the decimal point.	

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
5	Status, Value	Page 1, Function 1	4 byte	CWTU
The status displayed is defined via this object.				

Parameters and communication objects for additional functions 1 to 60

In addition to the 50 standard functions described earlier (5 per page), up to 60 additional functions can be defined on the device. The additional functions can be controlled via a detailed configuration page linked to a main page. Unlike standard functions, only one object is available for each additional function. They therefore have limited functionality.

The additional function is selected by a parameter:

Parameter	Settings
1. Function	**No function**
2. Function	Switching
....	Forced switching (2 bit)
59. Function	1-byte setting value
60. Function	Set temperature (2 byte)
	Set counter value
	Scene call/program
	Set heating mode
	Set ventilation speed
	Status display 1 bit
	Status display 1 byte
	Status display 2 byte
The additional function is set via this parameter.	

Depending on the additional function selected, up to 5 sub-parameters are displayed and the type of communication object is defined.

Function control *(continued)*

The following sub-parameters and communication objects are available:

■ **Additional function: No function**

This function is used for structuring purposes. If it is selected, the following parameters are available:

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be entered. The descriptive text is not displayed on screen. It is only used for structuring purposes in ETS.	

The communication objects are not displayed for this function.

■ **Additional function: Text only**

This function is used to structure navigation around the page. If it is selected, the following parameters are available:

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be defined. The text is displayed on screen.	

■ **Additional function: Switching**

This function is used to switch functions with one or two buttons.

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be defined. The text is displayed on screen.	
Type of button	On/Off **Off/On** On Off Toggle
Defines the switching direction and type of button. Two "On/Off" buttons are used for switching on and off. Two "Off/On" buttons are used for switching off and on. A large "On" button is used for switching on. A large "Off" button is used for switching off. A large "Toggle" button is used for switching on/off.	
Feedback	None **Symbol type feedback**
The type of feedback is defined here. The communication object is displayed according to the parameter.	
Button symbols	**Symbol 1 (Gen. on/off style 1)** **....** **Symbol 4 (Lighting style 1)** .... Symbol 64
Defines the symbols used on the buttons.	

Function control *(continued)*

Parameter	Settings
If the parameter is set to "Symbol type feedback":	
Feedback symbols	**Symbol 1 (Gen. on/off style 1)** **....** **Symbol 4 (Lighting style 1)** .... Symbol 64
The symbols representing feedback are set here.	
Function enabled for	**No use in programs** Scenes Schedules Logic program Scenes and schedules Logic programs and scenes Logic programs and schedules Logic programs, schedules and scenes Presence simulation Scenes and presence simulation Schedules and presence simulation Scenes, schedules and presence simulation Logic programs and presence simulation Scene, logic programs and presence simulation Schedules, logic programs and presence simulation Scenes, schedules, logic programs and presence simulation
Used to determine whether this function is enabled for use in programmed scenes and schedules.	
Enable an additional function on the main page	**1…10 [by default: 1]**
Used to determine the main page from which the additional function can be accessed.	
Order of an additional function in position	**1…6 [by default: 1]**
Used to determine the additional button on the main page from which the additional function can be accessed.	

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
155	Switching On/Off	Additional function 1	1 bit	CWTU
This object is used to send the switching telegram generated by pressing a button.				

■ **Additional function: Forced switching**

This function is used to switch on and off by means of an override instruction. The override instruction can also be disabled. A short press on the button immediately sends the corresponding command (On or Off by override instruction). A long press on the button is used to send an override instruction disable command.

Actuators with a forced switching input take priority over certain actuator outputs by means of a central intervention. For example, in Night or Energy-saving mode, certain luminaires can be prevented from switching on. The control panel is used to enable the override command manually or disable an automatically-activated command.

Parameter	Settings
Description	**1. Function**

A description of 20 characters maximum can be entered.
The descriptive text is displayed on screen.

Type of button	On/Off **Off/On**

This parameter defines the button switching direction.
In the "On/Off" switching direction, a short press on the left-hand button is used to enable the switch on by override instruction function.
In the "On/Off" switching direction, a short press on the right-hand button is used to enable the switch off by override instruction function.
In the "Off/On" switching direction, a short press on the left-hand button is used to enable the switch off by override instruction function.
In the "Off/On" switching direction, a short press on the right-hand button is used to enable the switch on by override instruction function.
A long press (> 2 s.) on the left-hand or right-hand button is used to disable the override instruction.

Parameter	Settings
Feedback	None **Symbol type feedback**

The type of feedback is defined in this parameter. The communication object is displayed according to this parameter. Feedback is generated by the LSB (bit 0) of the 2-bit object.

Button symbols	**Symbol 1 (Gen. on/off style 1)** **....** **Symbol 4 (Lighting style 1)** .... Symbol 64

Defines the symbols used on the buttons.

If the parameter is set to "Symbol type feedback":

Feedback symbols	**Symbol 1 (Gen. on/off style 1)** **....** **Symbol 4 (Lighting style 1)** .... Symbol 64

Used to define symbols representing feedback.

