State 02/2022

MDT solution proposal

Setpoint adjustment and operating mode preselection with the *Glass Push Button II Smart* and the *Heating Actuator* AKH-0x00.03

Possible applications:

With the *Glass Push Button II Smart with temperature sensor*, it is possible to adjust the heating setpoint individually for different rooms. In addition, the *Glass Push Button II Smart* offers the possibility of clearly visualising operating modes, current temperature value and setpoint temperature.

Info: The setpoint adjustment can also be realised with the *Push Button Smart 86 with temperature sensor*. Both devices use the same database. Only the *Glass Push Button II Smart* is mentioned in the following example.

Used devices:

MDT Glass Push Button II Smart (Push Button Smart 86),
with temperature sensor

BE-GT2TW.01/ BE-GT2TS.01 (BE-TAS86T.01)

MDT Heating Actuator

AKH-0400.03/ AKH-0600.03/ AKH-0800.03

Content

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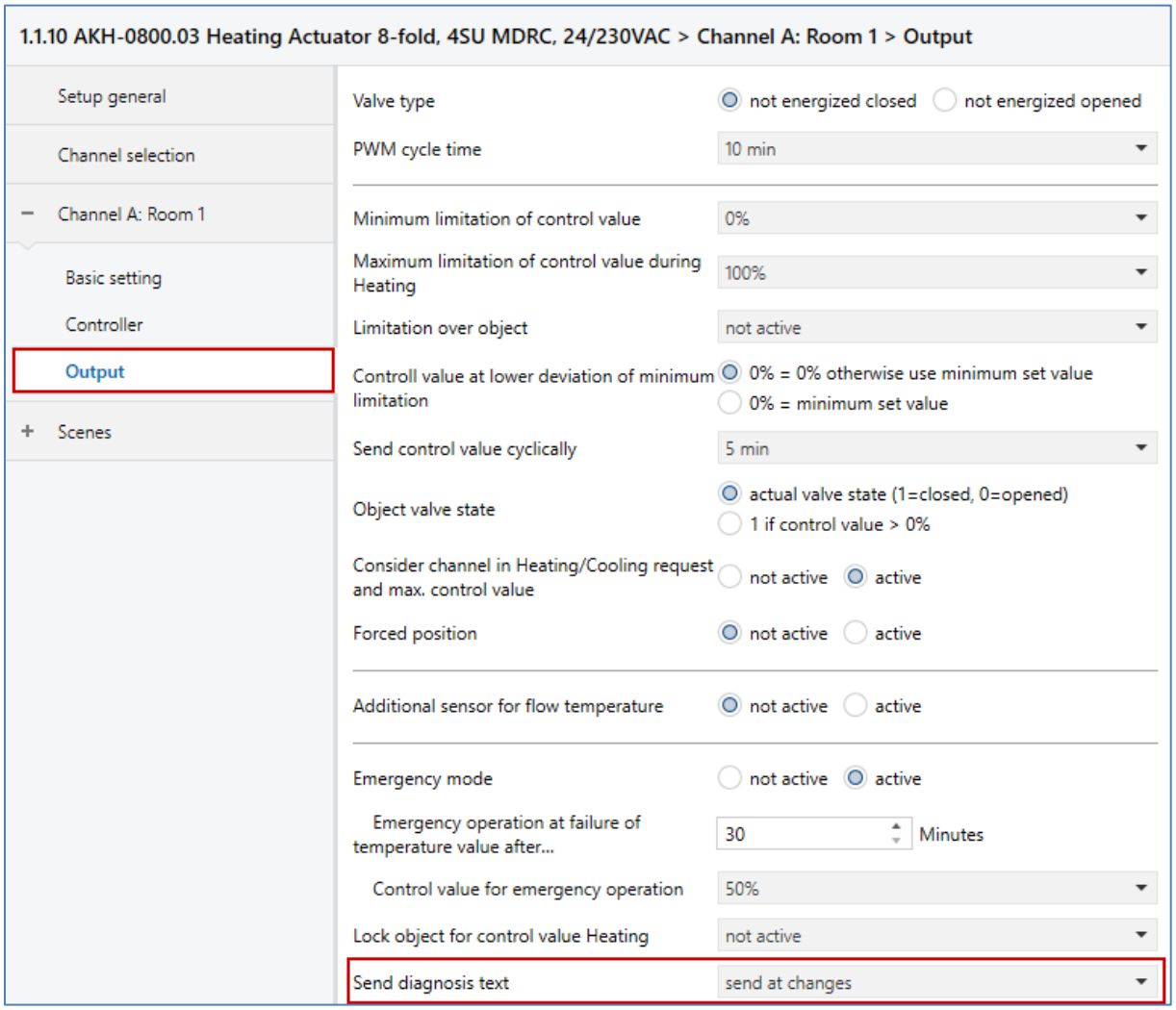
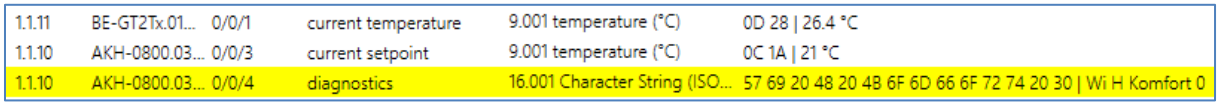
Simple troubleshooting via diagnosis object:

