KNX eTR M

Push Button with Temperature Sensor
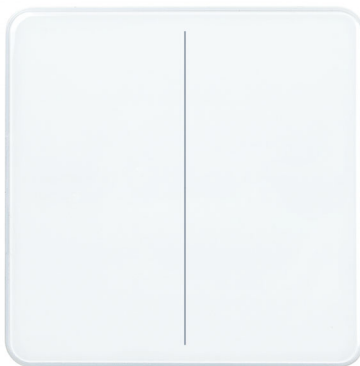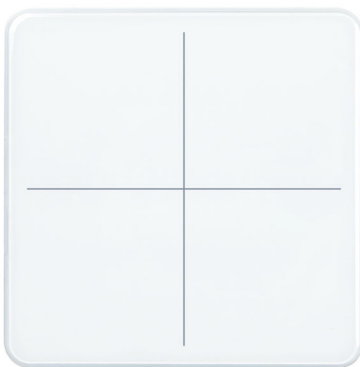
KNX eTR M1
Item numbers
71110/13 (white), 71112/14 (black)

KNX eTR M2
Item numbers
71120/23 (white), 71122/24 (black)

KNX eTR M4
Item numbers
71130/33 (white), 71132/34 (black)

elsner

Manual

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

Clarification of signs used in this manual

⚠️   Safety advice.

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

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

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

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

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

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

1.   Safety and operating instructions

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

CAUTION!
Live voltage!

• Inspect the device for damage before installation. Only put undamaged devices into operation.
• Comply with the locally applicable directives, regulations and provisions for electrical installation.
• Immediately take the device or system out of service and secure it against unintentional switch-on if risk-free operation is no longer guaranteed.

Use the device exclusively for building automation and observe the operating instructions. Improper use, modifications to the device or failure to observe the operating instructions will invalidate any warranty or guarantee claims.

Operate the device only as a fixed-site installation, i.e. only in assembled condition 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.

For information on installation, maintenance, disposal, scope of delivery and technical data, please refer to the installation instructions.

2.   Description

The **KNX eTR M push button** has touch-sensitive buttons, with which functions in the KNX building bus system can be called, such as switch lights and devices, dim, activate drives, send values, scenarios. A white LED is integrated into each touch button, the behaviour of which can be adjusted.

A temperature sensor is integrated into **KNX eTR M**. An external temperature reading can be received via the bus and processed with its own data to create a total temperature (mixed value).

Communication objects can be connected by AND and OR logic gates.

KNX eTR M1 functions:
• **1 Touch bus button**, can be configured as switch, selector switch, dimmer, blind (position and slats up/stop OR down/stop), shutters (up/down/stop), awning (in/out/stop), window (closed/open/stop), as 8 or 16-bit encoder or for scenario recall/storage

KNX eTR M2 functions:
- **2 Touch bus button**, can be configured as switch, selector switch, dimmer, for operating drives, as 8 or 16-bit encoder or for scenario recall/storage
- **Area function** when touching both push buttons. Can be configured as switch, selector switch, as 8 or 16 bit encoder or for scenario recall

KNX eTR M4 functions:
- **4 Touch bus button**, can be configured as switch, selector switch, dimmer, for operating drives, as 8 or 16-bit encoder or for scenario recall/storage
- **Area function** when touching two or more push buttons. Can be configured as switch, selector switch, as 8 or 16 bit encoder or for scenario recall

Function of all models:
- One **LED** per touch area. On for object value = 1 / Off for object value = 0, On after pressing button for settable time or always off. Settable, as to whether LED flashes at block object value = 1
- **Temperature** measurements. **Mixed value** from own measured value and external values (proportion can be set by percentage)
- **2 AND and 2 OR logic gates** each with 4 inputs. 8 logic inputs (in the form of communications objects) can be used as inputs for the logic gates. The output from each gate can be configured optionally as 1-bit or 2 x 8-bit

2.0.1. Area function

If the area function in ETS has been activated, another function is available alongside the regular key functions. This is triggered by touching multiple keys, e.g. if you touch the sensor with the palm of your hand.