Function enabled for	**No use in programs** Scenes Schedules Logic program Scenes and schedules Logic programs and scenes Logic programs and schedules Logic programs, schedules and scenes Presence simulation Scenes and presence simulation Schedules and presence simulation Scenes, schedules and presence simulation Logic programs and presence simulation Scene, logic programs and presence simulation Schedules, logic programs and presence simulation Scenes, schedules, logic programs and presence simulation

Used to determine whether this function is enabled for use in programmed scenes and schedules.

Parameter	Settings
Enable an additional function on the main page	**1…10 [by default: 1]**

Used to determine the main page from which the additional function can be accessed.

Order of an additional function in position	**1…6 [by default: 1]**

Used to determine the additional button on the main page from which the additional function can be accessed.

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
155	Override, On/Off	Additional function 1	2 bit	CWTU

A short press on the button sends a 2-bit object with a defined MSB (value 2, 3) and a very long press (> 2 seconds) sends a 2-bit object with a deleted MSB (value 0, 1).

■ **Additional function: Set 1 byte value**

This function is used to send 1-byte fixed and variable values between 0 and 100%.

A button can be assigned its own 1-byte value to in order, for example, to reduce the brightness of the corresponding luminaires to a configured value or define the rotation speed of a fan.

When a 1-byte variable value is sent, the value increases and decreases in increments by means of two buttons. The increments can be configured. The left-hand button is used to reduce the value in increments. The right-hand button is used to increase the value in increments. The value can only be increased or reduced by pressing the button again.

Parameter	Settings
Description	**1. Function**

A description of 20 characters maximum can be entered.
The descriptive text is displayed on screen.

Button functions	Set a constant value **Variable value (+/-)**

Used to determine whether to send a fixed value or a value varying in increments.

If the parameter is set to "Send a fixed value":

Constant value on pressing button	0...100 (by default: **0**)

Function control *(continued)*

Parameter	Settings
Used to define the fixed value sent after pressing the button.	
Feedback	None **Current value (0 to 100%)**
Used to determine whether a feedback value is displayed or not.	
If the parameter is set to "Variable value (+/-)":	
Increment interval when button is pressed	1% 5% **10%** 20% 25% 33% 50%
This object is only displayed if "Variable value (+/-)" has been selected in the above configuration. This parameter is used to set the increment interval used to reduce (left-hand button) or increase (right-hand button) the value.	
Function enabled for	**No use in programs** Scenes Schedules Logic program Scenes and schedules Logic programs and scenes Logic programs and schedules Logic programs, schedules and scenes Presence simulation Scenes and presence simulation Schedules and presence simulation Scenes, schedules and presence simulation Logic programs and presence simulation Scene, logic programs and presence simulation Schedules, logic programs and presence simulation Scenes, schedules, logic programs and presence simulation
Used to determine whether this function is enabled for use in programmed scenes and schedules.	

Parameter	Settings
Enable an additional function on the main page	**1…10 [by default: 1]**
Used to determine the main page from which the additional function can be accessed.	
Order of an additional function in position	**1…6 [by default: 1]**
Used to determine the additional button on the main page from which the additional function can be accessed.	

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
155	Setting value, Value	Additional function 1	1 byte	CWTU
This object is used to send the value setting telegram generated by a press on a button.				

Function control *(continued)*

■ **Additional function: Set temperature (2 byte)**

This function is used to send 2-byte decimal temperature values, both fixed and varying in increments of +/- 3 in the following ranges: 0°C, -5 to 50°C and 0 to 150°C.
A button can be assigned its own 2-byte temperature value to in order, for example, to set the reference temperature with a simple press on a button.
When a 2-byte variable temperature value is sent, the value in the configured temperature range is modified in increments using two buttons. The increment interval can be configured. The left-hand button is used to reduce the temperature value. The right-hand button is used to increase this value. The value can only be increased or reduced by pressing the button again.

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be entered. The descriptive text is displayed on screen.	
Button functions	**Sending a constant value** Value varying in increments of +/- 3 Value varying between -5 and 50°C Value varying between 0 and 150°C
This parameter is used to determine whether to send a fixed temperature value or a value varying in increments in a certain temperature range. The "Value varying in increments of +/- 3" designates 3 switching levels in the predefined increment, around 0°C.	
If the parameter is set to "Send a fixed value":	

Parameter	Settings
Constant value on pressing button	-5°C **[20°C by default]** -4°C ... 0°C 1°C ... 39°C 40°C 45°C 50°C 60°C ... 140°C 150°C
This object is only displayed if "Send a fixed value" has been selected in the above configuration. This parameter is used to assign a 2-byte fixed decimal temperature value and send it with a simple press on a button.	
If the parameter is set to "Variable value (+/-)":	
Increment interval	**Increment of 1°C** Increment of 2°C Increment of 3°C Increment of 5°C Increment of 10°C Increment of 15°C
This object is only displayed if "Value varying in increments of +/- 3", "Value varying between -5 and 50°C" or "Value varying between 0 and 150°C" has been selected in the above configuration. This parameter is used to set the increment interval used to reduce (left-hand button) or increase (right-hand button) the temperature value to be sent.	
Feedback	None **Current value (temperature)**
This parameter is used to define the type of feedback. The communication objects displayed depend on this parameter.	