The diagnosis object can be activated for each channel and provides valuable information in case of an error.



This activates a new object for the corresponding channel.

Here is an example of the output after a restart of the AKH-0800.03. The channel is in winter mode, set to heating, comfort mode and the control value is 0.



The explanation of the possible diagnostic outputs can be found as plain text at chapter 4.1.8.1 in the technical manual of AKH-0x00.03.

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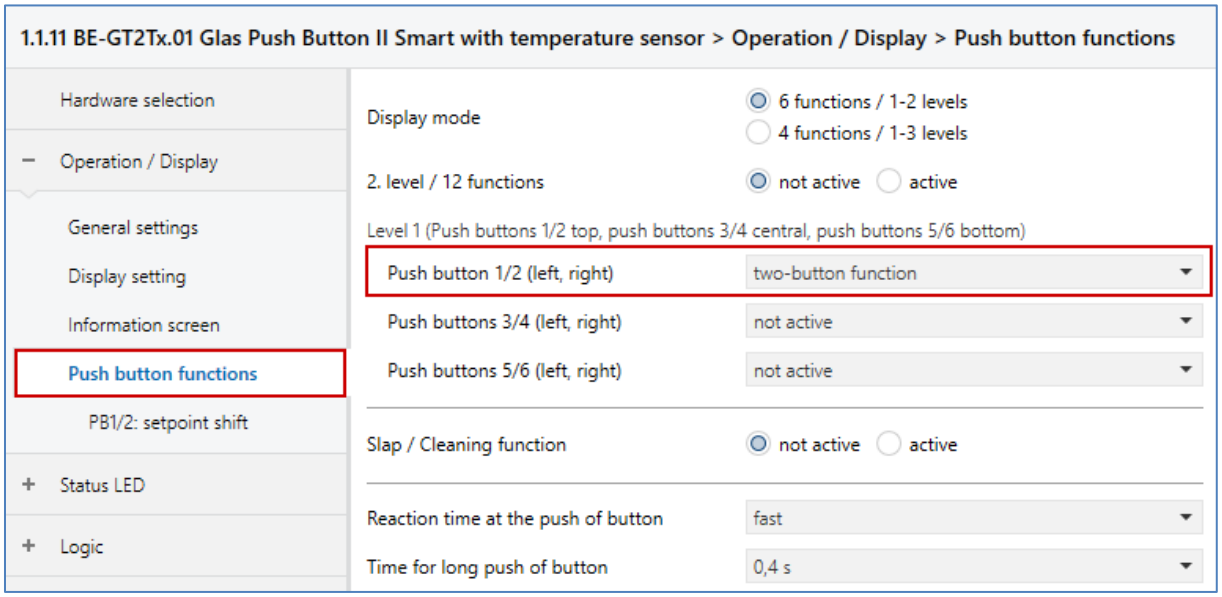
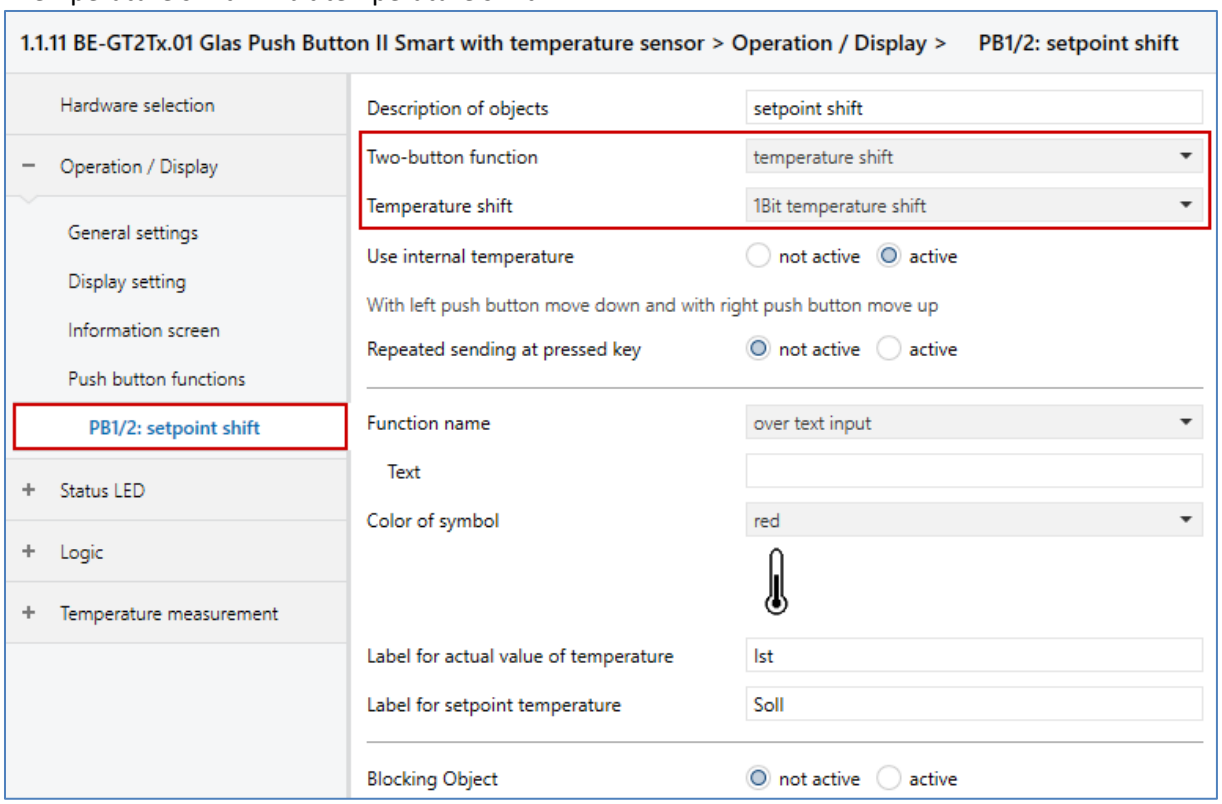
Solution example 1: Setpoint shift via 1 bit (step)

Settings on Glass Push Button II Smart with temperature sensor:

- Push button functions -> two-button function



- Two-button function -> temperature shift
- Temperature shift -> 1bit temperature shift