Using the area function

If a key is pressed and another (different) key is touched within 0.2 seconds, the action set in the ETS is performed for the area operation (See Fig. 1 a) and b)). The keys are then blocked for 0.5 seconds.

Using the normal key function

If a key is pressed and no other key is touched within 0.2 seconds, the normal key function is enabled/provided for 5 seconds (See Fig. 1 c) and d)). This is extended for 5 seconds with each push of the button.

Fig. 1

Area function examples

a)

b)

Examples of normal key functions

c)

d)
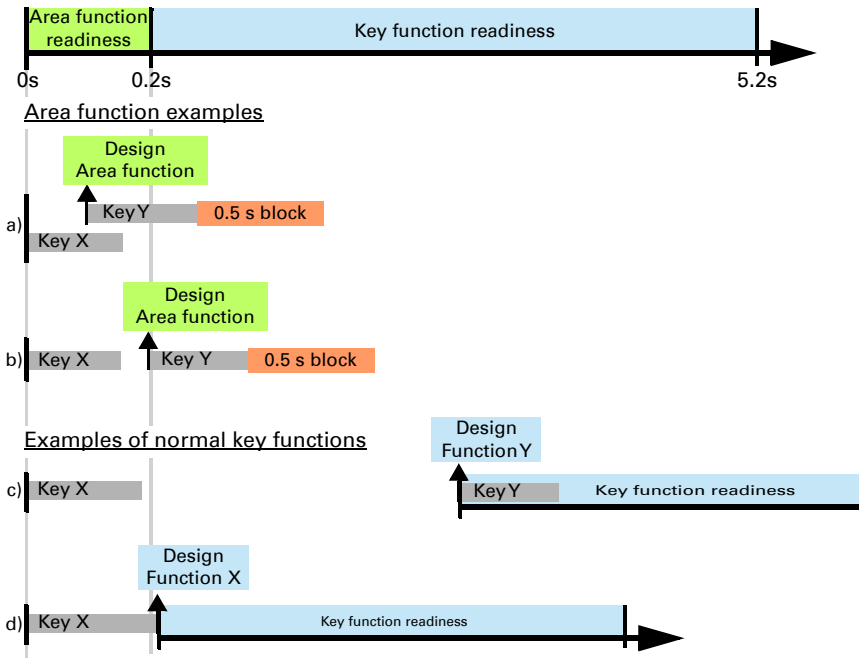
If the area function in the ETS is disabled, the keys can be used normally at any time.

3.   Commissioning

Configuration is made using the KNX software as of ETS 5. The **product file** can be downloaded from the ETS online catalogue and the Elsner Elektronik website on **www.elsner-elektronik.de**.

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

3.1.   Addressing of the device at the bus

The equipment is delivered with the bus address 15.15.255. Another address can be programmed using the ETS.
The programming button is located at the bottom outer side of the front panel of the device and is recessed. Use a thin object to reach the button, e. g. a 1.5 mm^2 wire.
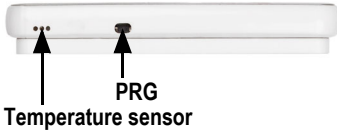
Fig. 2
View from bottom

PRG

Temperature sensor

When programming mode is active, the programming LED lights up and all other LEDs also flash.

4.　Transfer protocol

Units:

　Temperatures in degrees Celsius

4.1.　List of all communications objects

Abbreviation flags:

