



KNX eTR DND/MUR

Switch for Room Service

Signal for Room Service and Doorbell



KNX eTR DND/MUR Switch
Item numbers
71330 (white), 71332 (black)



KNX eTR DND/MUR Signal/Bell
Item numbers
71334 (white), 71336 (black)

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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, commissioning and fault repair may only be carried out by a qualified electrician.



BEWARE! **Electric voltage!**

- Before installation, check the device for damage. Only operate devices if they are free from damage.
 - Comply with local directives, provisions and conditions for electrical installation.
 - Immediately switch off the device or system and secure it against accidental activation if safe operating is no longer guaranteed.
-

Only use the device for building automation and follow the instructions for use in the installation guide and manual. Incorrect use, changes to the device or non-observance of the operating instructions lead to warranty and guarantee claims becoming void.

The device may only be operated as a fixed-site installation, i.e. 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.

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

2. Description

The two Push Buttons are designed for the GRMS (Guest Room Management System) of hotels. They have touch-sensitive buttons, with which functions in the KNX building bus system can be called.

Using the 'Switch' device, the guest selects the service request 'Do Not Disturb' (DND) or 'Make Up Room' (MUR) from the room.

The 'Signal/Bell' device is installed outside the room. It shows the guest's service selection (DND/MUR). The touch surface with the bell symbol serves as a bell.

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

Either binary contacts such as push-buttons and window contacts or analogue temperature sensors T-NTC can be connected to 2 inputs.

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

Functions:

- Button for '**Do Not Disturb**' and '**Make Up Room**' function
- **Temperature** measurements. **Mixed value** from own measured value and external values (proportion can be set by percentage), output of minimum and maximum values
- **2 inputs** for binary contacts or T-NTC temperature sensor
- **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

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.

4. Addressing the device

The device is delivered ex works with the bus address 15.15.255. You program a different address in the ETS by overwriting the address 15.15.255 or teach the device using the programming button.

The programming button is located at the bottom of the device and is recessed. Use a thin object to reach the button, e. g. a 1.5 mm² wire. When the button is pressed, the programming LED lights up and the DND and MUR LEDs on the front flash alternately.

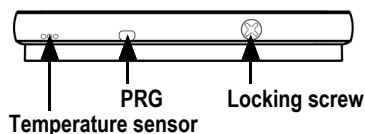


Abb. 1
View from bottom

5. Transmission protocol

Units:

Temperatures in degrees Celsius

5.1. List of all communication objects

Abbreviations 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
11	LED brightness	Input	CRWTU	[5.1] DPT_Scaling	1 Byte
15	Switch DND Activation	Output	C-WT-	[5.10] DPT_Value_1_Ucount	1 Bit / 1 Byte
16	Switch DND LED Block (1 = lock 0 = release)	Input	-RW--	[1.1] DPT_Switch	1 Bit
17	Switch MUR Activation	Output	C-WT-	[5.10] DPT_Value_1_Ucount	1 Bit / 1 Byte
18	Switch MUR LED Block (1 = lock 0 = release)	Input	-RW--	[1.1] DPT_Switch	1 Bit
25	Signal bell	Output	C-WT-	[1.1] DPT_Switch	1 Bit
26	Signal bell LED Activation	Input	-RW--	[1.1] DPT_Switch	1 Bit
27	Signal bell LED Block (1 = lock 0 = release)	Input	-RW--	[1.1] DPT_Switch	1 Bit
28	Signal DND LED Activation	Input	-RW--	[5.10] DPT_Value_1_Ucount	1 Bit / 1 Byte
29	DND LED block (1 = lock 0 = release)	Input	-RW--	[1.1] DPT_Switch	1 Bit
30	MUR LED activation	Input	-RW--	[5.10] DPT_Value_1_Ucount	1 Bit / 1 Byte
31	MUR LED block (1 = lock 0 = release)	Input	-RW--	[1.1] DPT_Switch	1 Bit
41	Temperature sensor: Malfunction	Output	C-WT-	[1.1] DPT_Switch	1 Bit
42	Temperature sensor: Measured value external	Input	-RWT-	[9.1] DPT_Value_Temp	2 Bytes
43	Temperature sensor: Measured value	Output	C-WT-	[9.1] DPT_Value_Temp	2 Bytes