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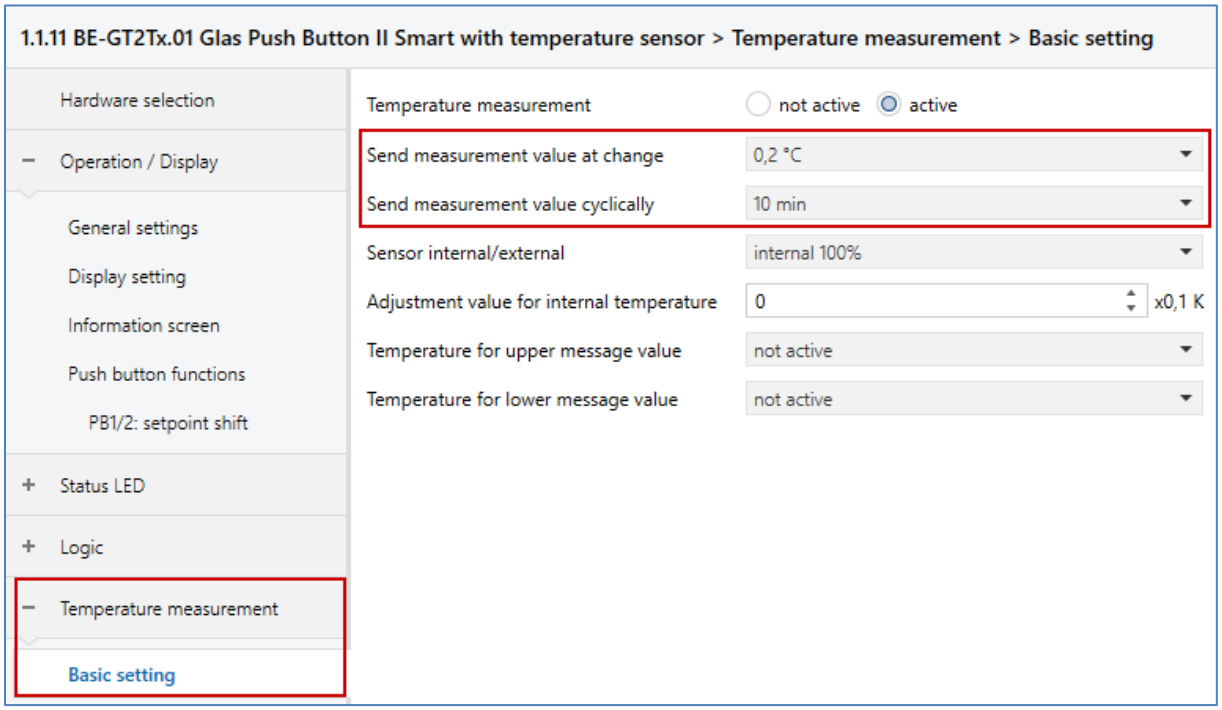
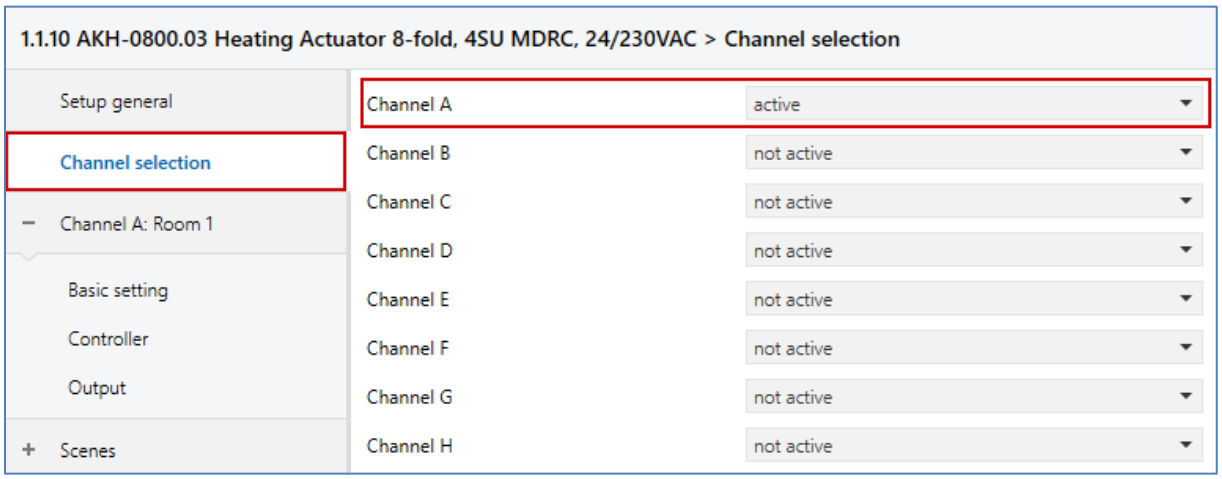
- Send measurement value at change -> 0,2 °C
- Send measurement value cyclically -> 10 min.