C　*Communication*
R　*Read*
W　*Write*
T　*Transmit*
U　*Update*

No	Text	Function	Flags	DPT type	Size
0	Software version	Output	C-WT-	[217.1] DPT_Version	2 Bytes
Only with KNX eTR M2 and KNX eTR M4					
31	Area operation on/off	Input	-RW--	[1.1] DPT_Switch	1 Bit
32	Area operation Output: Switch	Output	C-WT-	depending on setting	2 Bytes
For all models					
33	All LEDs On/Off	Input	-RW--	[1.1] DPT_Switch	1 Bit
34	All LEDs Brightness	Input	-RW--	[5.1] DPT_Scaling	1 Byte
35	LED 1 on/off	Input	-RW--	[1.1] DPT_Switch	1 Bit
36	LED 1 Block	Input	-RW--	[1.1] DPT_Switch	1 Bit
Only with KNX eTR M2 and KNX eTR M4					
37	LED 2 on/off	Input	-RW--	[1.1] DPT_Switch	1 Bit
38	LED 2 Block	Input	-RW--	[1.1] DPT_Switch	1 Bit
Only with KNX eTR M4					
39	LED 3 on/off	Input	-RW--	[1.1] DPT_Switch	1 Bit
40	LED 3 Block	Input	-RW--	[1.1] DPT_Switch	1 Bit
41	LED 4 on/off	Input	-RW--	[1.1] DPT_Switch	1 Bit
42	LED 4 Block	Input	-RW--	[1.1] DPT_Switch	1 Bit
For all models					
51	Temperature sensor: malfunction	Output	C-WT-	[1.1] DPT_Switch	1 Bit
52	Temperature sensor: measured value external	Input	-RWT-	[9.1] DPT_Value_Temp	2 Bytes
53	Temperature sensor: measured value	Output	C-WT-	[9.1] DPT_Value_Temp	2 Bytes
54	Temperature sensor: measured value total	Output	C-WT-	[9.1] DPT_Value_Temp	2 Bytes
55	Temperature sensor: measured value min./max. query	Input	-RW--	[1.17] DPT_Trigger	1 Bit

No	Text	Function	Flags	DPT type	Size
56	Temperature sensor: measured value minimum	Output	C-WT-	[9.1] DPT_Value_Temp	2 Bytes
57	Temperature sensor: measured value maximum	Output	C-WT-	[9.1] DPT_Value_Temp	2 Bytes
58	Temperature sensor: measured value min./max. reset	Input	-RW--	[1.17] DPT_Trigger	1 Bit
61	Push button 1 long-term	Output	C-WT-	[1.8] DPT_UpDown	1 Bit
62	Push button 1 short-term	Output	C-WT-	[1.10] DPT_Start	1 Bit
63	Push button 1 switching	Output	C-WT-	[1.1] DPT_Switch	1 Bit
64	Push button 1 dimming	Input / Output	CRWT-	[3.7] DPT_Control_Dimming	4 Bit
65	Push button 1 encoder 8 bit	Output	C-WT-	[5.10] DPT_Value_1_U-count	1 Byte
66	Push button 1 encoder 16 bit	Output	C-WT-	[9] 9.xxx	2 Bytes
67	Push button 1 Scene (recall)	Output	C-WT-	depending on setting	1 Byte
Only with KNX eTR M2 and KNX eTR M4					
68	Push button 2 long-term	Output	C-WT-	[1.8] DPT_UpDown	1 Bit
69	Push button 2 short-term	Output	C-WT-	[1.10] DPT_Start	1 Bit
70	Push button 2 switching	Output	C-WT-	[1.1] DPT_Switch	1 Bit
71	Push button 2 dimming	Input / Output	CRWT-	[3.7] DPT_Control_Dimming	4 Bit
72	Push button 2 encoder 8 bit	Output	C-WT-	[5.10] DPT_Value_1_U-count	1 Byte
73	Push button 2 encoder 16 bit	Output	C-WT-	[9] 9.xxx	2 Bytes
74	Push button 2 Scene (recall)	Output	C-WT-	depending on setting	1 Byte
Only with KNX eTR M4					
75	Push button 3 long-term	Output	C-WT-	[1.8] DPT_UpDown	1 Bit
76	Push button 3 short-term	Output	C-WT-	[1.10] DPT_Start	1 Bit
77	Push-button 3 switching	Output	C-WT-	[1.1] DPT_Switch	1 Bit
78	Push button 3 dimming	Input / Output	CRWT-	[3.7] DPT_Control_Dimming	4 Bit
79	Push-button 3 encoder 8 bit	Output	C-WT-	[5.10] DPT_Value_1_U-count	1 Byte
80	Push-button 3 encoder 16 bit	Output	C-WT-	[9] 9.xxx	2 Bytes
81	Push button 3 Scene (recall)	Output	C-WT-	depending on setting	1 Byte
82	Push button 4 long-term	Output	C-WT-	[1.8] DPT_UpDown	1 Bit
83	Push button 4 short-term	Output	C-WT-	[1.10] DPT_Start	1 Bit
84	Push-button 4 switching	Output	C-WT-	[1.1] DPT_Switch	1 Bit
85	Push button 4 dimming	Input / Output	CRWT-	[3.7] DPT_Control_Dimming	4 Bit
86	Push-button 4 encoder 8 bit	Output	C-WT-	[5.10] DPT_Value_1_U-count	1 Byte