Function control *(continued)*

Parameter	Settings
Function enabled for	**No use in programs** Scenes Schedules Logic program Scenes and schedules Logic programs and scenes Logic programs and schedules Logic programs, schedules and scenes Presence simulation Scenes and presence simulation Schedules and presence simulation Scenes, schedules and presence simulation Logic programs and presence simulation Scene, logic programs and presence simulation Schedules, logic programs and presence simulation Scenes, schedules, logic programs and presence simulation
Used to determine whether this function is enabled for use in programmed scenes and schedules.	
Enable an additional function on the main page	**1…10 [by default: 1]**
Used to determine the main page from which the additional function can be accessed.	
Order of an additional function in position	**1…6 [by default: 1]**
Used to determine the additional button on the main page from which the additional function can be accessed.	

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
155	Temperature, Value	Additional function 1	2 byte	CWTU
This object is used to send the value setting telegram generated by a press on a button.				

■ Additional function: Set counter value

This function is used to send 1 or 2-byte fixed reader values. A button can be assigned its own reader value to in order, for example, to reset the reader to a basic value with a simple press of a button.

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be entered. The descriptive text is displayed on screen.	
Button functions	**Send a 1 byte constant value** Send a 2 byte constant value
Used to define the type of data used.	
If the parameter is set to "Send a 1 byte fixed value":	
Constant value on pressing button	0...255 **[by default: 0]**
This object is only displayed if "Send a 1 byte fixed value" has been selected in the above configuration. This parameter is used to assign a 1-byte fixed reader value between 0 and 255 and send it with a simple press on a button.	

Function control *(continued)*

Parameter	Settings
If the parameter is set to "Send a 2 byte fixed value":	
Constant value x 100 on pressing button	0…100 **[by default: 0]**
This object is only displayed if "Send a 2 byte fixed value" has been selected in the above configuration. This parameter is used to assign a 2-byte fixed reader value between 0 and 10,000. The reader values entered are automatically multiplied by 100. The reader value is sent with a simple press on a button.	
Function enabled for	**No use in programs** Scenes Schedules Logic program Scenes and schedules Logic programs and scenes Logic programs and schedules Logic programs, schedules and scenes Presence simulation Scenes and presence simulation Schedules and presence simulation Scenes, schedules and presence simulation Logic programs and presence simulation Scene, logic programs and presence simulation Schedules, logic programs and presence simulation Scenes, schedules, logic programs and presence simulation
Used to determine whether this function is enabled for use in programmed scenes and schedules.	
Enable an additional function on the main page	**1…10 [by default: 1]**
Used to determine the main page from which the additional function can be accessed.	

Parameter	Settings
Order of an additional function in position	**1…6 [by default: 1]**
Used to determine the additional button on the main page from which the additional function can be accessed.	

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
155	Setting value, Value	Additional function 1	1 byte 2 byte	CWTU
This object is used to send the value setting telegram generated by a press on a button. The type of object changes according to the selected parameter.				

■ **Additional function: Scene call/program**

The 1-byte scene call/program functions allow the user to reprogram elements of a 1-byte scene or actuators with integrated 1-byte scene control without modifying projection into ETS. This means that different brightness levels or a different switching status can be assigned to different groups in a scene.

For 1-byte scenes, the scene and the configured number (1 to 64) can be called with a short press on the button or programmed with a long press on the button.
A single communication object is used to program a scene and to call a programmed scene as well as to transmit the required scene number. Bits 0 to 5 of the 1-byte scene telegram determine the scene number (1 to 64). Bit 7 (the last bit) determines whether the scene needs to be called (bit = 0) or programmed (bit = 1). Bit 6 is not used.

Before a scene is programmed, the actuators must be set to the required switching status or brightness levels using the appropriate sensors/buttons. After receipt of a program telegram, the interrogated scene elements or actuators with integrated scene control ask for the switching status or brightness levels currently defined in the actuators and programs them in the appropriate scene.

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be entered. The descriptive text is displayed on screen.	
Scene function	**Scene call only, 1 byte** Scene call/program, 1 byte Scenes called internally
The scene logic and button function are defined here.	
Scene number (scene 1 to 64)	1…64 **[by default: 1]**
Used to define the object value or scene number sent after pressing the button.	
Button symbols	**Symbol 1 (Gen. on/off style 1)** **….** **Symbol 51 (scene call)** .... Symbol 64
Used to define the symbols used on the buttons or as feedback.	
Enable an additional function on the main page	**1…10 [by default: 1]**
Used to determine the main page from which the additional function can be accessed.	
Order of an additional function in position	**1…6 [by default: 1]**
Used to determine the additional button on the main page from which the additional function can be accessed.	