Settings on Heating Actuator:

Activate the desired channel in the channel selection:



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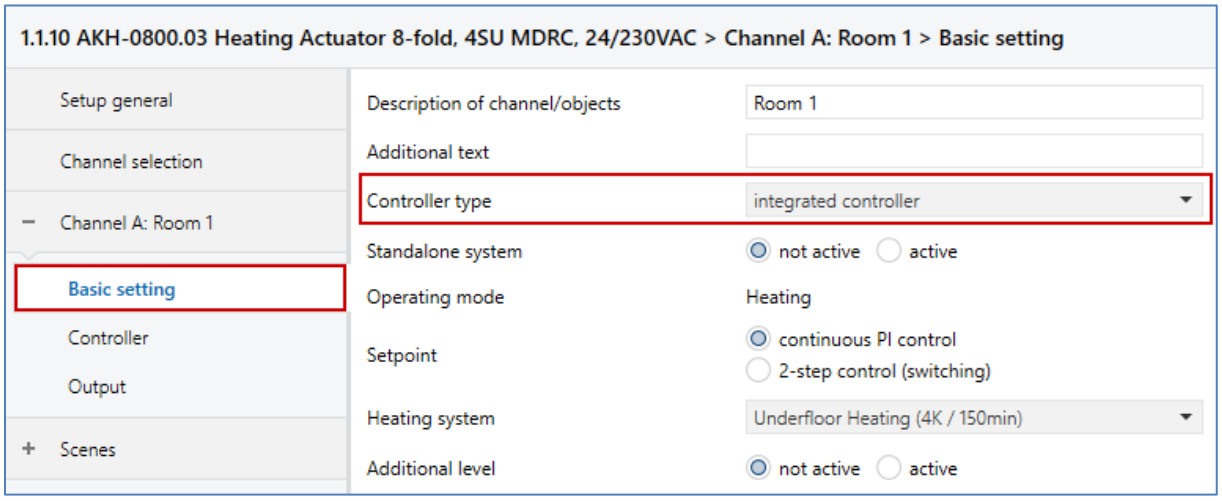
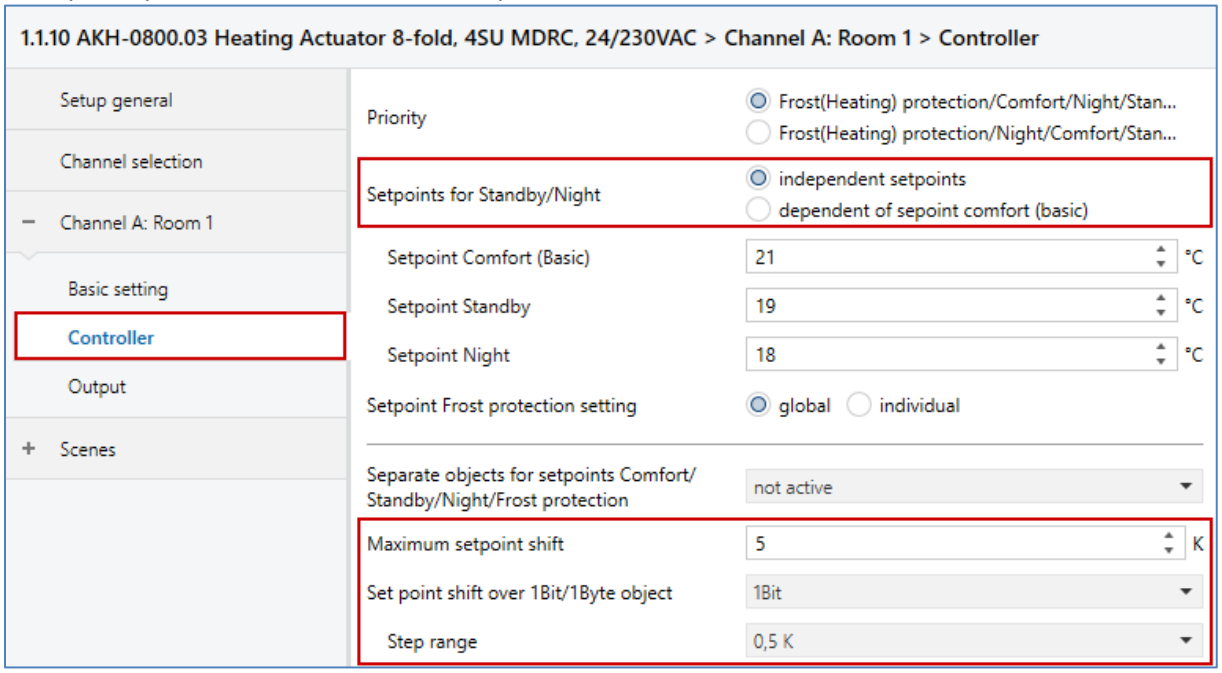
Basic setting:
Controller type -> integrated controller