No	Text	Function	Flags	DPT type	Size
87	Push-button 4 encoder 16 bit	Output	C-WT-	[9] 9.xxx	2 Bytes
88	Push button 4 Scene (recall)	Output	C-WT-	depending on setting	1 Byte
For all models					
91	Logic input 1	Input	-RW--	[1.2] DPT_Bool	1 Bit
92	Logic input 2	Input	-RW--	[1.2] DPT_Bool	1 Bit
93	Logic input 3	Input	-RW--	[1.2] DPT_Bool	1 Bit
94	Logic input 4	Input	-RW--	[1.2] DPT_Bool	1 Bit
95	Logic input 5	Input	-RW--	[1.2] DPT_Bool	1 Bit
96	Logic input 6	Input	-RW--	[1.2] DPT_Bool	1 Bit
97	Logic input 7	Input	-RW--	[1.2] DPT_Bool	1 Bit
98	Logic input 8	Input	-RW--	[1.2] DPT_Bool	1 Bit
101	AND logic 1: 1 bit switching output	Output	C-WT-	[1.2] DPT_Bool	1 Bit
102	AND logic 1: 8 bit output A	Output	C-WT-	depending on setting	1 Byte
103	AND logic 1: 8 bit output B	Output	C-WT-	depending on setting	1 Byte
104	AND logic 1: Block	Input	-RW--	[1.1] DPT_Switch	1 Bit
105	AND logic 2: 1 bit switching output	Output	C-WT-	[1.2] DPT_Bool	1 Bit
106	AND logic 2: 8 bit output A	Output	C-WT-	depending on setting	1 Byte
107	AND logic 2: 8 bit output B	Output	C-WT-	depending on setting	1 Byte
108	AND logic 2: Block	Input	-RW--	[1.1] DPT_Switch	1 Bit
109	OR logic 1: 1 bit switching output	Output	C-WT-	[1.2] DPT_Bool	1 Bit
110	OR logic 1: 8 bit output A	Output	C-WT-	depending on setting	1 Byte
111	OR logic 1: 8 bit output B	Output	C-WT-	depending on setting	1 Byte
112	OR logic 1: Block	Input	-RW--	[1.1] DPT_Switch	1 Bit
113	OR logic 2: 1 bit switching output	Output	C-WT-	[1.2] DPT_Bool	1 Bit
114	OR logic 2: 8 bit output A	Output	C-WT-	depending on setting	1 Byte
115	OR logic 2: 8 bit output B	Output	C-WT-	depending on setting	1 Byte
116	OR logic 2: Block	Input	-RW--	[1.1] DPT_Switch	1 Bit

5. Setting the parameters

5.1. Behaviour on power failure/ restoration of power

Behaviour following a failure of the bus power supply:

The device sends nothing.

Behaviour on bus restoration of power and following programming or reset:

The device sends all outputs according to their send behaviour set in the parameters. Delays established in the "General settings" parameter block are taken into account.

5.2. General settings

Set the basic properties of the data transmission.

Transmission delay after reset/bus restoration	5 s • ... • 300 s
Maximum message rate	• 1 message per second • ... • 10 messages per second • ... • 50 messages per second

5.3. Temperature measured value

Select, whether a **malfunction object** is to be sent if the sensor is faulty.

Use malfunction object	No • Yes

When **measuring temperature**, the self-heating of the device is considered by the electronics. The heating is compensated for in the device.

Use **Offsets** to adjust the readings to be sent.
Permanent measurement variations can be corrected in this way.