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
155	Scene call, Scene 1…64	Additional function 1	1 byte	CWT
The scene request telegram is sent via this object.				
155	Scene call/ program	Additional function 1	1 byte	CWT
The scene request telegram is sent via this object.				

No object is displayed if "Call scenes internally" has been selected.

■ **Additional function: Set heating operating mode**

This function is used to set the heating system operating mode. Each operating mode determines its own heating value.
The operating mode can be transmitted by a 1-byte object. The configurable operating modes are the Comfort, Standby, Night and Protection modes. The control unit can be configured with or without automatic mode.
The selected operating mode is displayed by a feedback symbol.

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be entered. The descriptive text is displayed on screen.	
Adjustment of the operating mode	**1 byte object with auto mode** 1 byte object without auto mode
Determines whether Automatic mode should be defined in addition to the Comfort, Standby, Night and Protection modes.	
Function enabled for	**No use in programs** Scenes Schedules Logic program Scenes and schedules
Used to determine whether this function is enabled for use in programmed scenes and schedules.	
Enable an additional function on the main page	**1…10 [by default: 1]**
Used to determine the main page from which the additional function can be accessed.	

Function control *(continued)*

Parameter	Settings
Order of an additional function in position	**1…6 [by default: 1]**
Used to determine the additional button on the main page from which the additional function can be accessed.	

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
5	Heating mode, Value	Additional function 1	1 byte	CWT
Depending on the operating mode, this object sends the following values: Auto: ..... Object value 0 Comfort: ..... Object value 1 Standby: ..... Object value 2 Night: ..... Object value 3 Protection: ..... Object value 4				

■ **Additional function: Set heating ventilation**

This function is used to set the rotation speed of the heating system ventilation. Depending on the type of ventilation, up to 5 speed levels are available.
The levels are transmitted as a percentage by a 1-byte object. The selected ventilation level is displayed via a feedback symbol.

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be entered. The descriptive text is displayed on screen.	
Type of fan	Fan 1 level (0%, 100%) Fan 2 levels (0%, 50%, 100%) **Fan 3 levels (0%, 33.3%...) 100%)** Fan 4 levels (0%, 25%...100%) Fan 5 levels (0%, 20%...100%)
Function enabled for	**No use in programs** **Scenes** Schedules Logic program Scenes and schedules
Used to determine whether this function is enabled for use in programmed scenes and schedules.	
Enable an additional function on the main page	**1…10 [by default: 1]**
Used to determine the main page from which the additional function can be accessed.	
Order of an additional function in position	**1…6 [by default: 1]**
Used to determine the additional button on the main page from which the additional function can be accessed.	

Function control *(continued)*

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
5	Ventilation level, Value	Additional function 1	1 byte	CWT
The desired ventilation level can be set manually via this object.				

■ **Additional function: Status display 1 bit**

This function is used to display the status of a 1-bit object. The status can be displayed in the form of a value ("0" or "1") or using customised symbols. It is therefore possible to view the status of windows or doors, for example. The symbols library is used to make status display easy both to do and to understand.
It is also possible to display a status in the form of an alarm notification. 1-bit objects activated for this purpose are displayed in the chronological list of alarms when the value is "1". They are displayed with a timestamp and a description.
No alarm symbol can be selected for these alarms and no acoustic alarm can be selected. These alarm notifications are always displayed with the symbol 1 (general alarm).

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be entered. The descriptive text is displayed on screen.	
Type of feedback	Value (0/1) **Symbol**
Used to define the type of feedback.	
If the parameter is set to "Symbol type feedback"	
Symbol	**Symbol 1 (Gen. on/off style 1)** …. Symbol 12 (Adjust +/-, Set) …. Symbol 64
Used to define symbols representing feedback.	
Function enabled for	**Any use as alarm** Use as additional alarm
Determines whether or not the function can be used in the form of an additional 1-bit alarm function.	

Parameter	Settings
Enable an additional function on the main page	**1…10 [by default: 1]**
Used to determine the main page from which the additional function can be accessed.	
Order of an additional function in position	**1…6 [by default: 1]**
Used to determine the additional button on the main page from which the additional function can be accessed.	

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
155	Status, On/Off	Additional function 1	1 bit	CWTU
The status displayed is defined via this object.				

■ **Additional function: Status display 1 byte**

This function is used to display 1-byte feedback objects. Feedback can be displayed in the form of floating point numbers between 0 and 255 or a percentage between 0 and 100%. This allows the user to view, for example, the brightness level of a dimmer or rotation speed of a fan.

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be entered. The descriptive text is displayed on screen.	
Type of feedback	**Percentage (0…100%)** Absolute value (0...255)
Used to define the type of feedback.	
Enable an additional function on the main page	**1…10 [by default: 1]**
Used to determine the main page from which the additional function can be accessed.	
Order of an additional function in position	**1…6 [by default: 1]**
Used to determine the additional button on the main page from which the additional function can be accessed.	

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
155	Status, Value	Additional function 1	1 byte	CWTU
The status displayed is defined via this object.				