No	Text	Function	Flags	DPT type	Size
44	Temperature sensor: Measured value total	Output	C-WT-	[9.1] DPT_Value_Temp	2 Bytes
45	Temperature sensor: Measured value min./max. query	Input	-RW--	[1.17] DPT_Trigger	1 Bit
46	Temperature sensor: Measured value minimum	Output	C-WT-	[9.1] DPT_Value_Temp	2 Bytes
47	Temperature sensor: Measured value maximum	Output	C-WT-	[9.1] DPT_Value_Temp	2 Bytes
48	Temperature sensor: Measured value min./max. reset	Input	-RW--	[1.17] DPT_Trigger	1 Bit
61	Input 1 Extended	Output	C-WT-	[1.8] DPT_Up-Down	1 Bit
62	Input 1 Brief	Output	C-WT-	[1.10] DPT_Start	1 Bit
63	Input 1 Switching	Output	C-WT-	[1.1] DPT_Switch	1 Bit
64	Input 1 Dimming	Input / Output	CRWT-	[3.7] DPT_Control_Dimming	4 Bit
65	Input 1 8-bit encoder	Output	C-WT-	[5.10] DPT_Value_1_Ucount	1 Byte
66	Input 1 16-bit encoder	Output	C-WT-	depending on setting	2 Bytes
67	Input 1 Scene (recall)	Output	C-WT-	depending on setting	1 Byte
68	Input 1 NTC measured value	Output	C-WT-	[9.1] DPT_Value_Temp	2 Bytes
69	Input 1 NTC external measured value	Input	-RW--	[9.1] DPT_Value_Temp	2 Bytes
70	Input 1 NTC total measured value	Output	C-WT-	[9.1] DPT_Value_Temp	2 Bytes
71	Input 1 NTC fault	Output	C-WT-	[1.1] DPT_Switch	1 Bit
72	Input 2 Extended	Output	C-WT-	[1.8] DPT_Up-Down	1 Bit
73	Input 2 Brief	Output	C-WT-	[1.10] DPT_Start	1 Bit
74	Input 2 Switching	Output	C-WT-	[1.1] DPT_Switch	1 Bit
75	Input 2 Dimming	Input / Output	CRWT-	[3.7] DPT_Control_Dimming	4 Bit
76	Input 2 8-bit encoder	Output	C-WT-	[5.10] DPT_Value_1_Ucount	1 Byte
77	Input 2 16-bit encoder	Output	C-WT-	depending on setting	2 Bytes
78	Input 2 Scene (recall)	Output	C-WT-	depending on setting	1 Byte
79	Input 2 NTC measured value	Output	C-WT-	[9.1] DPT_Value_Temp	2 Bytes

No	Text	Function	Flags	DPT type	Size
80	Input 2 NTC external measured value	Input	-RW--	[9.1] DPT_Val-ue_Temp	2 Bytes
81	Input 2 NTC total measured value	Output	C-WT-	[9.1] DPT_Val-ue_Temp	2 Bytes
82	Input 2 NTC fault	Output	C-WT-	[1.1] DPT_Switch	1 Bit
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

6. Setting the parameters

6.1. 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. The delay established in the "General settings" parameter block is taken into account.

6.2. General settings

First set the send delays after reset/bus restoration here.

These delays should be coordinated with the entire KNX-system, i.e. in a KNX system with many participants, care should be taken that the bus is not overloaded after a KNX-bus reset. The messages of the individual participants should be sent offset.

Transmission delay after reset/bus restoration	<u>5 s</u> • ... • 7200 s
--	---------------------------

The bus load is limited with the aid of the maximum message rate. Many messages per second put a strain on the bus, but ensure faster data transmission.

Maximum message rate	<ul style="list-style-type: none"> • 1 message per second • ... • <u>10 messages per second</u> • ... • 50 messages per second
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6.3. Do not disturb & Make up room

The guest room functions DND (Do Not Disturb) and MUR (Make Up Room) are available in the "Switch" model inside the room as touch surfaces, in the "Signal/Bell" model outside the room as a display. Activate the functions and select the model.

