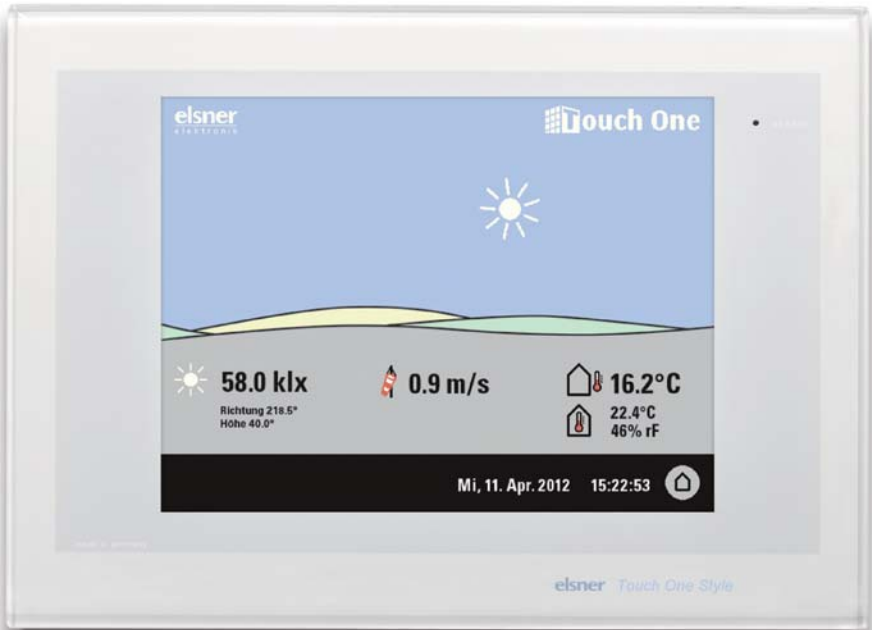


KNX Touch One Style

Touchpanel for Room Automation

Item numbers 70197 (white), 70198 (black)



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Explanation of the symbols used in this manual



Danger of death by electrocution!

Advice on dangers concerning work on electrical terminals, components etc.
Safety measures to protect the life and health of relevant personnel.



Safety instruction!

Instructions that must strictly be observed to ensure the safe operation.
Safety measures to protect against damage to persons or property.



“Control unit”

The symbol is followed by a menu path. In this menu the settings just described can be changed.



“Manual”

The symbol is followed by chapter information with a page number. In this chapter you will find additional information about the setting just described.

ETS

In the ETS tables, the default settings are underlined.

1. Description

1.1. Field of application

The **Room Controller KNX Touch One Style** enables control of the KNX building technology for one room by means of a touch-sensitive display screen. The unit provides integrated control functions which can also be directly set on the display (automatic). Basic settings are made by the installer in the ETS.

The **KNX Touch One Style** with integrated indoor sensor (temperature, air humidity) includes an internal automated operation function for shades (sun/privacy shades) and room climate control (heating, cooling, ventilation), internal light control as well as bus functions for time and scene control. 4 binary inputs enable the connection of conventional buttons, switches and window contacts.

Eight universal pages with up to eight functions per page can be created to ensure the orderly operation and display of the function and object assignments.

The Remo 8 eight-channel wireless remote control can be used with the **KNX Touch One Style** for remote control of the drives.

Functions

- Internal automatic shade controls (protection from the sun/privacy)
- Room climate control (heating, cooling, ventilation)
- Internal lighting control
- Integrated interior sensors (temperature, air humidity)
- Bus functions for time and scene control
- Universal menu to display and operate the function and object assignments
- Bus functions: Actuating variable comparator, AND/OR logic

Die Konfiguration erfolgt mit der KNX-Software ETS. **Produktdatei**, Datenblatt und Handbuch stehen auf der Homepage von Elsner Elektronik unter www.elsner-elektronik.de im Menübereich „Service“ zum Download bereit.

1.1.1. Scope of delivery

- Central control and operation unit with colour touch-display screen, 5.7 inch
Integrated interior sensors (temperature, air humidity) and
4 binary inputs (e.g. for buttons)
- Data sheet

Accessories (not included in the scope of delivery):

- Radio remote control Remo 8

1.1.2. Technical Data

Housing	Glass, plastic
Colour	<ul style="list-style-type: none"> • White/grey • Dark grey/black, reflectiv coating
Assembly	Flush/cavity wall
Protection Class	IP 20

Dimensions	Display front approx. 181 × 131 (W × H, mm), mounting depth approx. 8 mm, concealed box approx. 172 × 122 × 81 (W × H × D, mm)	
Weight	approx. 765 g	
Ambient temperature	Operational 0 to +45°C, Storage -30 to +70°C, Avoid condensation	
Auxiliary supply	12...40 V DC / 14...28 V AC Residual ripple 10 %	
Auxiliary current at 100% display lighting	300 mA at 12 V DC 130 mA at 24 V DC 80 mA at 40 V DC	230 mA at 14 V AC 110 mA at 28 V AC
Auxiliary current at 0% display lighting	120 mA at 12 V DC 55 mA at 24 V DC 35 mA at 40 V DC	85 mA at 14 V AC 45 mA at 28 V AC
Power consumption	For 100 % display lighting: max. 3.6 Watt For 0 % display lighting: max. 1.5 Watt	
Bus current	max. 10 mA	
Data output	KNX +/- Bus connector terminal	
BCU type	TP UART	
PEI type	0	
Group addresses	max. 1024	
Assignments	max. 1024	
Communications objects	447 (Number 1 ... 532)	
Temperature measurement range	-40...+100°C	
Resolution (temperature)	0.1°C	
Accuracy (temperature)	± 1.0°C from +5°C to +45°C	
Humidity measurement range	0 ... 100 %	
Resolution (humidity)	0,1 % 0 % to 20 % = ± 5 % rH 20 % to 80 % = ± 3 % rH 80 % to 100 % = ± 5 % rH	
Drift (humidity)	± 0.5 % rH per year in normal atmosphere	

* Concerning the **accuracy** of the measurement, please not chapter

 Installation location

Please also take note that the displayed temperature value will be too high temporarily after a **power breakdown**.

The product conforms with the provisions of EC guidelines

- EMC Directive 2004/108/EC
- Low Voltage Directive 2006/95/EC
- R&TTE Directive 1999/5/EG

The following standards and/or technical specifications have been applied:

- EN 301489-1 V1.9.2
- EN 300220-2 V2.1.2
- EN 50491-5-1 : 2010
- EN 50491-5-2 : 2011

1.2. Maintenance and care

Finger marks on the touch screen are best removed with a damp cloth or a microfiber cloth. You can wipe the buttons without activating them.

Do not use abrasives / detergents or aggressive cleaners for cleaning.

If there is a power outage, the data you have entered will be saved for around 10 years. No battery is required for this.

1.3. Connection and control options

The following **ambient parameters** are measured and displayed:

- Indoor temperature
- Air humidity, interior

The following **ambient parameters** must be received:

- Brightness
- Wind speed
- Precipitation
- Outdoor temperature

This data can be provided by Suntracer KNX, Suntracer KNX-GPS, or Suntracer KNX-GPS light weather sensors.

- Time/Date

It is recommended that **Date and time** be received by means of the KNX. When the date and time are set manually on the touch display, the values are not saved following an auxiliary power failure, and these must then be re-entered.

The following devices can be connected using a **wireless connection**:

- 8-channel radio remote control Remo 8

The following **button interfaces** are available:

- 4 binary inputs for connecting conventional buttons, switches and window contacts

1.3.1. An overview of the automatic functions

The **Room Controller KNX Touch One Style** has got internal automatic functions for blinds (for protection from the sun/privacy) and for room climate regulation (heating, cooling, ventilation).

General instructions:

- The entire runtime is completed for timed closures
- The movement positions are only settable in the blind and ventilation functions

Automatic functions for up to eight Lighting settings

- Time switching / night switching: Switching on for a set period and at night (periods, brightness values can be set)
- Switch on daily (periods can be set)
- Dim the light (period, brightness at ON/OFF can be set)
- Automatic resets (time/periods can be set)

Automatic functions for up to six Shutters

- Blind dependent on brightness and position of the sun (Sun elevation and direction can be set) or independent of brightness (slat and travel position can be set) or leave extended (privacy, automatic retraction only in the event of rain or wind alarm)
- Night-time closure (can be switched off)
- Timed closure (period can be set)
- Interior temperature lock: Leave open until a selectable interior temperature is reached (can be switched off)
- Outside temperature lock: Lock when below a selectable external temperature (can be switched off)
- Frost alarm: Retract during rainfall below a selectable external temperature (can be switched off)
- Wind alarm: Retract when a selectable wind speed is exceeded (can be switched off)
- Rain alarm: Retract during rainfall (can be switched off)
- Travel position and slat position can be set (Slat retraction dependent on sun elevation possible)
- Travel delays during extension/retraction (can be set)

Automatic functions for up to four Awnings

- Extension dependent on brightness and position of the sun (Sun elevation and direction can be set) or leave retracted independent of brightness (manual extension only) or leave extended independent of brightness (privacy, automatic retraction only in the event of rain or wind alarm)
- Leave retracted until a selectable interior temperature is reached (can be switched off)
- Outside temperature lock: Allow blinds from a selectable external temperature (can be switched off)
- Interior temperature lock: Allow blinds from a selectable interior temperature (can be switched off)
- Frost alarm: Retract during rainfall below a selectable external temperature (can be switched off)
- Wind alarm: Retract when a selectable wind speed is exceeded (can be switched off)

- Rain alarm: Retract during rainfall (can be switched off)
- Travel position can be set
- Travel delays during extension/retraction (can be set)

Automatic functions for up to four Roller shutters

- Close dependent on brightness and position of the sun (travel position can be set) or leave open independent of brightness (Closure only using time control or manually) or leave closed independent of brightness (privacy, automatic retraction only in the event of rain or wind alarm)
- Night-time closure (can be switched off)
- Timed closure (period can be set)
- Interior temperature lock: Leave open until a selectable interior temperature is reached (can be switched off)
- Outside temperature lock: Lock when below a selectable external temperature (can be switched off)
- Frost alarm: Retract during rainfall below a selectable external temperature (can be switched off)
- Wind alarm: Retract when a selectable wind speed is exceeded (can be switched off)
- Rain alarm: Retract during rainfall (can be switched off)
- Travel position can be set
- Travel delays during extension/retraction (can be set)

Automatic functions for up to two Windows

- Open at a selectable interior temperature (TH sensor/CO2 can be switched off)
- Open at a selectable air humidity in the room (TH sensor/CO2 can be switched off)
- Open/close at a selectable CO2 content in the room (TH sensor/CO2 can be switched off)
- Outside temperature lock: Lock when below a selectable external temperature (can be switched off)
- Frost alarm: Close during rainfall below a selectable external temperature (can be switched off)
- Close when the supply air temperature is higher than the room temperature (TH sensor/CO2 can be switched off)
- Rain alarm: Close completely or to only provide a gap during rainfall (can be switched off)
- Wind alarm: Close when a selectable wind speed is exceeded (can be switched off)
- Timed ventilation/closure (periods can be set, switched off)
- Night-time re-cooling (period, room temperature and window opening can be set, switched off)
- Leave closed during a settable period
- Travel position/number of steps (Stepped window openings operate gradually with a selectable number of steps (2-10))

Automatic functions for a ventilator

- Use ventilator (can be switched off)
- Timed ventilation in up to 16 periods with defined force (periods can be set, ventilation steps can be set on a percentage basis)
- Use TH sensor for ventilator (can be switched off)
- Ventilate until room temperature drops below a set value (value and ventilation steps can be defined)
- Ventilate from a selectable interior temperature (can be switched off)
- Ventilate from a selectable air humidity in the room (can be switched off)
- Ventilate from a selectable CO2 content in the room (can be switched off)
- Start and increase exhaust ventilation (can be set on a percentage basis)
- Use night-time re-cooling for up to 16 periods (period can be set)

Automatic functions for heating and cooling

- Switch between heating and cooling by means of a dead zone (temperature can be set) or by means of a switching object
- Night-time reduction (with settings for the period and the temperature to which this should reduce)
- Day mode extension (temporary deactivation of night mode)
- Frost/heat protection (reference value and activation delay can be set)

1.3.2. Overview of functions

1.3.2.1. Only using ETS settable functions

- All parameters under General Settings
- TH sensor transmission behaviour
- Function and thus object allocations for Start and Universal menus
- Use of Lights 1 - 8 and Light type
- Use of Shutters 1 - 6, Awnings 1- 4, Roller Shutters 1 - 4
- Use of Windows 1 - 2 and Window type
- Temperature regulation type
- Actuating variable comparator
- Logic

1.3.2.2. Only using Display settable functions

- Calibrating the touch display
- Teaching radio remote control Remo 8
- Programming button/Programming LED (phys. address)
- Reset

1.3.2.3. Using ETS and display operable functions

Settings

- Language
- Date and time

- Location
- Display
- Texts
- Automatic
- TH sensor (adjusting/external segment)
- Alarm actions
- Access code

Light automation + names

Blind automation + names + manual control

- Blind
- Awning
- Roller blind

Window automation + manual control

Ventilation automation

The reference values for the temperature regulation defined using the ETS can be changed on the display.

Change names for functions, pages and scenes.

Temperature and humidity offset (correction to TH sensors).

1.4. List of communication objects

DTP: Data Point Type

No.	Name	Function	DPT	Flags
1	Software version	Output	217.001	C R T
2	Unit malfunction	Output	1.001	C R T
3	Date	Input	11.001	K S Ü U
4	Time	Input	10.001	K S Ü U
6	Display light brightness in %	Input	5.001	C R W
8	Surface operation_1	Output	1.001	C R T
9	Surface operation_8	Output	5.001	C R T
10	TH sensor malfunction	Output	1.001	C R T
11	External temperature measurement value	Input	9.001	K S Ü U
12	Internal temperature measurement value	Output	9.001	C R T
13	Overall temperature measurement value	Output	9.001	C R T

No.	Name	Function	DPT	Flags
14	External humidity measurement value	Input	9.007	K S Ü U
15	Internal humidity measurement value	Output	9.007	C R T
16	Overall humidity measurement value	Output	9.007	C R T
17	Temperature requirement Min./maximum value	Input	1.017	K S
18	Minimum temperature measurement value	Output	9.001	C R T
19	Maximum temperature measurement value	Output	9.001	C R T
20	Reset min./max. temperature value	Input	1.017	K S
21	Request min./max. humidity value	Input	1.017	K S
22	Minimum humidity measurement value	Output	9.007	C R T
23	Maximum humidity measurement value	Output	9.007	C R T
24	Reset min./max. humidity value	Input	1.017	K S
29	CO2 measurement value in ppm	Input	9.008	K S Ü U
30	Rain	Input	1.002	K S Ü U
31	External temperature measurement value	Input	9.001	K S Ü U
32	Wind force measurement value	Input	9.005	K S Ü U
33	Brightness measurement value	Input	9.004	K S Ü U
39	Alarm 1	Input	1.001	K S
40	Alarm 1 Acknowledge	Input / Output	1.001	K S Ü
41	Alarm 2	Input	1.001	K S
42	Alarm 2 Acknowledge	Input / Output	1.001	K S Ü
43	Alarm 3	Input	1.001	K S
44	Alarm 3 Acknowledge	Input / Output	1.001	K S Ü
45	Alarm 4	Input	1.001	K S
46	Alarm 4 Acknowledge	Input / Output	1.001	K S Ü
47	Alarm 5	Input	1.001	K S
48	Alarm 5 Acknowledge	Input / Output	1.001	K S Ü
49	Start menu function 1 (Display / Input)	Input / Output	14.*	C R W T
50	Start menu function 1 (Short-term input)	Output	1.*	C R T
51	Start menu function 2 (Display / Input)	Input / Output	14.*	C R W T

No.	Name	Function	DPT	Flags
52	Start menu function 2 (Short-term input)	Output	1.*	C R T
53	Start menu function 3 (Display / Input)	Input / Output	14.*	C R W T
54	Start menu function 3 (Short-term input)	Output	1.*	C R T
55	Start menu function 4 (Display / Input)	Input / Output	14.*	C R W T
56	Start menu function 4 (Short-term input)	Output	1.*	C R T
57	Start menu function 5 (Display / Input)	Input / Output	14.*	C R W T
58	Start menu function 5 (Short-term input)	Output	1.*	C R T
59	Start menu function 6 (Display / Input)	Input / Output	14.*	C R W T
60	Start menu function 6 (Short-term input)	Output	1.*	C R T
61	Universal menu page 1 Function 1 (Display / Input)	Input / Output	14.*	C R W T
62	Universal menu page 1 Function 1 (Brief Input)	Output	1.*	C R T
63	Universal menu page 1 Function 2 (Display / Input)	Input / Output	14.*	C R W T
64	Universal menu page 1 Function 2 (Brief Input)	Output	1.*	C R T
65	Universal menu page 1 Function 3 (Display / Input)	Input / Output	14.*	C R W T
66	Universal menu page 1 Function 3 (Brief Input)	Output	1.*	C R T
67	Universal menu page 1 Function 4 (Display / Input)	Input / Output	14.*	C R W T
68	Universal menu page 1 Function 4 (Brief Input)	Output	1.*	C R T
69	Universal menu page 1 Function 5 (Display / Input)	Input / Output	14.*	C R W T
70	Universal menu page 1 Function 5 (Brief Input)	Output	1.*	C R T
71	Universal menu page 1 Function 6 (Display / Input)	Input / Output	14.*	C R W T
72	Universal menu page 1 Function 6 (Brief Input)	Output	1.*	C R T
73	Universal menu page 1 Function 7 (Display / Input)	Input / Output	14.*	C R W T

No.	Name	Function	DPT	Flags
74	Universal menu page 1 Function 7 (Brief Input)	Output	1.*	C R T
75	Universal menu page 1 Function 8 (Display / Input)	Input / Output	14.*	C R W T
76	Universal menu page 1 Function 8 (Brief Input)	Output	1.*	C R T
77	Universal menu page 2 Function 1 (Display / Input)	Input / Output	14.*	C R W T
78	Universal menu page 2 Function 1 (Brief Input)	Output	1.*	C R T
79	Universal menu page 2 Function 2 (Display / Input)	Input / Output	14.*	C R W T
80	Universal menu page 2 Function 2 (Brief Input)	Output	1.*	C R T
81	Universal menu page 2 Function 3 (Display / Input)	Input / Output	14.*	C R W T
82	Universal menu page 2 Function 3 (Brief Input)	Output	1.*	C R T
83	Universal menu page 2 Function 4 (Display / Input)	Input / Output	14.*	C R W T
84	Universal menu page 2 Function 4 (Brief Input)	Output	1.*	C R T
85	Universal menu page 2 Function 5 (Display / Input)	Input / Output	14.*	C R W T
86	Universal menu page 2 Function 5 (Brief Input)	Output	1.*	C R T
87	Universal menu page 2 Function 6 (Display / Input)	Input / Output	14.*	C R W T
88	Universal menu page 2 Function 6 (Brief Input)	Output	1.*	C R T
89	Universal menu page 2 Function 7 (Display / Input)	Input / Output	14.*	C R W T
90	Universal menu page 2 Function 7 (Brief Input)	Output	1.*	C R T
91	Universal menu page 2 Function 8 (Display / Input)	Input / Output	14.*	C R W T
92	Universal menu page 2 Function 8 (Brief Input)	Output	1.*	C R T
93	Universal menu page 3 Function 1 (Display / Input)	Input / Output	14.*	C R W T
94	Universal menu page 3 Function 1 (Brief Input)	Output	1.*	C R T
95	Universal menu page 3 Function 2 (Display / Input)	Input / Output	14.*	C R W T

No.	Name	Function	DPT	Flags
96	Universal menu page 3 Function 2 (Brief Input)	Output	1.*	C R T
97	Universal menu page 3 Function 3 (Display / Input)	Input / Output	14.*	C R W T
98	Universal menu page 3 Function 3 (Brief Input)	Output	1.*	C R T
99	Universal menu page 3 Function 4 (Display / Input)	Input / Output	14.*	C R W T
100	Universal menu page 3 Function 4 (Brief Input)	Output	1.*	C R T
101	Universal menu page 3 Function 5 (Display / Input)	Input / Output	14.*	C R W T
102	Universal menu page 3 Function 5 (Brief Input)	Output	1.*	C R T
103	Universal menu page 3 Function 6 (Display / Input)	Input / Output	14.*	C R W T
104	Universal menu page 3 Function 6 (Brief Input)	Output	1.*	C R T
105	Universal menu page 3 Function 7 (Display / Input)	Input / Output	14.*	C R W T
106	Universal menu page 3 Function 7 (Brief Input)	Output	1.*	C R T
107	Universal menu page 3 Function 8 (Display / Input)	Input / Output	14.*	C R W T
108	Universal menu page 3 Function 8 (Brief Input)	Output	1.*	C R T
109	Universal menu page 4 Function 1 (Display / Input)	Input / Output	14.*	C R W T
110	Universal menu page 4 Function 1 (Brief Input)	Output	1.*	C R T
111	Universal menu page 4 Function 2 (Display / Input)	Input / Output	14.*	C R W T
112	Universal menu page 4 Function 2 (Brief Input)	Output	1.*	C R T
113	Universal menu page 4 Function 3 (Display / Input)	Input / Output	14.*	C R W T
114	Universal menu page 4 Function 3 (Brief Input)	Output	1.*	C R T
115	Universal menu page 4 Function 4 (Display / Input)	Input / Output	14.*	C R W T
116	Universal menu page 4 Function 4 (Brief Input)	Output	1.*	C R T
117	Universal menu page 4 Function 5 (Display / Input)	Input / Output	14.*	C R W T

No.	Name	Function	DPT	Flags
118	Universal menu page 4 Function 5 (Brief Input)	Output	1.*	C R T
119	Universal menu page 4 Function 6 (Display / Input)	Input / Output	14.*	C R W T
120	Universal menu page 4 Function 6 (Brief Input)	Output	1.*	C R T
121	Universal menu page 4 Function 7 (Display / Input)	Input / Output	14.*	C R W T
122	Universal menu page 4 Function 7 (Brief Input)	Output	1.*	C R T
123	Universal menu page 4 Function 8 (Display / Input)	Input / Output	14.*	C R W T
124	Universal menu page 4 Function 8 (Brief Input)	Output	1.*	C R T
125	Universal menu page 5 Function 1 (Display / Input)	Input / Output	14.*	C R W T
126	Universal menu page 5 Function 1 (Brief Input)	Output	1.*	C R T
127	Universal menu page 5 Function 2 (Display / Input)	Input / Output	14.*	C R W T
128	Universal menu page 5 Function 2 (Brief Input)	Output	1.*	C R T
129	Universal menu page 5 Function 3 (Display / Input)	Input / Output	14.*	C R W T
130	Universal menu page 5 Function 3 (Brief Input)	Output	1.*	C R T
131	Universal menu page 5 Function 4 (Display / Input)	Input / Output	14.*	C R W T
132	Universal menu page 5 Function 4 (Brief Input)	Output	1.*	C R T
133	Universal menu page 5 Function 5 (Display / Input)	Input / Output	14.*	C R W T
134	Universal menu page 5 Function 5 (Brief Input)	Output	1.*	C R T
135	Universal menu page 5 Function 6 (Display / Input)	Input / Output	14.*	C R W T
136	Universal menu page 5 Function 6 (Brief Input)	Output	1.*	C R T
137	Universal menu page 5 Function 7 (Display / Input)	Input / Output	14.*	C R W T
138	Universal menu page 5 Function 7 (Brief Input)	Output	1.*	C R T
139	Universal menu page 5 Function 8 (Display / Input)	Input / Output	14.*	C R W T