■ **Additional function: Status display 2 byte**

This function is used to display feedback in the form of 2-byte floating point numbers. The number of digits after the decimal point can be adjusted. The unit for this value can be selected and displayed after the numerical value. It can be used to view, for example, the temperature in °C, the wind speed in m/s or the brightness in lux.

Parameter	Settings
Description	**1. Function**
A description of 20 characters maximum can be entered. The descriptive text is displayed on screen.	
Unit	No unit (floating value) No unit (counter value) **°C** °F hPa Pa kWh kW W/m² m/s km/h lx % humidity S A V
Used to define the type of feedback.	
Number of decimal places	0…2 **(by default: 1)**
Used to define the number of digits displayed after the decimal point.	

Parameter	Settings
Enable an additional function on the main page	**1…10 [by default: 1]**
Used to determine the main page from which the additional function can be accessed.	
Order of an additional function in position	**1…6 [by default: 1]**
Used to determine the additional button on the main page from which the additional function can be accessed.	

The following communication objects are displayed for this function:

Obj.	Function	Object name	Type	Flags
155	Status, Value	Additional function 1	2 byte	CWTU
The status displayed is defined via this object.				

Function control *(continued)*

Communication objects and scene parameters

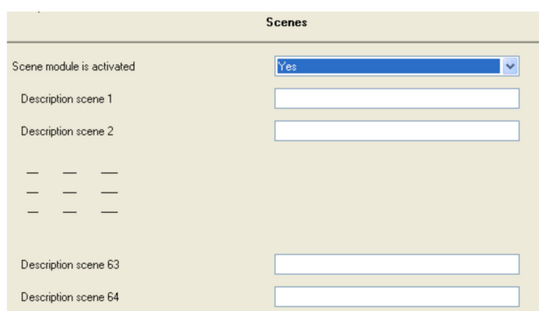
Up to 64 programmed scenes can be recorded and loaded in the device.

Scenes are programmed internally on the device via scene configuration (see below). Any function enabled for this purpose can be used in a programmed scene.

Scenes can also be loaded from an external object via the bus. The following object is available for this purpose:

Obj.	Function	Object name	Type	Flags
248	Internal scene, call	Scene 1…64	1 byte	CW
Scenes 1 to 64 which have been programmed on the device can be called by this object. Scene 1 corresponds to the value of telegram 0, scene 2 to value 1, etc.				

Use the Scenes page to enter settings relating to the scenes module.



The following settings are available.

Parameter	Settings
The scenes module is activated	**No** Yes
Determines whether or not the scenes module is activated. Scene object 248 is displayed depending on the setting entered.	
Description of scene 1	Text **[by default: Scene 1]**
A descriptive text of 20 characters maximum can be entered here to describe scene 1. When programming scenes, the text is used on screen to make identification and renaming easier for the user.	
Description of scene 2…64	Analogue (see above).
A descriptive text of 20 characters maximum can be entered here to describe scenes 2 to 64. When programming scenes, the text is used on screen to make identification and renaming easier for the user.	

Function control *(continued)*

Communication objects and alarm parameters

16 different communication objects are available on the device for alarm and event functions. If an object is used as an alarm function, the tripped alarms are displayed in the chronological alarm list. If an object is used to trip an event, it is not displayed in the alarm list, but activates a corresponding output object. To activate alarms/events, it is possible to use 1-bit, 1-byte, 2-byte telegrams as well as 4 and 14-byte text telegrams (only in Alarm 1 and 2). These parameters are used to define the alarm conditions or alarm threshold. For each alarm function, there is an output object which is sent during either event acknowledgement or alarm acknowledgement. The alarm function objects are as follows:

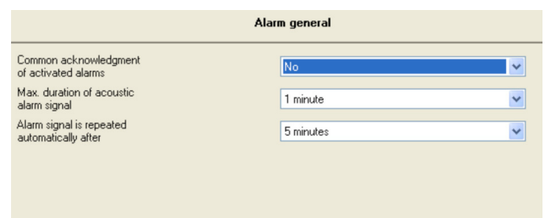
Obj.	Function	Object name	Type	Flags
215	Alarm, On/Off Alarm, Value Alarm, Value Alarm, Value Alarm, Text message	Alarm/Event 1	1 bit 1 byte 2 byte 4 byte 14 byte	CWTU
This object can be used to trip an alarm when the configured conditions are satisfied. The object type changes according to the chosen configuration.				
If the parameter is set to "Output object on alarm acknowledgement"				
216	Acknowled-gement, On	Alarm/Event 1	1 bit	CT
If the parameter is set to "Output object on alarm trip"				
216	Acknowled-gement, On	Alarm, Activated/Deactivated	1 bit	CT
This object is sent when an alarm trip condition is satisfied.				

Objects 217 to 246 are comparable to alarm functions 2 to 16.

As an alternative to individual acknowledgement for each alarm, a general acknowledgement can be sent for all active alarms. Object 247 is sent in the event of central acknowledgement.

Obj.	Function	Object name	Type	Flags
247	Central alarm acknowledge-ment	247	On	1 bit
A 1-bit telegram is sent in the event of central acknowledgement.				