Use DND/MUR	<u>No</u> • Yes
Device type	<u>Switch</u> • Signal / Bell

Set the brightness of the LEDs after a reset.

LED start brightness after reset	<u>0</u> ...100%
----------------------------------	------------------

Specify whether the DND and MUR object should be sent at activation and deactivation. Specify the respective object value

DND object type MUR object type	<u>1 bit (0 / 1)</u> • 8 bit (0...255)
Send DND object at activation Send DND object at deactivation Send MUR object at activation Send MUR object at deactivation	No • <u>Yes</u>
Value (for object type: 1 bit)	0 • 1
Value (for object type: 8 bit)	0...255; <u>1</u>

If desired, the LEDs of the DND symbol on the device can be displayed only temporarily. The LED is locked and released using the lock object "Switch / Signal DND LED Lock (1 = lock | 0 = release)", No. 16 or 29.

Use DND-LED lock	<u>No</u> • Yes
Locked object evaluation	• <u>1 = Lock</u> 0 = Release • 0 = Lock 1 = Release

Specify the value which the lock assumes after a reset.

Lock status after reset	<u>released</u> • locked
-------------------------	--------------------------

If desired, the LEDs of the MUR symbol on the device can be displayed only temporarily. The LED is locked and unlocked using the lock object "Switch / Signal MUR LED Lock (1 = lock | 0 = unlock)", No. 18 or 31.

Use MUR-LED lock	<u>No</u> • Yes
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The block can take effect at value 0 or 1, depending on the intended use.

Locked object evaluation	• <u>1 = Lock</u> 0 = Release • 0 = Lock 1 = Release
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Specify the value which the lock assumes after a reset.

Lock status after reset	<u>released</u> • locked
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6.4. Temperature measured value

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

Use malfunction object	<u>No</u> • Yes
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When **measuring temperature**, the self-heating of the device is considered by the electronics. The heating is compensated for by 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; <u>0</u>
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The unit can calculate a **mixed value** from its own reading and an external value, e.g. in order to determine a room average. 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	<u>No</u> • Yes
-----------------------------	-----------------

The percentage of the external measured value share of the total value is set here.

Ext. Reading proportion of the total reading	5% • 10% • ... • <u>50%</u> • ... • 100%
--	--

The internal measured value and the total measured value can be sent to the bus and further processed there by other participants.

Sending pattern for internal and total measured value	<ul style="list-style-type: none"> • <u>never</u> • periodically • on change • on change and periodically
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When sending on change, the temperature values are sent to the bus as soon as it changes by the value set here.

At and above change of (if sent on change)	0.1°C • 0.2°C • <u>0.5°C</u> • ... • 5.0°C
---	--

When sending periodically, the temperature values are sent to the bus in a fixed cycle that can be set here.

Send cycle (if sent periodically)	5 s • <u>10 s</u> • ... • 2 h
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The highest (max.) and the lowest (min.) temperature value since programming or a reset can be sent to the bus. The two values can be reset via object no. 48 "Temperature sensor: measured value min./max. reset".

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

Contacts (window contact, buttons) or temperature sensors T-NRC (Elsner Elektronik item number 30516) can be attached to the two analogue/digital inputs of the **KNX eTR DND/MUR**.

Activate the inputs you want to use.

Use input 1 / 2	<u>No</u> • Yes
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6.5.1. Input 1- 2

Select the function or which drive you want to control with the input.

Bus function	<ul style="list-style-type: none"> • <u>Switch</u> • Selector switch • Blind • Shutters • Awning • Windows • Dimmer • 8-bit encoder • 16-bit encoder • Scenario recall/ Scenario storage • Temperature sensor NTC
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Input as switch:

Specify which value is sent when pressing the button.

Command when pressing the button	<ul style="list-style-type: none"> • send 0 • send 1 • <u>Do not send message</u>
----------------------------------	--

Specify which value is sent when releasing the button.

Command when releasing the button	<ul style="list-style-type: none"> • send 0 • send 1 • <u>Do not send message</u>
-----------------------------------	--

Set when the switching output is to be sent to the bus.

