Corlo Touch KNX
Display and Touch Switch

Technical specifications and installation instructions

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.

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
- 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)
- Illuminated logo (optional) with individually variable colors (RGB).
  See "Illuminated labeling/logo" on page 4.
- 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**

Configuration is performed using the KNX software ETS. The **programme file** (format VD), the data sheet and the manual can be downloaded from the Elsner Elektronik homepage on **www.elsner-elektronik.de** in the "Service" menu.

1.1.   Deliverables

- Display unit
- Analog/digital input breakout cable

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)

1.2. Technical data

Housing	Glass: Schott Xensation, hardened, Surround: chromed 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 surround • White glass, matt chromed surround • Black glass, bright chromed surround • Black glass, matt chromed surround • Special colors on request (see *Colors for surround and frame*, page 4)
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 approx. 140 g, 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	12...24 V DC

Power consumption	• 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)

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

The product conforms with the provisions of EC guidelines
• EMC Directive 2004/108/EC
• Low Voltage Directive 2006/95/EC
The following standards and/or technical specifications have been applied:
• EN 50491-5-1: 2010
• EN 50491-5-2: 2011
• EN 50491-5-3: 2011

1.3.   Customizing options

1.3.1. Illuminated labeling/logo

The display **Corlo Touch KNX** can be provided with individual labeling or logo. The "logo labeling" option must be quoted when ordering (refer also to the price list); retrospective labeling is not possible. Return is not acceptable for personalized products.

The logo is engraved by lasing in the paint above the display and is backlit. The light color is adjustable and can also be matched to the ambient lighting.

When choosing a logo, please note the maximum usable area of 20 mm × 2.2 mm (width× height). We need the desired logo as a vector file. We will check the data and you will receive feedback on the technical and design feasibility of your labeling.

Labeling area
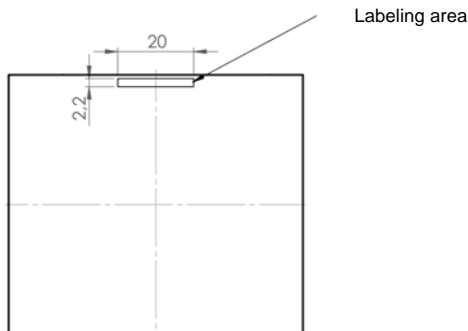
1.3.2. Colors for surround and frame

The standard colors for the display surround 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.

2.   Installation and start-up

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 immediately for any mechanical damages. 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.

2.2.   Installation

2.2.1. Assembly site and assembly preparations

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

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.
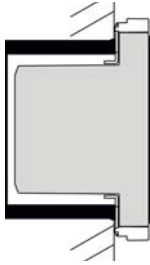
Fig. 1: Sectional drawing.
The **Display Corlo Touch KNX** *fits in a normal junction box (R 60 mm, depth 42 mm).*

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

2.2.2. 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
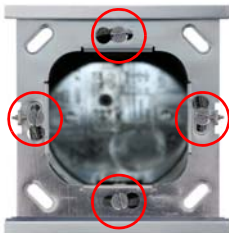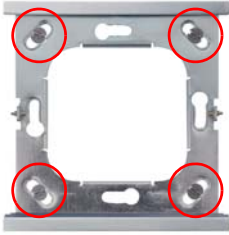*A socket with 4 screw domes faciliates installation.*

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 breakout cable for analog/digital inputs to the display unit.

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

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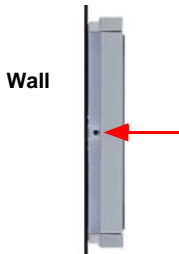
Fig. 6
To remove the display unit from the frame, press one of the snaplock connections on the side of the device with a sharp instrument. You can now pull the device to the front at the unlocked side und remove it.
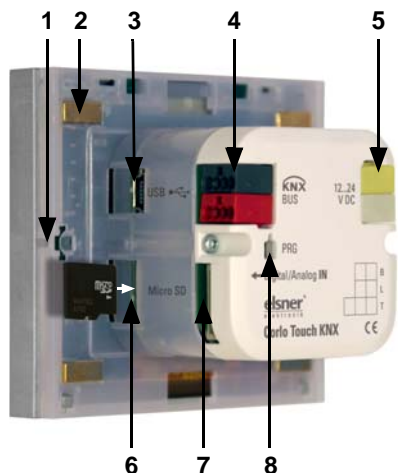
2.2.3. Connection overview

Fig. 7
1   Snaplock connector seating
2   Magnets (additional fixing)
3   USB socket
4   KNX terminal bus +/-
5   Terminal auxiliary supply 12...24V DC, 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.

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

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 initialization phase lasting 5 seconds. During this phase no information can be received via the bus.

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).

4. 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.

5. Load individual images

5.1. Images for screensaver

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).

5.2.   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).

5.3.   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
Icons for symbols	48 × 48 pixels	.png	icons
Icons for rotary control	158 × 158 pixels	.png	icons