The General alarms page can be used to define alarm characteristics.

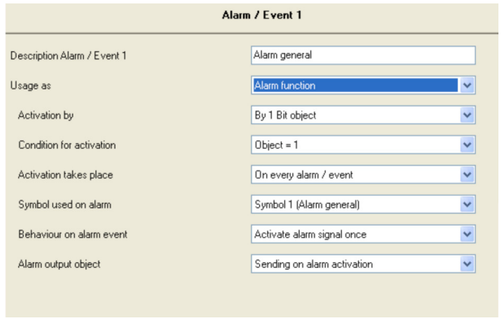


Function control *(continued)*

The available parameters are as follows:

Parameter	Settings
Common acknowledgement of activated alarms	**No** Yes
Determines whether a general acknowledgement should be sent for all waiting alarms using an acknowledgement button.	
Max. duration of acoustic signal	10 seconds 30 seconds **1 minute** …. 20 minutes 25 minutes 30 minutes
Defines the period after which the acoustic alarm signal stops automatically.	
The alarm signal is repeated automatically after	10 seconds 30 seconds **1 minute** …. 4 minutes **5 minutes** 6 minutes …. 25 minutes 30 minutes
Defines the period after which the acoustic alarm signal, having been automatically deactivated, sounds again. Activation only occurs if the alarm is still waiting.	

The specific parameters of each alarm function can be set on the alarm function 1 to 16 pages.



Each page contains the following parameters:

Parameter	Settings
Description of Alarm/Event 1	**Alarm/Event 1**
A description of 20 characters maximum can be entered. Text is displayed on screen in the form of an alarm description.	
Used as	Alarm function **Event**
Use this entry field to determine whether the object should be used as an alarm function or as an event. If you select an alarm function, an alarm is displayed on the alarm page when the object value satisfies the alarm trip conditions. If you select an event, the value of a 1-bit output object is set to "1" if the object value satisfies the conditions.	
Enabled by	**a 1-bit object** a 1-byte object a 2-byte object (floating point number) a 2-byte counter value a 4-byte counter value a text message

Function control *(continued)*

Parameter	Settings
This parameter defines the data format in which the object used to activate an alarm or an event is received. Depending on the format used, the trip condition or activation threshold value is displayed. If the data format of the alarm function trip object has been set to "via text notification", the value of the 14-byte signal string is displayed directly on screen in the form of an alarm notification. An alarm is activated every time a value of this type is received. If no signal is received, no alarm is tripped. If the data format of the event trip object is set to "by text notification", the 1-bit output object value is set to "1" and sent once a value is received in the trip object. If the trip object receives no signal, the 1-bit output object value is set to "0" and only sent if an event has been enabled earlier. Text notification and the data format 4-byte reader are only offered for Alarms/Events 1 and 2.	
Condition for activation	Object = 0 **Object = 1**
Used to trip an alarm if a 1-bit object is received.	
If the parameter is set to "Activation by a 1 byte object":	
Activation threshold	0...255 **[by default: 128]**
The selection range for this parameter is only displayed if "Activation by a 1 byte object" has been selected in the above configuration. This parameter is used to define the threshold value of the 1-byte trip object in order to activate an alarm or an event. Different relational operators are available:	

Parameter	Settings
If the parameter is set to "Activation by a 2 byte object (floating point number)":	
Activation threshold	-32767…+32766 **[by default: 21]**
The selection range for this parameter is only displayed if "Activation by a 2 byte object (floating point number)" has been selected in the above configuration. This parameter is used to define the threshold value of the 2-byte trip object in order to activate an alarm or an event.	
If the parameter is set to "Activation by a reader 2 byte object":	
Activation threshold	0…65,535 **[by default: 1028]**
The selection range for this parameter is only displayed if "Activation by a reader 2 byte object" has been selected in the above configuration. This parameter is used to define the threshold value of the 2-byte trip object in order to activate an alarm or an event. Different relational operators are available:	
If the parameter is set to "Activation by a reader 4 byte object":	
Activation threshold	0...4,294,967,295 **[by default: 10000]**
The selection range for this parameter is only displayed if "Activation by a reader 4 byte object" has been selected in the above configuration. This parameter is used to define the threshold value of the 4-byte trip object in order to activate an alarm or an event. Different relational operators are available:	

Function control *(continued)*

Parameter	Settings
If the parameter is set to "Activation by a 1 bit object":	
Activation takes place	On every alarm/event **On the alarm/first event only**
This parameter is only displayed if "Activation by a 1 bit object" has been selected in the above configuration. If the parameter is set to "on every alarm/event", an alarm trips or the 1-bit output object value is defined as "1" and sent every time the trip object value is the same as (=) the configured threshold value. For events, the 1-bit output object with the value "0" is only sent if the event has already been activated. If the parameter is set to "only on first alarm/first event", an alarm trips or the 1-bit output object value is defined as "1" and sent the first time the trip object value is the same as (=) the configured threshold value. For events, the 1-bit output object with the value "0" is only sent if the event has already been activated.	
If the parameter is set to "Activation by a 1 byte object" If the parameter is set to "Activation by a 2 byte object (floating point number)" If the parameter is set to "Activation by a reader 2 byte object": If the parameter is set to "Activation by a reader 4 byte object":	
Activation if value	Same as the threshold (always) Higher than the threshold Lower than the threshold Higher than or same as the threshold Lower than or same as the threshold **Same as the threshold (once)** Exceeds the threshold (rising) **Drops below the threshold (falling)**