Send value	<ul style="list-style-type: none"> • <u>upon a change</u> • upon a change to 1 • upon a change to 0 • upon change and periodically • upon a change to 1 and periodically • upon a change to 0 and periodically
------------	--

Specify the cycle for the periodic transmission.

Cycle <i>(is sent only if "periodically" is selected)</i>	5 s ... 2 h; <u>1 min</u>
--	---------------------------

Input as changeover switch:

Select whether another function should be activated if the button is depressed for a longer period.

Use additional function for button held down	<u>No</u> • Yes
--	-----------------

Specify whether a change is activated upon pressing.

Command when pressing the button	<ul style="list-style-type: none"> • Switch • <u>Do not send message</u>
----------------------------------	--

Specify whether a change is activated upon release.

Command when releasing the button	<ul style="list-style-type: none"> • Switch • <u>Do not send message</u>
-----------------------------------	--

The time difference between 'short' and 'long' can be adjusted individually.

Time between tap and hold (in 0.1 sec) <i>(only if hold is used)</i>	0...50; <u>10</u>
---	-------------------

A telegram is not sent when released.

Command when pressing the button <i>(only if hold is used)</i>	do not send message
---	---------------------

Specify whether a change is activated upon release.

Command when releasing before time expires <i>(only if hold is used)</i>	<ul style="list-style-type: none"> • <u>Changeover switching</u> • Do not send message
---	--

Specify which value is sent when pressing the button.

Command when pressing the button <i>(only if hold is used)</i>	<ul style="list-style-type: none"> • send 0 • send 1 • Switch • <u>Do not send message</u>
---	--

Specify which value is sent when releasing the button.

Command when releasing the button <i>(only if hold is used)</i>	<ul style="list-style-type: none"> • send 0 • send 1 • Switch • <u>Do not send message</u>
--	--

Set when the switching output is to be sent to the bus.

Send behaviour <i>(only if hold is used)</i>	<ul style="list-style-type: none"> • <u>upon a change</u> • upon a change to 1 • upon a change to 0 • upon change and periodically • upon a change to 1 and periodically • upon a change to 0 and periodically
---	--

Specify the cycle for the periodic transmission.

Cycle <i>(is sent only if "periodically" is selected)</i>	5 s ... 2 h; <u>10 s</u>
--	--------------------------

Input for shutter, blind, awning or window control:

Specify the direction of movement of the drive.

The drive moves in the specified direction when pressing the button for a longer period. If both directions are specified, the drive moves in the other direction with the second long press.

The drive stops with a short push of the button.

There is also a step command for blinds. This is executed when the button is pressed briefly, provided the drive is at a standstill.

Behaviour on button actuation in standard control mode:

	short:	hold
Blind	Stop/Step	Up or down
Shutters	Stop	Up or down
Awning	Stop	Retract or extend
Windows	Stop	Close or open

Command (button function)	<u>Up</u> • Down <u>Up</u> • Down • <u>Up/Down</u> <u>Retract</u> • Extend • Retract/Extend Open • <u>Close</u> • Open/ Close	(Blind) (Shutters) (Awning) (Window)
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Specify the control mode of the drive.

Standard:

Short actuation to move the drive stepwise and to stop it. Hold it longer to move the drive to the end position.

Standard inverted:

Log actuation to move the drive to end position. Short actuation to move the drive stepwise and to stop it.

Comfort mode:

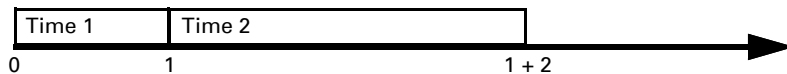
In comfort mode: short, medium and long pressing of the button trigger different responses from the drive. The time intervals are configured individually.

Short press (shorter than Time 1): Drive is positioned in steps or stopped.

Medium press (longer than Time 1, but shorter than time 1+2): Drive moves. Drive stops when the button is released.

Long press (released after Time 1+2): Drive moves independently to the end position. The move can be stopped by a short pressing of the button.