Offset in 0.1°C	-50...50; 0

The unit can calculate a **mixed value** from its own reading and an external value. Set the mixed value calculation if desired. If an external portion is used, all of the following settings (threshold values, etc.) are related to the overall reading.

Use external measured value	No • Yes
Ext. Reading proportion of the total reading	5% • 10% • ... • 50% • ... • 100%
Sending pattern for internal and total measured value	• never • periodically • on change • on change and periodically
At and above change of *(if sent on change)*	0.1°C • 0.2°C • 0.5°C • ... • 5.0°C
Send cycle *(if sent periodically)*	5 s • 10 s • ... • 2 h

The **minimum and maximum readings** can be saved and sent to the bus. Use the "Reset temperature min/max. value" objects to reset the values to the current readings. The values are not retained after a reset.

Use minimum and maximum value	<u>No</u> • Yes

5.4. Push button

On KNX eTR M2 and KNX eTR M4 there is a screen control with an additional function. It is activated by simultaneously touching multiple push buttons. The value of the activation object and the function is set for the screen control.

Set whether you want to use the screen control.

Use screen control	<u>No</u> • Yes
Use screen control	Yes
Activation object assessment	• <u>Value 1 = active | Value 0 = inactive</u> • Value 0 = active | Value 1 = inactive
Object value after reset	0 • <u>1</u>
Function	• <u>Switch</u> • Selector switch • 8 bit value 0 ... 255 • 8 bit value 0 ... 100% • 16-bit floating point value • Scenario recall
Value (*switch*)	0 • <u>1</u>
Value (*8 bit value 0 ... 255*)	0 • ... • <u>255</u>
Value (*8 bit value 0 ... 100%*)	0 • ... • <u>100</u>
Value in 0.1 (*16 bit value floating point*)	-6707600 • ... • 6707600; <u>10</u>
Scenario number(*Scenario recall*)	<u>1</u> • ... • 64

Enable the push button The menus for the other settings of the push buttons are shown on them.

Use push button 1 (top left)	<u>No</u> • Yes
Use push button 2 (top right)	<u>No</u> • Yes
Use push button 3 (bottom left)	<u>No</u> • Yes
Use push button 4 (bottom right)	<u>No</u> • Yes

5.4.1. Push button 1 / 2 / 3 / 4

Set the function of the push button.

Function	• <u>Switch</u> • Selector switch • Blind • Shutters • Awning • Windows • Dimmer • 8-bit encoder • 16-bit encoder • Scenario recall/ Scenario storage

Push button as switch

Specify which value is sent when pressing/holding the push button and when.

Function	**Switch**
Command when pressing the button	• 0 Send • 1 Send • <u>Do not send message</u>
Command when releasing the button	• 0 Send • 1 Send • <u>Do not send message</u>
Send value	• <u>If there is a 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 (*if transmission is "cyclical"*)	5 s • ... • <u>1 min</u> • ... • 2 h

Push button as selector switch

Specify whether a switch is performed when pressing or holding and whether there is an additional function after holding the push button for a long period.

Function	**Selector switch**
Use additional function for button held down	<u>No</u> • Yes

Use additional function for button held down	No
Command when pressing the button	• Switch • <u>Do not send message</u>
Command when releasing the button	• Switch • <u>Do not send message</u>

Use additional function for button held down	Yes
Time between tap and hold (0.1 sec)	0 ... 50; <u>10</u>
Command when pressing the button	Do not send message
Command when releasing before time expires	• <u>Switch</u> • Do not send message
Command when pressing the button	• 0 Send • 1 Send • <u>Switch</u> • Do not send message
Command when releasing the button	• 0 Send • 1 Send • <u>Switch</u> • Do not send message

Send value	• If there is a 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
Transmission cycle (if cyclically sent)	5 s • 10 s • ... • 2 h

Push button as blind, shutter, awning or window control

Specify the push button function and the control mode.

