Corlo Touch KNX,
Corlo Touch KNX WL
Display and Touch Switch

elsner®
elektronik

Installation and Operation

Installation, inspection, commissioning and troubleshooting of the device must only be carried out by a competent electrician.

This manual is amended periodically and will be brought into line with new software releases. The change status (software version and date) can be found in the contents footer. If you have a device with a later software version, please check **www.elsner-elektronik.de** in the menu area "Service" to find out whether a more up-to-date version of the manual is available.

Clarification of signs used in this manual

Safety advice.

Safety advice for working on electrical connections, components, etc.

DANGER!   ... indicates an immediately hazardous situation which will lead to death or severe injuries if it is not avoided.

WARNING!   ... indicates a potentially hazardous situation which may lead to death or severe injuries if it is not avoided.

CAUTION!   ... indicates a potentially hazardous situation which may lead to trivial or minor injuries if it is not avoided.

ATTENTION! ... indicates a situation which may lead to damage to property if it is not avoided.

ETS   In the ETS tables, the parameter default settings are marked by underlining.

1. Description

1.1. Description

The **Display Corlo Touch KNX** for the KNX system offers a variety of options for its use: Its touch-sensitive glass interface means that it can be used as a normal switch. The high resolution display is ideal for displaying text, images or graphics. In addition to current readings and messages, the KNX bus system can also display photographs, for example. Concurrently, you can set up the **Corlo Touch KNX** as a control center for automatic shading, ventilation and air conditioning regulation.

With the **Corlo Touch KNX WL** model, you can also show network content on the display using the WLAN connection, e.g. web pages, IP camera images or visualizations. The Corlo Touch KNX WL display screen can, for example, be shown on a Smartphone, if a VPN connection is provided externally.

Functions:

- 3.5" touch-sensitive interface
- **10 display pages**, which can be configured with different areas for control or display purposes, for example switches, buttons, rocker switch, rotary knob, readings
  With the **Corlo Touch KNX WL** model, you can display predefined web pages using the WLAN connection. You enter URL addresses in the ETS
- Icons for display can be exchanged (symbol library in the device, own pictures from by micro SD card)
- **Ambient lighting** with individually variable colors (RGB)
- Integrated **proximity sensor**. Enables proximity switching and fast activation of the display from standby mode
- Integrated **brightness sensor** for automatic adjustment of the display lighting
- Integrated scene **control**(16 scenes), **timer, alarm clock**
- **5 automatic channels** , integrated **automation for ventilation** (windows, ventilation equipment), for **shading** (shutter, blinds, awning) for **air conditioning regulation** (heating, cooling) and for **light**
- **4 AND and 4 OR logic gates** each with 4 inputs. 16 logic inputs (in the form of communication objects) are available as inputs for the logic gates.
  The output of each gate can be optionally configured as 1-bit or 2 x 8-bit
- **4 inputs** for binary contact or temperature sensor
- **Micro SD card socket** e.g. as storage for image data
- **USB interface**
- **Corlo Touch KNX WL model: WLAN interface** for wireless data transfer from or into local networks

Configuration is made using the KNX software ETS. The **product file** can be downloaded from the Elsner Elektronik website on **www.elsner-elektronik.de** in the "Service" menu.

1.1.1. Deliverables

- Display unit
- Connection line

You will *also* require (not included in deliverables):
- Corlo frame (available as a single, dual, or triple frame)

Optional accessories:

(not included in the deliverables):
- T-NTC temperature sensor (No. 30516)
- Micro SD card for image data (off the shelf)

1.1.2. Technical data

Housing	Glass: real glass, tempered Edge: zinc pressure die casting Housing: plastic
Display	Visible diagonal: 3,5 inches Resolution: 320 × 240 pixel Viewing Angle: 6 o'clock viewing direction Opening angle x: -75° to +75° typ. Opening angle y: -55° to +75° typ.
Colors	• White glass, bright chromed edge • White glass, matt chromed edge • Black glass, bright chromed edge • Black glass, matt chromed edge • White glass, edge matt white • Black glass, edge matt black • Custom colors on request (see *Colors for edge and frame*, Page 10)
Assembly	Flush mounting (Wall installation in junction box Ø 60 mm)
Dimensions	Housing overall approx. 80 × 71 × 49 (W × H × D, mm), Mounting depth approx. 12.5 mm
Weight display unit Corlo Touch KNX	approx. 140 g
Weight display unit Corlo Touch KNX WL	approx. 160 g
Weight frame	frame 1-gang approx. 75 g, frame 2-gang approx. 95 g, frame 3-gang approx. 115 g
Ambient temperature	Operation 0...+50°C, storage -10...+50°C
Ambient humidity	max. 95% RH, avoid condensation
Operating voltage	24 V DC ±10%

Power consumption Corlo Touch KNX	• approx. 1.3 W maximum (when ambient and logo lighting 100% white, display brightness 100%) • approx. 0.9 W in normal operation (when ambient and logo lighting off, display brightness 50%) • approx. 0.6 W in standby operation (when ambient and logo lighting off, display off) (was measured with 24 V auxiliary voltage)
Power consumption Corlo Touch KNX WL	• approx. 3.5 W maximum (when ambient and logo lighting 100% white, display brightness 100%) • approx. 1.9 W in normal operation (when ambient and logo lighting off, display brightness 50%) • approx. 1.7 W in standby operation (when ambient and logo lighting off, display off) (was measured with 24 V auxiliary voltage)
Data output/ bus communication	KNX +/- Bus connector terminal
BCU type	unit's own microcontroller
PEI type	0
Group addresses	max. 1024
Assignments	max. 1024
Communication objects	1022
Other data interfaces	Micro SD, USB
Inputs	4× Analog/digital, max. cable length 10 m
Setting range of temperature sensor T-NTC at input of Corlo Touch	-40°C...+80°C

The product conforms with the provisions of EU guidelines.

1.1.3. Customizing options

Colors for edge and frame

The standard colors for the display edge and matching frame are matt chrome and bright chrome. Special paints are possible, e. g. to RAL or automobile paint color codes. Please ask for your desired color.

The glass pane is only available with white or black painting, special colours are not possible.

1.2. Installation and start-up

1.2.1. Installation notes

Installation, testing, operational start-up and troubleshooting should only be performed by an electrician.

CAUTION!
Live voltage!
There are unprotected live components inside the device.
- National legal regulations are to be followed.
- Ensure that all lines to be assembled are free of voltage and take precautions against accidental switching on.
- Do not use the device if it is damaged.
- Take the device or system out of service and secure it against unintentional use, if it can be assumed, that risk-free operation is no longer guaranteed.

The device is only to be used for its intended purpose. Any improper modification or failure to follow the operating instructions voids any and all warranty and guarantee claims.

After unpacking the device, check it immediately for possible mechanical damage. If it has been damaged in transport, inform the supplier immediately.

The device may only be used as a fixed-site installation; that means only when assembled and after conclusion of all installation and operational start-up tasks and only in the surroundings designated for it.

Elsner Elektronik is not liable for any changes in norms and standards which may occur after publication of these operating instructions.

1.2.2. Installation

Assembly site and assembly preparations

The device must only be installed and operated in dry, indoor spaces. Avoid condensation.

ATTENTION!
The WLAN range for the Corlo Touch KNX WL model can be reduced as a result of the position where it is installed.
Consider this when planning the location.

Avoid direct light (sunlight, lights) when choosing the assembly site. The proximity sensor's function can be impaired by strong light sources.

Choose the assembly height based on the application in each case: When used as a switch, the **Corlo Touch KNX** should be mounted 110 cm above ground level and when used as an indicating and control display, at a conveniently legible height, say 150 cm.
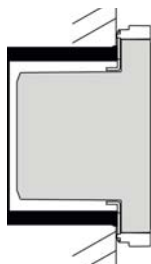
Fig. 1: Sectional drawing.
*The **Display Corlo Touch KNX** fits in a normal junction box (R 60 mm, depth 42 mm).*

If the analog/digital inputs are used, a deep socket (60 mm) or an electronics socket should be used. In this way, cables can be connected and stowed more conveniently.

When using a dual or triple frame, two or three sockets with a separation of 71 mm must be placed accordingly. The frames must be installed vertically.

Overall dimensions with frame:
Single, approx. 80 mm x 81 mm (W x H),
Dual, approx. 80 mm x 153 mm (W x H),
Triple, approx. 80 mm x 224 mm (W x H),
Mounting depth approx. 12.5 mm

Assembling the frame and the display unit

The instructions show installation of display unit with a single frame. Dual and triple frames are installed accordingly.

Fig. 2
A socket with 4 screw domes faciliates installation.
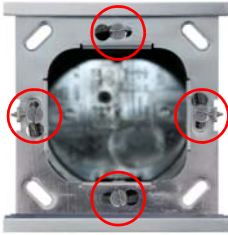
Fig. 3
Bolt the frame on to the socket. Two screws
(right/left or top/bottom) are enough.
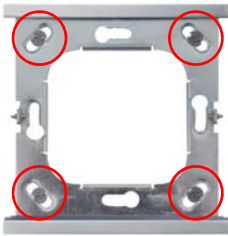
Fig. 4
If the screw domes of the box used are not
covered with the frame's longitudinal holes,
the frame can alternatively be bolted via the four
outside holes (e.g. for boxes from Swiss systems
or other installation systems).

Connect KNX bus, auxiliary voltage und where required the connection line inputs to the display unit.

Fig. 5
The display unit can now be put in place.
The wider part of the display edge must
be at the bottom.
The display unit engages on the right and left
sides and is also held by magnets.

Wall
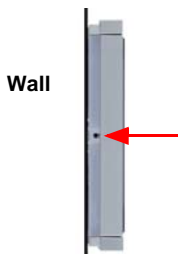
Fig. 6
To remove the display unit from the frame, press
one of the snaplock connections on the side of
the device with a pointed instrument. You can
now pull the device to the front at the unlocked
side und remove it.

Connection overview
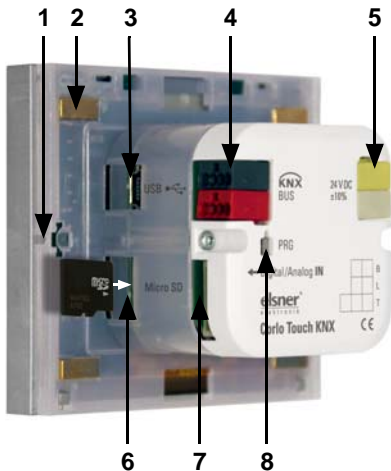
Fig. 7
1   *Snaplock connector seating*
2   *Magnets (additional fixing)*
3   *USB socket*
4   *KNX terminal bus +/-*
5   *Terminal auxiliary supply 24 V DC ±10%, terminal configuration independent from polarity*
6   *Micro SD socket (card contacts must show in the direction of the display when inserting it)*
7   *Analog/digital inputs socket*
8   *Programming button for addressing the device at the bus (recessed)*

Connect the bus voltage (no. 4, red/black terminals) and auxiliary voltage (no. 5, yellow/white terminals). Use the attached breakout cable for connecting the digital/analog inputs (no. 7). The cables for the inputs can be extendet to up to 10 m. All GND connections of the inputs are bridged internally (black cable).

Fig. 8
Breakout cable for analog/digital inputs:
Input 1: black/white
Input 2: black/yellow
Input 3: black/lilac
Input 4: black/blue

1.2.3. Instructions for assembly and operational start-up

Never expose the sensor to water (e.g. rain) or dust. This can damage the electronics. You must not exceed a relative air humidity of 95%. Avoid condensation.

After the operating voltage has been applied, the device will enter an initialisation phase lasting a few seconds. During this phase no information can be received or sent via the bus.

1.3.   Addressing the device

The programming mode for addressing at the bus is activated via the programming button at the back of the housing or via the display.

☐   Settings > System > Service > KNX

KNX programmming LED ON:
Programming mode active.

KNX programming LED OFF:
Programming mode off.

The current address is displayed (Address 15.15.250 when delivered).

1.4.   Setting up the WLAN connection

Only for the **Corlo Touch KNX WL** *model with an interface for wireless network connection!*

1.4.1. WLAN settings in the ETS

The WLAN connection must be set up in the ETS. Consult the WLAN setting section in the manual

ETS: System Settings > WLAN
📖   2.13.1 WLAN

You set the network name and the encryption for compatibility with the WLAN network access point. The IP address allocation can be made either automatically by DHCP or manually.

1.4.2. Displaying WLAN status on the display

You can call up information on the current status of the connection on the **Corlo Touch KNX** display. Network name, signal strength, IP address, DNS address and GW address are displayed.

☐   Settings > System > Service > WLAN Status
📖   3.11.7. WLAN Status

1.5.   Maintenance and care

Fingerprints on the glass area and frame are best removed with a cloth moistened with water or a microfiber cloth. Do not use an abrasive cleaning agent or aggressive cleansing agents.

For cleaning of the screen, the „cleaning mode" can be used, that is activeted via the display.

☐   Settings > Cleaning Mode

During a period set in the ETS, the touch function is disabled then and the screen can be cleaned.

1.6.   Load individual images

1.6.1. Images for screensaver

The setting of the screen saver is described in the manual chapters
📖   2.4. Display (ETS) and 3.4.4. Screen saver (Display)

Images that are shown as the screensaver must be stored on a micro SD card. In order that the system can recognize the SD card, carry out a reset in the menu after inserting it
Settings> System > Reset

This is not *necessary* if the card was inserted before booting the system. The card must remain in the device.

Store images in the given size in a corresponding folder on the top level of the SD card:

Image type	Resolution	File format	Folder name
Images for slide show	320 × 240 pixels	.jpg (RGB mode)	slideshow
Images for individual image display	320 × 240 pixels	.jpg (RGB mode)	diafix

Images for individual image display ("diafix" folder) must have a 4-digit numerical sequence so that they can be called up in the ETS and in the menu (0001...9999).

1.6.2. Images for image display

Images can be called up as a stationary display (e. g. welcome screen). In contrast to the screensaver, the touch function is disabled while a stationary image is displayed.

Images that are to be called up via the "Stationary Image" communication object must be stored on a micro SD card. In order that the system can recognize the SD card, carry out a reset in the menu after inserting it
Settings> System > Reset

This is not *necessary* if the card was inserted before booting the system. The card must remain in the device.

Store images in the given size in a corresponding folder on the top level of the SD card:

Image type	Resolution	File format	Folder name
Stationary images	320 × 240 pixels	.jpg (RGB mode)	festbilder

Stationary images must have a 4-digit numerical sequence so that they can be called up in the ETS and in the menu (0001...9999).

1.6.3. Exchanging images and graphics

For the **Corlo Touch KNX** display pages, a large number of icons from the area of security, multimedia, sensors, operation, house, light and air conditioning and drive control are available and these are stored in the device. However, you can also use proprietary symbol graphics and rotary control graphics.

Images that are shown as icons must be stored on a micro SD card. In order that the system can recognize the SD card, carry out a reset in the menu after inserting it
Settings> System > Reset

This is not *necessary* if the card was inserted before booting the system. The card must remain in the device.

Store images in the given size in a corresponding folder on the top level of the SD card:

Image type	Resolution	File format	Folder name
Symbol/small icon	48 × 48 pixels	.png	icons
Icons for rotary control	158 × 158 pixels	.png	icons

Icons must have a 4-digit numerical sequence so that they can be called up in the ETS and in the menu (0001...9999).

1.7. Connection/control options

For the automatic control of shading, ventilation etc., several different **ambient parameters/measuring values** must be provided via the bus. Chapter *An overview of the automatic functions*, Page 18 contains a list of the parameters needed for the individual automatic functions.

A temperature sensor to capture the room temperature may also be directly connected to one of the **4 analogue/digital input** of the device. Those inputs may also be used to connect conventional buttons, switches and window contacts.

Date and time should be received at least once a day via the bus (objects no. 7 or 8+9). Object no. 10 serves to request the date and time. The internal device clock deviates max. ±3 seconds per day. The alarm function of the **Corlo Touch KNX** is only active after the current time has been received from the bus.

1.7.1. An overview of the automatic functions

The **Display Corlo Touch KNX** has five automatic channels which may be dedicated to the functions, light, awning, shutter, blind, window, ventilation device and temperature control (heating/cooling).

General instructions:
• The entire runtime is completed for timed closures (no movement position)
• The movement positions are only settable in the shading and ventilation areas

Lighting:
In order to control the lighting, the ambient parameters/measuring values
• Brightness
• Time
are needed.

• Switching or dimming For dimming, the brightness can be set for ON/OFF.
• Switching on at night and in regular periods. Both may also be combined (AND/ OR). The twilight value is adjustable.
• Automatic resets (time/periods can be set)

Shutters, awnings, blinds:
In order to control the shading, the ambient parameters/measuring values
• Brightness
• Sun position
• Outdoor temperature
• Indoor temperature
• Wind speed
• Precipitation warning
• Time
are needed.

- Shading dependent on brightness and position of the sun (sun elevation and direction)
  or all the time (privacy, i.e. modification of slat and movement position only)
  or never (only close at night/at set times, protection against rain, wind and frost).
- Movement position and slat position can be set in two degrees. Slat retraction dependent on sun elevation possible
- Travel delays during extension/retraction can be set
- Night-time closure
- Timed closure
- Interior temperature block: Leave open until a selected interior temperature is reached
- Outdoor temperature block: Shading active only once a pre-set outdoor temperature is exceeded
- Heat protection (alternative movement position)
- Frost protection (retraction when precipitation below a pre-set outdoor temperature)
- Wind protection (retraction when a pre-set wind speed is exceeded)
- Rain protection (retraction during precipitation)
- Automatic resets (time/periods can be set)

Window

In order to control the windows, the ambient parameters/measuring values
- Outdoor temperature
- Indoor temperature
- Indoor air humidity
- CO_2 content of indoor air
- Wind speed
- Precipitation warning
- Time
are needed.

- Graded opening with up to 10 levels
- Movement position/opening limitation
- Ventilation based on indoor temperature, air humidity and room air CO_2 content
- Outdoor temperature block: Block when below a selected outdoor temperature
- Frost protection: Retraction when precipitation below a pre-set outdoor temperature
- Close when the supply air temperature is higher than the room temperature
- Rain protection: Close completely or to only provide a gap during rainfall
- Wind protection: Close when a pre-set wind speed is exceeded
- Timed ventilation, timed closure
- Night-time re-cooling (period, room temperature and window opening can be set)
- Automatic resets (time/periods can be set)

Ventilation device

In order to control ventilation devices, the ambient parameters/measuring values
- Outdoor temperature
- Indoor temperature
- Indoor air humidity
- CO_2 content of indoor air
- Time

are needed.

- Rotational speed can be adjusted
- Ventilation based on indoor temperature, air humidity and room air CO_2 content
- Outdoor temperature block: Block when below a selected outdoor temperature
- No ventilation when the supply air temperature is higher than the room temperature
- Timed ventilation
- Night-time re-cooling (period, room temperature and ventilator rotational speed can be set)
- Automatic resets (time/periods can be set)

Heating and cooling

For the control of heating/cooling, the ambient parameter/measuring value
- Indoor temperature

is needed.

- Heating and cooling can be set in two degrees, 1. Level PI control, 2. Level PI control
  or 2-point control
- The values for the comfort, standby, eco and frost protection modes can be set separately, or the comfort value is used as the starting point.
- Switch between heating and cooling by means of a dead zone or by means of a switching object
- Day extension (eco mode may be temporarily deactivated)
- Frost protection (reference value and activation delay can be set)
- Heat protection (reference value and activation delay can be set)

1.7.2. Overview of functions

May be set/modified	via ETS	on the display
Screen (brightness, screen saver...)	Yes	Yes
Ambient lighting	Yes	Yes
Logo lighting (only for engraved logos)	Yes	Yes
Button tone	Yes	Yes
Proximity sensor	Yes	–
Alarm	Yes	Yes

May be set/modified	via ETS	on the display
Timer	Yes	(modification only)
Alarm	Yes	Yes
Set language	Yes	Yes
Enter text (editable text, names, functions)	Yes	– not available in Version 0.1
Display page design (layout)	Yes	–
Symbols area, rockers, wheels (icons)	Yes	– not available in Version 0.1
Automatic settings	Yes	– not available in Version 0.1
Interface assignment	Yes	–
Temperature threshold values	Yes	–
Scenes	Yes	–
Logic	Yes	–
Access codes	Yes	(modification, reset only)

1.8. List of communications objects

DTP: Data Point Type

Abbreviation flags:

C   Communication
R   Read
W   Write
T   Transfer
U   Update

System

No.	Name	Function	DPT	Length in byte	Flags
1	Software version	Output	217.001	2	C R T
2	Unit malfunction	Output	1.001	1	C R T
3	System language selection	Input	234.001	2	C W
4	Key language selection	Input	234.001	2	C W
5	Reset access code	Input	1.017	1	C W
6	Reset to last loaded ETS parameters	Input	1.017	1	C W
7	Date / time	Input	19.001	8	C W T

No.	Name	Function	DPT	Length in byte	Flags
8	Date	Input	11.001	3	C W T
9	Time	Input	10.001	3	C W T
10	Date and time request	Input / Output	1.017	1	C R W
11	Reserve				
12	Status room brightness	Output	1.001	1	C R T
13	Reserve				
14	Display page selection	Input	05. Oct. 5	1	C W
15	Touch lock	Input	1.001	1	C W
16	Temporary touch lock	Input	1.001	1	C W
17	Screen saver	Input	1.001	1	C W
18	Image selection from SD Card	Input	5.001	1	C W
19	Reserve				
20	Reserve				
21	Display light brightness in %	Input	5.001	1	C W
22	Ambient lighting brightness in %	Input	5.001	1	C W
23	Ambient lighting red ratio in %	Input / Output	5.001	1	C R W T
24	Ambient lighting green ratio in %	Input / Output	5.001	1	C R W T
25	Ambient lighting blue ratio in %	Input / Output	5.001	1	C R W T
26	Ambient lighting RGB	Input / Output	232.600	3	C R W T
27	Reserve				
28	Reserve				
29	Logo lighting brightness in %	Input	5.001	1	C W
30	Logo lighting red ratio in %	Input / Output	5.001	1	C R W T
31	Logo lighting green ratio in %	Input / Output	5.001	1	C R W T
32	Logo lighting blue ratio in %	Input / Output	5.001	1	C R W T
33	Logo lighting RGB	Input / Output	232.600	3	C R W T
34	Activate button tone	Input / Output	1.001	1	C R W T
35	Reserve				
36	Reserve				
37	Reserve				

No.	Name	Function	DPT	Length in byte	Flags
38	Approach proximity sensor	Output	5.*	1	C R T
39	Reserve				
40	Retreat from proximity sensor	Output	5.*	1	C R T
41-55	Reserve				
56	Alarm 1	Input	1.001	1	C W
57	Alarm 1 Acknowledge	Input / Output	1.001	1	C W T
58	Alarm 2	Input	1.001	1	C W
59	Alarm 2 Acknowledge	Input / Output	1.001	1	C W T
60	Alarm 3	Input	1.001	1	C W
61	Alarm 3 Acknowledge	Input / Output	1.001	1	C W T
62	Alarm 4	Input	1.001	1	C W
63	Alarm 4 Acknowledge	Input / Output	1.001	1	C W T
64	Alarm 5	Input	1.001	1	C W
65	Alarm 5 Acknowledge	Input / Output	1.001	1	C W T
66	Alarm 6	Input	1.001	1	C W
67	Alarm 6 Acknowledge	Input / Output	1.001	1	C W T
68-79	Reserve				
80	Alarm activation	Input / Output	1.001	1	C R W T
81	Alarm clock time	Input / Output	10.001	3	C R W T
82	Alarm clock	Output	1.001	1	C R T
83	Alarm acknowledgement	Input / Output	1.001	1	C W T
84	Alarm repeat	Input / Output	1.001	1	C R W T
85-100	Reserve				