Fig. 2
Comfort mode time interval scheme



Time point 0:	Press the start, start Time 1
Release before Time 1 ends:	Step (or stop if the drive is moving)
Time point 1:	End of Time 1, beginning of Time 2, Movement command
Release after Time 1 ends but before Time 2 ends:	Stop
Release after Time 1+2 runs out:	Movement to the end position

Dead man control:

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

Control mode	<ul style="list-style-type: none"> • <u>Standard</u> • Standard inverted • Comfort mode • Dead man switch
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The time difference between 'short' and 'long' can be adjusted individually.

Behaviour when a button is operated: short = stop/step long = up or down	
Time between short and long in 0.1 seconds (Standard or standard inverted)	1...50; <u>10</u>

The repeat interval is set individually.

Repetition of the step command on long button press (Standard inverted)	every 0.1 s... • every 2 s; <u>every 0.5 s</u>
---	--

Time 1 is set individually.

Behaviour when a button is operated: Push-button is pressed and Released before expiry of Time 1 = 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 (Comfort mode)	0 s ... 5 s; <u>0,4 s</u>

Time 2 is set individually.

Time 2 (<i>Comfort mode</i>)	0 s ... 5 s; <u>2 s</u>
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Control mode	Dead man control
Behaviour when a button is operated: Press button = Up or down command Release button = Stop command	

Input as dimmer

Specify the dim function. If both dim functions are specified, the button function dims in the other direction with the second long press.

Push-button function	<u>Brighter</u> • darker • Brighter/darker
----------------------	--

A short press of the button toggles the device (on/off). A longer press activates the dimmer (brighter or darker). The time between "Switch" (short) and "Dim" (long) is set here.

Time between switching and dimming (in 0.1 s)	1...50; <u>5</u>
--	------------------

Specify whether the dim command should be repeated when the button is pressed longer.

Repeat the dim command	<u>No</u> • Yes
------------------------	-----------------

The repeat interval is set individually.

Repeat the dim command on long button press (<i>if dimmer command is repeated</i>)	every 0.1 s... • every 2 s; <u>every 1 s</u>
--	--

Specify the dim value for the repeat of the dim command.

Dim by (<i>if dimmer command is repeated</i>)	1.50% • 3% • <u>6%</u> • 12,50% • 25% • 50%
--	---

Input as 8-bit encoder:

Define the value range.

Range	• <u>0...255</u> • 0%...100% • 0°...360°
-------	--

Specify which value is sent.

Value	<u>0...255</u> (for value range 0...255) <u>0...100</u> (for value range 0%...100%) <u>0...360</u> (for value range 0°...360°)
-------	--

Input as 16 bit encoder:

Specify which value is sent.

Value in 0.1	-6707600...6707600; <u>0</u>
--------------	------------------------------

Input for scene controls (scene recall/ scene storage):

The scene number is set here.

Scene (0-63, corresponds to scenario no. 1-64)	<u>0</u> ...63
--	----------------

Specify whether the button should also be used to store the scene (press longer).

Scenario function	<ul style="list-style-type: none"> • <u>Activate</u> • Activate and save
-------------------	--

Specify the minimum time that the button must be pressed for the scene to be saved.

Press key for longer than (in 0.1 s) --> Scene memory (only for control)	0... <u>50</u>
--	----------------

Temperature sensor NTC:

Select whether to send an **interference object** if the sensor is defective.

Use malfunction object	Yes • <u>No</u>
------------------------	-----------------

Use **Offsets** to adjust the readings to be sent. Permanent measured value deviations can be corrected as a result.

Offset in 0.1°C	-50...50; <u>0</u>
-----------------	--------------------

The device can calculate a **mixed value** from its own measured value and an external measured value, e.g. in order to determine a room average. Set the mixed value calculation if desired. If an external portion is used, all the following settings (threshold values, etc.) are related to the overall measured value!

Use external measured value	Yes • <u>No</u>
-----------------------------	-----------------

Specify the percentage weighting of the external measured value in the total value.

Ext. measured value portion of the total reading (only if an external value is used)	5% • ... • <u>50%</u> • ... • 100%
All of the following settings then pertain to the total measured value	

The internal and total measured value can be sent to the bus and further used there by other participants.