Parameter	Settings
This parameter is only displayed if it is set to "Activation by a 1 byte object", "by a 2 byte object (floating point number)", "by a reader 2 byte object" or "by a reader 4 byte object" in the above configuration. This parameter is used to select the operator linked to the threshold value. If the parameter is set to "same as the threshold value (always)", an alarm trips or the 1-bit output object value is defined as "1" and sent each time the trip object value is the same as (=) the configured threshold value. For events, the 1-bit output object with the value "0" is only sent if the event has already been activated. If the parameter is set to "higher than the threshold value", an alarm trips or the 1-bit output object value is defined as "1" and sent each time the trip object value is higher than the configured threshold value. For events, the 1-bit output object with the value "0" is only sent if the event has already been activated. If the parameter is set to "lower than the threshold value", an alarm trips or the 1-bit output object value is defined as "1" and sent each time the trip object value is lower than the configured threshold value. For events, the 1-bit output object with the value "0" is only sent if the event has already been activated. If the parameter is set to "higher than or same as the threshold value", an alarm trips or the 1-bit output object value is defined as "1" and sent each time the trip object value is higher than or the same as the configured threshold value. For events, the 1-bit output object with the value "0" is only sent if the event has already been activated. If the parameter is set to "lower than or same as the threshold value", an alarm trips or the 1-bit output object value is defined as "1" and sent each time the trip object value is lower than or the same as the configured threshold value. For events, the 1-bit output object with the value "0" is only sent if the event has already been activated.	

Function control *(continued)*

Parameter	Settings
If the parameter is set to "same as the threshold value (once)", an alarm trips or the 1-bit output object value is defined as "1" and sent the first time the trip object value is the same as (=) the configured threshold value. For events, the 1-bit output object with the value "0" is only sent if the event has already been activated. If the parameter is set to "exceeds the threshold value (rising)", an alarm trips or the 1-bit output object value is defined as "1" and sent the first time the trip object value is higher than the configured threshold value. For events, the 1-bit output object with the value "0" is only sent if the event has already been activated. If the parameter is set to "below the threshold value (rising)", an alarm trips or the 1-bit output object value is defined as "1" and sent the first time the trip object value is lower than the configured threshold value. For events, the 1-bit output object with the value "0" is only sent if the event has already been activated.	
If the parameter is set to "Use as alarm function":	
Symbol used on the alarm	**Symbol 1 (general alarm)** Symbol 2 (power on) .... Symbol 23 Symbol 24
This parameter is used to select the symbol used for alarm notification. This symbol is displayed in front of the time-stamp and alarm description on the alarm page.	

Parameter	Settings
Behaviour in the event of an alarm	No alarm signal **Trips a continuous alarm signal** Trips an intermittent alarm signal
This parameter is only displayed if "Usage as alarm function" has been selected in the above configuration. This parameter is used to determine if and when an alarm trip generates an acoustic signal. If this parameter is set to "No alarm signal", no acoustic signal is sent when an alarm trips. The alarm is displayed on screen without emitting an acoustic signal. If this parameter is set to "Intermittent alarm signal", an acoustic alarm signal sounds once during a configurable period when an alarm trips. If this parameter is set to "Continuous alarm signal", an acoustic alarm signal sounds continuously during a configurable period when an alarm trips. Once the alarm signal stops, the alarm notification is displayed without emitting a sound during a configurable period. At the end of this period, the acoustic signal sounds again.	
Alarm object value	**Sending on acknowledgement** Sending on alarm activation
This parameter is only displayed if "Usage as alarm function" has been selected in the above configuration. This parameter is used to determine after which alarm event a 1-bit output object value should be sent. If this parameter is set to "Sending on receipt of acknowledgement", the output object value is defined as "1" and sent to the alarm page once the user has acknowledged the alarm. If this parameter is set to "Sending if an alarm trips", the output object value is defined as "1" and sent when the alarm trips.	