Function	Blind / shutters / awning / window	
Command (button function)	Up • Down Up • Down • Up/Down Retract • Extend • Retract/Extend Open • Close • Open/ Close	(Blind) (Shutters) (Awning) (Window)
Control mode*	• Standard • Standard inverted • Comfort mode • Dead man switch	

* For additional setting details, see 📖 "Control modes for drive control" on page 14

Push button as dimmer

If the push button should be used as a dimmer, select the function "Dimmer" and define the push button function, time interval (switching/dimming) and if required, the repeat interval for extended pressing of the push button.

Function	Dimmer
Command	• Brighter • Darker • Lighter/Darker
Time between switching and dimming (in 0.1 s)	0 ... 50; 5
Repeat the dim command	No • Yes
Repeat the dim command with a long hold of the button	every 0.1 s • ... • every 0.5 s • ... • every 2 s
Dim by	100% • ... • 6% • ... • 1.5%

Push button as 8 bit encoder

If the push button is to be used as an 8-bit encoder, select the function "8-bit encoder" and define which value is to be transmitted.

Range	• 0 ... 255 • 0% ... 100% • 0° ... 360°
Value	• 0... 255 • 0 ... 100 • 0°... 360°

Push button as 16 bit encoder

If the push button is to be used as a 16-bit encoder, select the function "16-bit encoder" and define which value is to be transmitted.

Value (in 0.1)	-6707600 ... 6707600; 0

Push button as scenario control

If a scenario is to be recalled and saved with a push button, select the "Recall scenario / Save scenario" function and specify whether the push button should also be used to save the scenario (press longer)

Scenario (0-63, corresponds to scenario no. 1-64)	0 ... 63
Scenario function	Call up • Call up and storage
Press button longer than (in 0.1s) --> Scenario memory (for call up and storage)	0 ... 50

5.4.2. Control modes for drive control

Behaviour on button actuation in standard control mode:

	short:	hold
Blind	Stop/Step	Up or down
Shutters	Stop	Up or down
Awning	Stop	In or out
Windows	Stop	Closed or open

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

Short actuation (shorter than Time 1): The drive is positioned step-wise and stopped.
Holding it slightly longer (longer than Time 1, but shorter than Time 1+2): Drive running. Drive stops when the button is released.
Long holding (release after Time 1+2 runs out): Drive moves independently to the end position. The movement can be interrupted by a short tap.

Fig. 3
Time interval comfort mode diagram

Time 1	Time 2	
0	1	1 + 2

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

Control mode	**Comfort mode**

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

Dead man's switch:

The drive moves as soon as the button is actuated 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	

5.5. LEDs

Set the LED mode.

LED mode	• All LEDs off • <u>All LEDs as ambient lighting</u> • All LEDs individually controllable

All LEDs as ambient lighting

If all LEDs are to be used as ambient lighting, illuminate all simultaneously. Set the brightness of the LEDs, whether objects are used and whether the LEDs switch off automatically after pushing the button.

LED mode	All LEDs as ambient lighting
Brightness	0 ... 100%; <u>30%</u>
Use objects	<u>No</u> • Yes
Object value on/off after reset (*if objects are used*)	0 • <u>1</u>
Use automatic switch-off after pressing a button	No • <u>Yes</u>
Switch off after *(is automatic switch off is used)*	1 ... 255; <u>30 secs. after pressing</u>

All LEDs individually controllable

This is where you set the brightness of the LEDs, whether objects are used and whether the LEDs switch off automatically after pushing the button.

LED mode	All LEDs individually controllable
Brightness	0 ... 100%; <u>30%</u>
Use objects	<u>No</u> • Yes

Object value on/off after reset (*if objects are used*)	0 • <u>1</u>
Function LED 1 (top left) / 2 (top right) / 3 (bottom left) / 4 (bottom right)	• always OFF • <u>On after pressing button for settable time</u> • On for object value = 1 / Off for object value = 0
Lighting period after pressing (*if "On after pressing button for a settable time"*)	1 ... 5 seconds ; <u>3 seconds</u>
Object value after reset (*if "On for object value = 1 / Off for object value = 0*)	0 • <u>1</u>
Use block object (*if "On for object value = 1 / Off for object value = 0*)	<u>No</u> • Yes

5.6. Logic

The device has 8 logic inputs, 2 AND and 2 OR logic gates.