Pages

No.	Name	Function	DTP	Length in byte	Flags
101	Page 1 area 1A	Input / Output	16.000	14	C R W T
102	Page 1 area 1B	Output	1.010	1	C R T
103	Page 1 area 1C	Input	5.001	1	C W
104	Page 1 area 1D	Input	5.001	1	C W
105	Page 1 area 2A	Input / Output	16.000	14	C R W T
106	Page 1 area 2B	Output	1.010	1	C R T

No.	Name	Function	DTP	Length in byte	Flags
107	Page 1 area 2C	Input	5.001	1	C W
108	Page 1 area 2D	Input	5.001	1	C W
109	Page 1 area 3A	Input / Output	16.000	14	C R W T
110	Page 1 area 3B	Output	1.010	1	C R T
111	Page 1 area 3C	Input	5.001	1	C W
112	Page 1 area 3D	Input	5.001	1	C W
113	Page 1 area 4A	Input / Output	16.000	14	C R W T
114	Page 1 area 4B	Output	1.010	1	C R T
115	Page 1 area 4C	Input	5.001	1	C W
116	Page 1 area 4D	Input	5.001	1	C W
117	Page 1 area 5A	Input / Output	16.000	14	C R W T
118	Page 1 area 5B	Output	1.010	1	C R T
119	Page 1 area 5C	Input	5.001	1	C W
120	Page 1 area 5D	Input	5.001	1	C W
121	Page 1 area 6A	Input / Output	16.000	14	C R W T
122	Page 1 area 6B	Output	1.010	1	C R T
123	Page 1 area 6C	Input	5.001	1	C W
124	Page 1 area 6D	Input	5.001	1	C W
125-132	Reserve			4	
133	Page 1 Rocker 1 Long-term	Output	1.008	1	C R W T
134	Page 1 Rocker 1 Short-term	Output	1.010	1	C R T
135	Page 1 Rocker 1 Position	Input	5.001	1	C R W T
136	Page 1 Rocker 1 Slat	Input	5.001	1	C R W T
137	Page 1 Rocker 1 Feedback	Input	1.001	1	C W
138	Page 1 Rocker 2 Long-term	Output	1.008	1	C R W T
139	Page 1 Rocker 2 Short-term	Output	1.010	1	C R T
140	Page 1 Rocker 2 Position	Input	5.001	1	C R W T
141	Page 1 Rocker 2 Slat	Input	5.001	1	C R W T
142	Page 1 Rocker 2 Feedback	Input	1.001	1	C W
143	Page 1 Rocker 3 Long-term	Output	1.008	1	C R W T

No.	Name	Function	DTP	Length in byte	Flags
144	Page 1 Rocker 3 Short-term	Output	1.010	1	C R T
145	Page 1 Rocker 3 Position	Input	5.001	1	C R W T
146	Page 1 Rocker 3 Slat	Input	5.001	1	C R W T
147	Page 1 Rocker 3 Feedback	Input	1.001	1	C W
148	Page 1 rotary control value [R]	Output	14.*	4	C R W T
149	Page 1 rotary control value [G]	Output	5.001	1	C R W T
150	Page 1 rotary control value [B]	Output	5.001	1	C R W T
151-200	Page 2				
201-250	Page 3				
251-300	Page 4				
301-350	Page 5				
351-400	Page 6				
401-450	Page 7				
451-500	Page 8				
501-550	Page 9				
551-600	Page 10				

Automatic

No.	Name	Function	DPT	Length in byte	Flags
601	Automatic inside temp. meas. value	Input	9.001	2	C W
602	Automatic inside humidity meas. value	Input	9.007	2	C W
603	Automatic CO2 meas. value in ppm	Input	9.008	2	C W
604	Automatic wind measuring value	Input	9.005	2	C W
605	Automatic rain	Input	1.002	1	C W

No.	Name	Function	DPT	Length in byte	Flags
606	Automatic outdoor temperature measuring value	Input	9.001	2	C W
607	Automatic brightness measuring value	Input	9.004	2	C W
608	Automatic cooling status	Input	1.001	1	C W
609	Reserve				
610	Reserve				

Objects automatic channels for shading, windows, ventilation or light

No. Auto 1	No. Auto 2	No. Auto 3	No. Auto 4	No. Auto 5	Name	Function	DPT	Flags
611	646	681	716	751	Reserve			
612	647	682	717	752	Reserve			
613	648	683	718	753	Automatic X Reset	Input	1.001	C W
614	649	684	719	754	Reserve			
615	650	685	720	755	Automatic X Block	Input	1.001	C W
616	651	686	721	756	Reserve			
617	652	687	722	757	Automatic X Safety	Output	1.001	C R T
618	653	688	723	758	Automatic X Precipitation warning	Output	1.001	C R T
619	654	689	724	759	Automatic X Wind warning	Output	1.001	C R T
620	655	690	725	760	Automatic X Frost warning	Output	1.001	C R T
621	656	691	726	761	Reserve			
622	657	692	727	762	Reserve			
623	658	693	728	763	Reserve			
624	659	694	729	764	Reserve			
625	660	695	730	765	Automatic X Status indoor temperature block	Output	1.001	C R T
626	661	696	731	766	Automatic X Status outdoor temperature block	Output	1.001	C R T
627	662	697	732	767	Reserve			
628	663	698	733	768	Reserve			
629	664	699	734	769	Reserve			
630	665	700	735	770	Automatic X movement position - brightness	Output	5.001	C R T

No. Auto 1	No. Auto 2	No. Auto 3	No. Auto 4	No. Auto 5	Name	Function	DPT	Flags
631	666	701	736	771	Automatic X slat position	Output	5.001	C R T
632	667	702	737	772	Automatic X movement position - brightness feedback	Input	5.001	C W
633	668	703	738	773	Automatic X slat position feedback	Input	5.001	C W
634-645	669-680	704-715	739-750	774-785	Reserve			

Objects automatic channels for temperature control

No. Auto 1	No. Auto 2	No. Auto 3	No. Auto 4	No. Auto 5	Name	Function	DPT	Flags
611	646	681	716	751	Temp. controller: Eco-Standby HVAC 1	Input	1.003	C W
612	647	682	717	752	Temp. controller: Comfort activation HVAC 2	Input	1.003	C W
613	648	683	718	753	Reserve			
614	649	684	719	754	Temp. controller: Frost/heat activation	Input	1.003	C R W T
615	650	685	720	755	Temp. controller: Blocking object	Input	1.003	C R W T
616	651	686	721	756	Temp. controller: Current set point	Output	9.001	C R T
617	652	687	722	757	Temp. controller: Switching object (0:Heating | 1:Cooling)	Input	1.002	C W
618	653	688	723	758	Temp. controller: Set point, comfort heating	Input / Output	9.001	C R W T
619	654	689	724	759	Temp. controller: Set point, night-time heating (1:+ | 0:-)	Input	1.002	C W
620	655	690	725	760	Temp. controller: Reference value, comfort cooling	Input / Output	9.001	C R W T
621	656	691	726	761	Temp. controller: Reference value, comfort cooling (1:+ | 0:-)	Input	1.002	C W
622	657	692	727	762	Temp. controller: Reference value, standby heating	Input / Output	9.001	C R W T
623	658	693	728	763	Temp. controller: Set point, standby heating (1:+ | 0:-)	Input	1.002	C W
624	659	694	729	764	Temp. controller: Set point, Standby cooling	Input / Output	9.001	C R W T

No. Auto 1	No. Auto 2	No. Auto 3	No. Auto 4	No. Auto 5	Name	Function	DPT	Flags
625	660	695	730	765	Temp. controller: Set point, standby cooling(1:+ | 0:-)	Input	1.002	C W
626	661	696	731	766	Temp. controller: Set point, eco heating	Input / Output	9.001	C R W T
627	662	697	732	767	Temp. controller: Set point, eco heating (1:+ | 0:-)	Input	1.002	C W
628	663	698	733	768	Temp. controller: Set point, Eco cooling	Input / Output	9.001	C R W T
629	664	699	734	769	Temp. controller: Set point, eco cooling (1:+ | 0:-)	Input	1.002	C W
630	665	700	735	770	Temp. controller: Control variable, heating (level 1)	Output	5.001	C R T
631	666	701	736	771	Temp. controller: Control variable, Heating (level 2)	Output	5.001	C R T
632	667	702	737	772	Temp. controller: Control variable, cooling level 1	Output	5.001	C R T
633	668	703	738	773	Temp. controller: Control variable, Cooling (level 2)	Output	5.001	C R T
634	669	704	739	774	Temp. controller: Status – Heating 1 (1=ON | 0=OFF)	Output	1.002	C R T
635	670	705	740	775	Temp. controller: Status – Heating 2 (1=ON | 0=OFF)	Output	1.002	C R T
636	671	706	741	776	Temp. controller: Status – Cooling 1 (1=ON | 0=OFF)	Output	1.002	C R T
637	672	707	742	777	Temp. controller: Status – Cooling 2 (1=ON | 0=OFF)	Output	1.002	C R T

No. Auto 1	No. Auto 2	No. Auto 3	No. Auto 4	No. Auto 5	Name	Function	DPT	Flags
638	673	708	743	778	Temp. controller: Comfort extension time (in sec)	Input / Output	7.005	C R W T
639	674	709	744	779	Temp. controller: Comfort delay status	Input / Output	1.002	C R W T
640-645	675-680	710-715	745-750	780-785	Reserve			

Miscellaneous

No.	Name	Function	DPT	Length in byte	Flags
786-790	Reserve				
791	Period 1 Switching output	Output	14.*	4	C R T
792	Period 2 Switching output	Output	14.*	4	C R T
793	Period 3 Switching output	Output	14.*	4	C R T
794	Period 4 Switching output	Output	14.*	4	C R T
795	Period 5 Switching output	Output	14.*	4	C R T
796	Period 6 Switching output	Output	14.*	4	C R T
797	Period 7 Switching output	Output	14.*	4	C R T
798	Period 8 Switching output	Output	14.*	4	C R T
799	Period 9 Switching output	Output	14.*	4	C R T
800	Period 10 Switching output	Output	14.*	4	C R T
801	Period 11 Switching output	Output	14.*	4	C R T
802	Period 12 Switching output	Output	14.*	4	C R T
803	Period 13 Switching output	Output	14.*	4	C R T
804	Period 14 Switching output	Output	14.*	4	C R T
805	Period 15 Switching output	Output	14.*	4	C R T
806	Period 16 Switching output	Output	14.*	4	C R T
807-819	Reserve				
820	Load / save scene	Input	18.001	1	C W
821	Scene object 1	Input / Output	9.*	4	C R T
822	Scene object 2	Input / Output	9.*	4	C R T
823	Scene object 3	Input / Output	9.*	4	C R T
824	Scene object 4	Input / Output	9.*	4	C R T
825	Scene object 5	Input / Output	9.*	4	C R T
826	Scene object 6	Input / Output	9.*	4	C R T
827	Scene object 7	Input / Output	9.*	4	C R T

No.	Name	Function	DPT	Length in byte	Flags
828	Scene object 8	Input / Output	9.*	4	C R T
829	Scene object 9	Input / Output	9.*	4	C R T
830	Scene object 10	Input / Output	9.*	4	C R T
831	Scene object 11	Input / Output	9.*	4	C R T
832	Scene object 12	Input / Output	9.*	4	C R T
833	Scene object 13	Input / Output	9.*	4	C R T
834	Scene object 14	Input / Output	9.*	4	C R T
835	Scene object 15	Input / Output	9.*	4	C R T
836	Scene object 16	Input / Output	9.*	4	C R T
837-850	Reserve				
851	Button 1 Extended	Output	1.008	1	C R T
852	Button 1 Brief	Output	1.010	1	C R T
853	Switch button 1 on / off	Input / Output	1.001	1	C R W T
854	Button 1 Relative dimming	Input / Output	3.007	1	C R W T
855	Button 1 - 8-bit encoder	Output	5*	1	C R T
856	Button 1 - 16-bit encoder	Output	9*	2	C R T
857	Button 1 Scene	Output	18.001	1	C R T
858	Button 2 Extended	Output	1.008	1	C R T
859	Button 2 Brief	Output	1.010	1	C R T
860	Switch button 2 on / off	Input / Output	1.001	1	C R W T
861	Button 2 Relative dimming	Input / Output	3.007	1	C R W T
862	Button 2 - 8-bit encoder	Output	5*	1	C R T
863	Button 2 - 16-bit encoder	Output	9*	2	C R T
864	Button 2 Scene	Output	18.001	1	C R T
865	Button 3 Extended	Output	1.008	1	C R T
866	Button 3 Brief	Output	1.010	1	C R T
867	Switch button 3 on / off	Input / Output	1.001	1	C R W T
868	Button 3 Relative dimming	Input / Output	3.007	1	C R W T
869	Button 3 - 8-bit encoder	Output	5*	1	C R T
870	Button 3 - 16-bit encoder	Output	9*	2	C R T
871	Button 3 Scene	Output	18.001	1	C R T
872	Button 4 Extended	Output	1.008	1	C R T
873	Button 4 Brief	Output	1.010	1	C R T

No.	Name	Function	DPT	Length in byte	Flags
874	Switch button 4 on / off	Input / Output	1.001	1	C R W T
875	Button 4 Relative dimming	Input / Output	3.007	1	C R W T
876	Button 4 - 8-bit encoder	Output	5*	1	C R T
877	Button 4 - 16-bit encoder	Output	9*	2	C R T
878	Button 4 Scene	Output	18.001	1	C R T
879-890	Reserve				
891	Temp_sensor_1 measuring value	Output	9.001	2	C R T
892	Temp_sensor_1 external measuring value	Input	9.001	2	C W
893	Temp_sensor_1 overall measuring value	Output	9.001	2	C R T
894	Temp_sensor_1_malfunction	Output	1.001	1	C R T
895	Temp_sensor_2 measuring value	Output	9.001	2	C R T
896	Temp_sensor_2 external measuring value	Input	9.001	2	C W
897	Temp_sensor_2 overall measuring value	Output	9.001	2	C R T
898	Temp_sensor_2_malfunction	Output	1.001	1	C R T
899	Temp_sensor_3 measuring value	Output	9.001	2	C R T
900	Temp_sensor_3 external measuring value	Input	9.001	2	C W
901	Temp_sensor_3 overall measuring value	Output	9.001	2	C R T
902	Temp_sensor_3_malfunction	Output	1.001	1	C R T
903	Temp_sensor_4 measuring value	Output	9.001	2	C R T
904	Temp_sensor_4 external measuring value	Input	9.001	2	C W
905	Temp_sensor_4 overall measuring value	Output	9.001	2	C R T
906	Temp_sensor_4 malfunction	Output	1.001	1	C R T
907-920	Reserve				
921	Temp. threshold value 1 measuring value	Input	9.001	2	C W
922	Temp. threshold value 1: Absolute value	Input / Output	9.001	2	C R W T

No.	Name	Function	DPT	Length in byte	Flags
923	Temp. threshold value 1: (1:+ | 0:-)	Input	1.001	1	C W
924	Temp. threshold value 1: Switching delay from 0 to 1	Input	7.005	2	C W
925	Temp. threshold value 1: Switching delay from 1 to 0	Input	7.005	2	C W
926	Temp. threshold value 1: Switching output	Output	1.001	1	C R T
927	Temp. threshold value 1: Switching output block	Input	1.002	1	C W
928	Temp. threshold value 2 measuring value	Input	9.001	2	C W
929	Temp. threshold value 2: Absolute value	Input / Output	9.001	2	C R W T
930	Temp. threshold value 2: (1:+ | 0:-)	Input	1.001	1	C W
931	Temp. threshold value 2: Switching delay from 0 to 1	Input	7.005	2	C W
932	Temp. threshold value 2: Switching delay from 1 to 0	Input	7.005	2	C W
933	Temp. threshold value 2: Switching output	Output	1.001	1	C R T
934	Temp. threshold value 2: Switching output block	Input	1.002	1	C W
935	Temp. threshold value 3: Absolute value	Input / Output	9.001	2	C R W T
936	Temp. threshold value 3 measuring value	Input	9.001	2	C W
937	Temp. threshold value 3: (1:+ | 0:-)	Input	1.001	1	C W
938	Temp. threshold value 3: Switching delay from 0 to 1	Input	7.005	2	C W
939	Temp. threshold value 3: Switching delay from 1 to 0	Input	7.005	2	C W
940	Temp. threshold value 3: Switching output	Output	1.001	1	C R T
941	Temp. threshold value 3: Switching output block	Input	1.002	1	C W
942	Temp. threshold value 4 measuring value	Input	9.001	2	C W
943	Temp. threshold value 4: Absolute value	Input / Output	9.001	2	C R W T

No.	Name	Function	DPT	Length in byte	Flags
944	Temp. threshold value 4: (1:+ | 0:-)	Input	1.001	1	C W
945	Temp. threshold value 4: Switching delay from 0 to 1	Input	7.005	2	C W
946	Temp. threshold value 4: Switching delay from 1 to 0	Input	7.005	2	C W
947	Temp. threshold value 4: Switching output	Output	1.001	1	C R T
948	Temp. threshold value 4: Switching output block	Input	1.002	1	C W
949-970	Reserve				
971	Logic input 1	Input	1.002	1	C W
972	Logic input 2	Input	1.002	1	C W
973	Logic input 3	Input	1.002	1	C W
974	Logic input 4	Input	1.002	1	C W
975	Logic input 5	Input	1.002	1	C W
976	Logic input 6	Input	1.002	1	C W
977	Logic input 7	Input	1.002	1	C W
978	Logic input 8	Input	1.002	1	C W
979	Logic input 9	Input	1.002	1	C W
980	Logic input 10	Input	1.002	1	C W
981	Logic input 11	Input	1.002	1	C W
982	Logic input 12	Input	1.002	1	C W
983	Logic input 13	Input	1.002	1	C W
984	Logic input 14	Input	1.002	1	C W
985	Logic input 15	Input	1.002	1	C W
986	Logic input 16	Input	1.002	1	C W
987-990	Reserve				
991	AND Logic 1: 1-bit switching output	Output	1.002	1	C R T
992	AND Logic 1: 8-bit output A	Output	5.010	1	C R T
993	AND Logic 1: 8-bit output B	Output	5.010	1	C R T
994	AND Logic 1: Block	Input	1.001	1	C W
995	AND Logic 2: 1-bit switching output	Output	1.002	1	C R T
996	AND Logic 2: 8-bit output A	Output	5.010	1	C R T
997	AND Logic 2: 8-bit output B	Output	5.010	1	C R T
998	AND Logic 2: Block	Input	1.001	1	C W

No.	Name	Function	DPT	Length in byte	Flags
999	AND Logic 3: 1-bit switching output	Output	1.002	1	C R T
1000	AND Logic 3: 8-bit output A	Output	5.010	1	C R T
1001	AND Logic 3: 8-bit output B	Output	5.010	1	C R T
1002	AND Logic 3: Block	Input	1.001	1	C W
1003	AND Logic 4: 1-bit switching output	Output	1.002	1	C R T
1004	AND Logic 4: 8-bit output A	Output	5.010	1	C R T
1005	AND Logic 4: 8-bit output B	Output	5.010	1	C R T
1006	AND Logic 4: Block	Input	1.001	1	C W
1007	OR Logic 1: 1-bit switching output	Output	1.002	1	C R T
1008	OR Logic 1: 8-bit output A	Output	5.010	1	C R T
1009	OR Logic 1: 8-bit output B	Output	5.010	1	C R T
1010	OR Logic 1: Block	Input	1.001	1	C W
1011	OR Logic 2: 1-bit switching output	Output	1.002	1	C R T
1012	OR Logic 2: 8-bit output A	Output	5.010	1	C R T
1013	OR Logic 2: 8-bit output B	Output	5.010	1	C R T
1014	OR Logic 2: Block	Input	1.001	1	C W
1015	OR Logic 3: 1-bit switching output	Output	1.002	1	C R T
1016	OR Logic 3: 8-bit output A	Output	5.010	1	C R T
1017	OR Logic 3: 8-bit output B	Output	5.010	1	C R T
1018	OR Logic 3: Block	Input	1.001	1	C W
1019	OR Logic 4: 1-bit switching output	Output	1.002	1	C R T
1020	OR Logic 4: 8-bit output A	Output	5.010	1	C R T
1021	OR Logic 4: 8-bit output B	Output	5.010	1	C R T
1022	OR Logic 4: Block	Input	1.001	1	C W

2. System settings via ETS

Before the system can be used, you have to have the basic configuration set up by the integrator in the KNX software ETC. Afterwards, some system settings may be modified directly on the display.

2.1.   Basic configuration in the ETS

First, make some basic settings for data transfer.

Transmission delay after power-up and programming	5 s • ... • 2 h
Maximum message rate	• 1 message per second • ... • 10 messages per second • ... • 20 messages per second

The integrated brightness sensor of the **Display Corlo Touch KNX** distinguishes between "day" and "night". This is used, e. g. for adapting the display brightness. However, the respective object no. 12 may also be transmitted to the bus and used for setting up AND links (e. g. night AND object in the range of the proximity sensor).

Object "Room brightness status" transmitting *Object no. 12*	• not • on change • on change to 1 • on change to 0 • on change and periodically • on change to 1 and periodically • on change to 0 and periodically

Specify whether the **Display Corlo Touch KNX** should receive the date and time as one common or as two separate objects. Via object no. 10, the date and the time are requested from the bus. As soon as the data is available on the bus, the query cycle is reset, regardless of whether the query was generated autonomously or arrived from another bus member. The query cycle of several cycles is therefore usually set to the same value.

Date and time are received via	• two separate objects • one common object
Transmission cycle of the object "Date and time query" (in s) *Object no. 10*	[50...420; 120]

For the **Corlo Touch KNX WL**, the device name for the WLAN (Elsner app) can be entered here. The name should be chosen so that you can easily locate and assign the device to the network.

Device name	[free text]

2.2. System language

The language used for the display can be changed via an object, directly on the display or in the ETS menu.

ETS: System language

Please find the languages, which can be shown on the display, in the current list "CorloTouchKNX Versions-Languages", which is available as a download.

Object control

In case of language selection via an object, i.e. the bus, the object values then correspond to the KNX standard for language changes. The object no. 3 "System language selection" is input and output simultaneously, and thus may both receive a switching command or transmit the status to the bus autonomously.

The language object may be activated in the ETS.

Use object for language	• No (no language change via object) • Yes (language change via object activated)

Adaptation on the display

The language settings on the display is done via the menu
☐   Settings > system > system language

and can be secured with an access code (set up in the ETS).
📖   System settings via touch display > *System language*, Page 55

Modification via ETS

Select "Transmit the following parameters: Yes" to render the modifications valid. Previous settings are then overwritten - including modifications done on the display!

The language menu on the display can be secured with an access code that is determined (or deleted) in the ETS.

Transfer the following parameters	Yes • No
Access code (8 digits from 0 to 9)	[free text] *An empty field means that no code query is done*

Language *when using the language object:* (valid till 1st communication)	• ... • English [en] object value 25966 • ... • German [de] object value 25701 • ...

2.3.   Editable text language

Individually entered text can be saved in several languages. The displayed language can be changed via an object, on the display or in the ETS menu.

ETS: Select editable text language

Object control

In case of language selection via an object, i.e. the bus, use the object table from the chapter "System language". The object no. 4 "Editable text language selection" is input and output simultaneously, and thus may both receive a switching command or transmit the status to the bus autonomously.

The language object may be activated in the ETS.

Use object for language	• <u>No</u> (no language change via object) • Yes (language change via object activated)

Adaptation on the display

The language settings on the display is done via the menu
☐   Settings > system > editable text language

and can be secured with an access code (set up in the ETS).

📖   System settings via touch display > *Editable text language*, Page 56

Modification via ETS

Select "Transmit the following parameters: Yes" to render the modifications valid. Previous settings are then overwritten - including modifications done on the display!

The language menu on the display can be secured with an access code that is determined (or deleted) in the ETS.