No.	Name	Function	DPT	Flags
140	Universal menu page 5 Function 8 (Brief Input)	Output	1.*	C R T
141	Universal menu page 6 Function 1 (Display / Input)	Input / Output	14.*	C R W T
142	Universal menu page 6 Function 1 (Brief Input)	Output	1.*	C R T
143	Universal menu page 6 Function 2 (Display / Input)	Input / Output	14.*	C R W T
144	Universal menu page 6 Function 2 (Brief Input)	Output	1.*	C R T
145	Universal menu page 6 Function 3 (Display / Input)	Input / Output	14.*	C R W T
146	Universal menu page 6 Function 3 (Brief Input)	Output	1.*	C R T
147	Universal menu page 6 Function 4 (Display / Input)	Input / Output	14.*	C R W T
148	Universal menu page 6 Function 4 (Brief Input)	Output	1.*	C R T
149	Universal menu page 6 Function 5 (Display / Input)	Input / Output	14.*	C R W T
150	Universal menu page 6 Function 5 (Brief Input)	Output	1.*	C R T
151	Universal menu page 6 Function 6 (Display / Input)	Input / Output	14.*	C R W T
152	Universal menu page 6 Function 6 (Brief Input)	Output	1.*	C R T
153	Universal menu page 6 Function 7 (Display / Input)	Input / Output	14.*	C R W T
154	Universal menu page 6 Function 7 (Brief Input)	Output	1.*	C R T
155	Universal menu page 6 Function 8 (Display / Input)	Input / Output	14.*	C R W T
156	Universal menu page 6 Function 8 (Brief Input)	Output	1.*	C R T
157	Universal menu page 7 Function 1 (Display / Input)	Input / Output	14.*	C R W T
158	Universal menu page 7 Function 1 (Brief Input)	Output	1.*	C R T
159	Universal menu page 7 Function 2 (Display / Input)	Input / Output	14.*	C R W T
160	Universal menu page 7 Function 2 (Brief Input)	Output	1.*	C R T
161	Universal menu page 7 Function 3 (Display / Input)	Input / Output	14.*	C R W T

No.	Name	Function	DPT	Flags
162	Universal menu page 7 Function 3 (Brief Input)	Output	1.*	C R T
163	Universal menu page 7 Function 4 (Display / Input)	Input / Output	14.*	C R W T
164	Universal menu page 7 Function 4 (Brief Input)	Output	1.*	C R T
165	Universal menu page 7 Function 5 (Display / Input)	Input / Output	14.*	C R W T
166	Universal menu page 7 Function 5 (Brief Input)	Output	1.*	C R T
167	Universal menu page 7 Function 6 (Display / Input)	Input / Output	14.*	C R W T
168	Universal menu page 7 Function 6 ((Brief Input))	Output	1.*	C R T
169	Universal menu page 7 Function 7 (Display / Input)	Input / Output	14.*	C R W T
170	Universal menu page 7 Function 7 (Brief Input)	Output	1.*	C R T
171	Universal menu page 7 Function 8 (Display / Input)	Input / Output	14.*	C R W T
172	Universal menu page 7 Function 8 (Brief Input)	Output	1.*	C R T
173	Universal menu page 8 Function 1 (Display / Input)	Input / Output	14.*	C R W T
174	Universal menu page 8 Function 1 (Brief Input)	Output	1.*	C R T
175	Universal menu page 8 Function 2 (Display / Input)	Input / Output	14.*	C R W T
176	Universal menu page 8 Function 2 (Brief Input)	Output	1.*	C R T
177	Universal menu page 8 Function 3 (Display / Input)	Input / Output	14.*	C R W T
178	Universal menu page 8 Function 3 (Brief Input)	Output	1.*	C R T
179	Universal menu page 8 Function 4 (Display / Input)	Input / Output	14.*	C R W T
180	Universal menu page 8 Function 4 (Brief Input)	Output	1.*	C R T
181	Universal menu page 8 Function 5 (Display / Input)	Input / Output	14.*	C R W T
182	Universal menu page 8 Function 5 (Brief Input)	Output	1.*	C R T
183	Universal menu page 8 Function 6 (Display / Input)	Input / Output	14.*	C R W T

No.	Name	Function	DPT	Flags
184	Universal menu page 8 Function 6 (Brief Input)	Output	1.*	C R T
185	Universal menu page 8 Function 7 (Display / Input)	Input / Output	14.*	C R W T
186	Universal menu page 8 Function 7 (Brief Input)	Output	1.*	C R T
187	Universal menu page 8 Function 8 (Display / Input)	Input / Output	14.*	C R W T
188	Universal menu page 8 Function 8 (Brief Input)	Output	1.*	C R T
210	Switch Light 1 on / off	Input / Output	1.001	C R W T
211	Dim Light 1	Output	3.007	C R T
212	Light 1 brightness value in %	Input / Output	5.001	C R W T
213	Switch Light 2 on / off	Input / Output	1.001	C R W T
214	Dim Light 2	Output	3.007	C R T
215	Light 2 brightness value in %	Input / Output	5.001	C R W T
216	Switch Light 3 on / off	Input / Output	1.001	C R W T
217	Dim Light 3	Output	3.007	C R T
218	Light 3 brightness value in %	Input / Output	5.001	C R W T
219	Switch Light 4 on/off	Input / Output	1.001	C R W T
220	Dim Light 4	Output	3.007	C R T
221	Light 4 brightness value in %	Input / Output	5.001	C R W T
222	Switch Light 5 on/off	Input / Output	1.001	C R W T
223	Dim Light 5	Output	3.007	C R T
224	Light 5 brightness value in %	Input / Output	5.001	C R W T
225	Switch Light 6 on/off	Input / Output	1.001	C R W T
226	Dim Light 6	Output	3.007	C R T
227	Light 6 brightness value in %	Input / Output	5.001	C R W T
228	Switch Light 7 on/off	Input / Output	1.001	C R W T
229	Dim Light 7	Output	3.007	C R T
230	Light 7 brightness value in %	Input / Output	5.001	C R W T
231	Switch Light 8 on/off	Input / Output	1.001	C R W T
232	Dim Light 8	Output	3.007	C R T
233	Light 8 brightness value in %	Input / Output	5.001	C R W T
242	Shutter 1 Extended	Output	1.008	C R T
243	Shutter 1 Brief	Output	1.010	C R T
244	Shutter 1 Travel position	Input / Output	5.001	C R W T
245	Shutter 1 Slat position	Input / Output	5.001	C R W T
246	Shutter 1 Safety	Output	1.002	C R T

No.	Name	Function	DPT	Flags
247	Shutter 2 Extended	Output	1.008	C R T
248	Shutter 2 Brief	Output	1.010	C R T
249	Shutter 2 Travel position	Input / Output	5.001	C R W T
250	Shutter 2 Slat position	Input / Output	5.001	C R W T
251	Shutter 2 Safety	Output	1.002	C R T
252	Shutter 3 Extended	Output	1.008	C R T
253	Shutter 3 Brief	Output	1.010	C R T
254	Shutter 3 Travel position	Input / Output	5.001	C R W T
255	Shutter 3 Slat position	Input / Output	5.001	C R W T
256	Shutter 3 Safety	Output	1.002	C R T
257	Shutter 4 Extended	Output	1.008	C R T
258	Shutter 4 Brief	Output	1.010	C R T
259	Shutter 4 Travel position	Input / Output	5.001	C R W T
260	Shutter 4 Slat position	Input / Output	5.001	C R W T
261	Shutter 4 Safety	Output	1.002	C R T
262	Shutter 5 Extended	Output	1.008	C R T
263	Shutter 5 Brief	Output	1.010	C R T
264	Shutter 5 Travel position	Input / Output	5.001	C R W T
265	Shutter 5 Slat position	Input / Output	5.001	C R W T
266	Shutter 5 Safety	Output	1.002	C R T
267	Shutter 6 Extended	Output	1.008	C R T
268	Shutter 6 Brief	Output	1.010	C R T
269	Shutter 6 Travel position	Input / Output	5.001	C R W T
270	Shutter 6 Slat position	Input / Output	5.001	C R W T
271	Shutter 6 Safety	Output	1.002	C R T
272	Awning 1 Extended	Output	1.008	C R T
273	Awning 1 Brief	Output	1.010	C R T
274	Awning 1 Travel position	Input / Output	5.001	C R W T
275	Awning 1 Safety	Output	1.002	C R T
276	Awning 2 Extended	Output	1.008	C R T
277	Awning 2 Brief	Output	1.010	C R T
278	Awning 2 Travel position	Input / Output	5.001	C R W T
279	Awning 2 Safety	Output	1.002	C R T
280	Awning 3 Extended	Output	1.008	C R T
281	Awning 3 Brief	Output	1.010	C R T
282	Awning 3 Travel position	Input / Output	5.001	C R W T
283	Awning 3 Safety	Output	1.002	C R T
284	Awning 4 Extended	Output	1.008	C R T
285	Awning 4 Brief	Output	1.010	C R T
286	Awning 4 Travel position	Input / Output	5.001	C R W T

No.	Name	Function	DPT	Flags
287	Awning 4 Safety	Output	1.002	C R T
288	Roller shutter 1 Extended	Output	1.008	C R T
289	Roller shutter 1 Brief	Output	1.010	C R T
290	Roller shutter 1 Travel position	Input / Output	5.001	C R W T
291	Roller shutter 1 Safety	Output	1.002	C R T
292	Roller shutter 2 Extended	Output	1.008	C R T
293	Roller shutter 2 Brief	Output	1.010	C R T
294	Roller shutter 2 Travel position	Input / Output	5.001	C R W T
295	Roller shutter 2 Safety	Output	1.002	C R T
296	Roller shutter 3 Extended	Output	1.008	C R T
297	Roller shutter 3 Brief	Output	1.010	C R T
298	Roller shutter 3 Travel position	Input / Output	5.001	C R W T
299	Roller shutter 3 Safety	Output	1.002	C R T
300	Roller shutter 4 Extended	Output	1.008	C R T
301	Roller shutter 4 Brief	Output	1.010	C R T
302	Roller shutter 4 Travel position	Input / Output	5.001	C R W T
303	Roller shutter 4 Safety	Output	1.002	C R T
304	Window 1 Extended	Output	1.009	C R T
305	Window 1 Brief	Output	1.010	C R T
306	Window 1 Travel position	Input / Output	5.001	C R W T
307	Window 1 Safety	Output	1.002	C R T
308	Window 2 Extended	Output	1.009	C R T
309	Window 2 Brief	Output	1.010	C R T
310	Window 2 Travel position	Input / Output	5.001	C R W T
311	Window 2 Safety	Output	1.002	C R T
312	Fan status	Output	1.001	C R T
313	Fan speed	Input / Output	5.001	C R T
334	Temp. controller: Shut-off object	Input	1.003	C R W T
335	Temp. controller: Current setpoint	Output	9.001	C R T
336	Temp. controller: Switching object (0:Heating 1:Cooling)	Input	1.002	K S
337	Temp. controller: Setpoint, daytime heating	Input / Output	9.001	C R W T
338	Temp. controller: Setpoint, daytime heating (1:+ 0:-)	Input	1.002	K S
339	Temp. controller: Setpoint, daytime cooling	Input / Output	9.001	C R W T
340	Temp. controller: Setpoint, daytime cooling (1:+ 0:-)	Input	1.002	K S

No.	Name	Function	DPT	Flags
341	Temp. controller: Control variable, Heating speed 1	Output	5.001	C R T
342	Temp. controller: Control variable, Heating speed 2	Output	5.001	C R T
343	Temp. controller: Control variable, Heating speed 2	Output	1.001	C R T
344	Temp. controller: Control variable, Cooling speed 1	Output	5.001	C R T
345	Temp. controller: Control variable, Cooling speed 2	Output	5.001	C R T
346	Temp. controller: Control variable, Cooling speed 2	Output	1.001	C R T
347	Temp. controller: Night-time reduction activation	Input	1.003	K S
348	Temp. controller: Setpoint, night-time heating	Input / Output	9.001	C R W T
349	Temp. controller: Setpoint, night-time heating (1:+ 0:-)	Input	1.002	K S
350	Temp. controller: Setpoint, night-time cooling	Input / Output	9.001	C R W T
351	Temp. controller: Setpoint, night-time cooling (1:+ 0:-)	Input	1.002	K S
352	Temp. controller: Status – Heating 1 (1=ON 0=OFF)	Output	1.002	C R T
353	Temp. controller: Status – Heating 2 (1=ON 0=OFF)	Output	1.002	C R T
354	Temp. controller: Status – Cooling 1 (1=ON 0=OFF)	Output	1.002	C R T
355	Temp. controller: Status – Cooling 2 (1=ON 0=OFF)	Output	1.002	C R T
356	Temp. controller: Window status (0: CLOSE 1: OPEN)	Input	1.002	K S
373	Period 1 Switching output	Output	14.*	C R T
374	Period 2 Switching output	Output	14.*	C R T
375	Period 3 Switching output	Output	14.*	C R T
376	Period 4 Switching output	Output	14.*	C R T
377	Period 5 Switching output	Output	14.*	C R T
378	Period 6 Switching output	Output	14.*	C R T
379	Period 7 Switching output	Output	14.*	C R T
380	Period 8 Switching output	Output	14.*	C R T
381	Period 9 Switching output	Output	14.*	C R T
382	Period 10 Switching output	Output	14.*	C R T

No.	Name	Function	DPT	Flags
383	Period 11 Switching output	Output	14.*	C R T
384	Period 12 Switching output	Output	14.*	C R T
385	Period 13 Switching output	Output	14.*	C R T
386	Period 14 Switching output	Output	14.*	C R T
387	Period 15 Switching output	Output	14.*	C R T
388	Period 16 Switching output	Output	14.*	C R T
389	Load / save scene	Input	18.001	K S
390	Scene object 1	Input / Output	9.*	C R T
391	Scene object 2	Input / Output	9.*	C R T
392	Scene object 3	Input / Output	9.*	C R T
393	Scene object 4	Input / Output	9.*	C R T
394	Scene object 5	Input / Output	9.*	C R T
395	Scene object 6	Input / Output	9.*	C R T
396	Scene object 7	Input / Output	9.*	C R T
397	Scene object 8	Input / Output	9.*	C R T
398	Scene object 9	Input / Output	9.*	C R T
399	Scene object 10	Input / Output	9.*	C R T
400	Scene object 11	Input / Output	9.*	C R T
401	Scene object 12	Input / Output	9.*	C R T
402	Scene object 13	Input / Output	9.*	C R T
403	Scene object 14	Input / Output	9.*	C R T
404	Scene object 15	Input / Output	9.*	C R T
405	Scene object 16	Input / Output	9.*	C R T
406	Button 1 Extended	Output	1.008	C R T
407	Button 1 Brief	Output	1.010	C R T
408	Switch button 1 on / off	Input / Output	1.001	C R W T
409	Button 1 Relative dimming	Input / Output	3.007	C R W T
410	Button 1 - 8-bit encoder	Output	5*	C R T
411	Button 1 - 16-bit encoder	Output	9*	C R T
412	Button 1 Scene	Output	18.001	C R T
413	Button 2 Extended	Output	1.008	C R T
414	Button 2 Brief	Output	1.010	C R T
415	Switch button 2 on / off	Input / Output	1.001	C R W T
416	Button 2 Relative dimming	Input / Output	3.007	C R W T
417	Button 2 - 8-bit encoder	Output	5*	C R T
418	Button 2 - 16-bit encoder	Output	9*	C R T
419	Button 2 Scene	Output	18.001	C R T
420	Button 3 Extended	Output	1.008	C R T
421	Button 3 Brief	Output	1.010	C R T
422	Switch button 3 on / off	Input / Output	1.001	C R W T

No.	Name	Function	DPT	Flags
423	Button 3 Relative dimming	Input / Output	3.007	C R W T
424	Button 3 - 8-bit encoder	Output	5*	C R T
425	Button 3 - 16-bit encoder	Output	9*	C R T
426	Button 3 Scene	Output	18.001	C R T
427	Button 4 Extended	Output	1.008	C R T
428	Button 4 Brief	Output	1.010	C R T
429	Switch button 4 on / off	Input / Output	1.001	C R W T
430	Button 4 Relative dimming	Input / Output	3.007	C R W T
431	Button 4 - 8-bit encoder	Output	5*	C R T
432	Button 4 - 16-bit encoder	Output	9*	C R T
433	Button 4 Scene	Output	18.001	C R T
440	Actuating variable comparator 1: Input 1	Input	5.001	KS
441	Actuating variable comparator 1: Input 2	Input	5.001	KS
442	Input variable comparator 1: Eingang 3	Input	5.001	KS
443	Actuating variable comparator 1: Input 4	Input	5.001	KS
444	Actuating variable comparator 1: Input 5	Input	5.001	KS
445	Actuating variable comparator 1: Output	Output	5.001	KLÜ
446	Actuating variable comparator 1: Block	Input	1.002	KS
447	Actuating variable comparator 2: Input 1	Input	5.001	KS
448	Actuating variable comparator 2: Input 2	Input	5.001	KS
449	Actuating variable comparator 2: Eingang 3	Input	5.001	KS
450	Actuating variable comparator 2: Input 4	Input	5.001	KS
451	Actuating variable comparator 2: Input 5	Input	5.001	KS
452	Actuating variable comparator 2: Output	Output	5.001	KLÜ
453	Actuating variable comparator 2: Block	Input	1.002	KS
454	Actuating variable comparator 3: Input 1	Input	5.001	KS

No.	Name	Function	DPT	Flags
455	Actuating variable comparator 3: Input 2	Input	5.001	KS
456	Actuating variable comparator 3: Input 3	Input	5.001	KS
457	Actuating variable comparator 3: Input 4	Input	5.001	KS
458	Actuating variable comparator 3: Input 5	Input	5.001	KS
459	Actuating variable comparator 3: Output	Output	5.001	KLÜ
460	Actuating variable comparator 3: Block	Input	1.002	KS
461	Actuating variable comparator 4: Input 1	Input	5.001	KS
462	Actuating variable comparator 4: Input 2	Input	5.001	KS
463	Actuating variable comparator 4: Input 3	Input	5.001	KS
464	Actuating variable comparator 4: Input 4	Input	5.001	KS
465	Actuating variable comparator 4: Input 5	Input	5.001	KS
466	Actuating variable comparator 4: Output	Output	5.001	KLÜ
467	Actuating variable comparator 4: Block	Input	1.002	KS
469	Logic input 1	Input	1.002	KS
470	Logic input 2	Input	1.002	KS
471	Logic input 3	Input	1.002	KS
472	Logic input 4	Input	1.002	KS
473	Logic input 5	Input	1.002	KS
474	Logic input 6	Input	1.002	KS
475	Logic input 7	Input	1.002	KS
476	Logic input 8	Input	1.002	KS
477	Logic input 9	Input	1.002	KS
478	Logic input 10	Input	1.002	KS
479	Logic input 11	Input	1.002	KS
480	Logic input 12	Input	1.002	KS
481	Logic input 13	Input	1.002	KS
482	Logic input 14	Input	1.002	KS
483	Logic input 15	Input	1.002	KS
484	Logic input 16	Input	1.002	KS

No.	Name	Function	DPT	Flags
485	UND Logic 1: 1 Bit Switching output	Output	1.002	KLÜ
486	UND Logic 1: 8 Bit Output A	Output	5.010	KLÜ
487	UND Logic 1: 8 Bit Output B	Output	5.010	KLÜ
488	UND Logic 1: Blocking	Input	1.002	KS
489	UND Logic 2: 1 Bit Switching output	Output	1.002	KLÜ
490	UND Logic 2: 8 Bit Output A	Output	5.010	KLÜ
491	UND Logic 2: 8 Bit Output B	Output	5.010	KLÜ
492	UND Logic 2: Blocking	Input	1.002	KS
493	UND Logic 3: 1 Bit Switching output	Output	1.002	KLÜ
494	UND Logic 3: 8 Bit Output A	Output	5.010	KLÜ
495	UND Logic 3: 8 Bit Output B	Output	5.010	KLÜ
496	UND Logic 3: Blocking	Input	1.002	KS
497	UND Logic 4: 1 Bit Switching output	Output	1.002	KLÜ
498	UND Logic 4: 8 Bit Output A	Output	5.010	KLÜ
499	UND Logic 4: 8 Bit Output B	Output	5.010	KLÜ
500	UND Logic 4: Blocking	Input	1.002	KS
517	ODER Logic 1: 1 Bit Switching output	Output	1.002	KLÜ
518	ODER Logic 1: 8 Bit Output A	Output	5.010	KLÜ
519	ODER Logic 1: 8 Bit Output B	Output	5.010	KLÜ
520	ODER Logic 1: Blocking	Input	1.002	KS
521	ODER Logic 2: 1 Bit Switching output	Output	1.002	KLÜ
522	ODER Logic 2: 8 Bit Output A	Output	5.010	KLÜ
523	ODER Logic 2: 8 Bit Output B	Output	5.010	KLÜ
524	ODER Logic 2: Blocking	Input	1.002	KS
525	ODER Logic 3: 1 Bit Switching output	Output	1.002	KLÜ
526	ODER Logic 3: 8 Bit Output A	Output	5.010	KLÜ
527	ODER Logic 3: 8 Bit Output B	Output	5.010	KLÜ
528	ODER Logic 3: Blocking	Input	1.002	KS
529	ODER Logic 4: 1 Bit Switching output	Output	1.002	KLÜ
530	ODER Logic 4: 8 Bit Output A	Output	5.010	KLÜ
531	ODER Logic 4: 8 Bit Output B	Output	5.010	KLÜ
532	ODER Logic 4: Blocking	Input	1.002	KS

2. Installation

2.1. Installation

The central unit is fixed in the wall. The magnetic mounting of the display unit allows for the flat mounting on the wall. The display unit cannot be used as a portable device.

2.1.1. 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.

2.1.2. Installation location



The device must only be installed and used in dry, interior spaces. Avoid condensation.

The device is to be installed flush to the wall surface. When selecting an installation location, please ensure that the measurement results of the integrated temperature/humidity sensor are affected as little as possible by external influences. Possible sources of interference include:

- Direct sunlight
- Drafts from windows and doors
- Draft from ducts which lead from other rooms to the concealed box

- Warming or cooling of the building structure on which the device is mounted, e.g. due to sunlight, heating or cold water pipes
- Connection lines which lead from warmer or colder areas to the device

You can correct temperature and humidity variations from such sources of interference on the ETS in order to obtain the specified sensor accuracy (temperature offset).