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

Use logic inputs	Yes • <u>No</u>
Object value prior to 1st communication for	
- Logic input 1 ... 8	<u>0</u> • 1

Activate the required logic outputs

AND logic

AND logic 1/2	<u>not active</u> • active

OR logic

OR logic 1/2	<u>not active</u> • active

5.6.1. AND logic 1+2 and OR logic outputs 1+2

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

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

1. / 2. / 3. / 4. Input	• <u>Do not use</u> - Logic inputs 1...8 - Logic inputs 1...8 inverted • Temperature sensor malfunction ON • Temperature sensor malfunction OFF
Output type	• <u>a 1-bit-object</u> • sends two 8-bit objects

If the **output type is a 1-bit object**, set the output values for the various conditions.

Output value if logic = 1	<u>1</u> • 0
Output value if logic = 0	1 • <u>0</u>
Output value If block active	1 • <u>0</u>
Output value if monitoring time exceeded	1 • <u>0</u>

If the **output type is two 8-bit objects**, set the type of object and the output values for the various conditions.

Object type	• <u>value (0…255)</u> • Percent (0…100%) • Angle (0…360°) • Scene call-up (0…63)
Output value object A if logic = 1	0 … 255 / 100% / 360° / 63; <u>1</u>
Output value object B if logic = 1	0 … 255 / 100% / 360° / 63; <u>1</u>
Output value object A if logic = 0	0 … 255 / 100% / 360° / 63; <u>0</u>
Output value object B if logic = 0	0 … 255 / 100% / 360° / 63; <u>0</u>
Output value object A If block active	0 … 255 / 100% / 360° / 63; <u>0</u>
Output value object B If block active	0 … 255 / 100% / 360° / 63; <u>0</u>
Output value object A if monitoring time exceeded	0 … 255 / 100% / 360° / 63; <u>0</u>
Output value object B if monitoring time exceeded	0 … 255 / 100% / 360° / 63; <u>0</u>

Set the output send pattern.

Transmission behaviour	• <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 + object receipt • on change of logic + object receipt and cyclically
Send cycle *(if sent periodically)*	5 s • <u>10 s</u> • ... • 2 h

Block

If necessary, activate the block for the logic output and set what a 1 or 0 at the block input means and what happens in the event of a block.

Use block	No • Yes
Assessment of the block object	• At value 1: block | At value 0: release • At value 0: block | At value 1: release
Blocking object value before first Commu- nication	0 • 1
Output behaviour when blocking	• Do not send message • Send block value [see above, output value if block active]
when released (with 2 second release delay)	[send value for current logic status]

Monitoring

If necessary, activate the input monitoring. Set which inputs are to be monitored, at which intervals the inputs are to be monitored and what value the "monitoring status" should have, if the monitoring period is exceeded without a feedback being given.

Use input monitoring	No • Yes
Input monitoring	• 1 • 2 • 3 • 4 • 1 + 2 • 1 + 3 • 1 + 4 • 2 + 3 • 2 + 4 • 3 + 4 • 1 + 2 + 3 • 1 + 2 + 4 • 1 + 3 + 4 • 2 + 3 + 4 • 1 + 2 + 3 + 4
Monitoring period	5 s • ... • 2 h; 1 min
Output behaviour on exceeding the moni- toring time	• Do not send message • Send value exceeding [= value of the parameter "Monitoring period"]

5.6.2. OR LOGIC connection inputs

The OR logic connection inputs are the same as those for the AND logic. Additionally, the following inputs are available for the OR logic:

Switching output AND logic 1
Switching output AND logic 1 inverted
Switching output AND logic 2
Switching output AND logic 2 inverted

Questions about the product?

You can reach the technical service of Elsner Elektronik under
Tel. +49 (0) 70 33 / 30 945-250 or
service@elsner-elektronik.de

We need the following information to process your service request:

- Type of appliance (model name or item number)
- Description of the problem
- Serial number or software version
- Source of supply (dealer/installer who bought the device from Elsner Elektronik)

For questions about KNX functions:

- Version of the device application
- ETS version used for the project