Transfer the following parameters	Yes • <u>No</u>
Access code (8 digits from 0 to 9)	[free text] *An empty field means that no code query is done*
Language *when using the language object:* (valid till 1st communication)	• Languages 1...-6

Six languages may be pre-set. The parameter table "language settings" contains the languages allocated to the six locations. The object values correspond to the data point types for language switches in the KNX bus.

Languages 1...-6	• ... • German [de] object value 25701 • ... • English [en] object value 25966 • ... • French [fr] object value 26226 • ...

2.4.   Display

Display settings can be modified via objects, on the display or in the ETS menu.

ETS: Display

Lock time for cleaning	5 s • ... • 5 min • ... • 2 h

The touch screen can be temporarily or permanently blocked using object no. 15 "touch lock". The touch lock has got priority over the screen saver and standby (screen off). A lock symbol will be shown as long as the touch lock is active.

Use the "cleaning mode" for cleaning the screen. It is activated via object no. 16 "touch lock for cleaning" or the display button "settings > cleaning mode". The touch function is then blocked for the time period set here.

Object control

For the display settings via objects, i.e. via the bus, objects 14-18 and 21 are available.

The display object may be activated in the ETS. The following parameters only appear when the objects are used ("yes").

Use objects for display	• No • Yes
Touch blocked at value *Object no. 15 "touch lock"*	1 • 0
value before 1st communication	1 • 0

The object no. 14 "display screen selection" allows the display to be switched over to any preconfigured display screen. After five minutes, however, the display switches back to the start screen if this is the generally set option (see parameter "if the display is not touched for 5 minutes, the display switches ..." below).

Adaptation on the display

The screen settings on the display are modified via the menu
☐ Settings > system > screen

and can be secured with an access code (set up in the ETS).
📖   System settings via touch display > *Display*, Page 56

Modification via ETS

Select "Transmit the following parameters: Yes" to render the modifications valid. Previous settings are then overwritten - including modifications done on the display! The screen menu on the display can be secured with an access code that is determined (or deleted) in the ETS.

Transfer the following parameters	Yes • No
Access code (8 digits from 0 to 9)	[free text] *An empty field means that no code query is done*

The **screen brightness** can be set to a fixed value or adapt to the room luminosity automatically (using the internal brightness sensor) or controlled via object no. 21 "screen illumination brightness in %".
The **automatic switch off**darkens the display after the pre-set waiting time. The deactivation can also be linked to the surrounding brightness via the setting "if room is dark".

Brightness *Object no. 21 "screen illumination"* *Brightness in %*	• has a fixed value • is adjusted to ambient light • controlled by means of an object *(only if display objects are used)*
(start) value in % *only for fixed value/object control*	[0...100; 100]
Automatic shut-down *not when control is executed via object*	• On • Off • If Room Dark
Waiting time	5 s • ... • 1 min • ... • 2 h

The **start display** determines which screen is shown on the display when you press the **house button** [⌂] (and after a reset). In addition, you can set the options for what is to happen if no setting is entered on the display for 5 minutes.

Start display	• Screen 1 • ... • Screen 10
If the display is not touched for 5 minutes, the display	• doesn't switch • switches to start screen

Independently of the automatic shut-down, you may select an individual **screen saver**. This screen saver is activated after a period of waiting and may also be linked to the proximity sensor. This means that the display is reactivated upon proximity.

Use screen saver *Object no. 17 "screen saver"*	Yes • No
Waiting time	5 s • 10 s • ... • 2 h
Proximity sensor action:	
on approach Screen saver OFF?	Yes • No

Screen saver type	• Screen OFF • Analogue clock • Digital clock • Image from SD Card • Slide show from SD Card
(start) image number *Object no. 18 "Image selection from SD card"*	[1...65000; 1]

The screen saver may be modified via objects no 17 "screen saver" and no. 18 "image selection from SD card" via the bus. The object no. 17 is input and output simultaneously, and thus may both receive a command or transmit the status to the bus autonomously.

The images for the screen saver are loaded from the SD card. The individual images must be saved to a folder called "diafix", and the images for a slide show in a folder called "diashow". Please refer to the chapter

📖 *Images for screensaver*, Page 16

2.5.   Ambient lighting

The **Display Corlo Touch KNX** has LEDs installed which are directed to the side from behind the frame. This ambient lighting can be adjusted in terms of colour and brightness. Settings may be made via objects, on the display or on the ETS menu.

ETS: ambient lighting

Object control

For the settings via objects, i.e. via the bus, objects 22-26 are available.

The ambient lighting objects may be activated in the ETS. The following parameter only appears when the objects are used ("yes").

Use objects for ambient lighting	• No • Yes
RGB shares are set via	• an object (1x 3 byte, DTP 232.600) • three objects (3x 1 byte, DTP 5.001)

Adaptation on the display

The settings on the display are modified via the menu

☐   Settings > system > ambient lighting

and can be secured with an access code (set up in the ETS).

📖   System settings via touch display > *Ambient lighting*, Page 62

Modification via ETS

Select "Transmit the following parameters: Yes" to render the modifications valid. Previous settings are then overwritten - including modifications done on the display!

The ambient lighting menu on the display can be secured with an access code that is determined (or deleted) in the ETS.

Transfer the following parameters	Yes • <u>No</u>
Access code (8 digits from 0 to 9)	[free text] *An empty field means that no code query is done*

The illumination **brightness** may be set to a fixed value, or controlled in % via object no. 22 "ambient lighting brightness in %", or automatically adapt to the display, the illuminated logo or the brightness of the room. The internal brightness sensor is used for controlling the ambient lighting in correlation with room brightness.
The **automatic shut down** switches the ambient lighting off after the pre-set waiting time. The deactivation can also be linked to the surrounding brightness via the setting "if room is dark".

Brightness *Object no. 22 "ambient lighting"* *Brightness in %*	• <u>adjust to display brightness</u> • adjust to logo brightness (see logo illumination) • adjust to room brightness • has a fixed value • controlled by means of an object *(only if ambient lighting objects are used)*
(start) value in % *only for fixed value/object control*	0...100; <u>100</u>
Automatic shut-down *not when settings are made via objects*	• On • Off • <u>If Room Dark</u>
Waiting time	5 s • ... • <u>1 min</u> • ... • 2 h

The **colour** of the lighting can be set to a fixed value, be controlled via objects 23-26 or automatically adapt to the illuminated logo. The colour is mixed from the RGB range, i.e. the percentage of red, green and blue light is determined.

Colour
Objects no. 23-25 or no. 26)
	• adjust to logo lighting
	  (see logo illumination)
	• can be set via objects
	  (only if ambient lighting objects are used)
	• <u>has a fixed setting</u>

Red in %	0...100; <u>100</u>
Green in %	0...100; <u>100</u>
Blue in %	0...100; <u>100</u>

The colour can be modified via objects no. 23-25 "ambient lighting shares red/green/blue in %" or no. 26 "ambient lighting RGB" via the bus (depending on the parameter setting "RGB shares are set via ..."). The objects are input and output simultaneously, and thus may both receive a command or transmit the status to the bus autonomously. This means that, for example, the colours of several illuminations in a building may be controlled by a "master".

2.6.　Logo illumination

This setting may only be made if there is a logo engraved above the display (customizing option). If not, leave the setting at the standard setting "fixed value = 0%".

The logo illumination can be adjusted in terms of colour and brightness. Settings may be made via objects, on the display or on the ETS menu.

ETS: Logo illumination

Object control

For the settings via objects, i.e. via the bus, objects 29-33 are available.

The logo illumination objects may be activated in the ETS. The following parameter only appears when the objects are used ("yes").

Use objects for logo illumination	• <u>No</u> • Yes
RGB shares are set via	• an object (1x 3 byte, DTP 232.600) • three objects (3x 1 byte, DTP 5.001)

Adaptation on the display

The settings on the display are modified via the menu
☐　Settings > system > logo illumination

and can be secured with an access code (set up in the ETS).
📖　System settings via touch display > *Logo illumination*, Page 66

Modification via ETS

Select "Transmit the following parameters: Yes" to render the modifications valid. Previous settings are then overwritten - including modifications done on the display!

The logo illumination menu on the display can be secured with an access code that is determined (or deleted) in the ETS.

Transfer the following parameters	Yes • <u>No</u>
Access code (8 digits from 0 to 9)	[free text] *An empty field means that no code query is done*

The illumination **brightness** may be set to a fixed value, or controlled in % via object no. 29 "logo illumination brightness in %", or automatically adapt to the display, the

ambient lighting or the brightness of the room. The internal brightness sensor is used for controlling the ambient lighting in correlation with room brightness.

This **automatic shut-down** switches off the logo illumination after the pre-set waiting time. The deactivation can also be linked to the surrounding brightness via the setting "if room is dark".

Brightness
Object no. 29 "Logo illumination brightness in %"
	• adjust to display brightness
	• adjust to ambient brightness
	  (see ambient lighting)
	• adjust to room brightness
	• <u>has a fixed value</u>
	• can be set via objects
	  (only if ambient lighting objects are used)

(start) value in % *only for fixed value/object control*	0...100; <u>0</u>
Automatic shut-down *not when settings are made via objects*	• On • Off • <u>If Room Dark</u>
Waiting time	5 s • ... • <u>1 min</u> • ... • 2 h

The **colour** of the lighting can be set to a fixed value, be controlled via objects 30-33 or automatically adapt to the ambient lighting. The colour is mixed from the RGB range, i.e. the percentage of red, green and blue light is determined.

Colour
Objects no. 30-32 or no. 33
	• <u>adjust to ambient lighting</u>
	  (see ambient lighting)
	• can be set via objects
	  (only if logo illumination objects are used)
	• has a fixed setting

Red in %	0...100; <u>100</u>
Green in %	0...100; <u>100</u>
Blue in %	0...100; <u>100</u>

The colour can be modified via objects no. 30-32 "logo illumination shares red/green/ blue in %" or no. 33 "logo illumination RGB" via the bus (depending on the parameter setting "RGB shares are set via ..."). The objects are input and output simultaneously, and thus may both receive a command or transmit the status to the bus autonomously. This means that, for example, the colours of several illuminations in a building may be controlled by a "master".

2.7.   Button tone

The **Display Corlo Touch KNX** may emit a sound if a button on the display is touched. The button tone can be changed via an object, on the display or in the ETS menu.

ETS: button tone

Object control

Use object no. 34 "button tone" for the setting via an object, i.e. via the bus. It is input and output simultaneously, and thus may both receive a command or transmit the status to the bus autonomously.

The button tone may be activated in the ETS. The following parameter only appears when objects are used ("yes").

Use object for button tone	• <u>No</u> (no object control) • Yes (switch via object activated)
Value for button tone active *only if object is used*	0 • <u>1</u>

Adaptation on the display

The settings on the display are modified via the menu
☐   Settings > system > button tone

and can be secured with an access code (set up in the ETS).
📖   System settings via touch display > *Button tone*, Page 71

Modification via ETS

Select "Transmit the following parameters: Yes" to render the modifications valid. Previous settings are then overwritten - including modifications done on the display!

The button tone menu on the display can be secured with an access code that is determined (or deleted) in the ETS.

Transfer the following parameters	Yes • <u>No</u>
Access code (8 digits from 0 to 9)	[free text] *An empty field means that no code query is done*

Activate button tone *or* Button tone active before 1st communication	Yes • <u>No</u>

2.8. Proximity sensor

The proximity sensor of the **Corlo Touch KNX** registers when an object moves into the capture range or leaves this range. Consequently, you can send object no. 38 when approaching the display and object no. 40 when leaving the vicinity of the display.

The object functions for the proximity sensor can only be set via the ETS.

Each of the objects can be configured as a bit object and send the value 1 or 0, or switch between 0 and 1 (e.g. to switch the light). Alternatively, the object may be configured as a byte object and send a value between 0 and 255, or a percentage value (e.g. for dimming lights, approaching a shade position or recalling a scene).

Use objects for proximity sensor	• <u>No</u> (do not use proximity sensor to transmit objects) • Yes (activate objects 38 and 40)
on approach *Object no. 38 "proximity sensor approaching"* or on leaving *Object no. 40 "proximity sensor distancing"*	• nothing will be sent • bit object (value 1) will be transmitted • bit object (value 0) will be transmitted • bit object will be switched • byte object (value 0...255) will be transmitted • byte object (value 0...100%) will be transmitted
Transmission delay in s *(is only transmitted if byte object is transmitted)*	0...240; <u>2</u>
Value *only upon transmission*	0...255; <u>255</u> or 0...100; <u>100</u>

2.9. Alarm

The six alarm functions of the **Corlo Touch KNX** show messages in the display. At the same time, the display may flash, and an alarm tone emitted. Alarm messages may be acknowledged with the button shown on the display or via the bus. For this purpose, decide whether to use a 1 or a 0 for the acknowledgement.

The alarm functions use objects no. 56-67 (per alarm channel there is one input object and one input/output object for acknowledgement). They can be modified on the display or in the ETS menu.
ETS: Alarm

The settings **on the display** are modified via the menu
☐   Settings > system > alarm

and can be secured with an access code (set up in the ETS).
📖   System settings via touch display > *Alarm*, Page 72

Select "Transmit the following parameters: yes" when making modifications **via the ETS** so render the modifications for access codes and alarm settings valid. Previous settings are then overwritten -including modifications done on the display!

The alarm menu on the display can be secured with an access code that is determined (or deleted) in the ETS.

Use alarm	• <u>No</u> (no alarm functions, all subsequent parameters hidden) • Yes (alarm object active)
Object value for alarm acknowledgement	0 • <u>1</u>
Transfer the following parameters	Yes • <u>No</u>

Access code (8 digits from 0 to 9)	[free text] *An empty field means that no code query is done*

Alarm action for inputs 1...6:	
Flashing back lighting (is spelt without capitals in the ETS!)	<u>No</u> • Yes
Alarm sound	<u>No</u> • Yes
Alarm symbol	• Symbol 1...254, For a list of symbols please refer to chapter ... • Image selection
Image number *Only for image selection for alarm symbol*	1...65535; <u>1</u>

If the setting "alarm symbol: image selection" is activated, an image is loaded from the SD card. The image must be saved to a folder called "festbilder". Please refer to the chapter

📖 *Images for screensaver*, Page 16

Alarm text Languages 1...6	[free text] *An individual text may be entered for each language*

2.10. Weekly timer

16 periods may be defined on the weekly timer of the **Corlo Touch KNX**. Those periods are then allocated to the internal automatic functions such as, e.g. the timed closure of blinds. The respective period objects (no. 791 to 806) can be configured as inputs or outputs, i.d. send to the bus (timer via **Corlo Touch KNX**, also for other bus members) or be switched from there (timer function via an external device). If several displays are used in the system, the timer settings may be done on a device transmitting the period objects from the output. The others then copy the time switch command (input).

Periods must be pre-set in the ETC menu "weekly timer: period". Periods configured as outputs may also be modified on the display.

ETS: Weekly timer

First, activate the periods to be set in the ETS. Sub menus for the activated periods will appear.

Use periods 1 ... 16	Yes • <u>No</u>

The settings **on the display** are modified via the menu.
☐ Settings > system > timer

The menu may be secured with an access code (set up in the ETS).
📖 System settings via touch display > *Timer*, Page 74

2.10.1.Periods 1 … 16

Now select whether the period is an input or an output for the activated periods of the weekly timer (see above). Define the transmission behaviour for outputs.

ETS: Weekly timer > periods 1...16

Period	• is adjustable (period object is output) (period may also be set on the display) • can be switched (time period object is input) (external time control)
Period output transmits *only if adjustable/output*	• not • on change • on change to 1 • on change to 0 • on change and periodically • on change to 1 and periodically • on change to 0 and periodically
cycle *only if output transmits periodically*	5 s • ... • 1 min • ... • 2 h

Select "Transmit the following parameters: Yes" to render the modifications valid. Previous settings are then overwritten - including modifications done on the display! The timer menu on the display can be secured with an access code that is determined (or deleted) in the ETS.

Transfer the following parameters	Yes • No
Access code (8 digits from 0 to 9)	[free text] *An empty field means that no code query is done*
Name 　Languages 1...6	[free text] *An individual text may be entered for each language*

If the period can be switched, i.e. is controlled via the bus by an external timer, no other parameters are available. In case of an **adjustable period (period object is output)** you can now set the time:

Start	
Hour	0...23
Minute	0...59
End	
Hour	0...23
Minute	0...59
Use weekday	
Monday ... Friday	Yes • No

2.11. Alarm

The **Display Corlo Touch KNX** may trigger a wake-up call with a sound alarm and flashing display at a pre-set time. At the same time, the display shows the time and a button to switch the alarm off.

The wake-up call function of the **Corlo Touch KNX** can be changed via an object, on the display or in the ETS menu.

ETS: alarm clock

Object control

For the settings via objects, i.e. via the bus, objects 80-84 are available. The objects are input and output simultaneously, and thus may both receive a status change or transmit the status to the bus autonomously. This means that the alarm clock may also be activated, switched or set to snooze from, for example, a different location in the building.

Object no. 81 sends or receives the wake-up time. This allows the alarm clock to be set from another display as well.

Object no. 82 "Alarm clock warning status" can be configured as a bit object and transmit the value 1 or 0 (e.g. to switch the light). Alternatively, the object may be configured as a byte object and send a value between 0 and 255, or a percentage value (e.g. for dimming lights, approaching a shade position or recalling a scene).

The alarm clock objects may be activated in the ETS. The following parameters only appear when the objects are used ("yes").

Use object for alarm clock	• <u>No</u> • Yes
Object value for alarm activation *Object no. 80 "alarm clock activation"*	0 • <u>1</u>
Object value for alarm acknowledgement *Object no. 83 "alarm clock acknowledgement"*	0 • <u>1</u>
Object value for alarm repeat *Object no. 84 "alarm clock warning repetition"*	0 • <u>1</u>
Alarm action *Object no. 82 "alarm clock warning status"*	• <u>transmit nothing</u> • transmit bit object (value 1) • transmit bit object (value 0) • transmit byte object (value 0...255) • transmit byte object (value 0...100%)
Value *only for alarm clock action byte object*	0...255; <u>255</u> or 0...100; <u>100</u>

Adaptation on the display

The settings on the display are modified via the menu
☐   Settings > system > alarm clock

and can be secured with an access code (set up in the ETS).

📖   System settings via touch display > *Alarm*, Page 75

Modification via ETS

Select "Transmit the following parameters: Yes" to render the modifications valid. Previous settings are then overwritten - including modifications done on the display!

The alarm clock menu on the display can be secured with an access code that is determined (or deleted) in the ETS.

Transfer the following parameters	Yes • No
Access code (8 digits from 0 to 9)	[free text] *An empty field means that no code query is done*

Alarm time hour	0...23
Alarm time minute	0...59
Alarm duration	5 s • ... • 30 min • ... • 2 h • until acknowledgement
Alarm repetition cycle in minutes (0 = no repetition)	0...30; 5
Use alarm tone	Yes • No
Display lighting flashes on alarm	Yes • No

2.12. Service

If settings made on the display are to be cancelled, you may do so **on the display** in the menu Settings > system > service" by selecting the button "reset to last ETS download".

📖   System settings via touch display > *Service*, Page 78

The reset to ETS download may be protected with a code. Select "Transmit the following parameters: Yes" in the ETS to modify the code.

Transfer the following parameters	Yes • No
Access code (8 digits from 0 to 9)	[free text] *An empty field means that no code query is done*

3. System settings via touch display

Before the system can be used, you have to have the basic configuration set up by the integrator in the KNX software ETC. Afterwards, some system settings may be modified directly on the display:

• System language
• Editable text language
• Display
• Ambient lighting
• Log lighting
• Button tone
• Alarm
• Timer
• Alarm
• Service

You can call up the system settings via the tool symbol on the display screens.

The symbol can be set to "visible" or "hidden" when the display screens are adapted. If you want to allow system modifications on the display, the symbol must be shown on at least one screen.

📖 *Setting up screens in the ETS*, Page 82
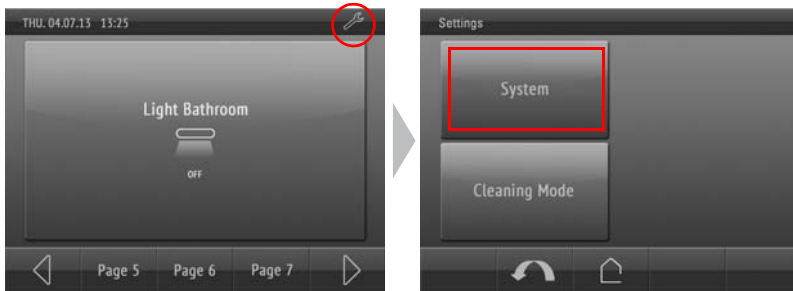
The **skip back arrow** 🔙 takes you back to the previous menu screen without saving.
The **house button** 🏠 takes you back to the standard screen without saving.

3.1. Access codes for display menus

The ETS may be used to determine access codes for the individual menus. Before the menu is displayed, the code has to be entered on a keypad.

The code may be modified or deleted with the tool button ✎ on the keypad screen. The currently active code must be entered in order for this to take effect.

Saving an empty field means: No further code query.

All codes may be reset to the level of the last ETS download via the menu.

☐ Settings > system > service > reset access code
📖 *Reset the access code*, Page 78

Use the bus to reset all codes using object no. 5 "access code reset".

3.2. System language

The language used for the settings menu may be selected in the menu

☐ Settings > system > system language

The menu can be secured with an access code.
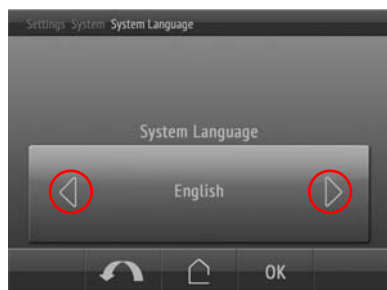
📖 *Access codes for display menus*, Page 54

Scroll to the desired setting using the arrow keys on the rocker.

Confirm with **OK** to save and return to the previous menu selection.
Or cancel using the **skip back arrow** 🔄 or the **house button** 🏠 .

3.3.   Editable text language

The language used for the editable texts (e.g. button labels) can be modified in the menu

☐   Settings > system > editable text language

The menu can be secured with an access code.

📖   *Access codes for display menus*, Page 54
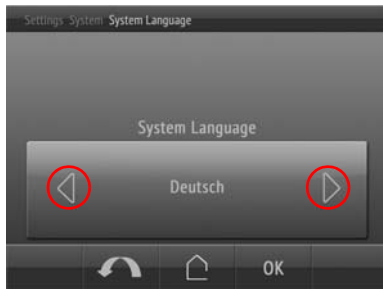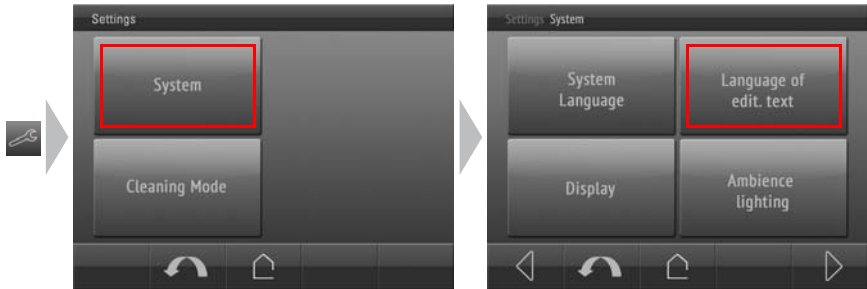
There are 6 languages available that are preset in the ETS. The texts can only be changed in the ETS. On the display, the only modification available is the language selection.

Scroll to the desired setting using the arrow keys on the rocker.

Confirm with **OK** to save and return to the previous menu selection.
Or cancel using the **skip back arrow** 🔄 or the **house button** 🏠 .

3.4.   Display

3.4.1. Cleaning mode

For cleaning of the screen, the „cleaning mode" can be used, that is activated via the display.