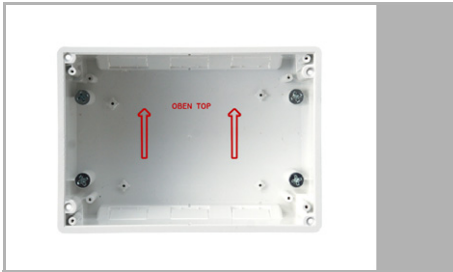
Cut-out dimensions for concealed box:

W = 166 mm +1 -0 | H = 116 mm +1 -0 | D = 80 mm

2.1.3. Preparing for installation



The display unit is held by magnets. Remove the front part from the concealed box.



Place the concealed box in the wall so that the arrows point upwards.

2.1.3.1. Wall-fitting



For fitting, screw the cover (board) on to the concealed box with the enclosed screws.

2.1.3.2. Cavity wall fitting

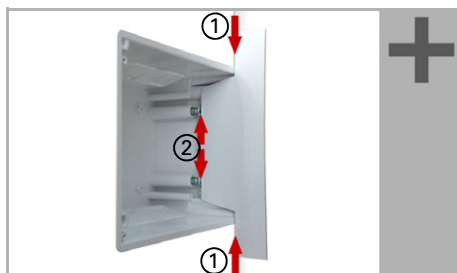


Clamp the concealed box to the wall with the four enclosed screws.

Upon delivery, the pouch containing the assembly screws can be found in the control unit's concealed box.

2.1.4. Assembling the operating unit

During electrical installation, please introduce all connection cables into the concealed box through the lower or upper side wall.

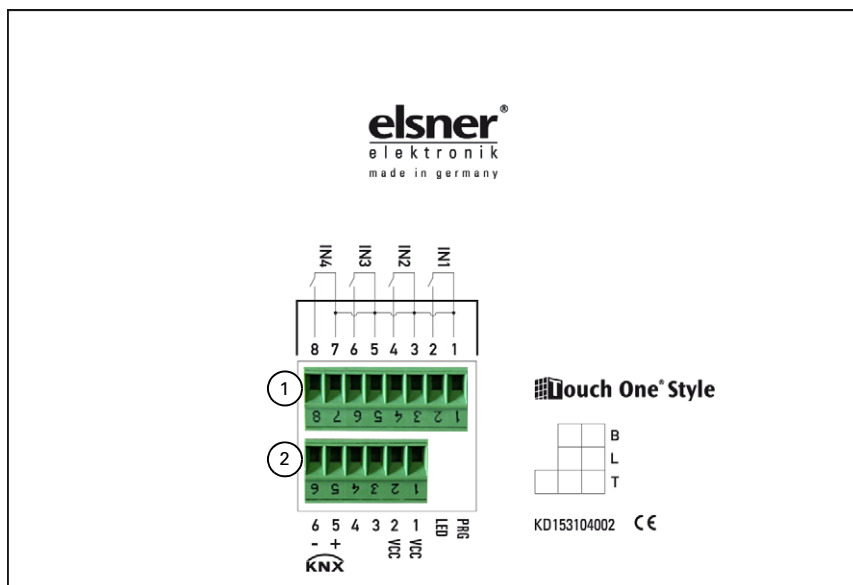


Adjust the screws of the magnetic mounting with the enclosed template. Each of the four screws must be adjusted individually in height.

When the edge of the template rests on the wall surface (1), the template must rest on the mounting screws as well (2).

By adjusting the mounting screws, the display unit will rest flat on the wall later and be held by the magnets safely.

Connect the cables to the display and place the display unit on the concealed box. The magnets must be attracted by the mounting screws considerably and the display unit must rest tightly on the concealed box.

**Plug 1:**

Terminal 1, 2: Button interface 1

Terminal 3, 4: Button interface 2

Terminal 5, 6: Button interface 3

Terminal 7, 8: Button interface 4

Plug 2:

Terminal 1, 2:

VCC (Auxiliary voltage AC/DC)

Terminal 5: KNX +

Terminal 6: KNX -

3. Initial start-up

3.1. First commissioning



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

3.1.1. Boot the control system



Bringing a device from a cold room into a warm room can cause a build-up of condensation. Before commissioning, ensure that there is no humidity in the device (leave to dry if necessary).


After installation, wiring up the equipment and verifying all connections, switch on the auxiliary supply.

Once the Start-up test sequence has been successfully completed, the Control system in the Start menu is in its start position.

3.1.2. Check the function of the sensors

The current values for the room interior sensors for room temperature and air humidity are shown on the display.

If the measured values of the integrated sensor are affected by external influences (sources of interference like direct sunlight), they can be corrected manually. It is also possible to set an external proportion.

 Technical Data, page 7

 TH sensor, page 70

3.1.3. Addressing the unit

The physical address is assigned using the display screen menu **Settings > Phys. Address**. Press the buttons:



Phys. Address

The **Physical Address** menu displays the current address and the status of the programming LED (the address is 15.15.250 on delivery).



Press the Programming button, in order to address the device to the bus.


3.2. Alarm and error messages



Alarm messages are always prioritised before error messages. When an alarm has already been triggered and displayed on the start screen, error messages are no longer visible.

3.2.1. Warning messages

In case of an alarm message from the bus, the display switches to start menu and shows the message. You can acknowledge alarm messages directly on the unit by pressing the relevant alarm message in the display.

- Settings > Alarm
-  Setting an alarm at the screen, page 74

3.2.2. Error messages


Error Messages in the start menu/in the waether data display:

No drives available!

is displayed as long as there are no drives and no lights set in the ETS (e. g. at first commissioning).

Please set the time!

is displayed if a drive or light is set, but there has (still) been no time signal reception (e. g. afer a restart). Once date and time have been received, this message disappears. Time and date are the basis for the timer, that allows for definition of up to 16 time periods for different automatic functions.

- Settings > Date and time.
-  Enter the date and time at the screen, page 59

No connection to weather station!

is displayed if a drive or light is set, but there has (still) been no weather data reception (e. g. afer a restart). Once values for rain, external temperature, wind speed and brightness have been received from the bus, this message disappears.

If the monitoring of the wind and rain object is active, you should ensure that weather data can be received within the defined monitoring intervall. The monitoring of the wind and rain object is active and set to "every 5 seconds" by default.

No connection to KNX bus!

is displayed:

- during ETS download (ETS transfers the data to the unit)
- when unloading the device in the ETS

- if a failure has led to a loss of connection between the bus and the unit
- if the power to the bus fails.

Error messages in the drive/light menu:

Those messages are displayed next to the drive or light (menu drive/light):

Position unknown...!

for a shading element or window indicates that the relevant actuator has not sent information about position.

Brightness unknown...!

for a light indicates that the relevant dimming actuator has not sent information about brightness.

Further error messages:

Incorrect code

indicates that a false, non-existent access code was input.

3.3. Power failure, maintenance work, etc. (restart of control system)

The control system will be unable to control the required drive in the event of a power failure! In the event that a full range of services must be ensured even in the event of a mains power supply failure, an emergency power supply system with the relevant switching from the mains to the emergency power supply must be installed.

Settings which have been saved in the control system program will remain unaffected by any power failure.

Should cleaning or maintenance work be performed in the building, the control system must be voltage-free by tripping the fuse fitted on site, and secured against re-activation. This is to ensure that the switched-off drives cannot operate.



Following any re-start (such as when the power supply is reconnected following a power failure or following a manual reset), all drives and light controls are in automatic mode.

3.4. Behaviour following a failure of power supply

Failure of the auxiliary power supply:

Nothing is sent, and nothing can be received.

Resumption of the auxiliary power supply:

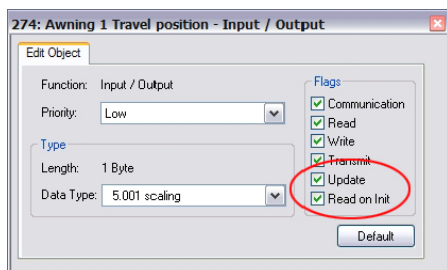
The following objects are sent:

- No. 1 Software version
- No. 2 Unit malfunction
- No. 10 TH sensor malfunction

The following objects send a read telegram:

- No. 3 Date
- No. 4 Time
- No. 11 External temperature measurement value
- No. 14 External humidity measurement value
- No. 29 CO2 measurement value in ppm
- No. 30 Rain
- No. 31 External temperature
- No. 32 Wind force
- No. 33 Brightness

If further objects are to be sent, please set the flags “Update” and “Read on Init” for the relevant objects:



Failure of the bus power supply:

“No connection to KNX bus” is displayed on the display.

Resumption of the bus power supply:

As for resumption of the auxiliary power supply

4. Operation


4.1. The touch screen

The **Room Controller KNX Touch One**'s wall-mounted touch screen display allows manual control as well as the settings for the automatic functions. The button surfaces are actuated by pressing the screen in the respective area.

Actuating a button triggers a visual message, and a short audible signal is heard.

In the event that the displayed surfaces of the buttons are not aligned with the touch-sensitive surfaces, the touch display can be calibrated.

Settings > Display > Calibrating the touch display

 Setting the display at the screen, page 62

Operating the display with long fingernails will not damage the display screen or the touch function. Operation using hard or sharp items (such as glass, precious stones or metal) should be avoided as this can lead to scratching.

4.2. Display options for operating elements and sensor data

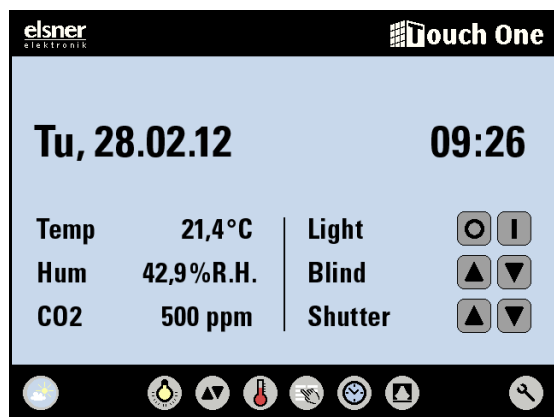
The **Room Controller KNX Touch One** offers various displays for operation of drives and light applications and for showing sensor data: The Start Screen/Start Menu, the weather data display and the universal menus.



The screen display and all drives will only function once weather data has been sent to the unit.

These values are not retained when the unit is reset. The weather data must then be received again from the bus.

4.2.1. Start Screen/Start Menu




The Start menu is the central display from which you can reach the other menu areas. The date and time are shown on the Start screen and six free places are available. Sensor values and control buttons can be shown here. The Start screen must be set up in the ETS. After the initial start only the values of the integrated indoor sensor and, if applicable, error messages will be shown.

 Set the Start Menu (ETS), page 52


The texts displayed (e.g. names for the sensors and functions) can also be changed on the display.

Settings > Texts

 Changing text at the screen, page 65

Alarm and error messages:


When malfunction or error messages are displayed, the data and time are no longer visible. Comments about alarm and error messages can be found in the chapter

 Alarm and error messages, page 37

Date and time:


Once date and time have been received by the **KNX Touch One**, they appear on the start screen. The time can be displayed with or without seconds.

Settings > Date and Time

 Date and time, page 57

Indoor data (TH Sensor):

If the measured values of the integrated sensor are affected by external influences (sources of interference like direct sunlight), they can be corrected manually.

 TH sensor, page 70



You get to the Start Menu from all menus by pressing “Home”

Use the buttons at the bottom of the display to reach the operating and setting menus of **KNX Touch One**:



To Weather Data Display



Light Menu (operation and adjustment of automatic functions)



Drive Menu (operation and adjustment of automatic functions)



Temperatur Controller (adjustment)



Universal Menu (pages for display and operation)



Timer (setting of periods)



Scene Control (save and recall)

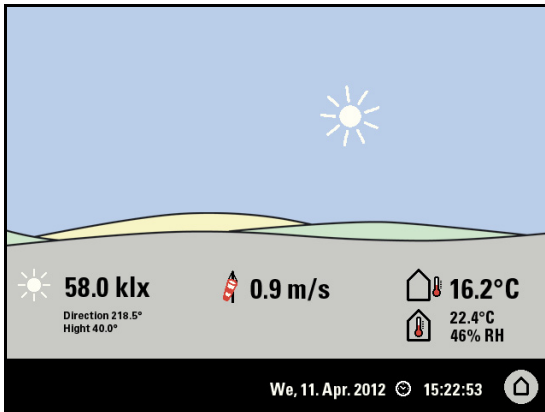


Settings Menu

4.2.2. Weather data display



From the Start Menu, you get to the weather data display by pressing “Weather Display”



The weather data display is a graphical menu for weather and indoor data, date and time.

The following data is displayed in case it is provided by the bus:

Sun data:



Intensity: Light intensity (brightness) in Lux (lx) or Kilolux (klx)

Direction: Direction (azimuth) in degrees

Height: Elevation over the horizon in degrees

Wind:

The wind speed will be shown in metres per second (m/s) and the windsock changes:



Calm: up to 2.0 m/s



Slight wind: 2.1 to 10.0 m/s



Strong wind: 10.1 m/s and up



A caution flag appears besides the wind symbol if wind alarm has been triggered for a drive.

Outdoor temperature:



Outdoor temperature in degrees Celsius (°C)

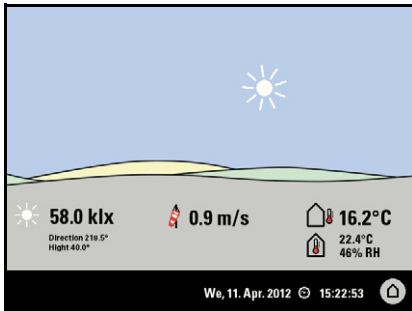
Indoor information:



Temperature in degrees Celsius (°C)

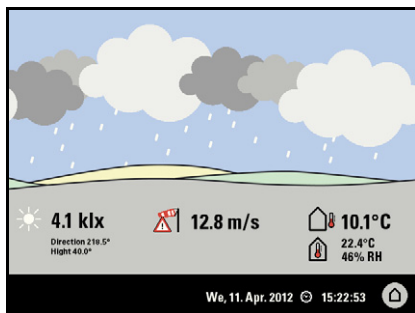
Air humidity in %RH

The general weather situation is shown graphically:

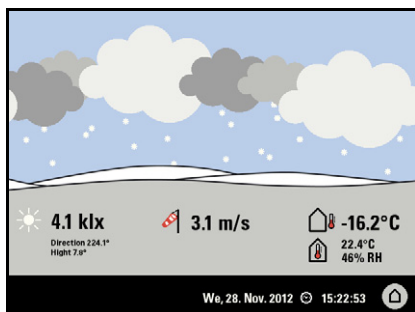


Sunny or cloudy:

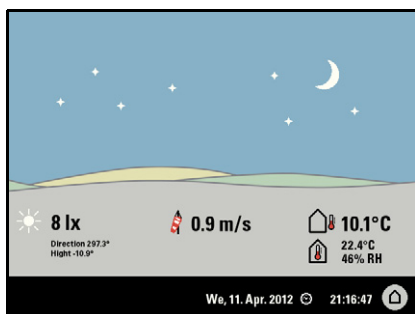
The sun moves across the sky according to its current direction and height.

**Rain:**

When there is a precipitation report and temperatures above -3°C , it is raining.

**Snow:**

When there is a precipitation report and temperatures below -3°C , it is snowing.

**Night:**

At night (twilight) the display will be darker; instead of the sun, the moon and stars will appear.

Alarm and error messages:

When error messages are displayed, the weather animation is no longer visible. Once an alarm message has been received from the bus, the display switches to Start Menu. Comments about alarm and error messages can be found in the chapter

📖 Alarm and error messages, page 37

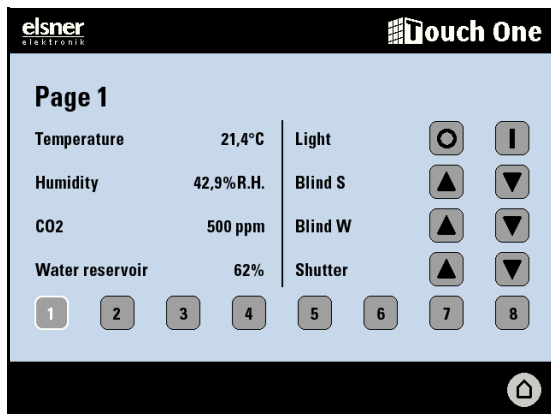


To Start Menu ("Home")

4.2.3. Universal Menu



From the Start Menu, you get to the Universal Menu by pressing “Universal Menu”



The universal menu offers space for up to 64 functions on eight pages. These may be control elements, display values or input fields and buttons for the bus communication. The universal menu must be set up in the ETS.

Universal menu, page 120

Press buttons 1 - 8 to select the relevant page. The selected page is marked in white.

You can change the page text and the function names in the ETS and on the display.

Texts, page 65

Operation with the buttons up/down:



Buttons up/down

If the object function “Input Extended/Short Term” is assigned to the up/down buttons, a long and a short button press are executed as follows:

released before expiry of Time 1

==> Stop/Step

Maintained for longer than Time 1

==> Up/Down

Triggered between Times 1 and 1 + 2

==> Stop

Triggered after Times 1 + 2


==> No further stop

Input functions:

The object function "Input 16-bit / 32-bit floating point" allows you to enter the values using the numeric keyboard, and to use the +/- buttons to define whether the value should be treated as a negative or positive number. The value input here is converted if set so in the ETS.

Press **OK** to send the set value.

The object function "Text input" allows you to enter text using a keyboard.

 Input keyboard for names and codes, page 49

Press **OK** to send the set text.



To Start Menu ("Home")

4.3. Adjustment and operation - further options

Manual operation and setting of the automatic functions of configured drives and light applications can take place directly in the menus



Light Menu (operation and adjustment of automatic functions)



Drive Menu (operation and adjustment of automatic functions)

Scenes are recalled in the menu



Scene Control (save and recall)

Buttons for navigation and manual operation



OK button. This allows settings to be confirmed.



Arrow buttons to increase/reduce a value or to scroll through a list of input possibilities.



Extended pressing of a button accelerates its input.



Up/Down buttons for manual operation

If the object function “Input Extended/Brief” is assigned to the up/down buttons, a long and a short button press are executed as follows:

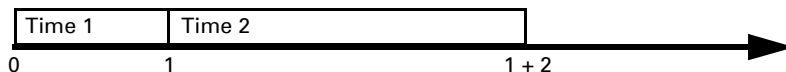
By pushing the button (shorter than adjustable time 1) the drive will be positioned (and stopped) incrementally.

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 and 2 have expired. The move can be stopped by briefly pushing.

Fig. 1

Time interval comfort mode diagram



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

4.3.1. Input keyboard for names and codes

An input keyboard for names and codes will appear in certain menus. Words can be typed in normally.

Special buttons:



Selects the alphabetical and numeric input keyboard.



Selects the symbols and special character input keyboard.



Delete. Deletes the preceding characters.



Shift key. Switches between upper and lower case letters.



Moves the cursor/caret one character to the left/right.

4.4. Protect menus with access codes

If you want to prevent unauthorised changes of the automatic functions or in the settings menu, you can set an access code for certain areas. The protected menu areas are only accessible after the input of the correct code.

The code for **General Settings** protects the menus



Language
Location
Display
TH Sensor

Alarm
Phys. Adresse
Service

The code for **Automatic Settings** protects the menus





(automatic menu for light)



(automatic menu for drives)

If an access code has been activated at the touch display but is no longer available for input, the unit can be unlocked via the ETS.

-  Setting access codes using the ETS, page 75
-  Setting access codes at the screen, page 75

5. Adjustment

5.1. Start menu

5.1.1. Set the Start Menu (ETS)

There are six free display positions in the Start Menu that can be occupied with functions. The six functions are arranged as follows:

Function 1	Function 4
Function 2	Function 5
Function 3	Function 6

By default the TH sensor's temperature and humidity value are displayed as functions 1 and 4 (external proportions are included).

Transfer the name of the object function (Note: The names of the internal functions are always transferred. If you activate this by clicking Yes , the names of the object functions are also transferred to the display)	<u>No</u> • Yes
Functions 1, 2, 3, 4, 5, 6 linked with	<ul style="list-style-type: none"> • <u>Internal function</u> • <u>Object function</u>
Function	<ul style="list-style-type: none"> • No function • All activated internal functions • All activated object functions
Name	Text input field

5.1.1.1. List of internal functions

No function
 TH sensor temperature
 TH sensor humidity
 Light 1 (2, 3, 4, 5, 6, 7, 8)
 Blind 1 (2, 3, 4, 5, 6)
 Awning 1 (2, 3, 4)
 Shutter 1 (2, 3, 4)
 Window 1 (2)
 Ventilation unit

5.1.1.2. List of object functions

For object function „Display ...“ the received value/text is shown on the display only.
 For object function „Input ...“ a value/text can be edited on the display and sent with **OK**.

No function
 Display 1 / 0
 Display Up (for value 0) / Down (for value 1)
 Display Up (for value 1) / Down (for value 0)

Display On (for value 1) / Off (for value 0)
 Display On (for value 0) / Off (for value 1)
 Display Up (for value 1) / To (for value 0)
 Display Up (for value 0) / To (for value 1)
 Display 8-bit value [0...255]
 Display 8-bit value [0%...100%]
 Display 8-bit value [0...360°]
 Display 16-bit floating point
 Display 32-bit floating point
 Display text
 Input 1 / 0
 Input 0
 Input 1
 Input (press = 1 / release = 0)
 Input (press = 0 / release = 1)
 Input up/down (press = 1 / release = 0)
 Input up/down (press = 0 / release = 1)
 Input + / -
 Input Up (for value 0) / Down (for value 1)
 Input Up (for value 1) / Down (for value 0)
 Input On (for value 1) / Off (for value 0)
 Input On (for value 0) / Off (for value 1)
 Input Open (for value 1) / Close (for value 0)
 Input Open (for value 0) / Close (for value 1)
 Input Extended / Brief
 Input 8-bit value [0...255]
 Input 8-bit value [0%...100%]
 Input 8-bit value [0...360°]
 Input 16-bit floating point
 Input 32-bit floating point
 Input text

Object function „Input Extended/Brief“:

Function	Input Extended / Brief
Time 1 in 10 m/s	0...200; <u>40</u>
Time 5.08 cm 10 m/s	0...24 000; <u>200</u>

For the object function „Input Brief/Extended“, you can trigger the following commands by varying the duration of the button press:



Up/down buttons

*Button was pressed and
 released before expiry of Time 1
 ==> Stop/Step*

Maintained for longer than Time 1

==> Up/Down

Triggered between Times 1 and 1 + 2

==> Stop

Triggered after Times 1 + 2

==> No further stop

Object function „Display/Input 16/32-bit floating point“:

Function	<ul style="list-style-type: none"> • Display 16-bit floating point • Display 32-bit floating point • Input 16-bit floating point • Input 32-bit floating point
Text for unit	Text input (max. 2 chars.)
Conversion factor a	-/+ 0,001 • ... • -/+ 10000
Conversion factor a	1 ... 65535

For object function "Display 16/32-bit floating point" and „Input 16/32-bit floating point", you can input the unit as text. Additionally, you can convert the value by using the factors *a* (+/-, floating point) and *b* (number 1...65535).