Symbols used for standard and additional functions

The ETS parameters can be used to select the symbols for buttons and feedback indicators.
The symbols available are as follows:

	Symbol 1 (Gen.on/off style 1)
	Symbol 2 (Gen.on/off style 2)
	Symbol 3 (Gen.on/off style 3)
	Symbol 4 (Lighting style 1)
	Symbol 5 (Lighting style 2)
	Symbol 6 (Lighting style 3)
	Symbol 7 (Light dimming style 1)
	Symbol 8 (Light dimming style 2)
	Symbol 9 (Light dimming style 3)
	Symbol 10 (shutters)
	Symbol 11 (screen)
	Symbol 12 (+/-, Set)
	Symbol 13 (Arrow style 1)
	Symbol 14 (Arrow style 2)
	Symbol 15 (volume)
	Symbol 16 (Read/Stop)
	Symbol 17 (Forward/Back)
	Symbol 18 (Start/End)
	Symbol 19 (Up/Down)
	Symbol 20 (Presence)
	Symbol 21 (temperature)
	Symbol 22 (boiler)
	Symbol 23 (dishwasher)

Symbols used for standard and additional functions
(continued)

	Symbol 24 (coffee machine)
	Symbol 25 (oven)
	Symbol 26 (refrigerator)
	Symbol 27 (microwave)
	Symbol 28 (iron)
	Symbol 29 (extra fan)
	Symbol 30 (washing machine)
	Symbol 31 (power socket)
	Symbol 32 (TV)
	Symbol 33 (PC)
	Symbol 34 (monitor)
	Symbol 35 (printer)
	Symbol 36 (fax)
	Symbol 37 (audio)
	Symbol 38 (heating)
	Symbol 39 (window)
	Symbol 40 (Absence/Comfort)
	Symbol 41 (night reduction)
	Symbol 42 (frost protection)
	Symbol 43 (heat protection)
	Symbol 44 (reference temperature)
	Symbol 45 (summer/winter time)
	Symbol 46 (awning)
	Symbol 47 (screen)

Symbols used for standard and additional functions
(continued)

	Symbol 48 (outdoor lighting)
	Symbol 49 (fan setting)
	Symbol 50 (Automatic/Manual)
	Symbol 51 (Scene call)
	Symbol 52 (Scene call/program)

The left-hand symbol in the table is assigned to the object value 0 and the middle one to the object value 1.
The right-hand symbol is used for the toggle button.
Some functions use predefined symbols.

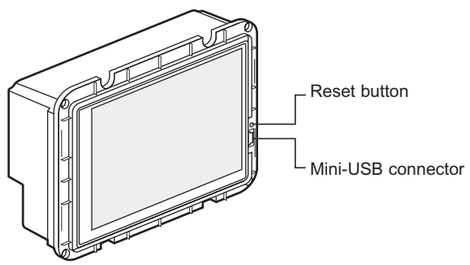
Using the USB interface

The touch screen has both a KNX communication interface and a USB port.

The USB port can be used for the following advanced functions:

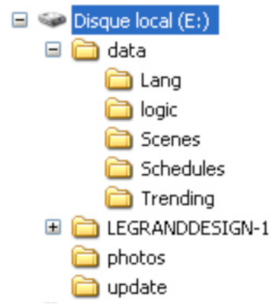
- Loading logo/slideshow images
- Updating the firmware
- Backing up data

The USB port is located on the front of the device and can be accessed once the decorative frame has been removed.



The device can be connected to a PC/laptop computer using the USB cable supplied. Only use the following cable (type B mini-USB ⟶ type A USB, length: 1 m).

Once the cable is connected, the screen is displayed in the list of remote peripherals on the connected computer. Use Windows Explorer to browse the tree structure:



Using the USB interface *(continued)*

Loading logo/slideshow images

Slideshow images/photos can be found in the photos folder in the root directory. Use File Explorer to add new images and delete or replace old images. Slideshow images are displayed in alphabetical order. In order to be displayed, images must be in the following format:

.jpg format

320 x 240 pixels

Maximum image size: 500 KB

In total, 500 MB of memory is available for photos. If there is only one image in the folder, it is displayed permanently (Logo function). If all the files are accidentally deleted, the manufacturer's logo (legrand) is displayed.

Once the USB connection has been removed and the device restarted (by disconnecting the power supply or pressing the reset button above the USB port), new images are displayed in the slideshow.

Updating the firmware

If the manufacturer suggests updating the firmware, this can also be loaded onto the device via the USB port. Updates are supplied in files in the update-xx.tpc format. Use File Explorer to copy the file into the update folder in the root directory.

The update takes effect once the USB connection has been removed and the device restarted (by disconnecting the power supply or pressing the reset button above the USB port). The current firmware version is indicated on the "General" page.

Using the USB interface *(continued)*

Backing up data

Some touch screen functions cannot be set in ETS, only on the device (schedules, scenes, logic programs). Others can only be recorded using the device (presence simulation). To back up these functions and restore them in in the event of malfunction, the Logic, Scenes and Schedules directories in the data sub-directory can be accessed via a USB connection. Files in the sub-directories take the .bin and .list extensions.

Schedules, scenes and logic programs, not to mention presence simulation, configured on the panel are all recorded in these files.

We recommend that, especially with large programs, you back up the whole ¥data folder once configuration is complete. This operation is also performed via a USB connection.

When replacing a device, backup data can easily be imported into the new device.

LE04534AA_EN

Head office:
128, av. du Maréchal-de-Lattre-de-Tassigny
87045 Limoges Cedex - France

Tel: +33 (0)5 55 06 87 87
Fax: +33 (0)5 55 06 88 88

www.legrandgroup.com