☐   Settings > Cleaning Mode

During a period set in the ETS, the touch function is disabled then and the screen can be cleaned.
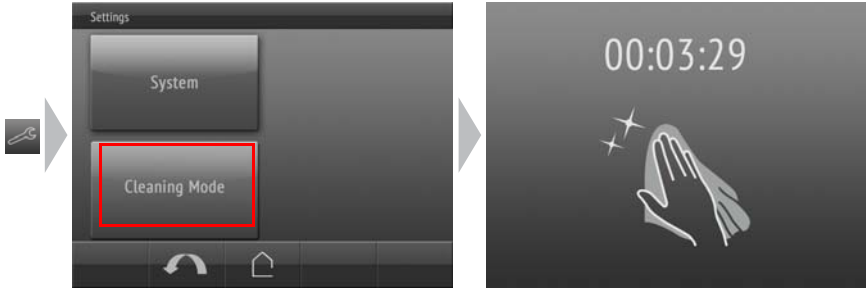
3.4.2. Screen options

Screen options can be adapted in the menu

☐ Settings > system > screen

The menu can be secured with an access code.

📖 *Access codes for display menus*, Page 54
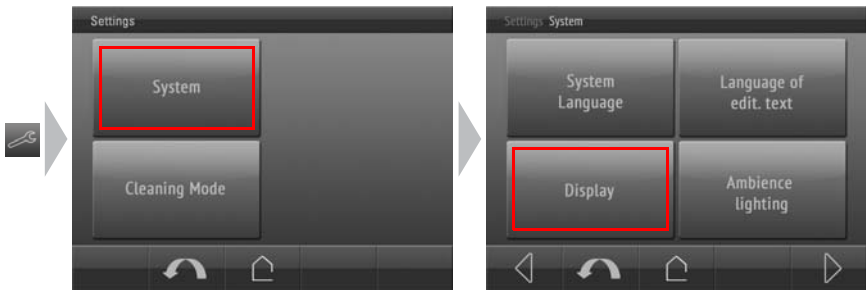
3.4.3. Brightness

☐ Settings > system > screen
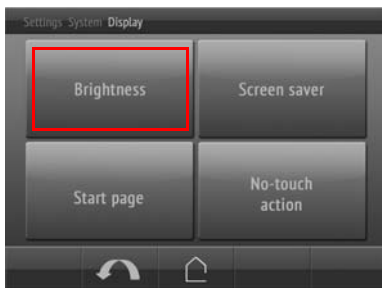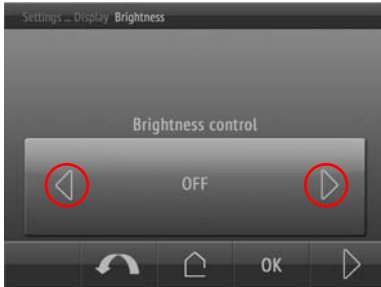
The screen brightness may be set to a
- fixed value (setting **OFF**).
- Setting using the internal brightness sensor (setting **according to room brightness**).
- Setting **via the KNX bus** (this setting can only be selected if pre-set in the ETS).

Scroll to the desired setting using the arrow keys on the rocker.

Then use the **Next** ▷ key (bottom right) to skip to the next setting.
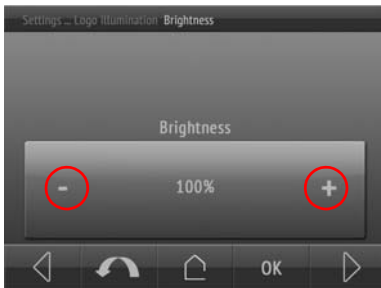
If the brightness value is fixed and the control is done via the KNX bus, brightness (or start brightness) can be set in percent.

Scroll to the desired setting using the +/- buttons on the rocker.

Then use the **Next** ▷ key (bottom right) to skip to the next setting.
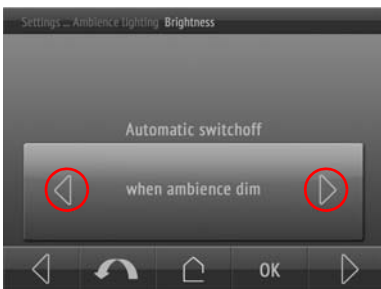
If you are using a fixed brightness value and control according to room brightness, you may also set an automatic switch off.
This automatic switch off darkens the display after the pre-set waiting time.
The automatic switch off may be
- **set to OFF**.
- **set to ON**.
- switch off **if room dark**.

Scroll to the desired setting using the arrow keys on the rocker.

Then use the **Next** ▷ key (bottom right) to skip to the next setting.
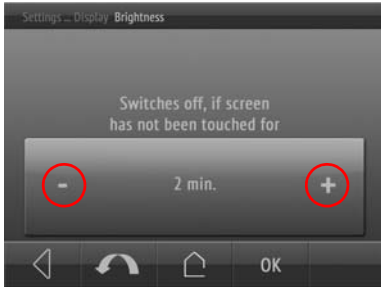
If the automatic switch off is activated, you now set the waiting time until switch off.

Scroll to the desired setting using the +/- buttons on the rocker.

Confirm with **OK** to save and return to the previous menu selection.
You can save using **OK** at any time, or cancel using the **skip back arrow** or the **house button** without saving.

3.4.4. Screen saver

The screen saver is displayed if the display has not been touched for a pre-set period of time.

☐   Settings > system > screen
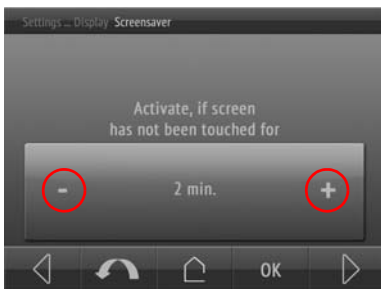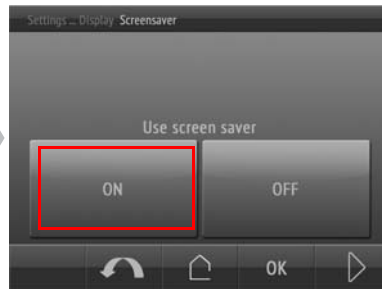
If the screen saver is activated, you now set the waiting time until screen saver call-up.

Scroll to the desired setting using the +/- buttons on the rocker.

Then use the **Next** ▷ key (bottom right) to skip to the next setting.
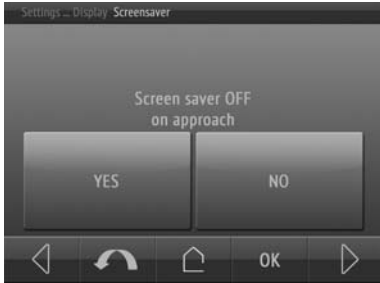
The screen saver may be linked to the proximity sensor.

Select **YES** if the display should switch back to the start screen upon proximity.

Then use the **Next** ▷ key (bottom right) to skip to the next setting.
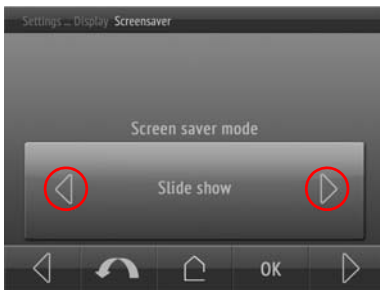
Select the desired screen saver:
- Screen OFF
- Analogue clock
- Digital clock
- Image from SD card
- Slide show
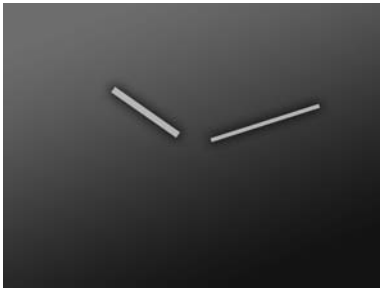
Analogue clock   Digital clock

Images you would like to display as screen savers have to be saved on an SD card that remains in the device. Please refer to the chapter

📖 *Images for screensaver,* Page 16
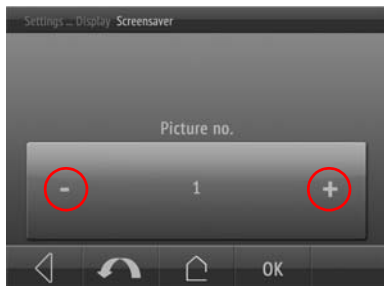
If you are using an image from an SD card as your screen saver, you can select the image number.

Scroll to the desired image number using the +/- buttons on the rocker.

Confirm with **OK** to save and return to the previous menu selection.
You can save using **OK** at any time, or cancel using the **skip back arrow** or the **house button** without saving.

3.4.5. Start display

The start display determines which screen is shown on the display when you press the house button (and after a reset).

☐ Settings > system > screen
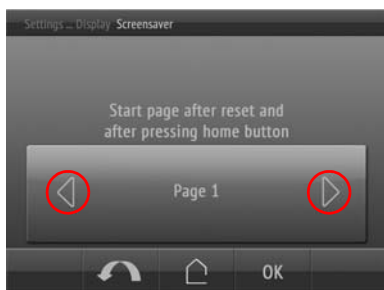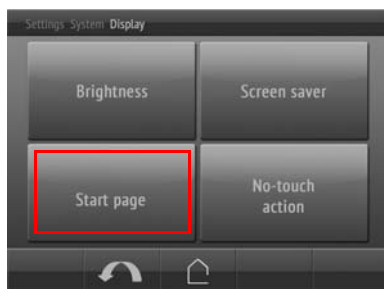
All display screens defined in the ETS may be used as the starting screen.

Scroll to the desired start display screen using
the +/- buttons on the rocker.

Confirm with **OK** to save and return to the previous menu selection.
Or cancel using the **skip back arrow** or the **house button** .

3.4.6. No-touch action

This action determines what is to happen if no setting is entered on the display for 5 minutes.

☐   Settings > system > screen
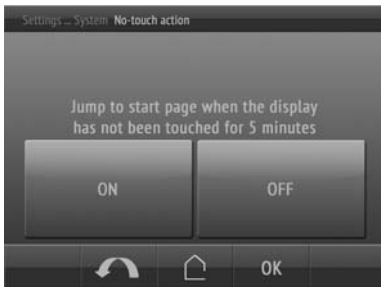
If you switch the automatic return to the starting screen **ON**, the display returns to that if it isn't touched for 5 consecutive minutes.
If you switch it **OFF**, the display shall remain on the selected screen until a key is pressed.

Confirm with **OK** to save and return to the previous menu selection.
Or cancel using the **skip back arrow** or the **house button** .

3.5.   Ambient lighting

The **Display Corlo Touch KNX** has LEDs installed which are directed to the side from behind the frame. This ambient lighting can be adjusted in terms of colour and brightness. The lighting may be adapted in the menu
☐   Settings > system > ambient lighting

The menu can be secured with an access code.
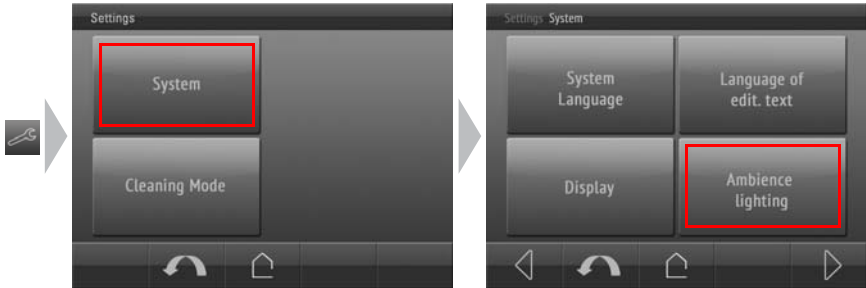
3.5.1. Brightness

☐   Settings > system > ambient lighting
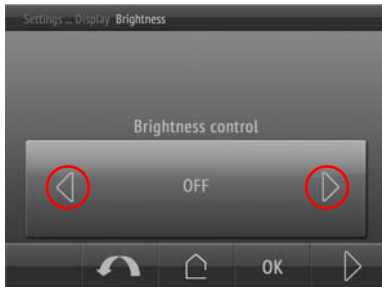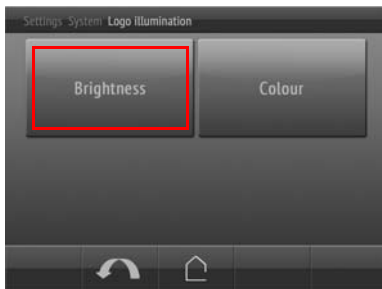
The brightness may be set to a
*   fixed value (setting **OFF**).
*   Adapted to the screen brightness (**as screen brightness**).
*   Adapted to the logo brightness (**as logo brightness**).
*   Setting using the internal brightness sensor (**as room brightness**).
*   Setting **via the KNX bus** (this setting can only be selected if pre-set in the ETS).
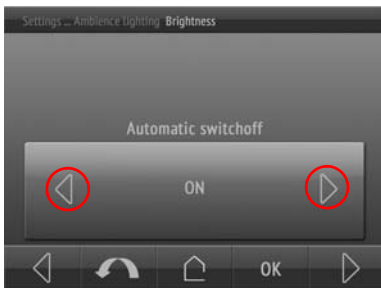
Scroll to the desired setting using the arrow keys on the rocker.

Then use the **Next** ▷ key (bottom right) to skip to the next setting.

If the brightness value is fixed and the control is done via the KNX bus, brightness (or start brightness) can be set in percent.

Scroll to the desired setting using the +/- buttons on the rocker.

Then use the **Next** ▷ key (bottom right) to skip to the next setting.

For all types of brightness control except the object control (via KNX bus), automatic switch-off can be set.
This automatic switch off switches off the ambient lighting after the pre-set waiting time.
The automatic switch off may be
• **set to OFF**.
• **set to ON**.
• switch off **if room dark**.

Scroll to the desired setting using the arrow keys on the rocker.

Then use the **Next** ▷ key (bottom right) to skip to the next setting.
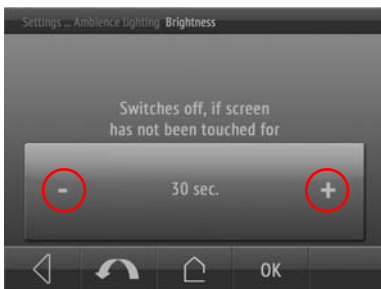
If the automatic switch off is activated, you now set the waiting time until switch off.
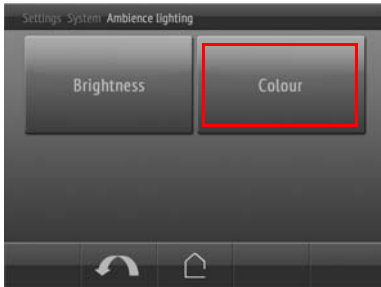
Scroll to the desired setting using the +/- buttons on the rocker.

Confirm with **OK** to save and return to the previous menu selection.

You can save using **OK** at any time, or cancel using the **skip back arrow** 🔙 or the **house button** ⌂ without saving.

3.5.2. Colour

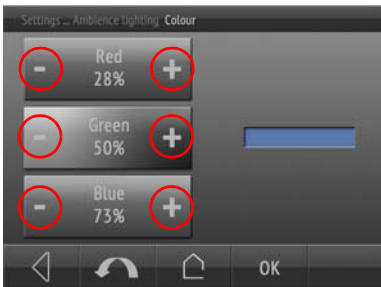☐   Settings > system > ambient lighting

The colour may be set to a
*   fixed value which is **set via RGB** (%)
*   fixed value which is **set via the colour wheel**
*   Adapted to the logo colour (**as logo illumination**).
*   Setting **via the KNX bus** (this setting can only be selected if pre-set in the ETS).

Scroll to the desired setting using the arrow keys on the rocker.

Then use the **Next** ▷ key (bottom right) to skip to the next setting.

If you set a fixed colour value **via RGB**, use the keys for red, green and blue to adapt the values with +/-. You can see a colour preview in the bar on the right.

If you wish to select a fixed colour value with the **colour wheel**, use the rotary control to adapt the colour. You can see a colour preview in the bar on the right.

Confirm with **OK** to save and return to the previous menu selection.

You can save using **OK** at any time, or cancel using the **skip back arrow** or the **house button** without saving.
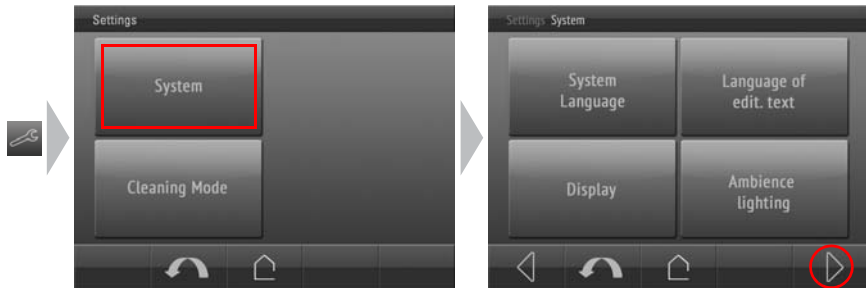
3.6.　Logo illumination

This setting may only be made if there is a logo engraved above the display (customizing option). If not, leave the setting at the standard setting "fixed value = 0%".

The logo illumination can be adjusted in terms of colour and brightness. The lighting may be adapted in the menu
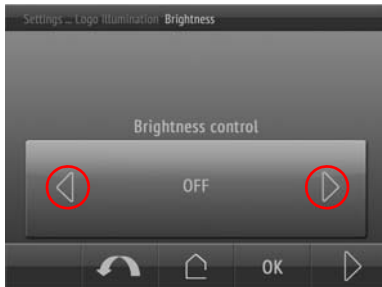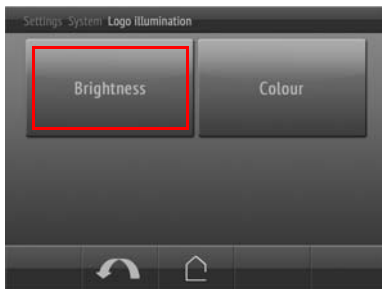
☐　Settings > system > logo illumination

The menu can be secured with an access code. This code may only be modified/set up in the KNX software ETC.

3.6.1. Brightness

☐   Settings > system > logo illumination

The brightness may be set to a
• fixed value (setting **OFF**).
• Adapted to the screen brightness (**as screen brightness**).
• Adapted to the surrounding brightness (**as ambient lighting**).
• Setting using the internal brightness sensor (**as room brightness**).
• Setting **via the KNX bus** (this setting can only be selected if pre-set in the ETS).

Scroll to the desired setting using the arrow keys on the rocker.

Then use the **Next** ▷ key (bottom right) to skip to the next setting.

If the brightness value is fixed and the control is done via the KNX bus, brightness (or start brightness) can be set in percent.

Scroll to the desired setting using the +/- buttons on the rocker.

Then use the **Next** ▷ key (bottom right) to skip to the next setting.

For all types of brightness control except the object control (via KNX bus), automatic switch-off can be set.
This automatic switch off switches off the logo illumination after the pre-set waiting time.
The automatic switch off may be
• **set to OFF**.
• **set to ON**.
• switch off **if room dark**.

Scroll to the desired setting using the arrow keys on the rocker.

Then use the **Next** ▷ key (bottom right) to skip to the next setting.

If the automatic switch off is activated, you now set the waiting time until switch off.

Scroll to the desired setting using the +/- buttons on the rocker.

Confirm with **OK** to save and return to the previous menu selection.

You can save using **OK** at any time, or cancel using the **skip back arrow** 🔙 or the **house button** ⌂ without saving.

3.6.2. Colour

☐ Settings > system > logo illumination
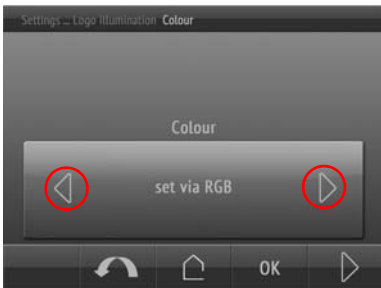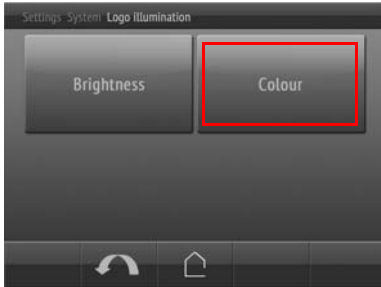
The colour may be set to a
- fixed value which is **set via RGB** (%)
- fixed value which is **set via the colour wheel**
- Adapted to the ambient colour (**as ambient lighting**).
- Setting **via the KNX bus** (this setting can only be selected if pre-set in the ETS).

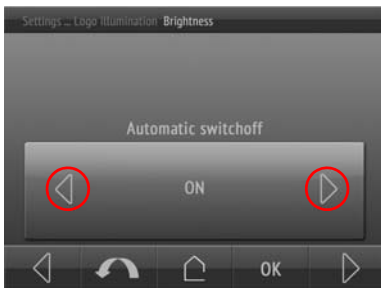Scroll to the desired setting using the arrow keys on the rocker.

Then use the **Next** ▷ key (bottom right) to skip to the next setting.

If you set a fixed colour value **via RGB**, use the keys for red, green and blue to adapt the values with +/-. You can see a colour preview in the bar on the right.

If you wish to select a fixed colour value with the **colour wheel**, use the rotary control to adapt the colour. You can see a colour preview in the bar on the right.

Confirm with **OK** to save and return to the previous menu selection.

You can save using **OK** at any time, or cancel using the **skip back arrow** or the **house button** without saving.

3.7.   Button tone

The **Display Corlo Touch KNX** may emit a sound if a button on the display is touched. This button tone can be switched on or off in the menu
☐   Settings > system > button tone

The menu can be secured with an access code.
📖   *Access codes for display menus,* Page 54
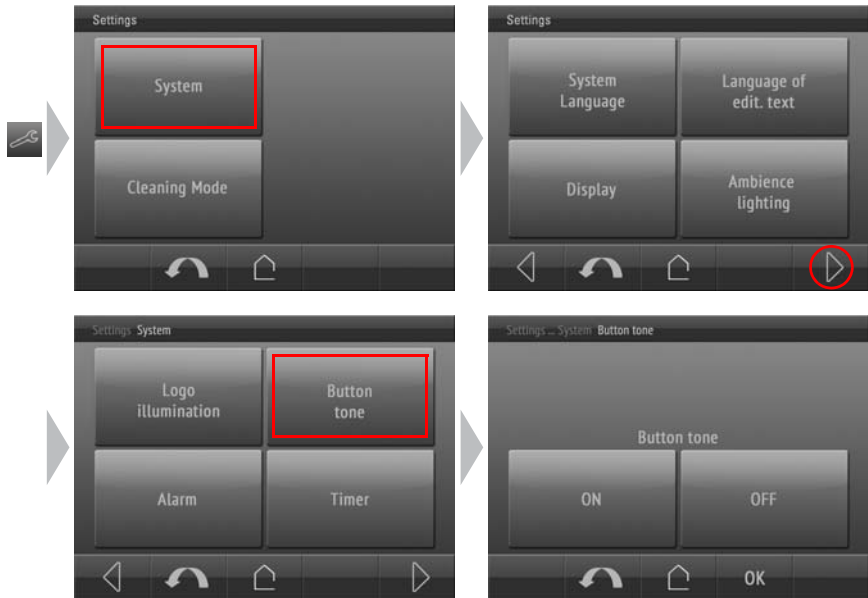
Confirm with **OK** to save and return to the previous menu selection.
Or cancel using the **skip back arrow** 🔄 or the **house button** ⌂ .

3.8.   Alarm

The six alarm functions of the **Corlo Touch KNX** show messages in the display. At the same time, the display may flash, and an alarm tone emitted. The alarm can be acknowledged directly on the display or via the bus.
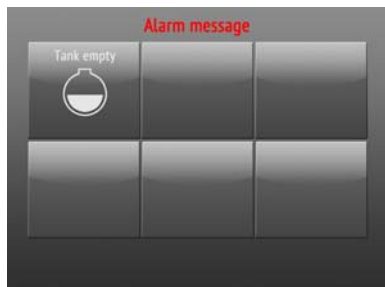
Screen with alarm messages, alarm 1 "tank empty" is active.