Thus, the value of 10 m/s received from the bus could be displayed as $10 \times (+0.1) \times 36 = 36 \text{ km/h}$

5.2. Basic settings

Basic settings concerning display, time/location and global settings for the automatic functions are done in the ETS ("General Settings") or at the display in the setting menus.

Language:	ETS and screen
Date and time:	ETS (without manual time setting) and screen
Location:	ETS and screen
Screen:	ETS and screen
Texts:	ETS (menu "Texts" in the general settings) and screen
Automatic:	ETS and screen
TH Sensor:	ETS and screen
Remo 8:	Only screen
Alarm:	ETS and screen
Phys. Adresse:	Only screen
Service: Access Codes:	ETS and screen
Service: Reset, Factory Defaults etc.:	Only screen

5.2.1. Basic setting in the ETS

General, monitoring wind/rain:

Maximum message rate	1 • 2 • 5 • <u>10</u> • 20 messages per second
Transmission delays after power-up and programming	<u>5 s</u> ... 2 h
Using wind and rain object monitoring	No • <u>Yes</u>
Monitoring period (only if monitoring is used)	<u>5 s</u> ... 2 h

The monitoring of the wind and rain object is active and set to “every 5 seconds” by default



You must ensure that the unit can receive weather data at the selected monitoring interval (e.g. every 5 seconds) when wind and rain object monitoring is activated.

Transfer/set general parameters:

Transfer the following parameters:

(Attention: If you transfer these parameters, the settings which have been made manually on the touch display will be overwritten.)

Language	<u>No</u> • Yes
Date and time	<u>No</u> • Yes
Location	<u>No</u> • Yes
Display	<u>No</u> • Yes
Automatically transfer all	<u>No</u> • Yes
TH sensor	<u>No</u> • Yes
Alarm	<u>No</u> • Yes
Access code	<u>No</u> • Yes

When a parameter is set to “Yes”, it appears in the menu on the left. Settings can be made there.



If you transfer parameters, the settings which have been made manually on the screen will be overwritten.

The setting options of the parameters are described in the chapters *Language*, *Date and time* ...

Surface operation, alarm acknowledgement:

Surface operation object sends	<ul style="list-style-type: none"> • 0 • 1 • Switching command (0 or 1) • 8-bit value [0...255] • 8-bit value [0%...100%]
Value (only when surface actuation object "8-bit value" is sent)	<ul style="list-style-type: none"> 0...255 (object sends 8-bit value [0...255]) 0...100 (object sends 8-bit value [0%...100%])

Surface operation can be activated in the "Display" menu in the ETS (or at the screen).

📖 Setting the display at the screen, page 62

Object value for alarm acknowledgment	0 • 1
---------------------------------------	-------

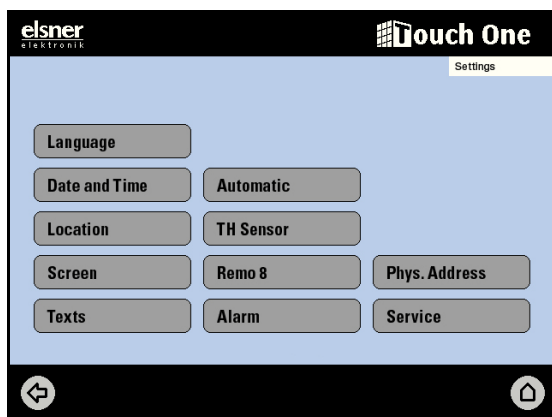
The alarm action is set in the "Alarm" menu in the ETS (or at the screen).

📖 Alarm, page 73

5.2.2. Settings menu at the screen



From the Start Menu, you get to the Settings menu by pressing "Settings"



The **Settings** menu area allows you to adjust the following general parameters:


- Language*
- Date and time
- Location*
- Screen* (brightness, switch-off, colour, surface operation, touch calibration)
- Texts (names for functions in the Start, Universal and Scene menu)
- Automatic (general settings for all drives/light applications)


- TH sensor* (adjustment, external proportion)
- Remo 8 (programm remote control)
- Alarm* (reaction)
- Phys. Address*
- Service* (access codes, restart, factory settings)

*code-protected when access code 2 is activated

If an access code has been activated but is no longer available for input, the unit can only be unlocked via the ETS.

Settings > Service > Access Code

 Setting access codes using the ETS, page 75

 Setting access codes at the screen, page 75

The settings options for the parameters are described in the chapters *Language*, *Date and time*

5.2.3. Language

The display language can be set to German, English, French or Italian.

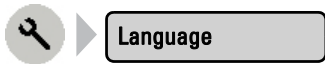
5.2.3.1. Setting the language using the ETS

Activate the “Transfer parameter” function for the language in the ETS’s “General Settings” menu. Then select the language in the appearing “Language” menu.

Language	<ul style="list-style-type: none"> • German • English • French • Italian
----------	--

5.2.3.2. Setting the language at the screen

Press the buttons:



Choose the button for the language you want from the menu. Confirm your setting using **OK**.

The menu is code-protected when access code 2 is activated.

5.2.4. Date and time

5.2.4.1. Setting the date and time in the ETS

Activate the “Transfer parameters” function for date and time under “General settings” in the ETS menu. Then set the display of seconds, the time zone and the summer time rule in the appearing “Date and time” menu.

Display seconds	<u>No</u> • Yes
Time zone (relative to GMT):	
Hours	-12...13; <u>1</u>
Minutes	<u>0</u> ...59;
Summer time rule	<ul style="list-style-type: none"> • <u>Europe</u> • USA • none • user-defined

If “Europe” is selected for the Summertime Rule, the following pre-defined values are applicable:

Start of Summer Time:	
On the first	Sunday
After (day)	25
(Month)	3
(Hour)	2
(Minute)	0
End of Summer Time:	
On the first	Sunday
After (day)	25
(Month)	10
(Hour)	2
(Minute)	0
Time shift:	
Hours	1
Minutes	0

If “USA” is selected for the Summertime Rule, the following pre-defined values are applicable:

Start of Summer Time:	
On the first	Sunday
After (day)	8
(Month)	3
(Hour)	2
(Minute)	0
End of Summer Time:	
On the first	Sunday
After (day)	1
(Month)	11
(Hour)	2
(Minute)	0

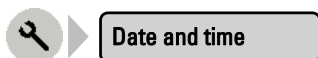
Time shift:	
Hours	1
Minutes	0

If “User-defined” is selected for the Summertime Rule, the following values can be freely set:

Start of Summer Time:	
On the first	• Monday ... • <u>Sunday</u>
After (day)	1..31; <u>25</u>
(Month)	1...12; <u>3</u>
(Hour)	0...23; <u>2</u>
(Minute)	<u>0</u> ...59
End of Summer Time:	
On the first	• Monday ... • <u>Sunday</u>
After (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:	
Hours	-12..12; <u>1</u>
Minutes	<u>0</u> ...59

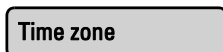
5.2.4.2. Enter the date and time at the screen

As long as no error messages appear, the date and time is displayed in the Start menu and in the weather data display. The date and time are received from the bus, but can also be entered manually on a short-term basis. Even with UTC reception via bus (co-ordinated worldwide, e.g. via GPS) the time zone and Summertime Rule must still be defined. Press the button:



To set the time, consecutively press the hour, minute, second, day, month and year fields to set their current values manually using the arrow buttons.

In order to include the seconds in the display, press the **Yes** button for “Display seconds?”.



In order to calculate local date and time correctly from the UTC signal received via the bus (e. g. received via GPS), the time zone (in relation to GMT) must be specified. Additionally, the automatic switch-over to summer time can be set.

Consecutively press, the hour and minute fields in order to set the time zone (relative to GMT) using the arrow buttons.

Press the button next to **Summertime Rule** to set the automatic switch-over to summer time. Depending on your location, select **Europe, USA or None** (if no summertime switch-over shall take place), or **User-defined** (if you want to be able to set the time setting individually).

Confirm your setting using the **OK** button.

The Summer Time time settings for Europe and the USA are shown in the lower area of the touch display.

If a "User-defined" Summer Time rule is selected:

When you want to set the time individually (User-defined), a new window will open. You can use the arrow buttons to set the time zone, start/end of summer time as well as the Daylight Saving Time:

Time zone

Press **Time zone** and then, consecutively, the hour and minute fields in order to set the time zone (relative to GMT) using the arrow buttons.

Start of summer time

End of summer time

Press the button beside **Start of summer time**, and a new window will open.

When pre-setting the "**Fixed date**", press the day, month, hour and minute fields consecutively in order to set the start date of summer time using the arrow buttons. If you want to set a specific weekday, press the **Fixed date** button in order to change this to a specific weekday.

Confirm your setting using the **OK** button.

Time shift summer/winter time

Press the hour and minute fields consecutively in order to set the daylight savings time using the arrow buttons.

Confirm your setting using the **OK** button.

5.2.5. Location

The information on the location is necessary in order to calculate the position of the sun (shading automation). If this location data is not correct, the shading elements will not be correctly controlled. The location is entered using the ETS or at the screen.

5.2.5.1. Setting the location using the ETS

Activate the “Transfer parameters” function for location under “General settings” in the ETS menu. Then set the location in the appearing “Location” menu.

Location input using	<ul style="list-style-type: none"> • <u>Town</u> • Coordinates
----------------------	--

Location input using	Town
Country	<u>Germany</u> • Austria • Switzerland • Other country
Town	40 towns in Germany; <u>Stuttgart</u> 23 towns in France 10 towns in Italy 6 towns in Belgium 4 towns in Austria 4 towns in Switzerland 4 towns in Great Britain 7 towns in other countries

Location input using	Coordinates
E. longitude in degrees	-180 ... +180; <u>9</u>
E. longitude in minutes	-59 ... +59; <u>10</u>
N. latitude in degrees	-90 ... +90; <u>48</u>
N. latitude in minutes	-59 ... +59; <u>46</u>

5.2.5.2. Setting the location at the screen

Press the buttons:



The menu is code-protected if access code 2 is activated.

You can input the location using a **Town** or using **Coordinates** (longitude and latitude).



Select **Town** to select a state and town from a list.



Select **Coordinates** to input the location using numbers. Set the location manually by consecutively selecting the input fields for Easterly longitude and Northerly latitude, and then input the ° values using the arrow buttons.

Confirm your setting using the **OK** button.

5.2.6. Display


The brightness, switching off and background colours for the display screen can be individually set. Additionally, the surface operations (using the upper half of screen as a button) can be activated and the standard page can be set.

5.2.6.1. Setting the display using the ETS

Activate the “Transfer parameters” function for display under “General settings” in the ETS. Then set the display in the appearing “Display” menu.

Brightness	<ul style="list-style-type: none"> • <u>Has a specific value</u> • is adjusted to ambient light • controlled by means of an object
Brightness in % (only when brightness is defined using a set value)	1... <u>100</u>
Automatic shutdown (does not appear when brightness is controlled by an object)	• <u>From</u> • To
When the upper half of the display is touched, the surface operation object sends	• <u>never</u> • always

The value sent by the object surface operation is determined by the parameter “surface operation object sends” in the General settings in the ETS.

 Basic setting in the ETS, page 55

Background colour for operator menus	• <u>Blue</u> • Grey • Red • Green • Yellow
If screen is not touched for 5 minutes, display switches	<ul style="list-style-type: none"> • not • to weather data • <u>to start menu</u> • to universal menu 1...8 • to value of object “display page selection”

Assignment of the object value when switching according to value of object “display page selection”:

0 = no switching

1...8 = Universal menu pages 1...8

10 = Weather data display

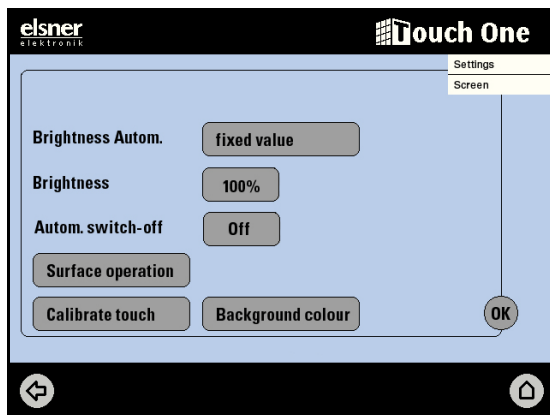
11 = Start screen

5.2.6.2. Setting the display at the screen

Press the buttons:



The menu is code-protected if access code 2 is activated.



Set brightness automation

Press the button beside Auto. brightness and select from **Fixed value**, **Ambient brightness** or **via Object** by repeated pressing.

If you want to define a set value for the brightness of the display, select **Fixed value** and input the desired % value using the arrow buttons.

If you select **Ambient brightness** or **via Object**, the brightness which is either automatically determined or set by the object is increased by 30% when the touch display is touched. This value is maintained for one minute after the last touch contact.

The automatic brightness function uses **ambient brightness** to adjust the display screen to the light conditions in the room (the darker the room, the darker the display screen lighting).

If the brightness of the display is to be controlled via an object, select **via Object**. In this case, the switch-over automation is deactivated.

Setting the automatic switch-off

The **automatic switch-off** can be used if the display screen brightness is controlled by a fixed value or by the ambient brightness. If the brightness of the display is controlled via an object, the automation is deactivated. Select the setting by pressing the button next to "Autom. switch-off".

If the automatic switch-off is set to **On**, the display lighting will be turned off if no command is given for 1 minute. If the screen is touched, it re-activates.

If the automatic switch-off is set to **When ambience dim**, then the display lighting will switch off if the room is dark. If the room is lit, the display lighting will automatically re-activate. If the screen is touched, it also re-activates. If no command is given for around 1 minute, the automatic switch-off darkens the screen again.

Confirm your setting using the **OK** button.


Surface operation

Surface operation enables the rapid call-up of a user-defined function, such as switching on a light at night or calling up a scene menu, by touching the upper half of the display screen (large-scale operability).

You can set whether the surface operation object is **always** or **never** sent when the upper half of the display screen is touched. Press the **Surface operation** button and select the desired option using the arrow buttons.

Confirm your setting using the **OK** button.

The value sent by the object surface operation is determined by the parameter “surface operation object sends” in the General settings in the ETS.

 Basic setting in the ETS, page 55

Standard page

Please select what will happen if the screen is not touched for 5 minutes. Then the display switches

- to object value (0 = no switching, 1...8 = Universal menu pages 1...8, 10 = Weather data display, 11 = Start screen)
- to start menu
- to universal menu 1...8
- to weather data
- not

Confirm your setting using the **OK** button.

Calibrate touch

Follow the instructions on the display and press the centre of the cross. The touch surface is then adjusted.

Confirm your setting using the **OK** button.

Background colour

To choose a different background colour for the operation menu, press the button and select **Blue**, **Grey**, **Red**, **Green** or **Yellow**.

Confirm your setting using the **OK** button.

5.2.7. Texts

Texts and function names in the Start menu, on the pages of the Universal menu and in the Scene menu can be changed. Some names for functions can already be set during the setting of the function in the ETS.

5.2.7.1. Changing text using the ETS

You can set texts for Universal and Scene menu in the ETS's menu "Texts".

Change text for:	
Universal menu pages	<u>No</u> • Yes
Universal menu functions	<u>No</u> • Yes
Scene menu	<u>No</u> • Yes

Change text for Universal menu pages:

Page 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8	Text field (default setting: Pages 1 - 8)
------------------------------------	---

Change text for Universal menu functions:

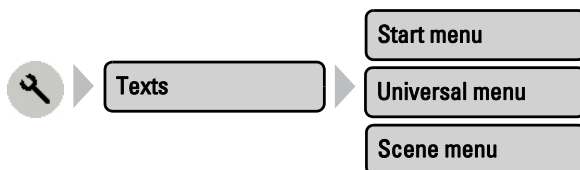
Page 1 / 2 ... / 8 Function 1 / 2 / ... 8	Text field (default setting: Pages 1 - 8 Function 1 - 8)
---	--

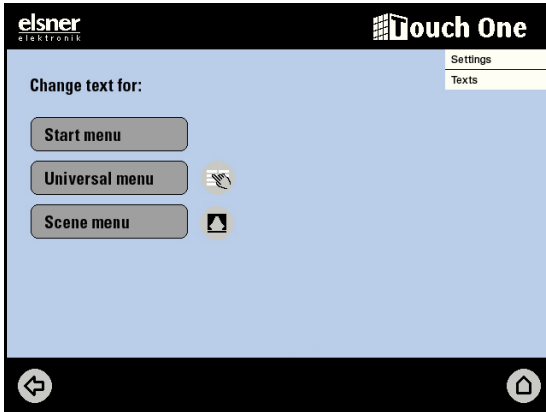
Change text for scene menu:

Scene 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 ... / 16	Text field (default setting: Scene 1 - 16)
--	--

5.2.7.2. Changing text at the screen


Press the buttons:





The **Start menu** allows you to change the names of all set functions, the **Universal menu** to change the texts of the pages and allocated functions, and the **Scene menu** to rename all set scenes.

Press the appropriate button and input the desired name into the button field which appears.

 Input keyboard for names and codes, page 49

Confirm your text input using the **OK** button.

5.2.8. Automatic settings

The general automatic menu in the ETS allows you to adjust settings that apply to all drives/lightapplications:

- Twilight value for shading and light
- Movement delays for shading
- Night-time re-cooling for windows
- Frost alarm for shading and windows
- Automatic reset

5.2.8.1. Change general automatic settings using the ETS

Activate the "Transfer parameters" function for the automatic functions under "General settings" in the ETS. Then set the automatic functions in the appearing menus.

Twilight:

Night is determined at a light level below (in lx)	1...200; <u>10</u>
--	--------------------

Note that on moonlit nights, brightness values short below 10 lux can be achieved. If the twilight value is set below 10 lux, shades which are set to "close at night" will remain open because of the moonlight or retract during the night.

Movement delays:

Extension delay for blinds in minutes	<u>1</u> ...240
Retraction delay for blinds in minutes	1...240; <u>12</u>

Night-time re-cooling:

Use night-time re-cooling	<u>No</u> • Yes
start when an external temperature of (in 0.1 °C)	<u>100</u> ...350
for an extended time which exceeds the following hours	1...72; <u>48</u>

Frost alarm:

use	<u>No</u> • Yes
use	Yes
Start frost alarm when	
an external temperature of (in 0.1 °C) is undercut	-50...40; <u>20</u>
during or until (in hours) after the end of precipitation	1...10; <u>5</u>
End frost alarm when	
an external temperature of (in 0.1 °C)	30...100; <u>50</u>
is exceeded for more than (in hours)	1...10; <u>5</u>

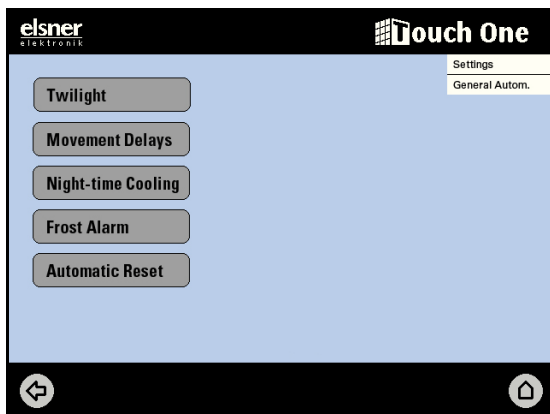
Automatic Reset:

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.	

5.2.8.2. Change automatic settings at the screen

Press the buttons:





In order to be able to set the automation functions, at least one relevant drive or a light must be configured.

Twilight

Use the arrow buttons to set the value from which the control system should identify twilight and night. Pre-setting: 10 lx.

Night identification has a delay of one minute.

Confirm your setting using the **OK** button.

Movement delays

You can adjust the delay time for shading actuation. The movement delay prevents 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 brightness value set for solar protection for a set delay time (e. g. 1 minute) before the blind will extend. The brightness must remain continuously below the value during the set retraction delay time (e. g. 12 minutes) before the blind will retract again. This allows passing clouds to be “blended out”, while the shading can still react rapidly to the sun.

Use the arrow buttons to set the values for the extension and retraction delays. Pre-setting: Extension 1 minute, retraction 12 minutes.

Confirm your setting using the **OK** button.

Night-time cooling

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

You can use the arrow buttons to activate night-time re-cooling and set the external temperature which must be exceeded for the cooling to start (e.g. higher than 10 °C). You can also set the time period within which the external temperature must remain above the minimum temperature (e.g. longer than 48 hours).

Confirm your setting using the **OK** button.

Frost alarm

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

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

The frost alarm is triggered in the following situations:

- The external temperature is below the set frost alarm temperature and it is beginning to rain/snow.
- The external temperature drops below the set frost alarm temperature while it is raining/snowing.
- It has rained/snowed. The external 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 external temperature remains above the set dew point temperature for the period of time.

Triggering the frost alarm: First, determine when the frost alarm is triggered. Use the arrow buttons to adjust the outdoor temperature that must be undercut to trigger the frost alarm (e. g. 2.0 °C).

Then, set the number of hours during or after a precipitation which the external temperature must undercut this in order to trigger a frost alarm (e. g. 5 hours).

Ending a frost alarm: Use the arrow buttons to determine the outdoor temperature that must be exceeded to end the frost alarm (e. g. 5.0 °C). Then set how many hours the external temperature must be exceeded in order to end the frost alarm (e. g. 5 hrs).



A drive or curtain can be damaged if an external shade which has frozen stiff is retracted!

Automatic reset

Following a manual intervention, the affected drive or light remains in manual mode, and automatic operations are switched off. Once the general Automatic Function time point is reached, drives and light applications are once again set to Automatic. Alternatively, the automatic function can be set to reactivate following a manual intervention. The period for this can be set.

The Automatic Reset prevents drives from being manually operated and then stay in an unfavourable position (leaving windows accidentally open, or blinds retracted despite the sunlight).

The general Automatic Reset and reset following a manual intervention can be separately activated and de-activated in the Automatic functions menu for each drive group and each unit.

General Automatic Reset:

Set the time point by selecting the hour and accordingly the minute fields and setting the time using the arrow buttons. Default setting: 3:00 AM.

Automatic reset following a manual intervention:

Use the arrow keys to set the time interval after which Automatic functions should be once again activated. Default setting: 60 minutes.

Confirm your setting with the **OK** button.

5.2.9. TH sensor

If the measured values of the integrated sensors are affected by external influences, they can be corrected manually. An external compound for temperature and humidity can be set, too.

5.2.9.1. Setting the TH sensor using the ETS

Activate the "Transfer parameters" function for the TH sensor under "General settings" in the ETS. Then set the indoor sensor in the appearing menu.