Send behaviour	<ul style="list-style-type: none"> • periodically • <u>upon a change</u> • upon change and periodically
----------------	--

When sending at a change, the temperature values are sent on the bus as soon as it changes by the value set here.

Upon a change of (if sent upon change)	0.1°C • ... • <u>0.5°C</u> • ... • 5.0°C
---	--

When sending periodically, the temperature values are sent on the bus in a fixed cycle that can be set here.

Send cycle (if sent periodically)	<u>5 s</u> ...2 h
--------------------------------------	-------------------

6.6. Logic

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

Use logic inputs	Yes • <u>No</u>
------------------	-----------------

For each logic input, the object value can be assigned before the first communication, which is used for the initial commissioning and when the voltage returns.

Object value prior to first communication for	
- Logic input 1... 8	<u>0</u> • 1

Select which logic gate should be used.

AND logic

.....

AND Logic 1 / 2	<u>not active</u> • active
-----------------	----------------------------

OR logic

.....

OR Logic 1 / 2	<u>not active</u> • active
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6.6.1. AND logic 1/2 and OR logic outputs 1/2

Select a switch event.

1 / 2 / 3 / 4 Input	<ul style="list-style-type: none"> • <u>Do not use</u> • Logic inputs 1...8 • Logic inputs 1...8 inverted • Temperature sensor malfunction = ON • Temperature sensor malfunction = OFF • <i>only with OR logic:</i> • Switching output AND logic 1/2 • Switching output AND logic 1/2 inverted
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Each logic output can transmit one 1-bit or two 8-bit objects.

Output type	<ul style="list-style-type: none"> • a <u>1-bit-object</u> • sends two 8-bit objects
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If the **output type is a 1-bit-object**, set the output values.

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**, first set the object type.

Object type	<ul style="list-style-type: none"> • value (0...255) • Percent (0...100%) • Angle (0...360°) • Scenario call-up (0...63)
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Then set the output values.

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 cases in which the logic output is to be sent to the bus.

Send behaviour	<ul style="list-style-type: none"> • <u>upon a change of logic</u> • upon a change of logic to 1 • upon a change of logic to 0 • upon a change of logic and periodically • upon a change of logic to 1 and periodically • upon a change of logic to 0 and periodically • upon a change of logic+object receipt • upon a change of logic+object receipt and cyclically
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When sending periodically, the logic object is sent to the bus in a fixed cycle that can be set.

Send cycle (if sent periodically)	5 s • <u>10 s</u> • ... • 2 h
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Blocking

With the help of the blocking object, the output can be blocked, e.g. by a manual command (push button).

Use block	<u>No</u> • Yes
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The block can take effect at value 0 or 1, depending on the intended use.

Assessment of the block object	<ul style="list-style-type: none"> • <u>At value 1: block At value 0: release</u> • At value 0: block At value 1: release
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Specify an object value until first communication.

Blocking object value before first communication	<u>0</u> • 1
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The behaviour of the output during blocking can be set.

Output behaviour on blocking	<ul style="list-style-type: none"> • <u>Do not send message</u> • Send block value [see above, output value if block active]
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The behaviour of the output on release, i.e. when the lock is removed, can be set.

on release (with 2 second release delay)	<ul style="list-style-type: none"> • <u>Do not send message</u> • transmit value for current logic status
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Monitoring

If necessary, activate the input monitoring.

The input monitoring is a safety function that periodically needs a live message at input. A ratio of 1:3 is recommended here as a monitoring period.

Example: Monitoring period 30 min, input communication object(s) should receive a message every 10 min.

Use input monitoring	<u>No</u> • Yes
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Set the inputs to be monitored.

Input monitoring	<ul style="list-style-type: none"> • 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 • <u>1 + 2 + 3 + 4</u>
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Set the monitoring period.

Monitoring period	5 s • ... • 2 h; <u>1 min</u>
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The behaviour of the output can be set if the monitoring period is exceeded.

Output behaviour on exceeding the monitoring time	<ul style="list-style-type: none"> • <u>Do not send message</u> • Send value exceeding [= value of the parameter "Output value if monitoring time exceeded"]
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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