Acknowledge the active alarm by pressing the button. Several alarms may be active at the same time.

Text and symbol may only be set in the ETS.

The reaction upon an alarm may be adapted in the menu
☐   Settings > system > alarm

The menu can be secured with an access code.
📖   *Access codes for display menus*, Page 54
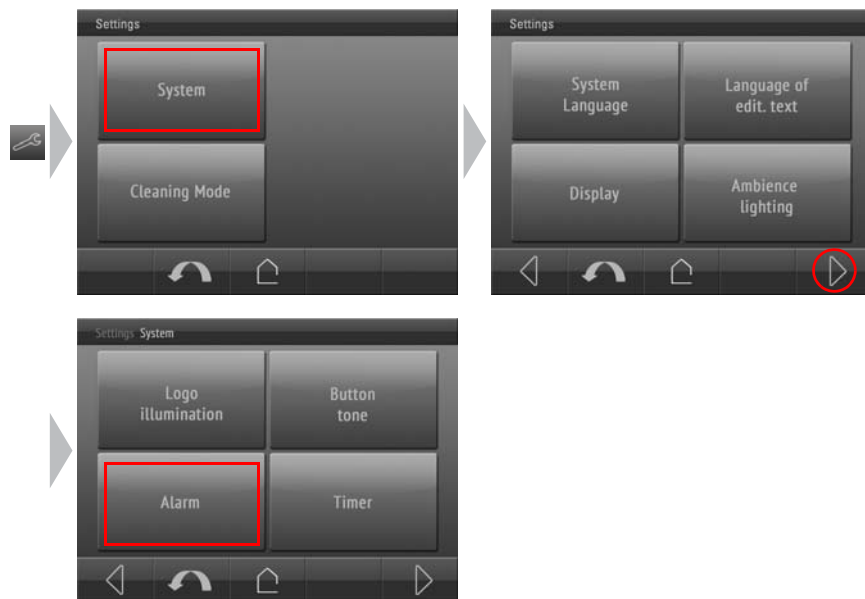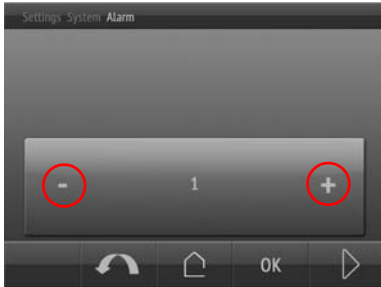
Select the alarm function you with to modify (1-6).

Scroll to the desired number using the +/- buttons on the rocker.

Then use the **Next** ▷ key (bottom right) to skip to the first setting.

Switch the flashing display background lighting in case of alarm **ON** or **OFF**.

Then use the **Next** ▷ key (bottom right) to skip to the next setting.

Switch the alarm tone **ON** or **OFF**.

Then use the **Next** ▷ key (bottom right) to skip to the next setting.
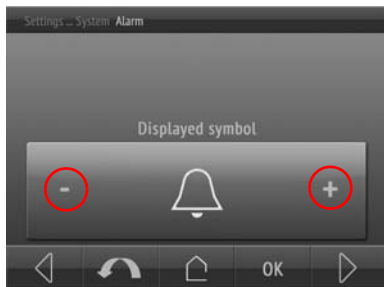
Select the symbol to be displayed in case of alarm. All the icons of the system are available.

📖 *Symbol overview*, Page 95

Additionally, custom symbols may be saved on the SD card and then loaded. For further information please refer to chapter

📖 *Exchanging images and graphics*, Page 17

Scroll to the desired setting using the arrow keys on the rocker.

Confirm with **OK** to save and return to the previous menu selection.
Or cancel using the **skip back arrow** or the **house button** .

3.9. Timer

16 periods may be defined on the timer of the **Corlo Touch KNX**. Those periods are then allocated to the internal automatic functions such as, e.g. the timed closure of blinds.

Periods must be pre-set in the ETC menu "weekly timer: period". Periods configured as outputs may also be modified on the display. Periods configured as inputs only receive the time settings from another time in the bus system. Only the name of the input periods is displayed, it is not possible to modify the settings.

Periods may be viewed or modified in the menu
☐ Settings > system > timer

The menu can be secured with an access code.
📖 *Access codes for display menus*, Page 54
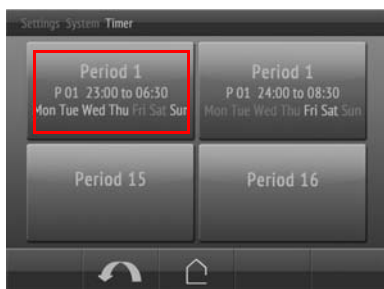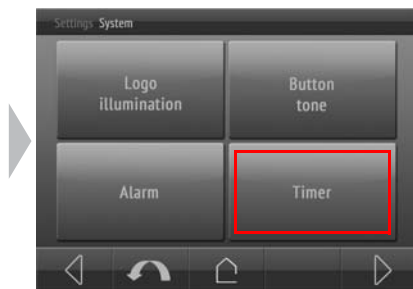
Select the period you wish to modify.

Only the periods preconfigured in the ETS are displayed.
In the example, period 15 and 16 have been configured as inputs in the ETS. The timer information arrives via the bus, no modification may be applied.

Then use the **Next** ▷ key (bottom right) to skip to the next setting.
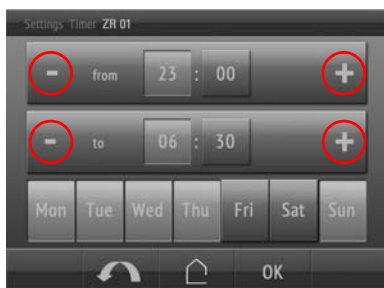
Set the start and end of the period respectively. In order to do this, activate the field for the hour and then for the minutes and sue the +/- buttons on the rocker to adjust the desired time.
Select the day of the week on which the time period should be activated.

In the example, the period lasts from 07:00 to 09:30 and is active Sunday through

Confirm with **OK** to save and return to the previous menu selection.
Or cancel using the **skip back arrow** or the **house button** .

3.10. Alarm

The **Display Corlo Touch KNX** may trigger a wake-up call with a sound alarm and flashing display at a pre-set time. At the same time, the display shows the time and a button to switch the alarm off.

If the alarm is not switched off manually, it stops by itself after the set alarm time is reached. Alternatively, the wake-up call can be switched off via the bus. After the

alarm is switched off, the alarm clock remains active and triggers the alarm again on the next day.

If the alarm clock is activated, there is a little clock symbol displayed next to the time on the display screen.

The symbol is also a button that takes you directly to the alarm clock menu. If the alarm is deactivated, use the settings menu

☐   Settings > system > alarm clock

The menu can be secured with an access code.

📖   *Access codes for display menus*, Page 54
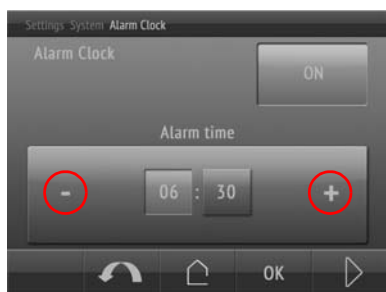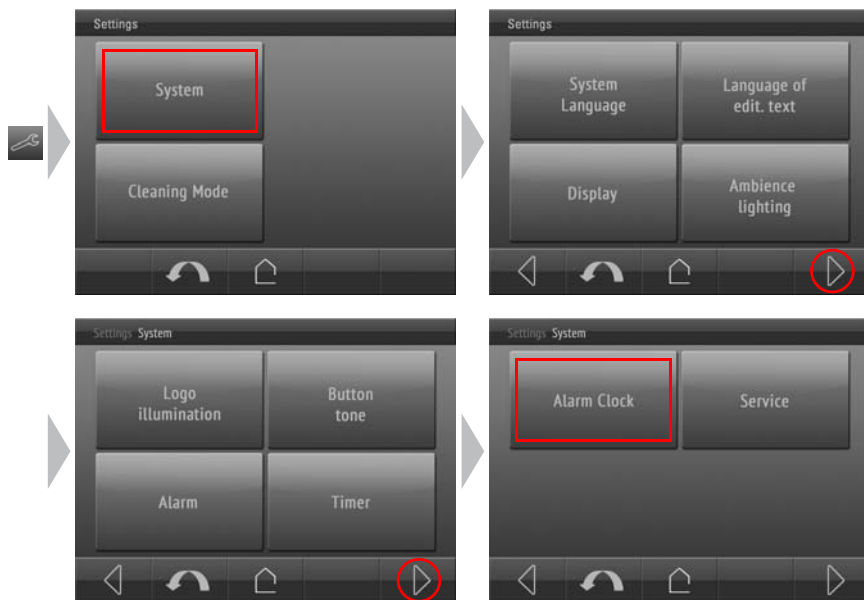
Switch the alarm clock **ON** or **OFF** with the key at the top right.
Select the wake-up time by activating the field for the hours and then the minutes respectively and setting the desired time with the +/- buttons on the rocker.

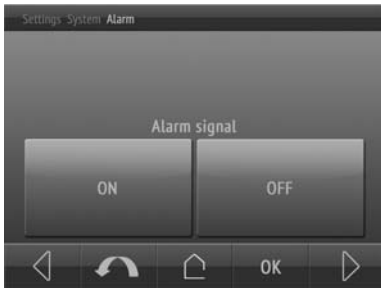Then use the **Next** ▷ key (bottom right) to skip to the next setting.
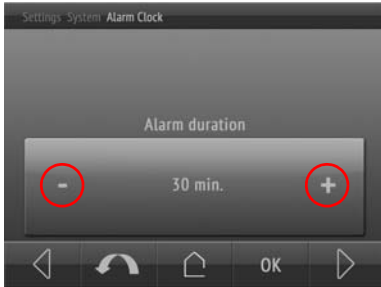
Set the alarm duration.

Scroll to the desired setting using the +/- buttons on the rocker.

Then use the **Next** ▷ key (bottom right) to skip to the next setting.
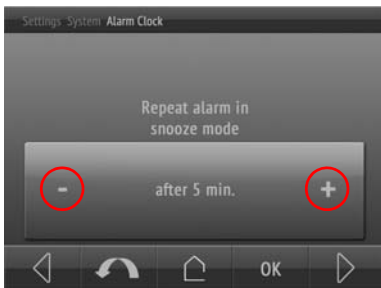
Determine the snooze period (in minutes) after which the alarm should be repeated. Select "none" if the alarm is not to be repeated.

Scroll to the desired setting using the +/- buttons on the rocker.

Then use the **Next** ▷ key (bottom right) to skip to the next setting.

Switch the alarm tone **ON** or **OFF**.

Then use the **Next** ▷ key (bottom right) to skip to the next setting.

Switch the flashing display background lighting in case of alarm **ON** or **OFF**.

Confirm with **OK** to save and return to the previous menu selection.
Or cancel using the **skip back arrow** or the **house button**.

3.11. Service

In the service menu, you can

- Reset the access code
- reset the system to the status of the last ETS download
- reset the device software
- allocate a device address (PRG-LED on)
- call up information about the device (software versions)
- read the license text
- access the internal area (manufacturer service only)

3.11.1. Reset the access code

All codes may be reset to the level of the last ETS download via the menu.

☐   Settings > system > service > reset access code

3.11.2. Reset the system to the status of the last ETS download

All settings modified manually on the display are irrevocably overwritten when the system is reset!

☐   Settings > system > service > reset to last ETS download

3.11.3. Device reset

This option causes a restart of the device software.

☐   Settings > system > service > reset

3.11.4.Addressing the equipment

The programming mode for addressing at the bus is activated via the programming button at the back of the housing or via the display.

☐   Settings > System > Service > KNX
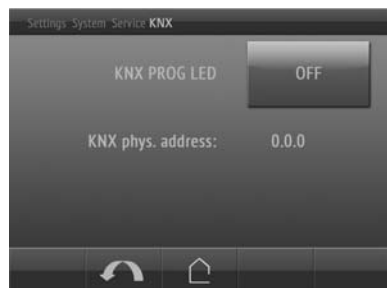
KNX programming LED ON:
Programming mode active.

KNX programming LED OFF:
Programming mode off.

The current address is displayed (Address 15.15.250 when delivered).

3.11.5.Info

This is where you can find the KNX software version information, the display software version and the operating system software version.

☐   Settings > system > service > info

3.11.6.License

Here you can find information about the licenses for software and hardware components used in the **Display Corlo Touch KNX** as well as license documents and license holders.

4. Set up display screens

The **Display Corlo Touch KNX** offers 10 display scenes which may be configured individually to show:

• areas (switches, display spaces for sensor values)
• rockers
• wheels

There are 38 pre-defined screen displays to select from. The screens are set up in the ETS and then shown on the display.

4.1. Select screen on display

The individual screens are selected using the lower menu bar.
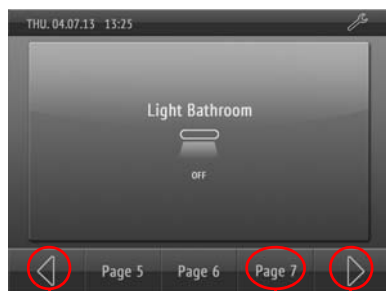
*To previous
screen block*

*To next
screen block*

*"Screen 7"
to be displayed*

In the ETS, determine a **starting screen**. The display jumps to this screen when the **house key** ⌂ is pressed in the set-up menus (and after a reset). In addition, you may set the starting screen to be displayed if no entry is made on the display for 5 minutes.

4.2. Setting up screens in the ETS

ETS menu: Screens 1...10

The "tool" key used to jump to the system settings may be displayed on each screen. If the user should not make changes to the system settings, this key can be hidden. If, on the other hand, system settings should be made via the display, the key should be activated on at least one of the display screens.

Menu navigation permitted from this screen	Yes • No

Decide if the settings for the access code, editable texts (i.e. fields with free text input) and symbols/icons should be transferred from the ETS upon download. In this case,

all previous settings are overwritten - even the modification of codes done on the display.

You may want to enter an access code for the display screens. The code must be entered when switching between screens. The standard screen thus always remains accessible.

Transfer with download:	
- Access code	Yes • No
Access code (8 digits from 0 to 9)	[free text] *An empty field means that no code query is done*
- editable text	Yes • No
- symbols and icons	Yes • No
The last two parameters must be set to Yes if you which to modify the type of controls for the sides, areas, rockers or rotary movement.	

Set a name for this screen. A name can be selected for each of the six available languages (max. 15 characters).
📖 *Editable text language*, Page 39

Screen name	
Languages 1...6	[free text]

Select the screen layout according to the table.
📖 *Overview predefined screens*, Page 89

Screen type	see Overview predefined screens

Symbols and labelling for the individual screen elements may be adapted:

Area

Labels in 6 languages with up to 15 characters are possible

Symbols from the internal library or from a Micro SD card. Symbols can have functions and status assigned (e.g. light on - off)

Status labels in 6 languages with up to 10 characters are possible. Alternatively, there is a value display or value input

Select a name for this function. A name can be selected for each of the six available languages (max. 15 characters).
📖 *Editable text language*, Page 39

Then assign the function of the area, enter other text you wish to be displayed if necessary and select a symbol. If you do not wish to display a symbol, select symbol no. 254 (not assigned).

   📖 *Symbol overview*, Page 95

Name	
Languages 1...6	[free text]
Function	see below Area functions
Text(s)	
Languages 1...6	[free text]
Key symbol(s)	• no symbol • symbol 1...254 (internal library, see 📖 table *Symbol overview*, Page 95) • image selection (from SD card, see 📖 *Exchanging images and graphics*, Page 17)

Area functions

no function
Display 1 / 0
Display date
Display time
Display 8-bit value (0 ... 255)
Display 8-bit value (0 ... 100%)
Display 8-bit value (0 ... 360°)
Display 16-bit counter without math. symbol
Display 16-bit counter with math. symbol
Display 16-bit floating point
Display 32-bit counter without math. symbol
Display 32-bit counter with math. symbol
Display 32-bit floating point
Display text
Display energy [DPT 29.01X]
Input 1
Input 0
Press enter = 1, release = 0
Press enter = 0, release = 1
Input switch
Input date
Input time
Input 8-bit value scene
Input 8-bit value (0 ... 255)
Input 8-bit value (0 ... 100%)
Input 8-bit value (0 ... 360°)
Input 16-bit counter without math. symbol
Input 16-bit counter with math. symbol
Input 16-bit floating point
Input 32-bit counter without math. symbol

Input 32-bit counter with math. symbol
Input 32-bit floating point
Input text
Input energy [DPT 29.01X]
Dim control brighter
Dim controls darker
Dim controls brighter / darker
Controls long-term (0) / short-term
Controls long-term (1) / short-term
Page navigation
System navigation
Automatic navigation

Rocker
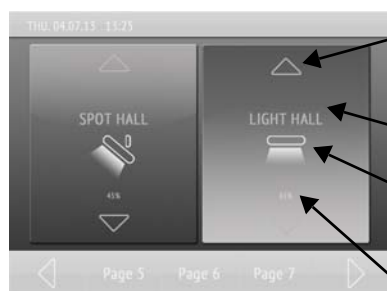
Rocker symbol (from the internal library or from a Micro SD card). Symbols can be assigned to functions and status.

Labels in 6 languages with up to 15 characters are possible

Button symbol (from the internal library or from a Micro SD card). Symbols can be assigned to functions and status.

Status label (value)

Rocker functions:

1 / 0 switch
1 / 0 switch (reversed)
Switching + dimming
Switching + dimming (reversed)
Long-term + short-term
Long-term + short-term (reversed)

Select a name for this function. A name can be selected for each of the six available languages (max. 15 characters).

   📖 *Editable text language*, Page 39

Select the rocker function. Set time requirements for each function and select whether the values are to be displayed (e.g. movement position). Then select symbols for the button (centred) and the rocker. If you do not wish to display a symbol, select symbol no. 254 (not assigned).

   📖 *Symbol overview*, Page 95

Name	
Languages 1...6	[free text]

Function	see above Rocker functions:
Time between switching and dimming (in 10 ms) *Only for "switching and dimming"*	0 ... 200; <u>40</u>
Display brightness n *Only for "switching and dimming"*	Yes • <u>No</u>
Time 1 in 10ms *Only for "long term + short term"*	0 ... 200; <u>40</u>
Time 2 in 10ms *Only for "long term + short term"*	0 ... <u>200</u>
Display movement position *Only for "long term + short term"*	Yes • <u>No</u>
Display slat position *Only for "long term + short term"*	Yes • <u>No</u>
Button symbol for 1 / 0	• no symbol • symbol <u>1</u>...254 (internal library, see 📖 table *Symbol overview*, Page 95) • image selection (from SD card, see 📖 *Exchanging images and graphics*, Page 17
Rocker symbol for feedback object value 1 / 0	• no symbol • symbol <u>1</u>...254 (internal library, see 📖 table *Symbol overview*, Page 95) • image selection (from SD card, see 📖 *Exchanging images and graphics*, Page 17

Rotary control
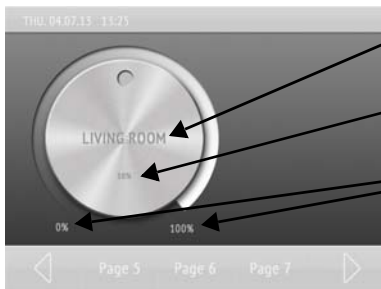
Labels in 6 languages with up to 15 characters are possible

Status labels in 6 languages with up to 10 characters are possible.

Minimum/maximum value. Resolution and threshold value may be set in the ETS

Rotary control functions:

Temperature
RGB controls
8-bit value (0 ... 255)
8-bit value (0 ... 100%)
8-bit value (0 ... 360°)
16-bit counter without math. symbol
16-bit counter with math. symbol

16-bit floating point
32-bit counter without math. symbol
32-bit counter with math. symbol
32-bit floating point

Select a name for this function. A name can be selected for each of the six available languages (max. 15 characters).

  📖 *Editable text language*, Page 39

Select the rotary control function. Then select a symbol.

  📖 *Symbol overview*, Page 95

Further settings depend on the function.

Name	
Languages 1...6	[free text]
Function	see above Rotary control functions:
Rotary control symbol	• no symbol • symbol 1...254 (internal library, see 📖 table *Symbol overview*, Page 95) • image selection (from SD card, see 📖 *Exchanging images and graphics*, Page 17)

Temperature function

Text for unit	°C
Minimum value in 0.1°C	-32768 ... 32767
Maximum value in 0.1°C	-32768 ... 32767
Resolution in 0.1°C (observe settings range)	1 ... 10000; 10
Start value in 0.1°C	-32768 ... 32767; 0

RGB control function

RGB ratios set via	• one object (1 x 3 byte) • three objects (3 x 1 byte)

8-bit value function (0 ... 255 / 0...100% / 0...360°)

Text for unit	[free text] % °
Minimum value	0 ... 255 (in 0.1°C) 0 ... 100 0 ... 360
Maximum value	0 ... 255 (in 0,1°C) 0 ... 100 0 ... 360

Resolution (observe settings range)	1 ... 200; <u>10</u> (in 0.1°C) 5 ... 1000; <u>10</u> (in 0.1%) 1 ... 300; <u>10</u>
Start value in 0.1°C	<u>0</u> ... 255 (in 0.1°C) <u>0</u> ... 100 <u>0</u> ... 100

16-bit counter with/without math. symbol function

Text for unit	[free text]
Minimum value	<u>0</u> ... 65535 <u>-32768</u> ... 32767
Maximum value	0 ... <u>65535</u> -32768 ... <u>32767</u>
Resolution (observe settings range)	1 ... 60000; <u>10</u> 1 ... 30000; <u>10</u>
Start value	<u>0</u> ... 65535 -32768 ... 32767; <u>0</u>

16-bit floating point function

Text for unit	[free text]
Minimum value in 0.1	-2147483648
Maximum value in 0.1	2147483647
Resolution in 0.1 (observe settings range)	1 ... 2000000000; <u>10</u>
Conversion factor a	-0.0001 • ... • <u>+0.1</u> • ... • +10000
Conversion factor b	<u>1</u> ... 65535
Display value = value of bus *a *b Bus value = display value / a / b	
Start value in 0.1	-32768 ... <u>32767</u>

32-bit counter with/without math. symbol function

Text for unit	[free text]
Minimum value	<u>0</u> ... 4294697295 <u>-2147483648</u> ... 2147483647
Maximum value	0 ... <u>4294697295</u> -2147483648 ... <u>2147483647</u>
Resolution (observe settings range)	1 ... 4000000000; <u>10</u> 1 ... 2000000000; <u>10</u>
Start value	<u>0</u> ... 4294697295 -2147483648 ... 2147483647; <u>0</u>

"32-bit floating point" function selection

Text for unit	[free text]
Minimum value in 0.1	-2147483648

Maximum value in 0.1	2147483647
Resolution in 0.1 (observe settings range)	1 ... 2000000000; <u>10</u>
Conversion factor a	-0.0001 • ... • <u>+0,1</u> • ... • +10000
Conversion factor b	<u>1</u> ... 65535
Display value = value of bus *a *b Bus value = display value / a / b	
Start value in 0.1	0

4.2.1. Overview predefined screens

38 predefined screens are available, 10 of which may be selected.

Note: The labels and symbols shown are examples, areas, rockers and rotary control labels may be customized.