Making adjustments

Temperature and humidity deviations due to various malfunctions can be corrected in the ETS:

Temperature offset (in 0.1 °C)	-70...70; <u>0</u>
Humidity offset (in % absolute)	-20...20; <u>0</u>

External component

The external temperature must reach percent	<u>0</u> ...100
The external humidity must reach percent	<u>0</u> ...100
of the TH sensor measurement value.	

The resulting total measurement value for temperature and humidity is then applicable to the display and all automatic settings.

TH sensor transmission behaviour

You can set the transmission behaviour of temperature and humidity in the ETS menu “TH sensor transmission behaviour“:

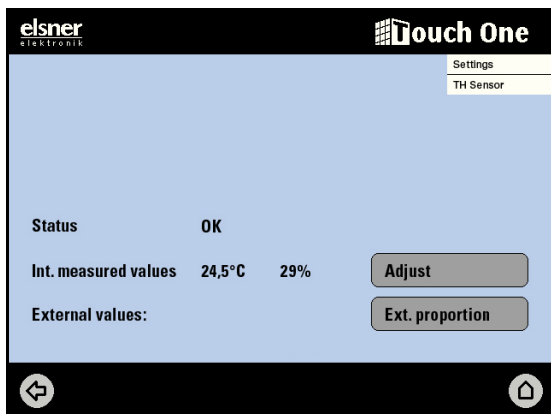
Internal and total temperature	<ul style="list-style-type: none"> • <u>do not transmit</u> • transmit periodically • transmit on change • transmit on change and periodically
From change (in °C)	• 0,1 • 0,2 • <u>0,5</u> • 1,0 • 2,0 • 5,0
Cycle	<u>5 s</u> ... 2 h
Internal and total humidity	<ul style="list-style-type: none"> • <u>do not transmit</u> • transmit periodically • transmit on change • transmit on change and periodically
From change (in %)	• 0,1 • 0,2 • <u>0,5</u> • 1,0 • 2,0 • 5,0
Cycle	<u>5 s</u> ... 2 h
Use minimum / maximum values	<u>No</u> • Yes

5.2.9.2. Setting the TH sensor at the screen

Press the buttons:



The menu is code-protected when access code 2 is activated.



Adjust

Press **Adjust** and use the appropriate arrow buttons to correct the measured temperature and measured humidity upward or downward. The measurement value may need to be corrected when the temperature or air humidity at the sensor does not correspond to the room average reading (for example when the **Room Controller KNX Touch One** is positioned in a location which is warmer than average).

Confirm your setting using the **OK** button.

The intrinsic heat of the unit is already taken into consideration during the temperature measurement.

External component

Press **External component** and use the respective arrow buttons to set the percentage component of the external temperature and humidity in the TH sensor measurement value.

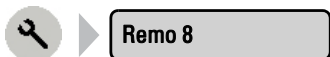
Pre-setting: 0 %

Confirm your setting using the **OK** button.

5.2.10. Remo 8 Remote Control

With the optional radio remote control Remo 8, drives (or drive groups) and lights (or light groups) configured at the **Room Controller KNX Touch One** can be operated.

The hand-held transmitter must be taught to the **KNX Touch One** via a screen menu first. Press the buttons:



Now you can teach in the radio connection and then assign drives and light applications of **KNX Touch One** to the channels of the hand-held transmitter. Radio connections can also be deleted here, if necessary.

Learning

Press **Learn** to bring the **Room Controller KNX Touch One** into learning readiness mode.



Press the centre of the +/- button **on the hand-held transmitter** until an “L” for Learning and a number (channel) are displayed. It does not matter which channel is selected.



Press the Up arrow button to establish the wireless connection with the **KNX Touch One**.

As soon as the wireless connection has been established, the **KNX Touch One** reports “Device successfully taught” and beeps. Press **←** to return to the menu.

Assigning channels

At the screen of **KNX Touch One**, select the hand transmitter channel you want to program (Channels 1 to 8).

Select the drives or light applications which you want to operate using this channel (multiple choices are possible). The selected drives/ights are marked in white.

Confirm your selection using **OK**.



Only drives/units with the same function should be controlled together using a single hand-held transmitter channel (for example, blinds or windows alone).

Delete

Press **Delete** to delete the wireless connection between the **Room Controller KNX Touch One** and the Remo 8 remote control. A security check prevents accidental deletion. Press **Yes** to confirm that you really want to delete the wireless connection to the Remo 8. Press **←** to leave the “Delete” menu.

5.2.11. Alarm

An alarm is triggered when a 1 is received by object “Alarm 1 / 2 / 3 / 4 / 5 input”. You can set how the alarm is displayed using the ETS or the screen.

An alarm is stopped and the alarm message in the display disappears when a 0 is received by the object “Alarm input 1 / 2 / 3 / 4 / 5”.

The alarm can be acknowledged by touching the alarm message in the display. The message then disappears. What will be sent when acknowledging an alarm, is set by the parameter “object value for alarm acknowledgement” in the in the ETS “General settings” menu.

📖 Basic setting in the ETS, page 55

5.2.11.1. Setting an alarm using the ETS

Activate the “Transfer parameters” function for the alarm under “General settings” in the ETS. Then set the alarm action in the appearing menu.

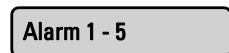
Alarm action for input 1 / 2 / 3 / 4 / 5	
Flashing backlighting	<u>No</u> • Yes
Alarm sound	<u>No</u> • Yes
Alarm text	Text field (Pre-setting: Alarm 1 - 5)

5.2.11.2. Setting an alarm at the screen

Press the buttons:



The menu is code-protected when access code 2 is activated.



You can activate/deactivate the **blinking background lighting** and **alarm sound** by pressing in the **Alarm 1 - 5** menu as well as set and change the **Alarm text** using an input keyboard with text input field. Make sure that the text you enter is as short and precise as possible. The display alarm text is limited to 15 characters.

Confirm your settings by pressing the **OK** button.

5.2.12. Addressing the unit

The physical address is assigned using the display screen menu **Settings > Phys. Address**. Press the buttons:



The **Physical Address** menu displays the current address and the status of the programming LED (the address is 15.15.250 on delivery).



Press the Programming button, in order to address the device to the bus.

5.2.13. Service / Access codes

Access codes, that protect certain menu areas from unauthorised changes, can be set in the ETS or at the screen in the menu **Settings > Service**. the Service menu can also be used for re-starting the unit and for re-setting to factory defaults.

Access Codes

The code 1 for **General Settings** protects the menus



► Language
Location
Display
TH Sensor

Alarm
Phys. Adresse
Service

The code 2 for **Automatic Settings** protects the menus



(automatic menu for light)



(automatic menu for drives)

If an access code has been activated at the touch display but is no longer available for input, the unit can be unlocked via the ETS.

5.2.13.1. Setting access codes using the ETS

Activate the “Transfer parameters” function for access codes under “General settings” in the ETS. Then set the codes in the appearing menu.

Access code (for General Settings and for Automatic Settings)

Activate access code	<u>No</u> • Yes
Access code (only when the access code is activated)	Input field for access code
If no value is entered, the access code is not activated.	

5.2.13.2. Setting access codes at the screen

Press the buttons:




► Service



Access Code 1/2

Input code

Press the button to set a new code. Enter the desired access code via the keypad that appears. The code is displayed in plain language.

 Input keyboard for names and codes, page 49


Confirm your setting using the **OK** button.

The unit will ask for this code before displaying the menus.

Change code

This button is deactivated (greyed out) when no there is no access code.

Press the button to change an existing code. Then enter the desired access code via the keypad that appears. The code is displayed in plain language.

 Input keyboard for names and codes, page 49

Confirm your input using the **OK** button.

Then enter the new access code via the keypad that appears.

Confirm your setting using the **OK** button.

The control system will ask for this new code before displaying the menus.

Delete code

This button is deactivated (greyed out) when no there is no access code.

Press this button to delete an existing code, such as when you no longer wish to install a lock. Enter the current access code via the keypad that appears.

Confirm this using the **OK** button.

The control system will report "Access code deleted".

Press  to return to the menu.

If an access code has been activated at the touch display but is no longer available for input, the unit can be unlocked via the ETS

5.2.13.3. Reset

Reset starts the control system software again. The automatic settings are retained in this event. After re-starting, all drives and units will be set to Automatic mode. The Reset function settings can be accessed by pressing the buttons:



Reset

Press **Reset** and the control system will restart.

5.2.13.4. Factory defaults

Resetting to factory settings will delete all basic and automatic settings. The control system will be returned to its delivery condition. The factory settings can be accessed by pressing the buttons:



Factory Settings

Select **Factory settings**. Enter the code "81" into the button field which appears and confirm this by pressing the **OK** button. The factory settings will be loaded and the control system restarted.

5.2.13.5. Internal area

The internal area allows basic unit settings to be changed. You are not authorised to make such changes.

Test mod.

A function which is only intended for internal company test purposes.

5.3. Light applications

To enable adjustment and operation of light applications at the **Room Controller KNX Touch One**, the individual lamps must be configured in the ETS first.

5.3.1. Set light using the ETS

Light applications are setup via the menu items "Light 1..8". Light can be set for simple switching or for dimming.

Use light 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8	<ul style="list-style-type: none"> • <u>No</u> • Yes as switch • Yes as dimmer
---	---

Use light as switch or dimmer:

Use light 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8	Yes as switch or Yes as dimmer
Transfer the following parameters	No • <u>Yes</u>



If you transfer these parameters, the settings which have been made manually on the touch display will be overwritten.

Name	Light 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8
Use automatic functions	<u>No</u> • Yes

If the light automation is used:

Light 1...8 switches on during:	
Period 1 - 16	<u>No</u> • Yes
AND at night (only when a min. of 1 period is selected)	<u>No</u> • Yes

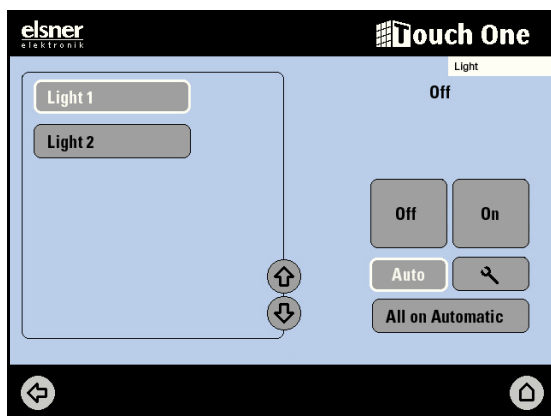
If "AND at night" is selected, the light is only switched on during the selected periods at twilight.

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

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

TS, page 66

5.3.2. Operate and adjust light at the screen



You can access the light application operations via the light menu:



Light

You can operate the connected light applications directly here: Use the buttons to select the names to the left of the lighting which you want to operate.



Use the arrow buttons to scroll through the list.



The selected light is marked in white. The right-hand side contains information on the status (e. g. dimming brightness, error messages) and different operating possibilities (up/down arrow buttons, Automatic button, Settings button).

The light operation varies by the application type that has been set using the ETS.

Light as switch (On/Off buttons):



Switch the light using the **On** or **Off** buttons. The automatic functions for the respective lighting are deactivated by the manual operation (if set so, only to a fixed automatic reset).

Light as dimmer (Up/Down buttons):



Dim the light using the **Up** and **Down** buttons. The automatic functions for the respective lighting are deactivated by the manual operation (if set so, only to a fixed automatic reset).

Briefly press and release ==> ON/OFF

Extended press and hold ==> Dimmer brighter/darker

Release ==> Stop

Activate and adjust automatic functions:

Auto


You can tell whether a light is in automatic mode or must be manually operated by the white marking of the "Auto" button to the right, and by the "Auto" text beside the button name in the list in the left-hand area.

After any manual operation, the light remains in manual mode. The automatic functions are then switched off.

An automatic reset will switch the light back to automatic mode. The automatic reset can be separately activated in the automatic menu for each light.

Use the arrow buttons to set the exact time for the daily automatic reset. Pre-setting: 3.00 am. Use the arrow buttons to set the time when the lights are reset to automatic after manual operation. Pre-setting: 60 min

Settings > Automatic > Automatic Reset

 Automatic settings, page 66

All to automatic

Press this button to set all light applications to automatic mode.




Press the button with the **Tool icon** to access the following settings:

- Change the light name
- Time switches for up to 16 different time periods
- Twilight switching/switching on at night (activatable using time switches)
- Dimmer value ON/OFF
- Switch automatic reset on/off

Name

Press the button to change this name. Enter the desired name via the keypad that appears.

 Input keyboard for names and codes, page 49

Confirm your input using the **OK** button.

Time switching


Press the button to set the time switch. Press **Select** to select the time during which the lights will be turned on.

As soon as you activate the twilight setting (see below), the light will only be turned on at twilight in the selected time periods.

Activate one or more times on the list.

Confirm your setting using the **OK** button.

To change any of the time periods set in the timer, press **Timer**.

 Setting the timer at the screen, page 124

Twilight

The twilight button will only be activated when at least one time-switching period has been set. Otherwise, the button is greyed out.

Press the button to switch the twilight / night switch on or off. Pressing the **Yes** button activates twilight switching, and the light is then switched on at night (e.g. below 200 lx). Pre-setting: Yes (twilight switching activated).

Confirm your setting using the **OK** button.

The limit value which identifies twilight/night can be adjusted.

Settings > Automatic > Twilight

 Change automatic settings at the screen, page 67

The twilight/night switch has a delay of one minute.

Dimmer value on

Dimmer value off

When a light is used as a dimmer

Press the **Dimmer value on** button in order to set the brightness of the light when it is switched on. Pre-setting: 100%. Adjust the value using the arrow buttons.

Confirm your setting using the **OK** button.

Press the **Dimmer value off** button in order to set the brightness of the light when it is switched off. Pre-setting: 0%. Adjust the value using the arrow buttons.

Confirm your setting using the **OK** button.

Automatic Reset

Press the button to switch on or off the setting for automatic operation at a set point in time, or following a manual intervention.

The general Automatic Reset occurs daily at the same time.

Activate: To set the lights to Automatic at a set point in time, select **Yes**.

Deactivate: To switch off the Reset function for these lights, select **No** (this is the default setting).


Alternatively, the automatic function can be reactivated at a set time following a manual intervention.

Activate: To perform an Automatic Reset after a manual intervention, select **Yes**.

Deactivate: To switch off the Reset function for these lights, select **No** (this is the default setting).

Confirm your setting using the **OK** button.




You can set automatic reset times and/or durations.

- Settings > Automatic > Automatic Reset
-  Change automatic settings at the screen, page 67

5.4. Drives and ventilation units

To be able to set and operate the drives of blinds, awnings, shutters and windows and ventilation equipment on the **Room Controller KNX Touch One**, the individual drives must first be created and set up in the ETS.

Please adjust the settings for the drives to the individual conditions. This is the only way that alarm and locking functions such as rain or wind warnings will help to protect external awnings or prevent rain coming in through a window. Also note the general automatic settings and set the time/date and location.

-  Automatic settings, page 66
-  Date and time, page 57
-  Location, page 60

5.4.1. Setting drives using the ETS

5.4.1.1. 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.

5.4.1.2. Setting blinds using the ETS

The drives of blinds are setup in the menu item "Blind 1...6".

Use blind	<u>No</u> • Yes
Transmission behaviour of the safety object	<ul style="list-style-type: none"> • 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
Transfer the following parameters	No • <u>Yes</u>




If you transfer these parameters, the settings which have been made manually on the touch display will be overwritten.

Name	Text field (Pre-Setting: Blind 1...6)
Manual direction on the touch menu	<ul style="list-style-type: none"> • <u>Up arrow: Extended 0</u> <u>Down arrow: Extended 1</u> • Up arrow: Extended 1 Down arrow: Extended 0
Shading	<ul style="list-style-type: none"> • <u>Never</u> • Always • Brightness-dependent

Settings for "Shading: Always" and "Shading: Brightness-dependent" see bottom.

Use night-time closure	No • <u>Yes</u>
Use timed closure for	
Period 1 - 16	<u>No</u> • Yes
Use frost protection	<u>No</u> • Yes
Use wind alarm	No • <u>Yes</u>
Retract at wind speeds from (in 0.1 m/s) (only if wind alarm is used)	5...195; <u>60</u>
for longer than (in sec) (only if wind alarm is used)	<u>1</u> ...5
Retract upon rain	<u>No</u> • Yes
Perform Automatic Reset	
at set time	No • <u>Yes</u>
after the set waiting period following manual operation	<u>No</u> • Yes

 Change general automatic settings using the ETS, page 66

If shading is always used:

Shading	Always
Movement position (in %)	0... <u>100</u>
Slat position	Does not track the sun
Slat position (in %)	0...100; <u>75</u>

If shading is used dependent on brightness:

Shading	Brightness-dependent
From a brightness of (in klx)	1...99; <u>40</u>
Sun direction	<ul style="list-style-type: none"> • <u>All sides</u> • West • South-West • South • South-East • East • Angle range
greater than (in °) (only when the selected angle range is settable)	0...360; <u>90</u>
lower than (in °) (only when the selected angle range is settable)	0...360; <u>270</u>
Sun height	<ul style="list-style-type: none"> • <u>Any height</u> • Angle range
greater than (in °) (only when the selected angle range is settable)	<u>0</u> ...90
lower than (in °) (only when the selected angle range is settable)	0... <u>90</u>
Movement position (in %)	0... <u>100</u>

Slat position	<ul style="list-style-type: none"> • <u>Does not track the sun</u> • Tracks the sun
Slat position (in %) <i>(only when the slat position does not follow the sun)</i>	0...100; <u>75</u>
Sun height: <i>(only when the slat position follows the sun)</i>	Slat position (in %):
0° - 15°	0...100
15° - 30°	0...100; <u>80</u>
30° - 45°	0...100; <u>65</u>
45° - 90°	0...100; <u>50</u>
Use internal temperature lock shut-off <i>(only if an interior temperature lock is used)</i>	No • <u>Yes</u>
Allow shading from (in 0.1 °C)	50...400; <u>250</u>
Use external temperature shut-off	No • <u>Yes</u>
Allow shading from (in 0.1 °C)	-200...300; <u>50</u>

Sun position angle

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

5.4.1.3. Setting awnings using the ETS

The drives of awnings are setup in the menu item "Awning 1...4".

Use awning	<u>No</u> • Yes
Transmission behaviour of the safety object	<ul style="list-style-type: none"> • 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
Transfer the following parameters	No • <u>Yes</u>



If you transfer these parameters, the settings which have been made manually on the touch display will be overwritten.

Name	Text field (Pre-Setting: Awning 1...6)
Manual direction on the touch menu	<ul style="list-style-type: none"> • <u>Up arrow: Extended 0 </u> <li style="padding-left: 20px;"><u>Down arrow: Extended 1</u> • <u>Up arrow: Extended 1 </u> <li style="padding-left: 20px;"><u>Down arrow: Extended 0</u>
Shading	<ul style="list-style-type: none"> • <u>Never</u> • <u>Always</u> • <u>Brightness-dependent</u>

Settings for “Shading: Always” and “Shading: Brightness-dependent” see bottom.

Use frost protection	<u>No</u> • Yes
Use wind alarm	No • <u>Yes</u>
Retract at wind speeds from (in 0.1 m/s) <i>(only if wind alarm is used)</i>	5...195; <u>60</u>
for longer than (in sec) <i>(only if wind alarm is used)</i>	<u>1</u> ...5
Retract upon rain	<u>No</u> • Yes
Perform Automatic Reset	
at set time	No • <u>Yes</u>
after the set waiting period following manual operation	<u>No</u> • Yes

🔑 Change general automatic settings using the ETS, page 66

If shading is always used:

Shading	Always
Movement position (in %)	0... <u>100</u>

If shading is used dependent on brightness:

Shading	Brightness-dependent
From a brightness of (in klx)	1...99; <u>40</u>
Sun direction	<ul style="list-style-type: none"> • <u>All sides</u> • <u>West</u> • <u>South-West</u> • <u>South</u> • <u>South-East</u> • <u>East</u> • <u>Angle range</u>
greater than (in °) <i>(only when the selected angle range is settable)</i>	0...360; <u>90</u>
lower than (in °) <i>(only when the selected angle range is settable)</i>	0...360; <u>270</u>
Sun height	<ul style="list-style-type: none"> • <u>Any height</u> • <u>Angle range</u>
greater than (in °) <i>(only when the selected angle range is settable)</i>	<u>0</u> ...90

lower than (in °) (<i>only when the selected angle range is settable</i>)	0... <u>90</u>
Movement position (in %)	0... <u>100</u>
Use internal temperature lock shut-off (<i>only if an interior temperature lock is used</i>)	No • <u>Yes</u>
Allow shading from (in 0.1 °C)	50... <u>400</u> ; <u>250</u>
Use external temperature shut-off	No • <u>Yes</u>
Allow shading from (in 0.1 °C)	-200... <u>300</u> ; <u>50</u>

Sun position angle

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

5.4.1.4. Setting roller shutters using the ETS

The drives of roller shutters are setup in the menu item “Shutter 1...4”.

Use shutter	<u>No</u> • Yes
Transmission behaviour of the safety object	<ul style="list-style-type: none"> • 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
Transfer the following parameters	No • <u>Yes</u>




If you transfer these parameters, the settings which have been made manually on the touch display will be overwritten.

Name	Text field (Pre-Setting: Shutter 1...6)
Manual direction on the touch menu	<ul style="list-style-type: none"> • <u>Up arrow: Extended 0 </u> <u>Down arrow: Extended 1</u> • Up arrow: Extended 1 Down arrow: Extended 0
Shading	<ul style="list-style-type: none"> • <u>Never</u> • Always • Brightness-dependent

Settings for “Shading: Always” and “Shading: Brightness-dependent” see bottom.

Use night-time closure	No • <u>Yes</u>
Use timed closure for	
Period 1 - 16	<u>No</u> • Yes
Use frost protection	<u>No</u> • Yes
Use wind alarm	No • <u>Yes</u>
Retract at wind speeds from (in 0.1 m/s) (only if wind alarm is used)	5...195; <u>60</u>
for longer than (in sec) (only if wind alarm is used)	<u>1</u> ...5
Retract upon rain	<u>No</u> • Yes
Perform Automatic Reset	
at set time	No • <u>Yes</u>
after the set waiting period following manual operation	<u>No</u> • Yes

 Change general automatic settings using the ETS, page 66

If shading is always used:

Shading	Always
Movement position (in %)	0... <u>100</u>

If shading is used dependent on brightness:

Shading	Brightness-dependent
From a brightness of (in klx)	1...99; <u>40</u>
Sun direction	<ul style="list-style-type: none"> • <u>All sides</u> • West • South-West • South • South-East • East • Angle range
greater than (in °) (only when the selected angle range is settable)	0...360; <u>90</u>
lower than (in °) (only when the selected angle range is settable)	0...360; <u>270</u>
Sun height	<ul style="list-style-type: none"> • <u>Any height</u> • Angle range
greater than (in °) (only when the selected angle range is settable)	<u>0</u> ...90
lower than (in °) (only when the selected angle range is settable)	0... <u>90</u>
Movement position (in %)	0... <u>100</u>
Use internal temperature lock shut-off (only if an interior temperature lock is used)	No • <u>Yes</u>
Allow shading from (in 0.1 °C)	50...400; <u>250</u>

Use external temperature shut-off	No • <u>Yes</u>
Allow shading from (in 0.1 °C)	-200...300; <u>50</u>

Sun position angle

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

5.4.1.5. Setting windows using the ETS

The drives of windows are setup in the menu item "Window 1..2". Windows can be configured with or without step opening.