0 Do not use

1 Website
(Corlo Touch KNX WL model only)

2 one surface

3 two surfaces vertical

4 two surfaces horizontal

5 *three surfaces vertical*

6 *four surfaces*

7 *six surfaces*

8 *single rocker vertical*

9 *single rocker vertical left*
+ one surface

10 *single rocker vertical right*
+ one surface

11 *single rocker vertical left + two surfaces*

12 *single rocker vertical centre + two surfaces*

13 *single rocker vertical right + two surfaces*

14 *single rocker vertical left + four surfaces*

15 *single rocker vertical centre + four surfaces*

16 *single rocker vertical right + four surfaces*

17 double rocker vertical

18 double rocker vertical
+ one surface left

19 double rocker vertical
+ one surface centre

20 double rocker vertical
+ one surface right

21 double rocker vertical
+ two surfaces left

22 double rocker vertical
+ two surfaces centre

23 *double rocker vertical*
+ two surfaces right

24 *single rocker horizontal*

25 *single rocker horizontal top*
+ one surface

26 *single rocker horizontal bottom*
+ one surface

27 *single rocker horizontal top*
+ three surfaces

28 *single rocker horizontal bottom*
+ three surfaces

29 double rocker horizontal

30 triple rocker vertical

31 rotary control

32 rotary control
+ one surface vertical

33 rotary control + rocker

34 rotary control
+ one surface top

35 *rotary control*
+ one surface bottom

36 *rotary control*
+ two surfaces right

37 *rotary control with display at top*

38 *rotary control with display at top*
+ one surface bottom

4.2.2. Symbol overview

In the internal library of the **Corlo Touch KNX**, the following symbols are predefined:

Lighting

0001
*Ceiling lamp
on*

0002
*Ceiling lamp
off*

0003
*Direct light
on*

0004
*Direct light
off*

0005
*Wall lamp
on*

0006
Wall lamp
off

0007
Spot on

0008
Spot off

0009
Suspended
lamp on

0010
Suspended
lamp off

0011
Floor light
on

0012
Floor light
off

0013
Floor luminaire
on

0014
Floor luminaire
off

0015
Table lamp o

0016
Table lamp off

0017
Bulb
on

0018
Bulb
off

0019
Indirect lamp
on

0020
Indirect lamp
off

Drives

0031
Shutter
extended

0032
Shutter
retracted

0033
Blinds
extended

0034
Blinds
retracted

0035
Awning
extended
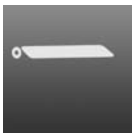
0036
Awning
retracted

0037
Window
Opened

0038
Window
Closed

0039
Sliding door
Opened

0040
Sliding door
Closed

0046
Lock
barred

0047
Roof light
open

0048
Roof light
closed

0049
Light dome
open

0050
Light dome
closed

Colour rings for rotary control

0071
Rotary control
heating

0072
Rotary control
Light

0073
Rotary control
ventilation

0074
Rotary control
Colour

Operation

0081
Display
black

0082
Display
green

0083
Display
blue

0084
Display
red

0085
Digit
0

0086
Digit
1

0087
Digit
2

0088
Digit
3

0089
Digit
4

0090
Digit
5

0091
Digit
6

0092
Digit
7

0093
Digit
8

0094
Digit
9

0095
Operating
arrow left

0096 Operating arrow right	**0097** Operating arrow up	**0098** Operating arrow down	**0099** Skip back	**0100** Skip forward
0101 Plus	**0102** Minus	**0103** Tool	**0104** Switch on	**0105** Switch off
0106 On/Off	**0107** Standby	**0108** Clock	**0109** Manual	**0110** Automatic
0111 OK	**0112** Ramp 1 up	**0113** Ramp 1 down	**0114** Ramp 2 up	**0115** Ramp 2 down
0116 Doorbell	**0117** Dustbin white	**0118** Dustbin blue	**0119** Dustbin brown	**0120** Dustbin yellow

0121
Dustbin
green

0122
Dustbin
grey

0123
Scene

climate

0126
Radiator
on

0127
Radiator
off

0128
Floor
heating

0129
Wall
heating
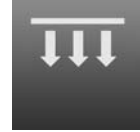
0130
Ceiling
heating

0131
Floor
cooling

0132
Wall
cooling

0133
Ceiling
cooling

0134
Night-time
reduction

0135
Absent

0136
Present

0137
Party

0138
Fan
on

0139
Fan
off

0140
Fan
Level 1

0141
Fan
Level 2

0142
Fan
Level 3

0143
Fan
Level 4

0144
Heating

0145
Heating
plus

0146
Heating
minus

0147
Cooling

Sensors

0156
Sun

0157
Precipitation

0158
Tank

0159
Pyranometer

0160
Air humidity
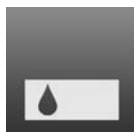
0161
Earth moisture

0162
Outside
temperature

0163
Inside
temperature

0164
Fountain

0165
Pond
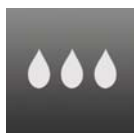
0166
Wet

0167
Snowfall

0168
Frost

0169
Wind direction
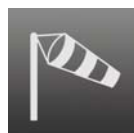
0170
Strong Wind

0171
Light Wind

0172
CO2

Multimedia

0186 TV	**0187** Projector	**0188** Projector screen	**0189** Socket	**0190** Music
0191 Play	**0192** Pause	**0193** Rewind	**0194** Fast-Forward	**0195** Stop
0196 Forward	**0197** Back	**0198** Loudspeaker	**0199** Volume up	**0200** Volume down
0216 Motion detector	**0217** Alarm siren	**0218** Caution	**0219** Key	**0220** Intruder inside
0221 Intruder outside	**0222** Intruder	**0223** Alarm siren inside	**0224** Alarm siren outside	
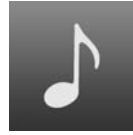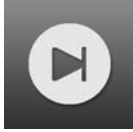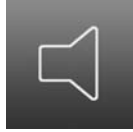
House

0236 House	**0237** Dining room	**0238** Living room	**0239** Kitchen	**0240** Children's room
0241 Bathroom	**0242** Bedroom	**0243** Cloakroom	**0244** Garage	**0245** Carport
0246 Garden	**0247** Utility room	**0248** Storeroom	**0249** Laundry	
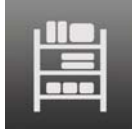
5. Automatic functions

Safety notes for automatic functions

⚠️ **WARNING!**
Risk of injury due to automatically moved components!
The automatic control may cause parts of the system to travel
and pose a danger to humans.
- No persons may remain in the travelling range of parts driven
  by an electric motor.
- Adhere to the relevant building regulations (see guideline for
  power-operated windows, doors and gates BGR 232 et al).
- Always disconnect the system from the mains power before
  maintenance or cleaning (e.g. switch off/remove fuse).

Precipitation warning for automatically controlled windows:

Some time can pass before falling rain is recognised by the sensors in the system, depending on the rain amount and outdoor temperature. Furthermore, a closure time must be calculated for electrically-actuated windows or sliding roofs. Humidity-sensitive items should therefore not be placed in an area where they might be damaged by incoming precipitation. Please also bear in mind that in the event of a power failure and rainfall, a window will not be automatically closed if no emergency generator is installed.

Running rails of shades icing up:

Note that the rails of shutters, awnings and blind which are externally mounted can ice up. Operating the drive under such conditions can damage the shades and drives.

5.1. General automation settings

ETS: Automation

Use the automation menu to allocate functions to the five automatic channels of the **Corlo Touch KNX**.

Furthermore, this menu is used for making general settings:
- Sun position calculation
- Access code for automatic menus
- Supervision of wind/precipitation objects
- Lock time in case of wind warning
- Twilight threshold value
- Extension and retraction delays for shades
- Opening limitation for windows
- Ventilation lock during cooling
- Night-time re-cooling
- Frost alarm
- Heat protection temperature
- Times for automatic reset

5.1.1. Allocate automation

First of all, you need to decide whether to use automatic functions or not. If this setting is set to "no", all automatic channels are deactivated, although allocations and settings may have been made previously.

Send automatically	Yes • <u>No</u>

Assign the desired function to the five automatic channels

Automatic 1 ... 5	• <u>Do not use</u> • Light • Shutter • Awning • Roller blind • Window • Fan • Temperature controller

5.1.2. Sun position

The sun position is needed to control the shades. The necessary information may be received via communication objects
no. 609 "automatic sun position measuring value Azimut" and
no. 610 "automatic sun position measuring value Elevation"
or be calculated within the system.

Sun elevation will be	• Calculated • **Received via communication objects**
Type of solar position objects *only if sun position is received via communication objects.*	• 2 byte • <u>4 byte</u>

The type of the sun position objects (2 or 4 byte) depends on the device sending the values.

For the **calculation** of the sun position, information about the location and time zone has to be provided. The location may be set by selecting a city or entering coordinates. **Select** city:

Sun elevation will be	• **calculated** • Received via communication objects	
Location input using	• <u>**City**</u> • Coordinates	
Country	• Belgium • Denmark • <u>Germany</u> • France • Great Britain • Italy	• Lichtenstein • Luxembourg • Netherlands • Austria • Switzerland • USA

Location	6 towns in Belgium 1 town in Denmark 46 towns in Germany; Stuttgart 23 towns in France 4 towns in Great Britain 10 towns in Italy 1 town in Lichtenstein 1 town in Luxembourg 2 towns in the Netherlands 4 towns in Austria 4 towns in Switzerland 2 towns in the USA

Enter coordinates:

Sun elevation will be	• **Calculated** • Received via communication objects
Location input using	• **City** • Coordinates
E. longitude (degrees, -180 … +180)	-180 … +180; 9
E. longitude (Minutes -59 … +59)	-59 … +59; 10
N. latitude (Degrees, -90 … +90)	-90 … +90; 48
N. latitude (Minutes -59 … +59)	-59 … +59; 46

In addition, the following information about the time is needed:

Time zone (relative to GMT):	
Hours	-12 … 13; 1
Minutes	0 … 59
European Summer Time	• Europe • USA • none • user-defined
Start of summer time: *May only be modified if there is an active user-defined summer time rule*	
on	• Monday • … • Sunday • Date (select fixed date, not day of the week)
From (day)	1…31; 25
(Month)	1…12; 3
(Hour)	0…23; 2
(Minute)	0…59
End of summer time: *May only be modified if there is an active user-defined summer time rule*	

on	• Monday • ... • <u>Sunday</u> • Date (select fixed date, not day of the week)
From (day)	1...31; <u>25</u>
(Month)	1...12; <u>10</u>
(Hour)	0...23; <u>2</u>
(Minute)	<u>0</u>...59
Time shift *May only be modified if there is an active user-defined summer time rule*	
Hours	-12...12; <u>1</u>
Minutes	<u>0</u>...59

5.1.3. Adapt parameters

Select "Transmit the following parameters: Yes" to render the modifications valid. Previous settings are then overwritten - including modifications done on the display!

Transfer the following parameters	No • <u>Yes</u>

General automation settings

You may want to enter an access code for the entire menu area for "automatic settings" on the display. The code is requested before the automation menus are shown.
Note: There are no automation menus available in version 0.1 of the display software!

Access code (8 digits from 0 to 9)	[free text] *An empty field means that no code query is done*

Wind and precipitation objects may be monitored regularly in order to ensure quick reactions to wind/precipitation warnings or malfunctions. If monitoring is activated, weather information must be received at the selected monitoring intervals (e.g. every 10 minutes), otherwise the relevant automatic channels shall move to a safe position.

Using wind and rain object monitoring	<u>Yes</u> • No
Monitoring interval *(only if Yes has been selected)*	5 s • ... • <u>10 min</u> • ... • 2 h

Wind alarm

If the wind threshold value for an automatic channel is exceeded, a 5-minute wind warning is triggered. if the wind value is exceeded once more during this period, the holding time of 5 minutes restarts.

For shades (awnings, shutters, blinds), an additional extended automatic lock applies after a wind warning. The duration is set here. If the shading was in automatic mode before the wind warning, the automatic mode remains inactive after the 5 minute wind warning lock time at first. However, manual operation is already possible again.

| Lock time duration for automatic mode after wind alarm in minutes | 0 ... 360 |

Twilight

The twilight threshold value denominates the brightness point when the system determines it to be "night". Please note that a brightness value of almost 10 Lux may be reached in moonlit nights. If the twilight threshold value is set to under 10 Lux, shades that are supposed to "close at night" might remain open because of the moonlight, or actually open because of it.

| below (in Lux) night settings are activated (switch delay = 1 minute) | 1 ... 200; 10 |

Travel delays

Travel delays prevent the solar protection system from continuously extending and retracting in the event of rapid changes in lighting conditions.

The brightness must remain uninterrupted above the aperture value set for solar protection for a set "extension delay time" (e. g. 1 minute) before the shade will extend. If the light intensity is below the threshold value for the duration of the "retraction delay short" without interruption, the set reaction for "short" is activated, e. g. the slats are opened. Only if the light intensity is uninterruptedly under the threshold value for the duration of the "retraction delay long", the shade is retracted.

Extension delay for blinds in minutes	1 ... 240; 1
Short retraction delay for shades in minutes	1 ... 240; 5
Long retraction delay for shades in minutes	1 ... 240; 30

Windows opening limitation

The opening limitation determines that a window only opens partly when the outdoor temperature is low. This prevents excessive cooling of the room.

Set the temperature here below which windows should only be opened within limits. Then also decide for how long this temperature setting has to be exceeded in order to deactivate the opening limitation.

| Start if below ... (in 0.1°C) | -50 ... 150; 20 |
| End if temperature exceeded for more than (in hours) | 1 ... 72; 8 |

The degree to which the opening should be limited is set within the automation functions for the different windows.

Ventilation lock

As soon as cooling is switched on, the window are closed and the fans deactivated. When the cooling is switched off again, the ventilation remains inactive for some time to ensure that cooled air is not immediately passed out through windows or fans. You may set the delay time for this as you wish.

The ventilation lock reacts to object no. 608 "automatic status cooling". This input object may also be set to the status of the internal cooling regulation (no. 671 and 672 "AutoX status cooling level X").

After shutting off the cooler, ventilation through windows or fans should stay blocked for ... minutes	1 ... 480; <u>60</u>

Night-time re-cooling

The night-time re-cooling function using the windows and ventilation equipment is activated once a set outdoor temperature is exceeded for an lengthy period of time.

Start when outdoor temperature of (in 0.1°C)	100 ... 350; <u>160</u>
is exceeded for more than ... hours	1 ... 72; <u>48</u>

The window(s) and ventilator(s) which are used for the night-time re-cooling, as well as the time period over which these are activated, can be set in the automatic operation functions for the individual
windows and ventilators.

Frost alarm

The frost alarm for blinds and windows will be active when during or after precipitation the outdoor temperature falls below a defined level.

The frost alarm is triggered in the following situations:
• The outdoor temperature is below the set frost alarm temperature and it is beginning to rain/snow.
• The outdoor temperature drops below the set frost alarm temperature while it is raining/snowing.
• It has rained/snowed. The outdoor temperature falls below the set frost alarm temperature within the set standby period after the end of the precipitation.
The frost alarm ends in the following situations:
• The outdoor temperature remains above the set dew point temperature for the period of time.

First determine when the frost alarm shall be triggered. Adjust the outdoor temperature that must be undercut to trigger the frost alarm (e.g. 2.0°C). Then set how many hours after precipitation the frost alarm standby mode should be active (e.g. 5 hrs). Select the standby period in a way ensuring that the humidity left from the previous precipitation has all dried up.

Now select the conditions for stopping the frost alarm. Set which outdoor temperature must be exceeded (e.g. 5.0°C) and for how long (e. g. 5 hrs.). Select a period ensuring that ice has completely melted away.

Start frost alarm when	
an outdoor temperature of ... (in 0.1°C) is undercut.	-50 ... 40; <u>20</u>
during or up to ... (in hours) after precipitation	1 ... 10; <u>5</u>
End frost alarm when	
an outdoor temperature of ... (in 0.1°C)	30 ... 100; <u>50</u>
for more than ... (in hours) is exceeded	1 ... 10; <u>5</u>

You adjust which blinds will be retracted and which windows will be closed in the automatic functions for the individual blinds and windows.

Heat protection

The heat protection for shades and windows will be active when the outdoor temperature set here falls below a defined level. Hysteresis determines how many degrees the outdoor temperature has to fall below the set heat protection temperature to void the heat protection status.

Temperature (in 0.1°C)	100 ... 500; <u>350</u>
Hysteresis (in 0.1°C)	10 ... 200; <u>50</u>

Automatic Reset

After manual operation, the respective automatic channel always remains in manual mode, automatic mode is deactivated. At the time of the daily automatic reset, the channels may be returned to automatic mode. In addition, you may determine that after a certain period the automatic mode is reactivated.

Automatic resets prevent manual operation of drives which then might remain in an inconvenient position (window inadvertently remains open, shutter remains retracted despite sunlight).

The drives can be reset daily at	
Time (Hours)	0 ... 23; <u>3</u>
Time (minutes)	<u>0</u> ... 59
or	
after (in minutes)	5 ... 480; <u>60</u>
to automatic after manual operation.	

Automatic resets may be activated and deactivated separately for each automatic channel.

5.2. Automatic light mode

ETS: Automatic X (light)

Light may be set up for simple switching or for dimming.

Light	• can be switched • can be dimmed

First, configure a lock via a blocking object.

Evaluation of the blocking object *Blocking objects no. 615/650/685/720/755* *"AutoX ... block"*	• 1 = block | 0 = release • 0 = block | 1 = release
Blocking object value before 1st communication	0 • 1
Action after locking	• Execution of last automatic command • Waiting for next automatic command

Due to the "change to manual mode if the feedback value does not correspond to the set point value", changes caused by external light switches are still registered in the system. Set the parameter to "yes", if all actuators of this channel are to be set to "manual", if the object "AutoX ... feedback" does not correspond to the set point value. This means that the automatic mode is inactive until the next automatic reset.
It is therefore advisable to set the parameters to "no" if many actuators are controlled via this channel. In this case, the information about "manual/automatic" should be processed by each actuator individually.

Switch to manual if feedback value deviates from automatic set point value. *Objects no. 636/667/702/737/772* *"AutoX ... feedback"*	No • Yes

Select "Transmit the following parameters: Yes" to render the modifications valid. Previous settings are then overwritten - including modifications done on the display!

Transfer the following parameters	No • Yes

You may want to enter an access code for the automatic light settings on the display. The code is requested before the automation menus are shown.
Note: There are no automation menus available in version 0.1 of the display software!

Access code (8 digits from 0 to 9)	[free text] *An empty field means that no code query is done*

Select a name for this light. A name can be selected for each of the six available languages
(max. 15 characters).
📖 *Editable text language*, Page 39

Automatic name	
Languages 1...6	[free text]

The light may be switched on at **night**, in pre-defined **periods** and in both situations, linked by AND or OR. Previously activate and define periods you would like to use here in the "weekly timer" menu!

    Twilight, Page 108

Light switches on	• at night • during period • <u>at night AND during period</u> • at night OR during period
Period 1 16 *only for time operation*	<u>No</u> • Yes

If the light can be **dimmed**, the percentage value for ON and OFF may be selected here.

Brightness value when ON (in %) *only for dimmable light*	0 ... <u>100</u>
Brightness value when OFF (in %) *only for dimmable light*	<u>0</u> ... 100

Finally, activate or deactivate the **automatic resets** for this light channel.

Perform Automatic Reset	
at set time	No • <u>Yes</u>
After the input waiting period following manual operation	<u>No</u> • Yes

    Automatic Reset, Page 110

5.3.   Shade automation (shutters, awnings, blinds)

The automatic mode for blinds and awnings offers the same setting options. For shutters, there is the additional slat setting option.

ETS: Automatic X (shutters/awnings/blinds)

5.3.1. Set bus communication

First, configure a lock via a blocking object.

Evaluation of the blocking object *Blocking objects no. 615/650/685/720/755 "AutoX ... block"*	• <u>1 = block | 0 = release</u> • 0 = block | 1 = release

Blocking object value before 1st communication	0 • <u>1</u>
Action after locking	• <u>Execution of last automatic command</u> • Waiting for next automatic command

Due to the "change to manual mode if the feedback value does not correspond to the set point value", changes caused by external switches are still registered in the system. Set the parameter to "yes", if all actuators of this channel are to be set to "manual", if the object "AutoX ... feedback" does not correspond to the set point value. This means that the automatic mode is inactive until the next automatic reset.

It is therefore advisable to set the parameters to "no" if many actuators are controlled via this channel. In this case, the information about "manual/automatic" should be processed by each actuator individually.

Switch to manual if feedback value deviates from automatic set point value. *Objects no. 636/667/702/737/772* *"AutoX ... feedback"*	No • <u>Yes</u>

Several objects allow an external evaluation and use of the shade status.
The safety object links frost, wind and precipitation alarm with OR.
"Use with alarm object: Yes" activates separate objects for frost, wind and precipitation warnings.

Use status objects for indoor/outdoor temperature blocks *Objects no. 625/660/695/730/765 "AutoX ...* *Status indoor temperature lock"* *Objects no. 626/661/696/731/766 "AutoX ...* *Status outdoor temperature lock"*	<u>No</u> • Yes
Use safety object *Objects no. 617/652/687/722/757* *"AutoX ... Safety"*	<u>No</u> • Yes
Use alarm objects *Precipitation alarm objects no. 618/653/688/* *723/758 "AutoX ... Rain alarm"* *Wind alarm objects no. 619/654/689/724/* *759 "AutoX ... Wind alarm"* *Frost alarm objects no. 620/655/690/725/760* *"AutoX ... Frost alarm"*	<u>No</u> • Yes

Transmission behaviour of the safety/alarm objects	• on change • on change to 1 • on change to 0 • on change and periodically • on change to 1 and periodically • on change to 0 and periodically
Transmit cycle *is only transmitted if "periodically" is selected*	5 s • ... • 2 h

5.3.2. Changing basic parameters

Select "Transmit the following parameters: Yes" to render the modifications valid. Previous settings are then overwritten - including modifications done on the display!

Transfer the following parameters	No • Yes

You may want to enter an access code for the automatic shade settings on the display. The code is requested before the automation menus are shown.
Note: There are no automation menus available in version 0.1 of the display software!

Access code (8 digits from 0 to 9)	[free text] *An empty field means that no code query is done*

Then select a name for this shade. A name can be selected for each of the six available languages (max. 15 characters).

Automatic name	
Languages 1...6	[free text]

5.3.3. Setting the blind automation

Priorities in automatic shading mode:

1. Alarm functions:

Alarm functions are used for shades in manual and in automatic mode. In case of frost, wind or precipitation alarm, shades are retracted and may not be extended manually.

2. Shade settings:

The settings are only executed if a shade is in automatic mode and none of the alarm functions named above is active.

The outdoor temperature lock (extended shades are not moved any more) has the highest priority, followed by
time opening (retraction).
time closure (extension),

night closure (extension),
indoor temperature lock (keep retracted) and
heat protection (alternative movement position)

Only if the direction and the height of the sun are correct and no lock or time/night function is active, the sun protection automatic mode is executed based on the light intensity.

Setting the shading

Select "Transmit the following parameters: Yes" to render the modifications valid. Previous settings are then overwritten - including modifications done on the display!

Transfer the following parameters	No • Yes

The **sun protection automatic mode** may shade:

Never: In this case, there will be no reaction to sunlight. The shading can be closed with a timer and during the night and operated manually.

Always: In this case, the shade automation approaches a set position, independently of the sun. However, the slats of shutters may always follow the sun position. Shading may be opened and closed based on a timer, closed during the night and operated manually. You may set a separate heat protection position.

Brightness-dependent: This means that the shade is automatically controlled based on light intensity, sun position, indoor and outdoor temperature. Shading may be opened and closed based on a timer, closed during the night and operated manually. You may set a separate heat protection position.

Frost, precipitation and wind alarm can be adjusted for all types of shading to protect the blinds. Such alarm functions block manual operation.

Shading	• Never • Always • Brightness-dependent

Settings appearing only in case of light-sensitive shading:

Set the light intensity, sun direction (Azimut) and height (elevation) for the shade.

Shading	**Brightness-dependent**
From a brightness of (in kLux)	1...99; 40
Sun direction 📖 *Sun position angle*, Page 120	• All sides • West • South-West • South • South-East • East • Angle range
greater than (in °) *only for angle range*	0...360

less than (in °) *only for angle range*	0...<u>360</u>
Sun elevation	• <u>Any height</u> • Angle range
greater than (in °) *only for angle range*	<u>0</u>...90
less than (in °) *only for angle range*	0...<u>90</u>

Select the **movement position** for automatic mode. In case of shutters, you might also select the slat setting and determine whether the slats are to follow the position of the sun. If so, we distinguish between four elevation areas which are each assigned a percentage of slat position.