Use window	<u>No</u> • Yes
Transmission behaviour of the safety object	<ul style="list-style-type: none"> • 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
Window type	<ul style="list-style-type: none"> • <u>without gradual opening</u> • with gradual opening
Number of steps <i>(only when With gradual opening is selected)</i>	2...10; <u>5</u>
Transfer the following parameters	No • <u>Yes</u>




If you transfer these parameters, the settings which have been made manually on the touch display will be overwritten.

Name	Text field
Manual direction on the touch menu	<ul style="list-style-type: none"> • <u>Up arrow: Extended 0 </u> <u>Down arrow: Extended 1</u> • <u>Up arrow: Extended 1 </u> <u>Down arrow: Extended 0</u>
Use TH sensor	<u>No</u> • Yes

Settings for use of the TH Sensor (indoor temperature/humidity) see bottom.

Use timed ventilation for	
Period 1 - 16	<u>No</u> • <u>Yes</u>
Use external temperature shut-off	<u>No</u> • <u>Yes</u>
Close when below (in 0.1 °C) <i>(only if an exterior temperature lock is used)</i>	-100...200; <u>50</u>
Use timed closure for	
Period 1 - 16	<u>No</u> • <u>Yes</u>
Use frost protection	<u>No</u> • <u>Yes</u>
Use wind alarm	<u>No</u> • <u>Yes</u>
Retract at wind speeds from (in 0.1 m/s) <i>(only if wind alarm is used)</i>	5...195; <u>60</u>
for longer than (in sec) <i>(only if wind alarm is used)</i>	<u>1</u> ...5
Close during rain	<u>No</u> • <u>Yes</u>
Use gap opening during rain <i>(only when the window closes due to rain)</i>	<u>No</u> • <u>Yes</u>
Gap opening (in %) <i>(only if gap-opening due to rain is used)</i>	0...100; <u>5</u>
Perform Automatic Reset	
at set time	<u>No</u> • <u>Yes</u>
after the input waiting period following manual operation	<u>No</u> • <u>Yes</u>

 Change general automatic settings using the ETS, page 66

When the TH sensor is used:

Use TH sensor	Yes
Use interior temperature	<u>No</u> • <u>Yes</u>
Open from (in 0.1 °C) <i>(only if the interior temperature is used)</i>	50...500; <u>250</u>
Use air humidity	<u>No</u> • <u>Yes</u>
Open from (in % rH) <i>(only if the air humidity is used)</i>	10...95; <u>80</u>
Use CO2	<u>No</u> • <u>Yes</u>
Open from above (in 10 ppm) <i>(only if the CO2 content is used)</i>	50...200; <u>80</u>
Close from below (in 10 ppm) <i>(only if the CO2 content is used)</i>	50...200; <u>55</u>
Close the window when the supply air temp. is higher than the room temperature	<u>No</u> • <u>Yes</u>
Use night-time cooling for	
Period 1 - 16	<u>No</u> • <u>Yes</u>

Open window until room temp. drops below (in 0.1 °C) <i>(only if night-time re-cooling is used)</i>	50...500; <u>160</u>
Window opening (in %) <i>(only if night-time re-cooling is used)</i>	0...100; <u>30</u>

5.4.1.6. Setting ventilation units using the ETS



Automatic and manual operation of the ventilator is only possible if the unit receives feedback on the currently operating ventilator speed from the ventilator actuator.

Ventilation units are setup in the menu item "Ventilation Unit".

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



If you transfer these parameters, the settings which have been made manually on the touch display will be overwritten.

Name	Text field
Use TH sensor	<u>No</u> • Yes

Settings for use of the TH Sensor (indoor temperature/humidity) see bottom.

Use timed ventilation for	
Period 1 - 16	<u>No</u> • Yes
Ventilate at levels (in 10%) <i>(only if timed ventilation is used)</i>	1...10; <u>4</u>
Perform Automatic Reset	
at set time	No • <u>Yes</u>
After the input waiting period following manual operation	<u>No</u> • Yes

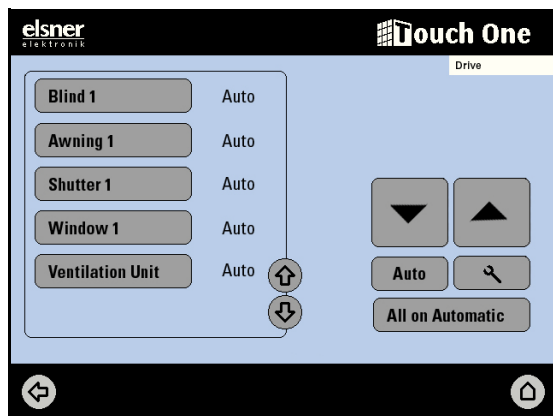
Change general automatic settings using the ETS, page 66

When the TH sensor is used:

Use TH sensor	Yes
Use interior temperature	No • <u>Yes</u>
Start ventilation from (in 0.1 °C) <i>(only if the interior temperature is used)</i>	50...500; <u>250</u>
Use air humidity	No • <u>Yes</u>
Start ventilation from (in % rH) <i>(only if air humidity is used)</i>	10...95; <u>80</u>
Use CO2	No • <u>Yes</u>

Start ventilation from above (in 10 ppm) (only if CO2 is used)	50...200; <u>80</u>
Stop ventilation from below (in 10 ppm) (only if CO2 is used)	50...200; <u>55</u>
Start exhaust ventilation at (in 10%)	<u>1</u> ...10
and increase exhaust ventilation until (in 10%)	1...10; <u>8</u>
Use night-time cooling for	
Period 1 - 16	<u>No</u> • Yes
Ventilate until the room temperature drops to below (in 0.1 °C)	50...500; <u>160</u>
Ventilate at levels (in %)	1...10; <u>4</u>

5.4.2. Set and operate drives at the screen



You can access the drive operations via the drive menu:



Drive

You can operate the drives and ventilation units configured in the ETS directly here: Use the buttons to select the names to the left of the drive or unit which you want to operate.



Use the arrow buttons to scroll through the list.



The selected drive is marked in white. The right-hand side contains information on the status (e. g. position, error messages) and different operating possibilities (up/down arrow buttons, automatic button, settings button).



For blinds and windows, the To an From buttons are equipped with timer automation. A brief press (less than 1 second, brief audible signal) allows the drive to be precisely positioned. If the button is pressed for longer than 1 second (higher audible signal: detection signal), the drive moves automatically to its end position. Briefly pressing the Up or down buttons stops the drive.

If manual operation of a drive group is currently locked by the **rain, wind or frost alarm**, the arrow buttons are greyed out and cannot be operated. The message “Rain alarm” and/or “Wind alarm” are displayed.

Unlock manual operation

Manual operation is only possible once frost, rain and wind alarms are switched off.

The **frost alarm** can be switched off by pressing the frost alarm button for 7 seconds. The frost lock will then only be active for this drive again when it is reactivated manually or the next time the frost alarm is triggered.



A drive or curtain can be damaged if an external shade which has frozen stiff is retracted!

Activate and adjust automatic functions




You can tell whether a drive or unit is in automatic mode or must be manually operated by the white marking of the “Auto” button to the right, and by the “Auto” text beside the button name in the list in the left-hand area.

After any manual operation, the drive or unit remains in manual mode. The automation functions are then switched off and only rain, wind and frost protection are available.

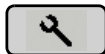
An automatic reset will switch the device back to automatic mode. The automatic reset can be separately activated for each drive group and each unit in the automatic menu.

Use the arrow buttons to set the exact time for the daily automatic reset. Pre-setting: 3.00 am. Use the arrow buttons to set the time when the drives are reset to automatic after manual operation. Pre-setting: 60 min

- Settings > Automatic > Automatic Reset
-  Change automatic settings at the screen, page 67

All to automatic

This button allows you to reset the drives to automatic mode.



Press the button with the **tool symbol** to set the automatic functions of the selected drive or ventilation unit.

5.4.2.1. 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.

5.4.2.2. Setting automatic functions for shading elements

The following can be set for blinds, awnings and roller shutters:

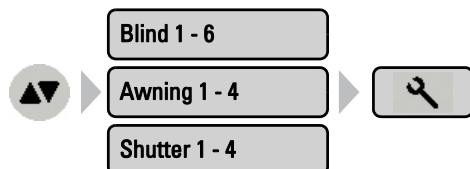
- Give name
- Manual operation
- Light intensity
- Sun direction
- Sun height
- Movement position

- Slat position (only for blinds)
- Sensor selection
- Sun screen dependent on interior temperature (integrated indoor sensor which is used for the blind/awning/roller shutter)
- Night-time closure (only for blinds and roller shutters)
- Timed closure (only for blinds and roller shutters)
- Sun screen dependent on exterior temperature
- Frost alarm
- Wind alarm
- Rain alarm
- Switch automatic reset on/off

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


Only when the direction and height of the sun agree and there is no active block is the **automatic shading by light intensity** engaged.

The automatic blind function can be accessed by pressing the buttons:



Name

Press the **Name** button and input the desired name into the button field which appears.

 Input keyboard for names and codes, page 49

Confirm your input using the **OK** button.

Manual direction

Press the button to set the **manual direction**. When pressing the \uparrow button the long-term object sends either 0 or 1. Default setting: 0

Manual operation can be defined separately for each drive and each unit.

Confirm your input using the **OK** button.

Intensity

You can select one of three shading control options.



Please activate the frost alarm so that the drive or curtain is not damaged if an external shading which has frozen stiff is retracted!

Never use shading: If the drive should not react to brightness, select **Never (does not react to the sun)**. The drive will then remain retracted, unless it is manually operated or controlled by night-time/ timed closure.

All of the parameters which are relevant for this setting (e.g. sensor selection and external temperature) are greyed out.


Confirm your setting using the **OK** button.

Always use shading: If the drive should always screen, select **Always**. The drive will then always move the blind using a slat position which can be set by percentage (shutters only) and travel position. You can use timed closures (using the closure timer) and night-time closure (dependent on brightness) to control when to fully close the shutter/ roller shutter.

Using shading dependent on brightness: If the drive must operate a screen dependent on brightness, select **Use shading from a brightness of X kilolux** using the arrow buttons and change the value using the arrow buttons depending on your needs.


Pre-setting: 40 klx. The drive will always actuate the screen:

- from a set external temperature which you can define using the appropriate button
- in accordance with the settings for night-time/timed closures (shutters/roller shutters)
- in accordance with the sun direction settings
- in accordance with the solar elevation settings

 List of communication objects, page 12

The set light intensity value must be undercut or exceeded for the length of the delay period in order for the automatic function to react. This is to prevent continuous awning extension and retraction in the event of rapidly changing light conditions. The movement delays can be adjusted. (Default setting: Extension delay 1 min; retraction delay 12 min)

Settings > Automatic > Movement delays

 Change automatic settings at the screen, page 67

Sun direction

only if screens are used dependent on brightness

Press the button in order to set the range (sun direction) at which the sun must be located in order to actuate the drive.

All directions: If the sun's orientation is not decisive for shading purposes, select **All sides** (default setting).

Direction: If the shade should only be deployed when the sun is in a specific orientation, select as appropriate: **West, South-West, South, South-East** or **East**. The thickened part of the circle in the centre shows the selected area.

Enter angle: To set the range in which shading shall be provided in exact numbers, press the "from **0°**" or "to **360°**" and adjust the numeric values with the arrows keys that appear.

Confirm your setting using the **OK** button.

Where the date and time are not available ("Please set the time!" in the display), the shading elements are controlled using aperture, temperature, alarm messages and time periods. The position of the sun is not taken into consideration.

Sun elevation

only if blinds are used dependent on brightness

Press the button in order to set the elevation at which the sun must be located in order to actuate the drive.

Any height: If the solar elevation for blind actuation is not crucial, select **All elevations** (default setting).

Input an angle: In order to input a precise numeric elevation, change the numeric value "lower than **90°**" or "greater than **0°**" using the arrow buttons which appear. The thickened section of the image shows the selected area.

Confirm your setting using the **OK** button.

Where the date and time are not available ("Please set the time!" in the display), the blinds are controlled using aperture, temperature and alarm messages. The position of the sun is not taken into consideration.

Movement position

Press the button to set the travel position for automatic operation. Input the movement position in % using the arrow buttons (0% = fully retracted, 100% = fully extended). Pre-setting: 100%.

Confirm your setting using the **OK** button.

Slat position

Only for blinds!

Press the button to set the shutter slat angle.

Fixed angle: if the slats should be opened to a fixed angle once the travel position has been reached, leave the button position at **No** (do not track solar elevation). Input the slat setting in % using the arrow buttons (0% = closed, 50% = horizontal, 100% = closed). Pre-setting: 75% (slightly open).

Tracking in accordance with position of sun: If the slats should be opened according to the solar elevation, press the button so that this changes to **Yes**. You can now adjust the slat opening to the changing angle of the sun. Use the arrow buttons beside the % values to do this.

Pre-setting: 0° to 15°: 100% (closed), 15° to 30°: 80%, 30° to 45°: 65%, 45° to 90°: 50% (horizontal).

Confirm your setting using the **OK** button.

Sensor selection

only if shading is used dependent on brightness

Press the button to select whether the interior room sensor is assessed. If **“No sensor”** is selected, the interior temperature and air humidity are not taken into consideration when controlling the blinds (default setting). Select **“TH sensor”** if the internal thermo-hygrometer should be evaluated when controlling the blinds.

Confirm your setting using the **OK** button.

Outdoor temperature

only if shading is used dependent on brightness

Press the button to set the outdoor temperature block. The effect of the block is that the shade remains in the current position. This protects external shades from damage through movement when the rails are iced up. The outdoor temperature block can also be used when no shading should take place in winter. This allows the light and heat of the sun to be utilised fully.

The outdoor temperature block only applies to automatic operation; no shading based on light intensity or the position of the sun takes place. When the rain or wind alarm is triggered, the shade will be retracted despite the outdoor temperature block (the alarm has priority over temperature block).

Manual operation continues to remain possible, even when shading is blocked because of low outdoor temperatures. Please note that the shade rails or other mechanical components can remain iced even when the outdoor temperature has already risen to a relatively high value.



A drive or curtain can be damaged if an external shade which has frozen stiff is retracted!

Setting the temperature: If the awnings must be locked at low exterior temperatures, use the arrow buttons to set the value recommended by the manufacturer. Pre-setting: 5.0 °C. The block is lifted again when the temperature rises more than 2.0 °C over the pre-set value (hysteresis).

Switching off the lock: If the awning should be actuated independently of the exterior temperature (e.g. for interior awnings), press the **Off** button.

Confirm your setting using the **OK** button.

Indoor temperature

only when an indoor sensor is selected

Press the button to set the interior temperature block. Where no interior room sensor is selected, the interior temperature lock will not be activated.

The interior temperature block enables the use of solar energy to warm the room. The block's effect is to ensure that the shade only deploys when the room temperature exceeds the pre-set value. The shade is retracted again once the temperature sinks more than 2.0 °C under the pre-set value (hysteresis).

Setting the temperature: Adjust the value for the desired room temperature using the arrow buttons. Pre-setting: 25.0 °C.

Switching off the lock: If ventilation is to be independent of indoor temperature, press the **Off** button.

Confirm your setting using the **OK** button.

Night Closure

Only for blinds and roller shutters!

Press the button to close switch the night-time closure of the shutter and/or roller shutter on or off.

Activate: If the shutter or roller shutter should be closed completely at night, select **Yes**.

Deactivate: If the shutter or roller shutter should remain open at night, select **No** (default setting).

Confirm your setting using the **OK** button.

The limit value which identifies twilight/night can be adjusted.

- Settings > Automatic > Twilight
-  Change automatic settings at the screen, page 67

Note on the night-time closure function and the exterior temperature block:

If the outdoor temperature is below the blocking temperature (see "Outdoor Temperature" settings), the blinds and roller shutters will close, but will not open automatically. If the blind/shutter fails to move up in the morning, please check if the hangings are not frozen or the rails iced. When the shading is free, you can move the hangings up by hand.



A drive or curtain can be damaged if an external shade which has frozen stiff is retracted!


Timed Closure

Only for blinds and roller shutters!

Press the button to set the shut-off time. Press **Select** to select the time during which the shutter or roller shutter will be closed completely. Activate one or more times on the list. These operating times can be individually customised.

Confirm your setting using the **OK** button.

To change any of the time periods set in the timer, press **Timer**.

-  Setting the timer at the screen, page 124

Note on the timed closure function and the exterior temperature block:

If the outdoor temperature is below the blocking temperature (see “Outdoor Temperature” settings), the blinds and roller shutters will close, but not open automatically. If the blind/shutter fails to move up after the preset period, please check if the hangings are not frozen or the rails iced. When the shading is free, you can move the hangings up by hand.




A drive or curtain can be damaged if an external shade which has frozen stiff is retracted!

Frost alarm

Press the button to active or deactivate the frost alarm for this shade. The frost alarm retracts the sun shade if the outdoor temperature is low and it is raining/snowing at the same time. This protects external shades from icing and from damage through movement when the rails are iced up.

The conditions for the triggering of the frost alarm are defined in the “General Settings” menu.

- Settings > Automatic > Frost alarm
-  Change automatic settings at the screen, page 67

When the frost alarm is triggered, manual operation of the shade is initially blocked. You can only remove the blocks by deactivating the frost alarm or sending an appropriate signal using the ETS. The block will then be first active for this drive again when it is reactivated manually or the next time the frost alarm is triggered. Please note that the shade rails or other mechanical components can remain iced even when the outdoor temperature has already risen to a relatively high value.



A drive or curtain can be damaged if an external shade which has frozen stiff is retracted!

Activate: If the security object is sent when there is a frost alarm, select **Yes**.

Deactivate: If the solar protection should actuate the blind regardless of the frost risk (e.g. for internal awnings), select **No** (default setting).

Confirm your setting using the **OK** button.

Wind alarm

Press the button to set the wind alarm. The wind alarm protects sensitive awning fabric from damage by retracting the awning.

Adjust values: Adjust the values for wind speed and the duration that this is exceeded using the arrow buttons.

Deactivate: If the drive need not react to the wind (e.g. for internal awnings), select **Do not retract** (default setting).

Confirm your setting using the **OK** button.

A wind alarm actuated for the drive will remain active for 5 minutes. If the saved value is exceeded in these 5 minutes, the stoppage time will be restarted.

Rain alarm

Press the button to switch the rain alarm on or off. The rain alarm protects items such as sensitive awning fabric from damage by retracting the awning.

Activate: For humidity-sensitive awnings, select **Yes** (awnings should be retracted during rain).

Deactivate: For interior awnings, select **No** (awnings should not be retracted during rain, default setting).

Confirm your setting using the **OK** button.

Automatic Reset

Press the button to switch the setting for automatic operation on or off at a set point in time, or following a manual intervention.

The general Automatic Reset occurs daily at the same time.

Activate: To set the drive to Automatic at a set point in time, select **Yes** (default setting).

Deactivate: To switch off the drive Reset function, select **No**.

Alternatively, the automatic function can be reactivated at a set time following a manual intervention.

Activate: To perform an Automatic Reset after a manual intervention, select **Yes**.

Deactivate: To switch off the Reset function for these awnings, select **No** (default setting).

Confirm your setting using the **OK** button.

You can set automatic reset times and/or durations.

Settings > Automatic > Automatic Reset

 Change automatic settings at the screen, page 67

5.4.2.3. Setting automatic functions for windows

The following settings can be changed for windows:

- Name
- Manual direction
- Interior room sensor which is evaluated for the window
- Indoor temperature
- Air humidity
- CO2 content
- Supply air temperature

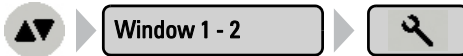
- Night-time re-cooling (indoor temperature and movement position can be set)
- Movement position (only for sliding windows)
- Number of steps (only for step windows)
- Timed ventilation
- Outdoor temperature
- Timed Closure
- Frost alarm
- Wind alarm
- Rain alarm
- Gap ventilation
- Gap position
- Switch automatic reset on/off

Highest priority is assigned to **time closure**, followed by the **outdoor temperature-block** (keep closed), **timed ventilation** (open), the incoming **air temperature-block** (keep closed) and **night-time re-cooling**.

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


The **automatic ventilation according to temperature** or relative humidity is only performed if no block is active.

The automatic window function can be accessed by pressing the buttons:



Name

Press the **Name** button and input the desired name into the button field which appears.

 Input keyboard for names and codes, page 49

Confirm your input using the **OK** button.

Manual direction

Press the button to set the **manual direction**. When pressing the \hat{u} button the long-term object sends either 0 or 1. Default setting: 0.

Manual direction can be defined separately for each drive.

Confirm your input using the **OK** button.

Sensor selection

Press the button to select whether the interior room sensor is assessed. If **"No sensor"** is selected, the interior temperature, air humidity and CO2 content are not taken into consideration when controlling the windows (default setting).

Confirm your setting using the **OK** button.

Indoor temperature

only when an indoor sensor is selected

Press the button to set the internal temperature at which the window is opened.

Setting the temperature: Adjust the value for the desired room temperature using the arrow buttons. Pre-setting: 25.0 °C.

The window is opened as soon as the temperature lies above the pre-set value. However, it is only closed again when the temperature sinks by more than 2.0 °C under the pre-set value (hysteresis).

Shutting off ventilation: If the interior temperature should be independently ventilated, press the **Off** button.

Confirm your setting using the **OK** button.

Air humidity

only when an indoor sensor is selected

Press the button to set the air humidity at which the window is opened. If no interior room sensor with humidity measurement is selected, air humidity is not taken into consideration.

Setting humidity: Adjust the value for the desired room humidity using the arrow buttons. Pre-setting: 80%.

The window is opened as soon as the air humidity lies above the pre-set value. It is however closed again once the humidity drops more than 3.0% below the set value (hysteresis).

Shutting off ventilation: If the ventilation should be performed independently of air humidity, press the **OFF** button.

Confirm your setting using the **OK** button.

CO₂

only when an indoor sensor is selected

Press the button to set the room air CO₂ content at which the window is opened or closed.

Setting CO₂ content: The window is opened as soon as the CO₂ content lies above the pre-set value. It is closed again once the CO₂ value lies below the set value. Adjust both CO₂ values using the arrow buttons (default window opening setting: > 800 ppm; default window closure setting: < 550 ppm).

Shutting off ventilation: If the ventilation should be performed independently of CO₂ content, press the **OFF** button.

Confirm your setting using the **OK** button.

Supply air**only when an indoor sensor is selected**

Press the button to set the interior temperature block (thermal protection). If no interior room sensor is selected, the supply air temperature is not taken into consideration.

Activate: If the window should be closed when the supply air temperature is higher than the room temperature, select **Yes**.

The supply air temperature-block becomes active as soon as the supply air temperature lies above the room temperature. The block is however only deactivated again when the supply air temperature sinks more than 3.0 °C below the room temperature (hysteresis).

Deactivate: If the window should be opened/remain open when the supply air temperature is higher than the room temperature, select **No** (default setting).

Confirm your setting using the **OK** button.

Number of steps**Only for step windows.****Only when an indoor sensor is selected**


Press the button to set the number of travel steps for a stepped window in automatic operation. In stepped windows, the control system checks every 3 minutes whether the set room temperature and/or air humidity is still undercut, and then if necessary extends this a further step.

Input the desired number of steps using the arrow buttons. Pre-setting: 5.

Confirm your setting using the **OK** button.

Night-time cooling**Only if night-time re-cooling is activated.****Only when an indoor sensor is selected**


Press the button to set the times for night-time re-cooling. The button is only active when the general settings for the night-time re-cooling have already been input and the TH sensor for the window has been selected.

- Settings > Automatic > Night-time re-cooling
-  Change automatic settings at the screen, page 67

Press **Select** to select the times during which the night-time re-cooling should be activated. Activate one or more times on the list.

Confirm your setting by pressing the **OK** button.

To change any of the time periods set in the timer, press **Timer**.

-  Setting the timer at the screen, page 124

Be careful that your timer settings do not prevent night-time re-cooling operations!

NTC interior temp.**Only when night-time re-cooling has been activated for this drive**

Press the button to set the internal temperature to the desired cooling level (for the night-time re-cooling). The button will only be activated once a night-time re-cooling temperature has been set.

Use the arrow buttons to change the value as required.

Pre-setting: 16.0 °C .

Confirm your setting using the **OK** button.

NTC operation**Only when night-time re-cooling has been activated for this drive**

Press the button to set the operating position for the night-time re-cooling. The button will only be activated once a night-time re-cooling temperature has been set.

Input the operating position in % using the arrow buttons (0% = closed, 100% = fully open). Pre-setting: 30%.

Confirm your setting using the **OK** button.


Timed ventilation

Press the button to set the ventilation running time. At the end of the ventilation period, the normal automated ventilation is once again performed according to the temperature, air humidity and CO2 content.

Press **Select** to select the times. Activate one or more times on the list. These operating times can be individually customised.

Confirm your setting using the **OK** button.

To change any of the time periods set in the timer, press **Timer**.

 Setting the timer at the screen, page 124

Outdoor temperature

Press the button to set the outdoor temperature block. The effect of the block is that the window remains in the current position. The outdoor temperature 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 for 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 (the alarm has priority over temperature block).

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

Setting a value: Use the arrow buttons to change the value as required.

Pre-setting: 5.0 °C .

The outdoor temperature-block becomes active as soon as the temperature sinks under the pre-set value. The block is however only deactivated again when the temperature rises over the pre-set value by more than 2.0 °C (hysteresis).

Switching off the lock: If the window should be controlled independently of the external temperature, press the **Off** button.

Confirm your setting using the **OK** button.

Timed Closure


Press the button to set the shut-off time. Shut-off times prevent the windows for example from opening and closing at night, and thus causing noise.

Make sure that no night-time re-cooling is possible during the set shut-off times.

Press **Select** to select the times during which the window should be closed. Activate one or more times on the list. These operating times can be individually customised.

Confirm your setting using the **OK** button.

To change any of the time periods set in the timer, press **Timer**.


 Setting the timer at the screen, page 124

Frost alarm

Press the button to activate or deactivate the frost alarm for this window. The frost alarm sends the security object if the outdoor temperature is low and it is raining/snowing at the same time. This prevents damage from ice (e.g. at the seal).

The conditions for the triggering of the frost alarm (outdoor temperature, period) are defined in the "Settings" menu.

Settings > Automatic > Frost alarm

 Change automatic settings at the screen, page 67

When the frost alarm is triggered, manual operation of the window is initially blocked. You can remove the block by deactivating the frost alarm. The block will then be first active for this drive again when it is reactivated manually or the next time the frost alarm is triggered.

Activate: If the security object is sent when there is a frost alarm, select **Yes**.

Deactivate: If the security object should not be sent when there is a frost alarm, select **No** (default setting).

Confirm your setting using the **OK** button.

Wind alarm

Press the button to set the wind alarm. The wind alarm protects the device and equipment from damage by closing the window. Even manually opened windows are closed in the event of a wind alarm.

Adjust values: Adjust the values for wind speed (default setting: 6 m/s) and the duration that this is exceeded (default setting: 1 sec.) using the arrow buttons.

Deactivate: If the window need not react to the wind, select **Do not close** (default setting).

Confirm your setting using the **OK** button.

A wind alarm actuated for the drive will remain active for 5 minutes. If the saved value is exceeded in these 5 minutes, the stoppage time will be restarted.

Rain alarm

Press the button to switch the rain alarm on or off. The rain alarm provides protection from humidity damage by sending the security object. Even manually opened windows are closed in the event of a rain alarm.

Activate: If the security object should be sent, select **Yes**.

Deactivate: If the security object should not be sent in the event of rain, select **No** (default setting).

Confirm your setting using the **OK** button.



A certain amount of time may pass before precipitation is recognised by the weather equipment, depending on the rain amount and temperature. The operating time taken to close the window must also be included in this calculation. Humidity-sensitive items should not be placed within range of the automatic windows.

Gap ventilation

Press the button to switch gap openings in the event of a rain alarm on or off. This function is only active when the rain alarm has been switched on. Gap opening allows the window to be opened slightly despite a rain alarm.

Activate: If gap opening should be activated when it is raining, select **Yes**.

Deactivate: If the window should be fully closed in the event of rain, select **No** (default setting).

Confirm your setting using the **OK** button.

Gap position

Press the button to set the travel position for gap opening in the event of rain. This function is only active when gap opening has been switched on.

Input the operating position in % using the arrow buttons (0% = closed, 100% = fully open). Pre-setting: 10%.

Confirm your setting using the **OK** button.

Automatic Reset

Press the button to switch on or off the setting for automatic operation at a set point in time, or following a manual intervention.

The general Automatic Reset occurs daily at the same time.

Activate: To set the window to Automatic at a set point in time, select **Yes** (default setting).

Deactivate: To switch off the Reset function for this window, select **No**.


Alternatively, the automatic function can be reactivated at a set time following a manual intervention.

Activate: To perform an Automatic Reset after a manual intervention, select **Yes**.

Deactivate: To switch off the Reset function for this window, select **No** (default setting).

Confirm your setting using the **OK** button.

You can set automatic reset times and/or durations

- Settings > Automatic > Automatic Reset
-  Change automatic settings at the screen, page 67

5.4.2.4. Setting automatic functions for ventilation units



Automatic and manual operation of the ventilator is only possible if the unit receives feedback on the currently operating ventilator speed from the ventilator actuator.

The following settings can be changed for a ventilator:

- Name
- Indoor sensor selection
- Indoor temperature
- Air humidity
- CO2 content
- Minimum ventilation
- Maximum ventilation
- Night-time re-cooling (internal temperature and ventilation steps for night-time re-cooling)

- Timed ventilation (and steps for timed ventilation)
- Switch automatic reset on/off

The automatic ventilation function can be accessed by pressing the buttons:



Name

Press the **Name** button and input the desired name into the button field which appears.

Input keyboard for names and codes, page 49

Confirm your input using the **OK** button.

Sensor selection

Press the button to select whether the interior room sensor is assessed. If **“No sensor”** is selected, the interior temperature, air humidity and CO2 content are not taken into consideration when controlling the ventilation (default setting).

Confirm your setting using the **OK** button.

Indoor temperature **only when an indoor sensor is selected**

Press the button to set the internal temperature at which the ventilation is opened.

Setting the temperature: Adjust the value for the desired room temperature using the arrow buttons. Pre-setting: 25.0 °C.

Shutting off ventilation: If ventilation is to be independent of indoor temperature, press the button labelled **OFF**.

Confirm your setting using the **OK** button.

Air humidity **only when an indoor sensor is selected**

Press the button to set the air humidity at which the ventilation is opened. If no interior room sensor is selected, air humidity is not observed.

Setting humidity: Adjust the value for the desired room humidity using the arrow buttons. Pre-setting: 80%.

Shutting off ventilation: If the ventilation should be performed independently of air humidity, press the **OFF** button.

Confirm your setting using the **OK** button.

CO 2**only when an indoor sensor is selected**

Press the button to set the room air CO₂ content at which ventilation should begin and end.

Setting CO₂ content: The ventilator operates as soon as the CO₂ content lies above the pre-set value. Ventilation stops once the CO₂ value lies below the set value. adjust both CO₂ values using the arrow buttons (default setting for ventilation with highest speed: > 800 ppm; default ventilation end setting: < 550 ppm).

Shutting off ventilation: If the ventilation should be performed independently of CO₂ content, press the **OFF** button.

Confirm your setting using the **OK** button.

Min. ventilation**only when an indoor sensor is selected**

Press the button to set the minimum ventilation force. If no interior room sensor is selected, minimum ventilation is not taken into consideration.

Setting minimum ventilation: The ventilator force can be set in 10% steps from 100 to 10% using the arrow buttons (default setting: 10%).

Confirm your setting using the **OK** button.

Max. ventilation**only when an indoor sensor is selected**


Press the button to set the maximum ventilation force. If no interior room sensor is selected, maximum ventilation is not taken into consideration.

Setting maximum ventilation: The ventilator force can be set in 10% steps from 100 to 10% using the arrow buttons (default setting: 100%).

Confirm your setting using the **OK** button.

Night-time cooling


Press the button to set the night-time re-cooling. The general settings for night-time re-cooling must be set for this.

- Settings > Automatic > Night-time re-cooling
-  Change automatic settings at the screen, page 67

Press **Select** to select the times during which the night-time re-cooling should be activated. Activate one or more times on the list.

Confirm your setting using the **OK** button.

To change any of the time periods set in the timer, press **Timer**.

-  Setting the timer at the screen, page 124

NTC interior temp.**only when night-time re-cooling is selected**

Press the button to set the internal temperature to the desired cooling level (for the night-time re-cooling). The button will only be activated once a night-time re-cooling temperature has been set.

Use the arrow buttons to change the value as required.
Pre-setting: 16.0 °C .

Confirm your setting using the **OK** button.

NTC exhaust steps**only when night-time re-cooling is selected**

Press the button to set the ventilation force. The button will only be activated once a night-time re-cooling temperature has been set.

Setting ventilation for night-time re-cooling: The ventilator force can be set in 10% increments from 100 to 10% using the arrow buttons. (Default setting: 40%).


Confirm your setting using the **OK** button.

Timed ventilation

Press the button to set the timed ventilation time. Press **Select** to select the times during which ventilation will occur. Activate one or more times on the list.

Confirm your setting using the **OK** button.

To change any of the time periods set in the timer, press **Timer**.

 Setting the timer at the screen, page 124

Timed ventilation**Only when a time period for timed ventilation has been selected**

Press the button to set the ventilation force for timed ventilation. The button will only be activated once a ventilation time for the timed ventilation has been set.

Setting ventilation force for timed ventilation: The ventilator force for timed ventilation can be set in 10% increments from 100 to 10% using the arrow buttons. (Default setting: 40%).

Confirm your setting using the **OK** button.

Automatic Reset

Press the button to switch on or off the setting for automatic operation at a set point in time, or following a manual intervention.

The general Automatic Reset occurs daily at the same time.

Activate: To set the ventilator to Automatic at a set point in time, select **Yes** (default setting).

Deactivate: To switch off the Reset function for this ventilator, select **No**.


Alternatively, the automatic function can be reactivated at a set time following a manual intervention.

Activate: To perform an Automatic Reset after a manual intervention, select **Yes**.

Deactivate: To switch off the Reset function for this ventilator, select **No** (default setting).

Confirm your setting using the **OK** button.

You can set automatic reset times and/or durations.

- Settings > Automatic > Automatic Reset
-  Change automatic settings at the screen, page 67

5.5. Temperature control

The temperature control must be activated in the ETS first, before it can be used at the **Room Controller KNX Touch One**.

5.5.1. Setting temperature control using the ETS

The temperature control with a heating and/or cooling is set via the menu item "Temperature control".

Control in general:

Use control	<u>No</u> • Yes
Type of control	<ul style="list-style-type: none"> • <u>One-step heating</u> • Two-step heating • One-step cooling • One-step heating + One-step cooling • Two-step heating + One-step cooling • Two-step heating + Two-step cooling
Behaviour of the blocking object at value	<ul style="list-style-type: none"> • <u>1 = Block control</u> <u>0 = Release control</u> • 0 = Block control 1 = Release control
Blocking object value before 1st communication	<u>0</u> • 1
Send actuating variables	<ul style="list-style-type: none"> • <u>on change</u> • on change and periodically
Transmit cycle (is only transmitted if "periodically" is selected)	5 s ... 2 h; <u>5 min</u>

Send status objects	<ul style="list-style-type: none"> • <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 <i>(is only transmitted if "periodically" is selected)</i>	5 s ... 2 h; <u>5 min</u>

Controller setpoint (when heating ONLY or cooling ONLY are used)

Storage of the last received value	<ul style="list-style-type: none"> • <u>not</u> • After reset • After reset and programming <p>(Attention: Do not use during initial start-up)</p>
Start setpoint in 0.1 °C valid till 1st communication	-300 ... 800; <u>220</u>
Object value limit (min) in 0.1 °C (restricts the input of the reference temperature on the touch display appropriately)	-300 ... 800; <u>140</u>
Object value limit (max) in 0.1 °C (restricts the input of the reference temperature on the touch display appropriately)	-300 ... 800; <u>300</u>
Type of setpoint change	<ul style="list-style-type: none"> • Absolute value • <u>Increase / Decrease</u>
Increment (in 0.1 °C) <i>(only when "increase/reduce" is used)</i>	1 ... 50; <u>10</u>

Controller setpoint (when heating AND cooling are used)

Switching between heating and cooling	<ul style="list-style-type: none"> • <u>By means of dead zone</u> • By means of switching object
Dead zone between heating and cooling (in °C) <i>(when switched by means of a "dead zone")</i> Cooling regulation starts at Actual temperature >= (reference value + dead zone)	1...100; <u>50</u>
Switching object value before 1st communication	<u>0</u> • 1

Storage of the last received value	<ul style="list-style-type: none"> • <u>not</u> • After reset • After reset and programming (Attention: Do not use during initial start-up)
Heating initial setpoint (in 0.1 °C) valid till 1st communication	-300 ... 800; <u>220</u>
H min. object value limit (in 0.1 °C) (restricts the input of the reference temperature on the touch display appropriately)	-300 ... 800; <u>140</u>
Object value limit Hmax (in 0.1 °C) (restricts the input of the reference temperature on the touch display appropriately)	-300 ... 800; <u>250</u>
Cooling initial setpoint (in 0.1 °C) valid till 1st communication	-300 ... 800; <u>260</u>
K min. object value limit (in 0.1 °C) (restricts the input of the reference temperature on the touch display appropriately)	-300 ... 800; <u>140</u>
K max. object value limit (in 0.1 °C) (restricts the input of the reference temperature on the touch display appropriately)	-300 ... 800; <u>300</u>
Type of setpoint change	<ul style="list-style-type: none"> • <u>Absolute value</u> • Increase / Decrease
Increment (in 0.1 °C) (only when "increase/reduce" is used)	1 ... 50; <u>10</u>

Heating control

Set control using	<ul style="list-style-type: none"> • Controller parameter • <u>provided applications</u>
Application (only when the controller is set by means of a "default application")	<ul style="list-style-type: none"> • <u>Warm water heating</u> • Floor heating • Convection unit • Electric heating
Maximum control variable is reached at setpoint/actual difference of (in °C) (only when controller is set by means of "controller parameter")	1 ... <u>5</u>
Reset time (in min) (only when controller is set by means of "controller parameter")	1 ... 255; <u>30</u>
Upon shut-off, control variable should	<ul style="list-style-type: none"> • <u>not transmitted</u> • send a specific value

Value in % (only if a set value is sent)	<u>0</u> ... 100
The control variable follows the rule upon triggering	

Preferences for "default applications":

Application	Maximum control variable is reached at setpoint/ actual difference of	Reset time
Warm water heating	5 °C	150 min
floor heating	5 °C	240 min
Convection unit	4 °C	90 min
Electric heating	4 °C	100 min

Heat control, second step (only for two-step heat control)

Setpoint difference between steps 1 and 2 in 0.1 °C	0...100; <u>40</u>
Control type	<ul style="list-style-type: none"> • <u>2-point control</u> • PI control

For 2-point control:

Hysteresis in 0.1 °C	0 ... 100; <u>20</u>
Control variable is a	<ul style="list-style-type: none"> • <u>1-bit object</u> • 8-bit object
Value in % (only when control variable is an 8-bit object)	0 ... <u>100</u>
Upon shut-off, control variable should (do not send: display 0%, Send value: display shows value in %)	<ul style="list-style-type: none"> • <u>not transmitted</u> • send a specific value
Value in % (only if the control variable should send a set value)	<u>0</u> • 1
The control variable follows the rule upon triggering	

For PI control:

For possible settings, see Heat control, single-step

Cooling control

Set control using	<ul style="list-style-type: none"> • <u>Provided applications</u> • Controller parameter
Application (only when the controller is set by means of a "default application")	<ul style="list-style-type: none"> • <u>Cooling ceiling</u>

Maximum control variable is reached at setpoint/actual difference of in °C (only when controller is set by means of "controller parameter")	1 ... <u>5</u>
Reset time in min (only when controller is set by means of "controller parameter")	1 ... 255; <u>30</u>
Upon shut-off, control variable should	<ul style="list-style-type: none"> • <u>not transmitted</u> • send a specific value
Value in % (only if a set value is sent)	<u>0</u> ... 100
The control variable follows the rule upon triggering	

Preferences for "default applications":

Application	Maximum control variable is reached at setpoint/ actual difference of	Reset time
Cooling ceiling	5 °C	240 min

Cooling control, second step (only shown for two-step cooling control)

Setpoint difference between steps 1 and 2 in 0.1 °C	0...100; <u>40</u>
Control type	<ul style="list-style-type: none"> • <u>2-point control</u> • PI control

For 2-point control:

Hysteresis in 0.1 °C	0 ... 100; <u>20</u>
Control variable is a	<ul style="list-style-type: none"> • <u>1-bit object</u> • 8-bit object
Value in % (only when control variable is an 8-bit object)	0 ... <u>100</u>
Upon shut-off, control variable should (do not send: display 0%, Send value: display shows value in %)	<ul style="list-style-type: none"> • <u>not transmitted</u> • send a specific value
Value in % (only if the control variable should send a set value)	<u>0</u> ... 100
The control variable follows the rule upon triggering	

For PI control:

For possible settings, see Cooling control, first step

Night-time reduction:

Use night-time reduction	<u>No</u> • Yes
--------------------------	-----------------

Use night-time reduction	Yes
Night-time reduction when object value	<ul style="list-style-type: none"> • <u>1 = active</u> 0 = inactive • 0 = active 1 = inactive
Activation object value before 1st communication	<u>0</u> • 1
Content of the last received value	<ul style="list-style-type: none"> • <u>Not</u> • After reset • After reset and programming (Attention: Do not use during initial start-up)

If night-time reduction is used for heating only:

Initial setpoint (in 0.1 °C) valid till 1st communication	-300...800; <u>180</u>
Min. object value limit (in 0.1 °C)	-300...800; <u>140</u>
Max object value limit (in 0.1 °C)	-300...800; <u>250</u>

If night-time reduction is used for cooling only:

Initial setpoint (in 0.1 °C) valid till 1st communication	-300...800; <u>300</u>
Min. object value limit (in 0.1 °C)	-300...800; <u>240</u>
Max object value limit (in 0.1 °C)	-300...800; <u>360</u>


If night-time reduction is used for heating and cooling:

Heating initial setpoint (in 0.1 °C) valid till 1st communication	-300...800; <u>180</u>
Object value limit Hmin (in 0.1 °C)	-300...800; <u>140</u>
Object value limit Hmax (in 0.1 °C)	-300...800; <u>250</u>
Cooling initial setpoint (in 0.1 °C)	-300...800; <u>300</u>
Object value limit Kmin (in 0.1 °C)	-300...800; <u>240</u>
Object value limit Kmax (in 0.1 °C)	-300...800; <u>360</u>

The following night-time reduction settings can be adjusted for all heatings and coolings:

Type of setpoint change	<ul style="list-style-type: none"> • Absolute value • <u>Increase / Decrease</u>
Increment (in 0.1 °C) (only when "increase/reduce" is used)	1...50; <u>10</u>
Day extension time in seconds	0 ... 36000

The night-time reduction can be cancelled for the set time with the day extension.

- Temperature menu > Night-time reduction
-  Setting temperature control at the screen, page 118

Frost/heat protection:

Use frost/heat protection	<u>No</u> • Yes
---------------------------	-----------------

If control is used for heating only:

Use frost protection	Yes
Setpoint (in 0.1 °C)	-300 ... 800; <u>70</u>
Activation delay according to Window opening (so that the controller does not immediately heat in the event of short-term temperature variations, e.g. airing)	None • 1 s ... 2 h; <u>5 min</u>
Window status before 1st communication	<u>OPEN</u> • CLOSE

If control is used for cooling only:

Use heat protection	Yes
Setpoint (in 0.1 °C)	-300 ... 800; <u>310</u>
Activation delay according to Window opening (so that the controller does not immediately heat in the event of short-term temperature variations, e.g. airing)	None • 1 s ... 2 h; <u>5 min</u>
Window status before 1st communication	OPEN • <u>CLOSE</u>

If control is used for heating AND cooling:

Use frost/heat protection	Yes
Heating setpoint in 0.1 °C	-300 ... 800; <u>70</u>
Activation delay according to Window opening (so that the controller does not immediately heat in the event of short-term temperature variations, e.g. airing)	None • 1 s ... 2 h; <u>5 min</u>
Cooling setpoint in 0.1 °C	-300 ... 800; <u>350</u>
Activation delay according to Window opening (so that the controller does not immediately heat in the event of short-term temperature variations, e.g. airing)	None • 1 s ... 2 h; <u>5 min</u>
Window status before 1st communication	<u>OPEN</u> • CLOSE

5.5.2. Setting temperature control at the screen

You can access the temperature controller via the menu:



Temperature

The type of control, setpoint values and other parameters are set in the ETS. The way in which the controller is shown on the display varies depending on the selected control type as well as the activation/deactivation of night-time reduction and frost/heat protection. This also applies to the control status display.