Movement position (in %)	0...<u>100</u>
Slat position *only for shutters!*	• <u>Does not track the sun</u> • Tracks the sun
Slat position (in %) *without following the sun position*	0...100; <u>75</u>
Sun elevation: *following the sun position*	Slat position (in %):
0° - 15°	0...<u>100</u>
15° - 30°	0...100; <u>80</u>
30° - 45°	0...100; <u>65</u>
45° - 90°	0...100; <u>50</u>

If the shade conditions are no longer met (brightness etc), the movement position may be modified after the "short" retraction delay is completed. The shade is only retracted all the way after the "long" retraction delay is completed.

📖 *Travel delays*, Page 108

Change movement position after "short" retraction delay	<u>No</u> • Yes
Position (in %) *only in case of modification by* *after "short" retraction delay*	0 ... <u>100</u>
Modify slat position after "short" retraction delay *only for shutters*	<u>No</u> • Yes
Position (in %) *only in case of modification by* *after "short" retraction delay*	<u>0</u> ... 100

The **interior temperature block** enables the use of solar energy to warm the room. If the indoor temperature is, for example, under the set value in the morning, the shades remain retracted despite the sun. As soon as the set indoor temperature is exceeded, the block is lifted and the shade released.

Once the indoor temperature sinks again, the lock becomes active as soon as the temperature
is more than 3°C below the set value (hysteresis).
Please note that the retraction delay is also valid for the indoor temperature lock and the shade shall only be retracted when the delay time is over.

Use indoor temperature lock	No • Yes
Allow shading from (in 0.1 °C) *only if block is active*	50...400; 220

The **outdoor temperature block** prevents moving extended shades at low outdoor temperatures. The block is lifted again only when the temperature rises more than 2.0 °C over the pre-set value (hysteresis).

The block applies to the automatic mode only. Even for active outdoor temperature blocks, the drive reacts to frost, wind and rain alarms and to manual operating commands.

STOP   **ATTENTION!**
A drive or curtain can be damaged if an external shade which has frozen stiff is retracted!
Running rails or other mechanical parts may still be iced up although the outdoor temperature has already risen to quite high degrees.
In order to reliably prevent damage due to ice, use the **frost alarm** function.

Use outdoor temperature block	No • Yes
Allow shading from (in 0.1 °C) *only if block is active*	-200...300; 50

Note: Time coordinated/night closure function and outdoor temperature block.
If the outdoor temperature is below the blocking temperature, shades are automatically extended, but not retracted any more. If the shade no longer retracts after the set time period has expired, check whether the blind is frozen or if the running rails are iced up. If the blind runs freely, re-start the blind manually.

Settings appearing only in case of shading settings saved as applicable "always":

Select the **movement position** for automatic mode. In case of shutters, you might also select the slat setting and determine whether the slats are to follow the position of the sun. If so, we distinguish between four elevation areas which are each assigned a percentage of slat position.

Shading	**Always**
Movement position (in %)	0...100
Slat position *only for shutters*	• Does not track the sun • Tracks the sun
Slat position (in %) *without following the sun position*	0...100; 75

Slat position (only for shutters:

Slat position *only for shutters*	• **Does not track the sun** • Tracks the sun
Slat position (in %)	0...100; <u>75</u>

Slat position	• <u>Does not track the sun</u> • **Tracks the sun**
From a brightness of (in kLux)	1...99; <u>40</u>
Sun direction 📖 *Sun position angle*, Page 120	• <u>All sides</u> • West • South-West • South • South-East • East • Angle range
greater than (in °) *only for angle range*	0...360; <u>90</u>
less than (in °) *only for angle range*	0...360; <u>270</u>
Sun elevation	• <u>Any height</u> • Angle range
greater than (in °) *only for angle range*	<u>0</u>...90
less than (in °) *only for angle range*	0...<u>90</u>
Sun elevation:	Slat position (in %):
0° - 15°	0...<u>100</u>
15° - 30°	0...100; <u>80</u>
30° - 45°	0...100; <u>65</u>
45° - 90°	0...100; <u>50</u>
Slat position (in %) when sun no longer in the aforementioned range or after completion of short retraction delay	0 ... 100; <u>75</u>

Settings when the shading is activated for "always" or "brightness related":

If the shade is kept closed at all times, or controlled in relation to brightness, you can select whether the blinds should be used as a **heat protection** and opened in certain **intervals**.

The heat protection temperature is set in the "automatic" menu.
📖 *Heat protection*, Page 110

Use heat protection *only if shades are "never" used.*	<u>No</u> • Yes
Heat protection movement position *only if heat protection is used*	0 ... <u>100</u>

Heat protection slat position *only if heat protection is used*	0 ... <u>100</u>
Use time opening for *only if shades are "never" used.*	
Period 1 - 16	<u>No</u> • Yes

Settings for ALL modes of shading:

You may select **time and night closure** for all types of shading. Activate and define periods you would like to use here in the "weekly timer" menu first!

📖 *Weekly timer*, Page 48

Use time opening for *only if shades are "never" used.*	
Period 1 - 16	<u>No</u> • Yes
Use timed closure for	
Period 1 - 16	<u>No</u> • Yes
Use night-time closure	No • <u>Yes</u>
Positions during night time/time closure	
Movement position (in %)	0...<u>100</u>
Slat position (in %) *only for shutters*	0...<u>100</u>

Frost, precipitation and wind alarm make the shading move into its safe position and block manual operation.

Wind and precipitation alarm are maintained for 5 minutes. For shading there is an additional, prolonged automatic block after a wind alarm. During this time, automatic mode is blocked but manual operation already possible.

Conditions for frost alarm and the blocking period for shades after a wind alarm are determined in the "Automation" menu.

📖 *Frost alarm*, Page 109 and *Wind alarm*, Page 107

Use frost protection	<u>No</u> • Yes
Use rain alarm	<u>No</u> • Yes
Use wind alarm	No • <u>Yes</u>
Wind alarm value (in 0.1 m/s) *only if wind alarm is used*	5...195; <u>80</u>
Wind alarm delay (in s) *only if wind alarm is used*	1...20; <u>2</u>

Finally, activate or deactivate the **automatic resets** for this shading channel.

Perform Automatic Reset	
at set time	No • <u>Yes</u>
After the input waiting period following manual operation	<u>No</u> • Yes

📖 *Automatic Reset*, Page 110

Sun position angle

All sides	greater than 0°	smaller than 360°
West	greater than 180°	smaller than 360°
South-West	greater than 135°	smaller than 315°
South	greater than 90°	smaller than 270°
South-East	greater than 45°	smaller than 225°
East	greater than 0°	smaller than 180°

5.4. Automatic window mode

ETS: Automatic X (window)

Windows may be configured with or without gradual opening (opening step by step).

Window type	• without gradual opening • with gradual opening
Number of steps *only for gradual opening*	2...10; 5

5.4.1. Set bus communication

First, configure a lock via a blocking object.

Evaluation of the blocking object *Blocking objects no. 615/650/685/720/755* *"AutoX ... block"*	• 1 = block | 0 = release • 0 = block | 1 = release
Blocking object value before 1st communication	0 • 1
Action after locking	• Execution of last automatic command • Waiting for next automatic command

Due to the "change to manual mode if the feedback value does not correspond to the set point value", changes caused by external switches are still registered in the system. Set the parameter to "yes", if all actuators of this channel are to be set to "manual", if the object "AutoX ... feedback" does not correspond to the set point value. This means that the automatic mode is inactive until the next automatic reset.

It is therefore advisable to set the parameters to "no" if many actuators are controlled via this channel. In this case, the information about "manual/automatic" should be processed by each actuator individually.

Switch to manual if feedback value deviates from automatic set point value. *Objects no. 636/667/702/737/772* *"AutoX ... feedback"*	No • Yes

Several different objects allow an external evaluation and use of the window status.

The safety object links frost, wind and precipitation alarm with OR.
With "Use alarm object: Yes" separate objects for frost, wind and precipitation warnings are activated.

Use status objects for outdoor temperature block *Objects no. 626/661/696/731/766 "AutoX window status outdoor temperature block"*	No • Yes
Use safety object Objects no. 617/652/687/722/757 "AutoX window safety"	No • Yes
Use alarm objects *Precipitation alarm objects no. 618/653/688/ 723/758 "AutoX ... Rain alarm"* *Wind alarm objects no. 619/654/689/724/ 759 "AutoX ... Wind alarm"* *Frost alarm objects no. 620/655/690/725/760 "AutoX ... Frost alarm"*	No • Yes
Transmission behaviour of the safety/alarm objects	• on change • on change to 1 • on change to 0 • on change and periodically • on change to 1 and periodically • on change to 0 and periodically
Transmit cycle *is only transmitted if "periodically" is selected*	5 s • ... • 2 h

5.4.2. Changing basic parameters

Select "Transmit the following parameters: Yes" to render the modifications valid. Previous settings are then overwritten - including modifications done on the display!

Transfer the following parameters	No • Yes

You may want to enter an access code for the automatic window settings on the display. The code is requested before the automation menus are shown.
Note: There are no automation menus available in version 0.1 of the display software!

Access code (8 digits from 0 to 9)	[free text] *An empty field means that no code query is done*

Select a name for this window. A name can be selected for each of the six available languages (max. 15 characters).
  📖 *Editable text language*, Page 39

Automatic name	
Languages 1...6	[free text]

5.4.3. Setting the window automation

Priorities in automatic window mode:

1. Alarm functions:

Alarm functions are used for windows in manual and in automatic mode. In case of frost, wind or precipitation alarm, windows are closed and may not be opened manually.

Similarly, the ventilation block closes windows (object no. 608 "Automatic status cooling" = 1). They are then in automatic mode and can be immediately operated manually again. The delay time for the ventilation block can be adjusted.

 Ventilation lock, Page 109

2. Ventilation settings:

The settings are only executed if a window is in automatic mode and none of the alarm functions named above is active.

Highest priority is granted to
timed closure, followed by
outdoor temperature blocks (keep closed),
timed ventilation (open),
supply air temperature block (keep closed) and
night-time re-cooling (open).

This means that e.g. timed ventilation or night-time re-cooling will only occur, when the outdoor temperature exceeds the pre-set value for the outdoor temperature block.

Ventilation automation according to temperature, air humidity or CO_2 content is only executed if no block applies.

Setting the window ventilation

Select "Transmit the following parameters: Yes" to render the modifications valid. Previous settings are then overwritten - including modifications done on the display!

Transfer the following parameters	No • Yes

For the **ventilation** you may evaluate the indoor temperature, relative air humidity and the CO_2 content of the air in the room.

Use indoor temperature	No • Yes
Open from (in 0.1°C) *only if ventilation based on indoor temperature* (Hysteresis = 2°C)	50...400; 220
Use air humidity	No • Yes

Open from (in % rH) *only if ventilation based on air humidity* (Hysteresis = 3%)	10...95; <u>60</u>
Use CO_2	No • <u>Yes</u>
Open from above (in 10 ppm) *only if ventilation based on CO_2 value*	50...200; <u>80</u>
Close from below (in 10 ppm) *only if ventilation based on CO_2 value*	50...200; <u>55</u>

The **supply temperature block** closes the window if it is warmer outside than inside.

Close the window when the supply air temp. is higher than the room temperature	No • <u>Yes</u>

Select the periods for **night-time re-cooling**. Activate and define periods you would like to use here in the "weekly timer" menu first!
The night-time re-cooling is set in the "Automation" menu.
  Night-time re-cooling, Page 109

Use night-time re-cooling for	
Period 1 - 16	No • <u>Yes</u>
Open window until room temperature falls below below (in 0.1°C)	50...500; <u>160</u>
Window opening (in %)	0...100; <u>30</u>

The effect of the **outdoor temperature block** is that the window remains in the current position. The block can, for example, be used if the window should not be used for ventilation in winter (cold protection for plants).

The outdoor temperature block only applies to automatic operation; no ventilation then takes place. When the rain or wind alarm is triggered, the window will be closed despite the outdoor temperature block (alarm has priority over blocking temperature).

Manual operation continues to remain possible, even when the window is blocked because of low outdoor temperatures.

Use outdoor temperature block	<u>No</u> • Yes
Close when below (in 0.1°C) *if temperature block is used*	-100...200; <u>50</u>

Select the **periods** during which the window should be opened and those when it should be closed. Activate and define periods you would like to use here in the "weekly timer" menu first!
  Weekly timer, Page 48

Use time opening for	
Period 1 - 16	<u>No</u> • Yes

Use timed closure for	
Period 1 - 16	<u>No</u> • Yes

The **opening limitation** limits the opening range of the window when the outdoor temperatures are low. The opening limitations are set in the "Automation" menu.
📖 *Windows opening limitation*, Page 108

Use opening restriction	No • <u>Yes</u>
Position *only if opening is limited*	0 ... 100; <u>20</u>

The **ventilation block** is activated when cooling is switched on (object no. 608 "Automatic cooling status" = 1) and closes the window. It may, however, be opened again manually immediately.

Frost, precipitation and wind alarm, on the other hand, close the window and block manual operation. In case of precipitation alarm, the window may remain slightly open. Wind and precipitation alarm are maintained for 5 minutes.

Conditions for frost alarm and the delay period for the ventilation block are determined in the "Automation" menu.
📖 *Ventilation lock*, Page 109 and *Frost alarm*, Page 109

Use ventilation block	<u>No</u> • Yes
Use frost protection	<u>No</u> • Yes
Use rain alarm	<u>No</u> • Yes
Use gap opening during rain *only if precipitation alarm is used*	<u>No</u> • Yes
Gap opening (in %)	0 ... 100; <u>4</u>
Use wind alarm	No • <u>Yes</u>
Wind alarm value (in 0.1 m/s) *only if wind alarm is used*	5...195; <u>80</u>
Wind alarm delay (in sec) *only if wind alarm is used*	1...20; <u>2</u>

Finally, activate or deactivate the **automatic resets** for this window channel.

Perform Automatic Reset	
At set time	No • <u>Yes</u>
After the input waiting period following manual operation	<u>No</u> • Yes

📖 *Automatic Reset*, Page 110

5.5.　Automatic fan mode

Automatic control and manual operation of fans is only possible if the **Display Corlo Touch KNX** receives feedback about the current exhaust air level from the fan actuator.

ETS: Automatic X (fan)

5.5.1.　Set bus communication

First, configure a lock via a blocking object.

Evaluation of the blocking object *Blocking objects no. 615/650/685/720/755 "AutoX ... block"*	• <u>1 = block | 0 = release</u> • 0 = block | 1 = release
Blocking object value before 1st communication	0 • <u>1</u>
Action after locking	• <u>Execution of last automatic command</u> • Waiting for next automatic command

Due to the "change to manual mode if the feedback value does not correspond to the set point value", changes caused by external switches are still registered in the system. Set the parameter to "yes", if all actuators of this channel are to be set to "manual", if the object "AutoX ... feedback" does not correspond to the set point value. This means that the automatic mode is inactive until the next automatic reset.
It is therefore advisable to set the parameters to "no" if many actuators are controlled via this channel. In this case, the information about "manual/automatic" should be processed by each actuator individually.

Switch to manual if feedback value deviates from automatic set point value. *Objects no. 636/667/702/737/772 "AutoX ... feedback"*	No • <u>Yes</u>

The "Status outdoor temperature block" object allows an external evaluation and use of the fan status.

Use status objects for outdoor temperature block *Objects no. 626/661/696/731/766 "AutoX window status outdoor temperature block"*	<u>No</u> • Yes

5.5.2.　Changing basic parameters

Select "Transmit the following parameters: Yes" to render the modifications valid. Previous settings are then overwritten - including modifications done on the display!

Transfer the following parameters	No • <u>Yes</u>

You may want to enter an access code for the automatic fan settings on the display. The code is requested before the automation menus are shown.

Note: There are no automation menus available in version 0.1 of the display software!

Access code (8 digits from 0 to 9)	[free text] *An empty field means that no code query is done*

Select a name for this fan. A name can be selected for each of the six available languages (max. 15 characters).

  📖 *Editable text language*, Page 39

Automatic name	
Languages 1...6	[free text]

5.5.3. Setting the automatic ventilation

Priority for the fan automation functions:

The fan settings are only activated if there is a fan in automatic mode and the ventilation block (because of active cooling, object no. 608) is not active.

The highest priority is awarded to the
outdoor temperature block (switched off),
followed by
timed ventilation (activated),
supply air temperature block (switched off) and
night-time re-cooling (switched on).

This means that e.g. timed ventilation or night-time re-cooling will only occur, when the outdoor temperature exceeds the pre-set value for the outdoor temperature block.

Ventilation automation according to temperature, air humidity or CO_2 content is only executed if no block applies.

Ventilation settings

Select "Transmit the following parameters: Yes" to render the modifications valid. Previous settings are then overwritten - including modifications done on the display!

Transfer the following parameters	No • Yes

For the **ventilation** you may evaluate the indoor temperature, relative air humidity and the r CO_2 content of the air in the room.

Use indoor temperature	No • Yes
Start ventilation from (in 0.1°C) *only if ventilation based on indoor temperature* (Hysteresis = 2°C)	50...400; 220
Use air humidity	No • Yes
Start ventilation from (in % rH) *only if ventilation based on air humidity* (Hysteresis = 3%)	10...95; 60

Use CO$_2$	No • <u>Yes</u>
Start ventilation from above (in 10 ppm) *only if ventilation based on CO$_2$ value*	50...200; <u>80</u>
Stop ventilation from below (in 10 ppm) *only if ventilation based on CO$_2$ value*	50...200; <u>55</u>

The **supply temperature block** prevents ventilation if it is warmer outside than inside.

Terminate ventilation if the supply air temp. is higher than the room temperature	No • <u>Yes</u>

Set the **rotational speed range** you wish to use for ventilation.

Start exhaust ventilation at (in %)	1...100; <u>10</u>
and increase exhaust ventilation to (in %)	1...100; <u>80</u>

Select the periods for **night-time re-cooling**. Activate and define periods you would like to use here in the "weekly timer" menu first!
📖 *Weekly timer*, Page 48

Use night-time re-cooling for	
Period 1 - 16	No • <u>Yes</u>
Ventilate until room temperature falls below (in 0.1°C)	50...500; <u>160</u>
Ventilate at level (in %)	0...100; <u>30</u>

The **outdoor temperature lock** prevents ventilation when it is cold outside (e. g. protection of plants against cold). The block only applies to automatic mode, manual operation is still possible.

Use outdoor temperature block	<u>No</u> • Yes
Close when below (in 0.1°C) *if temperature block is used*	-100...200; <u>50</u>

Select the **periods** when you want to activate the ventilation. Activate and define periods you would like to use here in the "weekly timer" menu first!
📖 *Weekly timer*, Page 48

Use timed ventilation for	
Period 1 - 16	<u>No</u> • Yes
Ventilate at level (in %) *only for timed ventilation*	1...100; <u>50</u>

The **ventilation block** is activated when cooling is switched on (object no. 608 "Automatic cooling status" = 1) and prevents ventilation. However, the fan may be restarted manually immediately.

Use ventilation lock	<u>No</u> • Yes

Finally, activate or deactivate the **automatic resets** for this fan channel.

Perform Automatic Reset	
at set time	No • <u>Yes</u>
After the input waiting period following manual operation	<u>No</u> • Yes

🕮   *Automatic Reset*, Page 110

5.6. Temperature controller

Due to the temperature control, heating and cooling may be controlled in two levels.

ETS: Automatic X (temperature control)

General regulation

You may want to enter an access code for the automatic fan settings on the display. The code is requested before the automation menus are shown. Select "Transmit the access code: Yes" to render the modifications valid.
Note: There are no automation menus available in version 0.1 of the display software!

Transmit access code	<u>No</u> • Yes
Access code (8 digits from 0 to 9)	[free text] *An empty field means that no code query is done*

For an adequate regulation of the indoor temperature, comfort, standby, eco and building protection modes may be used.
Comfort when present,
Standby during short absences,
Eco as a night-time mode and
Frost/heat protection (building protection) during longer absences.

The settings for the temperature control include the set point temperatures for the individual modes. Objects are used to determine which mode is to be selected. A change of mode may be triggered manually or automatically (e.g. by a timer, window contact).

The **mode** may be switched with two 8 bit objects of different priority. Objects
"... HVAC mode (Prio 2)" for switching in everyday operation and
"... HVAC mode (Prio 1)" for central switching with higher priority.
The objects are coded as follows:

ID	Name	Encoding	Range	Use
20,102	DPT_HVACMode	field1 = HVACMode 0 = Auto 1 = Comfort 2 = Standby 3 = Economy 4 = Building Protection	[0 … 4]	HVAC

Alternatively, you can use three objects, with one object switching between eco and standby mode and the two others are used to activate comfort mode or frost/heat protection mode. The comfort object then blocks the eco/standby object, and frost/heat protection objects have the highest priority. Objects

"... Mode (1: Eco, 0: Standby)",

"... comfort activation mode" and

"... frost/heat protection activation mode"

Switch mode via	• two 8-bit objects (HVAC modes)
	• three 1-bit objects

Select the mode to be activated after reset (e.g. power failure, reset of the line via the bus). (Default).

Then configure a block of the temperature control by the blocking object.

Mode after reset	• Comfort
	• Standby
	• Eco
	• <u>Building protection</u>
The folllowing modes can be selcted via the operating surface:	
Comfort	<u>Yes</u> • No
Standby	<u>Yes</u> • No
Eco	<u>Yes</u> • No
Building Protection	<u>Yes</u> • No
Behaviour of the blocking object at value	• <u>1 = block	0 = release</u>
	• 0 = block	1 = release
Blocking object value before 1st communication	0 • <u>1</u>

Determine when the current settings of the controls are to be transmitted to the bus. Periodic transmission is safer if a message does not reach a recipient. You may also set up periodical monitoring by the actuator with this setting.

Send actuating variables	• <u>on change</u>
	• on change and periodically
from change of (in % absolut)	0...10; <u>2</u>
cycle *for periodical transmission only*	5 s • ... • <u>5 min</u> • ... • 2 h

The status object shows the current status of the output variable (0 = OFF, >0 = ON) and may, for example, be used for visualisations or to switch off the heating pump as soon as the heating is off.

Send status objects	• <u>on change</u>
	• on change to 1
	• on change to 0
	• on change and periodically
	• on change to 1 and periodically
	• on change to 0 and periodically

cycle *for periodical transmission only*	5 s • ... • <u>5 min</u> • ... • 2 h

Then define the type of setting. Heating and/or cooling may be controlled in two levels.

Type of control	• <u>One-stage heating</u> • Dual-speed heating • Single-speed cooling • Dual-stage cooling • Single-speed heating + Single-speed cooling • Dual-speed heating + Single-speed cooling • Dual-speed heating + Dual-speed cooling

General set point values

You may enter separate set point values for each mode or use the comfort set point as a basic value.

If you are using the controls for both heating *and* cooling, you may also select the setting "separately with switching object". Systems used for cooling in the summer and for heating in the winter can thus be switched from one to the other.

If you are using the basic value, only the deviation from the comfort set point value is listed for the other modes (e. g., 2°C less for standby mode).

Maintain changed nominal values after mode change	<u>Yes</u> • No
Setting the nominal values	• <u>separate</u> with switching object • separate without switching object • with comfort set point as a basis
Behaviour of the switching object at value *only if switching object is used*	• <u>0 = Heating</u> | 1 = Cooling • 1 = Heating | 0 = Cooling
Switching object value before 1st communication *only if switching object is used*	<u>0</u> • 1

The grades for the set point changes is predefined. Modifications may only remain active temporarily (do not save) or remain saved even after voltage recovery (and programming). This also applies to a comfort extension.

Grading for set point changes (in 0.1 °C)	1... 50; <u>10</u>
Saving set point value(s) and comfort extension time	• not • <u>after voltage recovery</u> • after voltage recovery and programming (do not use for first start-up!)