The following settings can be configured using the touch display:

- Change the setpoint temperature for heating and cooling (dependent on the selected control type)
- Activate or deactivate night-time reduction and change the setpoint temperatures (only if night-time reduction has been activated in the ETS)
- Deactivate night-time reduction temporarily with the day extension
- Block/unblock the controller

The display shows the actual temperature (including the temperature offset and external component), heating/cooling setpoint temperatures and the current setpoint temperature (which consists of the setpoint temperature with the highest priority).

The following parameters are valid for all control types:

Setpoint temperature heating/cooling

Only the setpoint temperatures which are required for the controller type are displayed. These values are given in the ETS and can be changed directly on the display.

This ensures that no unnecessary heating/cooling energy is wasted, and max./min. object value limits can be defined in the ETS which restrict the setpoint temperature range for input into the touch display.

Current setpoint temperature

The current setpoint temperature corresponds to the setpoint temperature with the highest priority for the temperature controller. If for example a heat shield is used, the current setpoint temperature thus corresponds to the temperature which is set as the threshold value for cooling (heat shield).

If a superordinate frost or heat alarm is used, this corresponds to the heating/cooling setpoint temperature.

If the heating/cooling setpoint temperature is changed on the touch display, the current setpoint temperature is automatically adjusted.

Controller status

The controller status indicates the control variables dependent on the selected control type in % as well as the window status (open/closed). If the control variables are not sent due to blocking (an ETS setting), the setting 0% is automatically shown.

Blocking the controller: If the temperature controller must be locked, select **Yes**.

Unblocking the controller: If the temperature controller must be unlocked, select **No**.

Also status changes of the blocking that were triggered via an object (the bus) are shown here immediately.

Night reduction**Only if night-time reduction has been activated in the ETS**

The night-time reduction setting is applicable to each type of temperature control and is only displayed if this has been activated in the ETS. The following also applies for night-time reduction: Only the setpoint temperatures which are required for the controller type are displayed. The pre-set setpoint temperatures correspond to the values given in the ETS and can be changed using the display.

You can change the setpoint temperature for night-time reduction within the permissible input range using the arrow buttons (the min./max. object value limits defined in the ETS restrict the setpoint temperature range appropriately).

The object value limits cannot be changed in the touch display.

Confirm your setting using the **OK** button.

Switching on: To activate the night-time reduction, select **On**.


Switching off: To deactivate the night-time reduction, select **Off**.

Day extension

If you want to switch off night-time reduction (e.g. when guests are there), you can use day extension. Day extension can only be switched on when night-time reduction is switched on (night-time reduction **On**). If you press day extension **On**, the control will switch to day mode and the set extension time will begin to run. You can change the expiry time by simply pressing the numeric keys next to the day extension time: An input field appears. You enter the time in seconds and confirm with **OK**. The expiry time can also be changed in the ETS.

5.6. Universal menu

The universal menu offers space for up to 64 functions on eight pages. These may be control elements, display values or input fields and buttons for the bus communication. The universal menu must be set up in the ETS.

 Universal menu, page 120

5.6.1. Setting the Universal menu using the ETS

Up to 8 pages can be created for the Universal menus. Each page can be allocated up to 8 functions. Thus, a total of 64 functions can be displayed in the Universal menus.

Make sure that the text you enter is as short and precise as possible. The page title display is limited to 15 characters.

Page 1 - 8 Function 1 - 8	Text input field S. 1 - 8 Function 1 - 8
Function 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8	<ul style="list-style-type: none"> • <u>No function</u> • Select all object functions

Determine in the ETS which object functions are displayed, and/or which can be directly processed on the touch display.

5.6.1.1. List of object functions

For object function „Display ...“ the received value/text is shown on the display only. For object function „Input ...“ a value/text can be edited on the display and sent with **OK**.

No function

Display 1 / 0

Display Up (for value 0) / Down (for value 1)

Display Up (for value 1) / Down (for value 0)

Display On (for value 1) / Off (for value 0)

Display On (for value 0) / Off (for value 1)

Display Up (for value 1) / To (for value 0)

Display Up (for value 0) / To (for value 1)

Display 8-bit value [0...255]

Display 8-bit value [0%...100%]

Display 8-bit value [0...360°]

Display 16-bit floating point

Display 32-bit floating point

Display text

Input 1 / 0

Input 0

Input 1

Input (press = 1 / release = 0)

Input (press = 0 / release = 1)

Input up/down (press = 1 / release = 0)

Input up/down (press = 0 / release = 1)

Input + / -

Input Up (for value 0) / Down (for value 1)

Input Up (for value 1) / Down (for value 0)

Input On (for value 1) / Off (for value 0)

Input On (for value 0) / Off (for value 1)

Input Open (for value 1) / Close (for value 0)

Input Open (for value 0) / Close (for value 1)

Input Extended / Brief

Input 8-bit value [0...255]

Input 8-bit value [0%...100%]

Input 8-bit value [0...360°]

Input 16-bit floating point

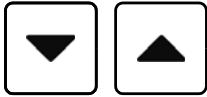
Input 32-bit floating point

Input text

Object function „Input Extended/Brief“:

Function	Input Extended / Brief
Time 1 in 10 m/s	0...200; <u>40</u>
Time 5.08 cm 10 m/s	0...24 000; <u>200</u>

For the object function „Input Brief/Extended“, you can trigger the following commands by varying the duration of the button press:



Up/down buttons

Button was pressed and released before expiry of Time 1
 ==> Stop/Step
Maintained for longer than Time 1
 ==> Up/Down
Triggered between Times 1 and 1 + 2
 ==> Stop
Triggered after Times 1 + 2
 ==> No further stop

Object function „Display/Input 16/32-bit floating point“:

Function	<ul style="list-style-type: none"> • Display 16-bit floating point • Display 32-bit floating point • Input 16-bit floating point • Input 32-bit floating point
Text for unit	Text input (max. 2 chars.)
Conversion factor a	-/+ 0,001 • ... • -/+ 10000
Conversion factor a	1 ... 65535


For object function "Display 16/32-bit floating point" and „Input 16/32-bit floating point", you can input the unit as text. Additionally, you can convert the value by using the factors *a* (+/-, floating point) and *b* (number 1...65535).

Thus, the value of 10 m/s received from the bus could be displayed as $10 \times (+0.1) \times 36 = 36 \text{ km/h}$

5.6.2. Universal menu at the screen

The Universal menu is used for display (e. g. measured values) and operation.



 Universal menu, page 120

Page texts and names for functions can be changes in the ETS and at the screen.

📖 Texts, page 65

5.7. Timer

For use of the timer, reception of date and time via the bus or manual setting of the internal clock is required.

📖 Date and time, page 57

Sixteen periods can be set in the week-long timer, which can be used for different automation functions. A start and end point, as well as a day of the week must be set for each time period.

5.7.1. Setting the timer using the ETS

The time periods for the timer are set in the menu items "Timer 1...16".

Period output transmits	<ul style="list-style-type: none"> • <u>not</u> • 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 <i>(is only transmitted if "periodically" is selected)</i>	5 s ... 2 h; <u>1 min</u>
Transfer the following parameters	No • <u>Yes</u>



If you transfer these parameters, the settings which have been made manually on the touch display will be overwritten.

Name	Text input field
Start:	
Hour	<u>0</u> ...23
Minute	<u>0</u> ...59
End:	
Hour	<u>0</u> ...23
Minute	<u>0</u> ...59
Use weekday:	
Monday	<u>No</u> • Yes
Tuesday	<u>No</u> • Yes
Wednesday	<u>No</u> • Yes
Thursday	<u>No</u> • Yes
Friday	<u>No</u> • Yes

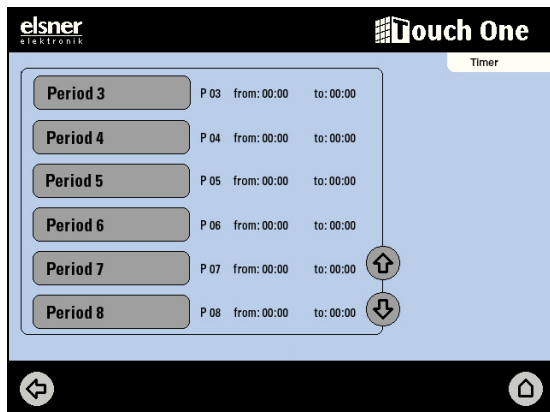
Saturday	<u>No</u> • Yes
Sunday	<u>No</u> • Yes

5.7.2. Setting the timer at the screen

You can access the timer via the menu:



Timer




The defined time periods can be easily identified in the overview for all time periods. Press the button in order to adjust a time period. The following settings of each time period can be changed:

Name:

Period 1 - 16

Press the button to change this name. Enter the desired name via the keypad that appears.

 Input keyboard for names and codes, page 49

Start / end:

Set the start and end of the time period by selecting each hour and minute field consecutively and setting the time using the arrow buttons. Holding the arrow button allows you to input the time more rapidly.

Weekdays:

Select the day of the week on which the time period should be activated. More than one day can also be selected.

Confirm your setting using the **OK** button.

Reset

The **Reset** command allows you, at the touch of a button, to reset the time periods to their original condition (start: 00:00, end: 00:00, no weekday).

Confirm your setting using the **OK** button.

5.8. Scenes

5.8.1. Setting scenes using the ETS

Scenes are set via the menu items "Scenen control" and "Scene object 1...16".

Scene control

At first the required number of scene objects is activated here (up to 16 objects).

Use scene object 1 - 16

Yes

Scene object 1...16

After that you define the individual scene objects (e. g. sending an 8 bit value in % for addressing a light dimming actuator in the living room). The scene objects must be linked with the corresponding actuator inputs.

After reset, last received value should

- Not 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 with the light in the living room) can now be assigned to the individual scenes (1...16) and a value can be defined. Thus each linkage can be used several times (e. g. dimming to 20% for scene "TV", dimming to 60% for scene "Guests")

Use scene 1 - 16

No • Yes

When a scene is used, the following values appear:

Value

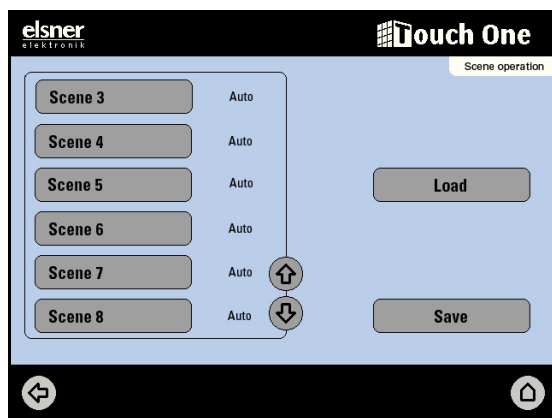
(for "1-bit object type")

0 • 1

Value (for "8-bit object type [0...255]")	<u>0</u> ...255
Value (for "8-bit object type in %[0...100]")	<u>0</u> ...100
Value (for "8-bit object type in ° [0...360]")	<u>0</u> ...360
Value (in 0.1) (for "16-bit floating comma object type")	-6707600...6707600; <u>0</u>

5.8.2. Scene activation at the screen

Up to 16 scenes can be called up or saved in the **Scene actuation > Scene 1 - 16** menu area. Press the button:



Pressing the **Load** buttons sends all of the values allocated in the ETS for objects which are allocated to the selected scene.



Pressing the **Saving** button sends a read message to all of the objects which are assigned to the scene. The value of the reply message is used as the new scene value. Please note that the L-flag is set in the actuator.

5.9. Push-button inputs

Besides operating using the display, you can also connect external buttons (wall-mounted buttons) to the **Room Controller KNX Touch One**. The button inputs are configured in the ETS.

Use button interface 1 / 2 / 3 / 4	<u>No</u> • Yes
Use button interface 1 / 2 / 3 / 4	Yes
Function	<ul style="list-style-type: none"> • <u>switch</u> • Changeover switch • Blind • Roller blind • Awning • Window • Dimmer • 8-bit encoder • 16-bit encoder • Scene load

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	<ul style="list-style-type: none"> • <u>send 0</u> • <u>send 1</u> • do not send telegram
Command when releasing the button	<ul style="list-style-type: none"> • <u>send 0</u> • send 1 • do not send telegram
Send value	<ul style="list-style-type: none"> • <u>no change</u> • 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")	<u>5 s</u> ... 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	<ul style="list-style-type: none"> • <u>selector switch</u> • do not send telegram
Command when releasing the button	<ul style="list-style-type: none"> • selector switch • <u>do not send telegram</u>

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.

Bus function	Shutter / blinds / awning / window	
Button function	<u>Up</u> • Down <u>Up</u> • Down • Up/ Down <u>On</u> • Off • On/Off <u>Open</u> • Closed • Open/Closed	(shutter) (blinds) (awning) (window)
Control mode*	<ul style="list-style-type: none"> • <u>Standard</u> • Standard inverted • Comfort mode • Dead man's switch 	

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.

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

Input for scene control:

If scenes are called and saved with the input, then choose the "Scenes" bus function and specify the scene number.

Bus function	Scenes
Scene No.	<u>0</u> ...127

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.

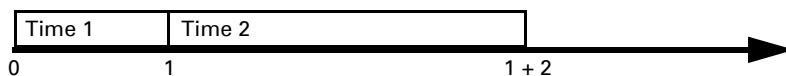
By pushing the button (shorter than adjustable time 1) the drive will be positioned (resp. stopped) incrementally.

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 and 2 have expired. The move can be stopped by briefly pushing.

Fig. 2

Time interval comfort mode diagram



Point in time 0:

Push of button, start of time 1

Release before time 1 expired:

step (or stop if drive is moving)

<i>Point in time 1:</i>	<i>End of time 1, start of time 2</i>
<i>Release after time 1 expired</i>	<i>Moving command</i>
<i>but before time 2 expires:</i>	<i>Stop</i>
<i>Release after time 1 + 2 expired:</i>	<i>Move into end position</i>

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	

Actuating variable comparator (ETS)

The four actuating variable comparators of the **Room Controller KNX Touch One** compare up to 5 inputs each and output maximum, minimum or the average value. The actuating variable comparators are set via the ETS.

Use comparator 1-4	Ja • Nein
--------------------	-----------

5.9.1. Actuating variable comparator 1...4

Output delivers	<ul style="list-style-type: none"> • Maximum value • Minimum value • <u>Average value</u>
Use 1...5 input	Yes • No (Yes activates the communication object "Actuating variable comparator X: input X")
Output sends	<ul style="list-style-type: none"> • <u>on change of output</u> • on change of output and periodically • when receiving an input object • when receiving an input object and periodically

from change of (when sending on change)	<u>1%</u> • 2% • 5% • 10% • 20% • 25%
Cycle (iwhen sending periodically)	5 s • ... • <u>5 min</u> • ... • 2 h
Evaluation of the blocking object	<ul style="list-style-type: none"> • <u>1 = block control</u> <u>0 = release control</u> • 0 = block control 1 = release control
Value of the blocking object before 1st communication	<u>0</u> • 1
Behaviour of the output	
With blocking	<ul style="list-style-type: none"> • <u>do not transmit message</u> • send value
Value in % (when value is sent)	0...100
With release, output sends (incl. 2 seconds release delay))	<ul style="list-style-type: none"> • <u>the current value</u> • the current value after reception of an object

5.10. Logic (ETS)

The **Room Controller KNX Touch One** offers 16 logic inputs, four AND and four OR logic gates. The logic is set in the ETS.

Use logic inputs	Yes • <u>Non</u>
Object value before 1st communication for - Logic input 1...16	<u>0</u> • 1

AND logic:

AND logic 1...4	<u>not active</u> • active
-----------------	----------------------------

OR logic:

OR logic 1...4	<u>not active</u> • active
----------------	----------------------------

5.10.1. AND logic 1/2/3/4 and OR logic 1/2/3/4

The AND and the OR logic offer the same setting options.

1. / 2. / 3. / 4. Input	<ul style="list-style-type: none"> • <u>do not use</u> • Logic input 1...16 • Logic input 1...16 inverted
Logik output sends	<ul style="list-style-type: none"> • <u>one 1 bit object</u> • two 8 bit objects

Logic output sends one 1 bit object:

Logic output sends	one 1 bit object
if logic = 1 → object value	<u>1</u> • 0
if logic = 0 → object value	1 • <u>0</u>

Logic output sends two 8 bit objects:

Logic output sends	two 8 bit objects
Object type	<ul style="list-style-type: none"> • Value [0...255] • Per cent [0...100%] • Angle [0...360°] • Scene call-up [0...127]
if logic = 1 → object A value	0 ... 255; <u>1</u>
if logic = 0 → object A value	<u>0</u> ... 255; <u>0</u>
if logic = 1 → object B value	0 ... 255; <u>1</u>
if logic = 0 → object B value	<u>0</u> ... 255; <u>0</u>

Object A: Shade position height (0 = safe position, 255 = fully extended).

Object B: Shade position slat angle (255 = 100% closed, 200 = approx. 80% closed).

Transmission behaviour	<ul style="list-style-type: none"> • <u>on change of logic</u> • 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 + receipt of object • on change of logic + receipt of obj.+ periodically
Transmission cycle (when sending periodically)	5 s • <u>10 s</u> • ... • 2 h

Blocking:

Evaluation of the blocking object	<ul style="list-style-type: none"> • <u>1 = block control</u> <u>0 = release control</u> • <u>0 = block control</u> 1 = release control
Value of the blocking object before 1st communication	<u>0</u> • 1
Behaviour of the switching output	
With blocking	<ul style="list-style-type: none"> • <u>do not transmit message</u> • send value for logic = 0 • send value for logic = 1
With release (incl. 2 seconds release delay))	[Depends on the setting for "Output sends"]

The behaviour of the switching output on release is dependent on the value of the parameter "Transsion behaviour":

Switching output sends on change	<ul style="list-style-type: none"> • <u>transmit no message</u> • transmit status of the switching output
Switching output sends on change to 1	<ul style="list-style-type: none"> • <u>transmit no message</u> • if switching output = 1 → transmit 1
Switching output sends on change to 0	<ul style="list-style-type: none"> • <u>transmit no message</u> • if switching output = 0 → transmit 0
Switching output send on change and periodically	transmit value for current logic status
Switching output send on change to 1 and periodically	if switching output = 1 → transmit 1
Switching output send on change to 0 and periodically	if switching output = 0 → transmit 0
Switching output sends on change and on reception of an object	<ul style="list-style-type: none"> • <u>transmit no message</u> • transmit value for current logic status
Switching output sends on change and on reception of an object and periodically	transmit value for current logic status

6. Tables

6.1. Units for sun and wind



The unit must receive values for rain, external temperature, wind speed and brightness from the bus in order to have the weather station initialised.

The display of sun intensity is in lux or kilolux and is shortened in the display to lx or klx. The value 1 is reached even with overcast skies, 20 klx if the sun has just come out again and 100 klx is reached when there are cloudless skies at noon. Experience indicates that extending shades above 40 klx is to be recommended.

The display of wind speed is in meters per second and is shortened in the display to m/s. Depending on the position of the building and the installation position of the weather station, different values may be optimal in order to protect the shade or window. Observe the response of the awning or blinds or the window to wind and then correct the wind value accordingly.

The following table should make it easier to find the optimal values for your situation:

Description	m/s	km/h	Beaufort	Knots
Calm	< 0,3	< 1	0	< 1
Light air	0,3-1,5	1-5	1	1-3
Light breeze	1,6-3,3	6-11	2	4-6
Gentle breeze	3,4-5,4	12-19	3	7-10
Moderate breeze	5,5-7,9	20-28	4	11-16
Fresh breeze	8,0-10,7	29-38	5	17-21
Strong breeze	10,8-13,8	39-49	6	22-27
Moderate gale	13,9-17,1	50-61	7	28-33
Fresh gale	17,2-20,7	62-74	8	34-40
Strong gale	20,8-24,4	75-88	9	41-47
Whole gale	24,5-28,4	89-102	10	48-55
Storm	28,5-32,6	103-117	11	56-63
Hurricane	> 32,6	> 117	12	> 63

6.2. Settings data

Blind 1-6, Awning 1-4, Roller shutter 1-4:

No.		1	2	3	4	5	6
	Name						
	Manual direction						
	Brightness (klx)						

Sun direction						
Sun elevation						
Actuation position						
Slat position						
Slat position for Sun elevation	0°-15°					
	15°-30°					
	30°-45°					
	45°-90°					
TH sensor Yes/No						
Indoor temperature (°C)						
Night-time closure?						
Timed closure (period)						
Frost alarm?						
Outdoor temperature (°C)						
Wind alarm in (m/s), time overrun						
Rain alarm?						
Automatic Reset?						
Reset following manual intervention?						

Awning 1-4, Roller shutter 1-4:

Extension delay (min)	
Retraction delay (min)	
Twilight value (lx)	

Window 1 - 2:

No.	1	2	-	-	-	-
Window type without or with step opening						
Number of steps						
Name						
Manual direction						
TH sensor Yes/No						
Timed ventilation (period) Yes/No						

No.	1	2	-	-	-	-
Outdoor temperature block Yes/No						
Close from outdoor temperature (0.1 °C)						
Frost protection Yes/No						
Wind alarm Yes/No						
Rain alarm Yes/No						
Gap opening when raining Yes/No Gap opening (in %)						
Automatic Reset?						
Reset following manual? actuation?						

When the TH sensor is used:

No.	1	2	-	-	-	-
Indoor temperature block Yes/No						
Outdoor temperature (0.1 °C)						
Air humidity Yes/No						
Air humidity (% rH)						
CO2 Yes/No						
CO2 content (10 ppm)						
Supply air temperature block Yes/No						
Night-time re-cooling Yes/No (period, temp.)						
Window opening (in %)						

Ventilation:

Name						
TH sensor Yes/No						
Timed ventilation Yes/No (period)						
Ventilate in steps (in %)						

Name						
Automatic Reset?						
Reset following manual? actuation?						

When the TH sensor is used:

Name						
Indoor temperature lock Yes/No						
Indoor temperature (0.1 °C)						
Use air humidity Yes/No						
Air humidity (% rH)						
Use CO2 Yes/No						
CO2 content (10 ppm)						
Start exhaust ventilation (in 10%)						
and increase exhaust ventilation from (in 10%)						
Night-time re-cooling (periods) Yes/No						
Ventilate in steps (in %)						

Light 1-8 Switch/Dimmer:

No.	1	2	3	4	5	6	7	8
Name								
Time switching (period 1 - 16)								
AND at night								
Brightness when ON When dimming (%)								
Brightness when OFF When dimming (%)								
Automatic Reset?								
Reset after manual actuation?								

General automation settings:

Twilight value (in lx)	
Extension delay (min)	
Retraction delay (min)	
Start night-time re-cooling when the external temperature is exceeded by (0.1 °C) for a period of (h)	
Start frost protection when the exterior temperature is exceeded (0.1 °C) for a set period following precipitation (in h)	
End frost protection when the exterior temperature is exceeded (0.1 °C) for a set period (in h)	
Time point for General Automatic Reset	
Automatic reset following a manual intervention (min)	

Period 1-16 of switching timer:

	Name	from	to	Weekday
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				

	Name	from	to	Weekday
12				
13				
14				
15				
16				