The control may be manually reset to comfort mode from eco, or night mode. This allows the user to maintain the daily nominal value for a longer time, e.g. when having

guests. The duration of this comfort extension period is set. After the comfort extension period is terminated, the system returns to eco mode.

Comfort extension time in seconds (can only be activated from eco mode)	1...36000; 3600

Set point Comfort

Comfort mode is usually used for daytime mode when people are present. A starting value is defined for the comfort set point as well as a temperature range in which the nominal value may be modified.

Initial heating/cooling set point (in 0.1 °C) valid till 1st communication *not upon saving the set point value after programming*	-300...800; 210
Min. object value heating/cooling (in 0.1 °C)	-300...800; 160
Max. object value heating/cooling (in 0.1 °C)	-300...800; 280

If the comfort set point is used as the basis, a dead zone is determined for the control mode "heating *and* cooling" to avoid direct switching from heating to cooling.

Dead zone between heating and cooling *only if both heating AND cooling are used.*	1...100; 50

Set point for standby

Standby mode is usually used for daytime mode when people are absent.

If set point values are entered separately:

A starting set point value is defined as well as a temperature range in which the nominal value may be modified.

Initial heating/cooling set point (in 0.1 °C) valid till 1st communication	-300...800; 210
Min. object value heating/cooling (in 0.1 °C)	-300...800; 160
Max. object value heating/cooling (in 0.1 °C)	-300...800; 280

If the comfort set point value is used as a basis:

If the comfort set point value is used as a basis, the deviation from this value is set.

Reduce nominal heating value (in 0.1°C) *for heating*	0...200; 30
Increase nominal cooling value\r\n (in 0.1°C) *for cooling*	0...200; 30

Eco set point

Eco mode is usually used for night mode.

If set point values are entered separately:

A starting set point value is defined as well as a temperature range in which the nominal value may be modified.

Initial heating/cooling set point (in 0.1 °C) valid till 1st communication	-300…800; <u>210</u>
Min. object value heating/cooling (in 0.1 °C)	-300…800; <u>160</u>
Max. object value heating/cooling (in 0.1 °C)	-300…800; <u>280</u>

If the comfort set point value is used as a basis:

If the comfort set point value is used as a basis, the deviation from this value is set.

Reduce nominal heating value (in 0.1°C) *for heating*	0…200; <u>50</u>
Increase nominal cooling value\r\n (in 0.1°C) *for cooling*	0…200; <u>60</u>

Set point values for frost/heat protection (building protection)

The building protection mode is used during longer absences. Set points for frost protection (heating) and heat protection (cooling) are determined which may not be modified from outside (no access via operating devices etc.). The building protection mode may be activated with delay, which allows you to leave the building before the controls switch to frost/heat protection mode.

Nominal value frost protection\r\n (in 0,1°C)	-300…800; <u>70</u>
Nominal value heat protection (in 0,1°C)	-300…800; <u>350</u>
Activation delay	no • 5 s • … • <u>5 min</u> • … • 2 h

General variables

This setting appears for the control types "Heating *and* Cooling" only. This is where you can decide whether to use a common variable for heating and cooling. If the 2nd level has a common variable, this is also where you determine the control mode of the 2nd level.

For heating and cooling	• <u>separate variables are used</u> • common variables are used for Level 1 • common variables are used for Level 2 • common variables are used for Level 1+2
Use actuating variable for 4/6-way valve	Yes • <u>No</u>

| Control type *only for level 2* | • 2-point control
• PI control |
| Regulating variable of the 2nd Stage is on *only for level 2* | • <u>1-bit object</u>
• 8-bit object |

Heating control level 1/2

If a heating control mode is configured, one or two setting sections for the heating levels are displayed.

On the 1st level, heating is controlled by a PI control which allows to either enter control parameters or select predetermined applications.

On the 2nd level (therefore only in case of a 2 level heating), heating is controlled via a PI or a 2-point-control.
On level 2, the set point deviation between the two levels must furthermore be determined, i. e. the lowest set point value from which the 2nd level is then added (when values exceed this set point).

| Set point difference between levels 1 and 2 (in 0.1°C) *only for level 2* | 0...100; <u>40</u> |
| Control type *only for level 2 and if no common variables are used* | • 2-point control
• PI control |

PI control with control parameters:

This setting allows individual input of the parameters for PI control.

| Control type | • **PI control** |
| Set control using | • **Controller parameter**
• provided applications |

Determine the deviation from the set point value which reaches maximum variable value, i. e. the point at which maximum heating power is activated.
The reset time shows how quickly the controls react to deviations from the set point value. In case of a short reset time, the controls react with a fast increase of the variable. In case of a long reset time, the controls react somewhat more gently and needs longer until the necessary variable for the set point deviation is reached.
You should set the time appropriate to the heating system at this point (note manufacturer instructions).

| Maximum control variable is reached at set point/actual difference of (in °C) | 0...<u>5</u> |
| Reset time (in min.) | 1...255; <u>30</u> |

Now determine what should be transmitted when the control is blocked. Set a value greater 0 (=OFF) to receive a basic heating level, e.g. for floor heating.
Upon release, the control variable follows the rule again.

When blocked, the variable shall	• not be transmitted • send a specific value
Value (in %) *only if a value is transmitted*	0...100

In case of a common variable for heating and cooling, 0 is always transmitted as a fixed value.

PI control with predetermined application:

This setting provides fixed parameters for frequent applications.

Control type	• **PI control**
Set control using	• Controller parameter • **provided applications**
Application	• Warm water heating • Floor heating • Convection unit • Electric heating
Maximum control variable is reached at set point/actual difference of (in °C)	Warm water heating: 5 Floor heating: 5 Convection unit: 4 Electric heating: 4
Reset time (in min.)	Warm water heating: 150 Floor heating: 240 Convection unit: 90 Electric heating: 100

Now determine what should be transmitted when the control is blocked. Set a value greater 0 (=OFF) to receive a basic heating level, e.g. for floor heating.
Upon release, the control variable follows the rule again.

When blocked, the variable shall	• not be transmitted • send a specific value
Value (in %) *only if a value is transmitted*	0...100

In case of a common variable for heating and cooling, 0 is always transmitted as a fixed value.

2-point-rule (only level 2):

The 2-point-rule is used for systems which are only set to ON or OFF.

Control type *is determined at a higher level for common variables*	• **2-point control**

Enter the hysteresis that prevents frequent on/off switching of temperatures in the threshold range. Then determine whether a 1 bit object (on/off) or an 8 bit object (on with percentage/off) should be used.

Hysteresis (in 0.1°C)	0...100; <u>20</u>
Actuating variable is a	• <u>1-bit object</u> • 8-bit object
Value (in %) *only for 8 bit objects*	0...<u>100</u>

Now determine what should be transmitted when the control is blocked. Set a value greater 0 (=OFF) to receive a basic heating level, e.g. for floor heating.
Upon release, the control variable follows the rule again.

When blocked, the variable shall	• not be transmitted • send a specific value
Value (in %) *only if a value is transmitted*	<u>0</u>...100

Cooling control level 1/2

If a cooling control mode is configured, one or two setting sections for the cooling levels are displayed.

On the 1st level, cooling is controlled by a PI control which allows to either enter control parameters or select predetermined applications.

On the 2nd level (therefore only in case of a 2 level cooling), cooling is controlled via a PI or a 2-point-control.
On level 2, the set point deviation between the two levels must furthermore be determined, i. e. the highest set point value from which the 2nd level is then added (when values exceed this set point).

Set point difference between levels 1 and 2 (in 0.1°C) *only for level 2*	0...100; <u>40</u>
Control type *only for level 2 and if no common variables are used*	• 2-point control • PI control

PI control with control parameters:
This setting allows individual input of the parameters for PI control.

Control type	• **PI control**
Set control using	• **Controller parameter** • provided applications

Determine the deviation from the set point value which reaches maximum variable value, i. e. the point at which maximum cooling power is activated.
The reset time shows how quickly the controls react to deviations from the set point value. In case of a short reset time, the controls react with a fast increase of the

variable. In case of a long reset time, the controls react somewhat more gently and needs longer until the necessary variable for the set point deviation is reached.

You should set the time appropriate to the cooling system at this point (note manufacturer instructions).

Maximum control variable is reached at set point/actual difference of (in °C)	0...<u>5</u>
Reset time (in min.)	1…255; <u>30</u>

Now determine what should be transmitted when the control is blocked.
Upon release, the control variable follows the rule again.

When blocked, the variable shall	• <u>not be transmitted</u> • send a specific value
Value (in %) *only if a value is transmitted*	<u>0</u>...100

In case of a common variable for heating and cooling, 0 is always transmitted as a fixed value.

PI control with predetermined application:

This setting provides fixed parameters for a cooling ceiling

Control type	• **PI control**
Set control using	• Controller parameter • **provided applications**
Application	• Cooling ceiling
Maximum control variable is reached at set point/actual difference of (in °C)	Cooling ceiling: 5
Reset time (in min.)	Cooling ceiling: 30

Now determine what should be transmitted when the control is blocked.
Upon release, the control variable follows the rule again.

When blocked, the variable shall	• not be transmitted • send a specific value
Value (in %) *only if a value is transmitted*	<u>0</u>...100

2-point-rule (only level 2):

The 2-point-rule is used for systems which are only set to ON or OFF.

Control type *is determined at a higher level for common variables*	• **2-point control**

Enter the hysteresis that prevents frequent on/off switching of temperatures in the threshold range. Then determine whether a 1 bit object (on/off) or an 8 bit object (on with percentage/off) should be used.

Hysteresis (in 0.1°C)	0...100; <u>20</u>
Actuating variable is a	• <u>1-bit object</u> • 8-bit object
Value (in %) *only for 8 bit objects*	0...<u>100</u>

Now determine what should be transmitted when the control is blocked.
Upon release, the control variable follows the rule again.

When blocked, the variable shall	• not be transmitted • send a specific value
Value (in %) *only if a value is transmitted*	<u>0</u>...100

In case of a common variable for heating and cooling, 0 is always transmitted as a fixed value.

6. Additional settings (ETS)

6.1.　Interfaces

Mechanical buttons or temperature sensors may be connected to the four analogue/digital inputs of the **Corlo Touch KNX**. The configuration is done via the menu.

ETS: Interfaces

Activate the interfaces you want to use.

Use interface 1 / 2 / 3 / 4	No • Yes

6.1.1.　Interface 1-4

Choose a function:

Bus function	• Switch • Changeover switch • Shutter • Roller blind • Awning • Window • Dimmer • 8-bit encoder • 16-bit encoder • Scene load • T-NTC temperature sensor

Input as switch:

If a button with switch function is assigned to the input, select the bus function "Switch" and specify which value is sent when pressing/releasing the button and when it will be sent.

Bus function	**Switch**
Command when pressing the button	• send 0 • send 1 • do not send telegram
Command when releasing the button	• send 0 • send 1 • do not send telegram
Send value	• on change • for change to 1 • for change to 0 • for change and cyclical • for change to 1 and cyclical • for change to 0 and cyclical
Send all values *(only if sent as "cyclical")*	5 s … 2 h

Input as selector switch:

If a button with switch function is assigned to the input, select the bus function "Selector switch" and specify if the button should switch when pressed/released..

Bus function	**Selector switch**
Command when pressing the button	• selector switch • do not send telegram
Command when releasing the button	• selector switch • do not send telegram

Input to shutter, blinds, awning or window control:

If the input to the drive control is used via the bus, select the bus function "shutter", "awning", "blinds" or "window" and specify the button function and control mode.

Function	**Shutter / blinds / awning / window**	
Button function	Up • Down Up • Down • Up/ Down On • Off • On/Off Open • Closed • Open/Closed	(shutter) (blinds) (awning) (window)
Control mode*	• Standard • Standard inverted • Comfort mode • Dead man's switch	

* For further details about settings, please see 📖 *Control modes for drive control*, Page 143

Input as dimmer:

If the input is used as a dimmer, select the bus function "Dimmer" and specify the button function, time interval (switching/dimming) and if requested, the repeat interval for a long button press.

Function	**Dimmer**
Button function	brighter • darker • brighter/darker
Time between switching and dimming (in 0.1 s)	1...50; 5
Repeat the dimm command	no • yes
Repeat the dimm command for a long button press *(if dimm command is repeated)*	every 0.1 s • every 2 sec; every 0,5 sec
Dim by *(if dimm command is repeated)*	1,50% • 3% • 6 % • 12,50% • 25% • 50%

Input 8 bit encoder:

If the input is to be used as an 8bit encoder, select the "8 bit encoder" bus function and specify which value will be sent.

Bus function	8 bit encoder
Value	-6707600...6707600; 0

Input 16 bit encoder:

If the input is to be used as a 16bit encoder, select the "16 bit encoder" bus function and specify which value will be sent.

Function	16 bit encoder
Value in 0.1	-6707600...6707600; 0

Input for scene control:

If the input is to be used for recalling and saving a scene, select the bus function "scene call-up" and decide whether the button should be used to save the scene as well (keep pressed for longer).

Bus function	Scene load
Scene no.	0...63
Scene function	• Activate • Activate and save
Press key for longer than (in 0.1 s) --> Scene saving *only for saving*	1...50

Temperature sensor

If a temperature sensor T-NTC is connected to the input, set the behaviour (malfunction object, transmission behaviour) and mixed-value calculation here. If the measuring values of the sensor should deviate from the actual temperature values (e. g. in case the installation site is not in an ideal position), this may be offset and corrected.

Bus function	Temperature sensor (NTC)
Use malfunction object	Yes • No
Offset in 0.1°C	-50...50; 0
Use external measured value	Yes • No
Ext. Meas. value ratio of the total value *only if an external value is used*	5% • ... • 50% • ... • 100%
All of the following settings then pertain to the total measuring value	
Transmit behaviour	• periodically • on change • on change and periodically

On change of *if transmitted on change*	0.1°C • ... • <u>0.5°C</u> • ... • 5.0°C
Transmission cycle *if transmitted periodically*	<u>5 s</u>...2 h

Control modes for drive control

Behaviour on button actuation in standard control mode:

	Short:	**Press and hold:**
Shutter	Stop/step	Up
Blind	Up	Stop
Awning	Stop	Retract
Window	Stop	Close

Standard:

If briefly operated, the drive will move incrementally or stops. If operated longer, the drive will move up to the end position. The time difference between "short" and "long" is set individually.

Control mode	**Standard**
Behavior during button operation: short = stop/increment long = Up or Down	
Time between short and long in 0.1 seconds	1...50; <u>10</u>

Standard inverted:

When pushed shortly, the drive moves up to the end position. When pushed for longer, the drive moves incrementally or stops. The time difference between "short" and "long" and the repeat interval is set individually.

Control mode	**Standard inverted**
Behavior during button operation: short = Up or Down long = Stop/Step	
Time between short and long in 0.1 seconds	1...50; <u>10</u>
Repeat the step command for a long button press	every 0.1 s • every 2 sec; <u>every 0.5 sec</u>

Comfort mode:

In the **comfort mode** pushing the button briefly, a bit longer and long will trigger different responses of the drive. The time intervals are set individually.

By pushing the button (shorter than adjustable time 1) the drive will be positioned (resp. stopped) incrementally.

If the drive is to be moved a bit farther, then a little longer push is needed (longer than time 1 but shorter than time 1+2). The drive stops immediately when releasing the button.

If the drive must be moved independently into the end position, the button is released only after times 1 + 2 have expired. The move can be stopped by briefly pushing.

Fig. 9
Time interval comfort mode diagram

Time 1	Time 2	
0	1	1 + 2
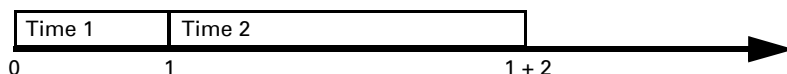
Point in time 0:	*Push of button, start of time 1*
Release before time 1 expired:	*step (or stop if drive is moving)*
Point in time 1:	*End of time 1, start of time 2*
	Moving command
Release after time 1 expired	
but before time 2 expires:	*Stop*
Release after time 1 + 2 expired:	*Move into end position*

Control mode	**Comfort mode**
Behavior during button operation: Button is pushed and released before time 1 expired = stop/step held longer than time 1 = Up or Down released between time 1 and 1-2= stop released after time 1 +2 = no more stop	
Time 1	0.0s ... • 2 s; <u>0.4 s</u>
Time 2	0 s • 2 s; <u>2 s</u>

Dead man's switch:

The drive moves as soon as the button is pushed and stops as soon as the button is released.

Control mode	**Dead man's switch**
Behavior during button operation: Push button = Up or Down command Release button = Stop command	

6.2. Temperature threshold values

The **Display Corlo Touch KNX** can evaluate the temperature readings (e. g. from a T-NTC at an input) using the temperature threshold values and then activate output objects accordingly.

ETS: Temperature thresholds

Activate the necessary temperature threshold values.

Use threshold values 1 - 4	<u>No</u> • Yes

6.2.1. Threshold values 1-4

Threshold value:

The threshold value may be set via parameters, i. e. directly in the menu.
ETS: Temperature thresholds > threshold value 1...4

or via communication objects (object no. 922-23/929-30/936-37/943-44).

Threshold value setting via	• <u>Parameter</u> • Communication object

Threshold value setting via parameter:

Threshold value in 0.1°C	-300 ... 800; <u>200</u>
Hysteresis of the threshold value in %	0 ... 50; <u>20</u>

Threshold value setting via communications object:

The object value is limited here, and the type of threshold value modification selected (reception of an absolute value or increase/decrease of the current value).

The last communicated value should be retained	• <u>Not</u> • After voltage recovery • After voltage recovery and programming (attention: do not use for first start-up)
Start value valid till 1st communication *not if value remains intact during programming*	
Object value limit (min) in 0.1°C	<u>-300</u> ... 800
Object value limit (max) in 0.1°C	-300 ... <u>800</u>
Type of threshold value change	• Absolute value • Increase / Decrease
Step-by-step *only when increasing/decreasing*	<u>0.1°C</u> • ... • 5°C
Hysteresis of the threshold value in %	0 ... 50; <u>20</u>

Switching output:

Set reaction, delay and transmission behaviour for the output

Output is at (TV = threshold value)	• <u>TV above = 1 | TV - Hyst. below = 0</u> • TV above = 0 | TV - Hyst. below = 1 • TV above = 1 | TV - Hyst. below = 0 • TV above = 0 | TV - Hyst. below = 1
Delays can be set via objects (in seconds)	<u>No</u> • Yes

Delay from 0 to 1 *if objects are delayed via "yes" objects:* valid till 1st communication	No • 5 s • ... • 2 h
Delay from 1 to 0 *if objects are delayed via "yes" objects:* valid till 1st communication	No • 5 s • ... • 2 h
Switching output transmits	• on change • on change to 1 • on change to 0 • on change and periodically • on change to 1 and periodically • on change to 0 and periodically
cycle	5 s • ... • 2 h

Block

Use switching output block	No • Yes

If the block is used:

Enter the behaviour, the value before 1st communication and the blocking action. The setting options for the release action depend on the parameter value "switching output sending ..." (see "switching output")

Evaluation of the blocking object	• at value 1: block | at value 0: release • at value 0: block | at value 1: release
Value of the blocking object before 1st communication	0 • 1
Action when locking	• do not transmit message • transmit 0 • transmit 1
Action upon release (with 2 seconds release delay)	• do not transmit message • Transmit switching output status

6.3. Scenario control

Set up the scenes that may then be called up (and be modified) via objects.

ETS: Scene control

First, activate the required number of scene objects (up to 16 objects, no. 821-836).

Use scene objects 1 - 16	**Yes**

6.3.1. Scene objects 1 - 16

Define the individual scene objects (e. g. sending an 8 bit value in % to address the light dimming actuator in the living room). The scene objects have to be linked to the respective actuator inputs.

After reset, last received value should	• Not be retained • Retained
Object type	• 1 bit • 8 bit [0...255] • 8 Bit in % [0...100] • 8 Bit in ° [0...360] • 16-bit floating point [-6707600...+6707600]

Those scene objects (e. g. the dimming linked to the living room light) can now be assigned to the individual scenes (1...16) and a value be defined. This makes it possible to use a link more than once (e. g. dimming to 20% for the "watching TV" scene, and to 60% for the "guests" scene).

Use scene 1 - 16	No • Yes
When a scene is used, the following values appear:	
Value *for "1-bit object type"*	0 • 1
Value *for "8-bit object type [0...255]"*	0...255
Value *for "8-bit object type in %[0...100]"*	0...100
Value *for "8-bit object type in ° [0...360]"*	0...360
Value (in 0.1) *for "16-bit floating comma object type"*	-6707600...6707600; 0

6.4.   Logic (ETS)

The **Corlo Touch KNX** provides 16 logistics inputs, four logic gates with AND and four with OR.

ETS: Logic

Activate the logic inputs and assign object values up to 1st communication.

Use logic inputs	Yes • No
Object value prior to 1. communication for:	
- Logic inputs 1...16	0 • 1

Activate the required logic outputs.

AND Logic:

AND logic output 1...4	Not active • Active

OR Logic:

OR logic output 1...4	Not active • Active

6.4.1. AND logic outputs 1/2/3/4 and OR logic outputs 1/2/3/4

The same setting options are available for AND and OR logic.

Each logic output may transmit one 1 bit or two 8 bit objects. Determine what the output should send if logic = 1 and = 0.

1. / 2. / 3. / 4. Input	• Do not use - Logic inputs 1...16 - Logic inputs 1...16 inverted
Logic output transmits	• one 1-bit object • two 8-bit objects

Logic output transmits a 1 bit object:

Logic output transmits	**a 1-bit object**
if logic = 1 ➔object value	1 • 0
if logic = 0 ➔object value	1 • 0

Logic output transmits two 8 bit objects:

Logic output transmits	**two 8-bit objects**
Object type	• Value [0…255] • Percent [0…100%] • Angle [0…360°] • Scene call-up [0…127]
if logic = 1 ➔object A value	0 … 255 / 100% / 360° / 127; 1
if logic = 0 ➔object A value	0 … 255 / 100% / 360° / 127; 0
if logic = 1 ➔object B value	0 … 255 / 100% / 360° / 127; 1
if logic = 0 ➔object B value	0 … 255 / 100% / 360° / 127; 0

Example: Objects for shading control
Object A: Shade position Height (0 = safe position, 255 = fully extended).
Object B: Shade position slat angle (255 = 100% closed, 200 = approx. 80% closed).

Transmit behaviour	• on change of logic
	• on change of logic to 1
	• on change of logic to 0
	• on change of logic and periodically
	• on change of logic to 1 and periodically
	• on change of logic to 0 and periodically
	• on change of logic+object receipt
	• on change of logic+object receipt and periodically
Transmit cycle *(if transmitted periodically)*	5 s • 10 s • ... • 2 h

Block:

Enter the behaviour, the value before 1st communication and the blocking action.

Evaluation of the blocking object	• 1 = block | 0 = release
	• 0 = block| 1 = release
Blocking object value before 1st communication	0 • 1
Behaviour of the switching output	
On block	• do not transmit message
	• transmit value for logic = 0
	• transmit value for logic = 1
On release (with 2 seconds release delay)	[Dependent on the "Switching output transmits" setting]

The setting options for the release behaviour depend on the parameter value "switching output sending ..." (see "switching output")

Switching output transmits on change	• do not transmit message
	• transmit value for current logic status
Switching output transmits on change to 1	• do not transmit message
	• if logic = 1 ➔ transmit value for 1
Switching output transmits on change to 0	• do not transmit message
	• if logic = 0 ➔ transmit value for 0
Switching output transmits upon change and periodically	Transmit value for current logic status
Switching output transmits upon change to 1 and periodically	• if logic = 1 ➔ transmit value for 1
Switching output transmits upon change to 0 and periodically	• if logic = 0 ➔ transmit value for 0
Switching output transmits upon change and object receipt	• do not transmit message
	• transmit value for current logic status
Switching output transmits upon change and object receipt and periodically	Transmit value for current logic status