Controller:
We recommend the use of independent setpoints. The setpoint shift is set to 1 bit, the step range is 0.5 K per keystroke and the maximum setpoint shift is 5 K.



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Group addresses:

The following figure shows the linking of the group addresses for the setpoint shift via 1 bit:

Number	Name	Object Function	Description	Group	Length	C	R	W	T	U	Data Type
1.1.10 AKH-0800.03 Heating Actuator 8-fold, 4SU MDRC, 24/230VAC											
1	Channel A: Room 1	Receive temperature value	current temperature	0/0/1	2 bytes	C	-	W	T	U	temperature (°C)
2	Channel A: Room 1	Preset setpoint			2 bytes	C	-	W	-	-	temperature (°C)
8	Channel A: Room 1	Send current setpoint	current setpoint	0/0/3	2 bytes	C	R	-	T	-	temperature (°C)
9	Channel A: Room 1	Manual setpoint shift (2byte)			2 bytes	C	-	W	-	-	temperature difference (K)
10	Channel A: Room 1	Manual setpoint shift (1=+ / 0=-)	setpoint shift	0/0/2	1 bit	C	-	W	-	-	step
12	Channel A: Room 1	Control value Heating: Send status			1 byte	C	R	-	T	-	percentage (0..100%)
15	Channel A: Room 1	Send valve state			1 bit	C	R	-	T	-	state
17	Channel A: Room 1	Mode selection			1 byte	C	-	W	-	-	HVAC mode
19	Channel A: Room 1	Switch Comfort operating mode			1 bit	C	-	W	-	-	switch
20	Channel A: Room 1	Switch Night operating mode			1 bit	C	-	W	-	-	switch
21	Channel A: Room 1	Switch Frost protection operating...			1 bit	C	-	W	-	-	switch
22	Channel A: Room 1	DPT_HVAC Mode: Send controlle...			1 byte	C	R	-	T	-	HVAC mode
28	Channel A: Room 1	Diagnostis status	diagnostics	0/0/4	14 bytes	C	R	-	T	-	Character String (ISO 8859-1)
35	Channel A: Room 1	Fault in case of mains failure / sh...			1 bit	C	R	-	T	-	alarm
321	Summer = 1 / Winter = 0	Switchover			1 bit	C	-	W	T	U	switch
327	Fault	At power failure/short circuit			1 bit	C	R	-	T	-	alarm
332	Scene	Activate			1 byte	C	-	W	-	-	scene number
334	Lead value (Outside temper...	Receive measured value			2 bytes	C	-	W	T	U	temperature (°C)
1.1.11 BE-GT2Tx.01 Glas Push Button II Smart with temperature sensor											
0	PB1/2: setpoint shift	Setpoint shift (1Bit)	setpoint shift	0/0/2	1 bit	C	-	-	T	-	step
2	PB1/2: setpoint shift	State current setpoint	current setpoint	0/0/3	2 bytes	C	-	W	T	U	temperature (°C)
106	Day / Night	Day = 1 / Night = 0			1 bit	C	-	W	T	U	boolean
107	Presence	Input			1 bit	C	-	W	T	U	switch
108	Temperature measured value	Output	current temperature	0/0/1	2 bytes	C	R	-	T	-	temperature (°C)
112	Time	Receive current value			3 bytes	C	-	W	T	U	time of day
114	Time/Date	Receive current values			8 bytes	C	-	W	T	U	date time
119	Message text (lowest priority)	Input			14 bytes	C	-	W	T	U	Character String (ASCII)
120	State text 1	Input			14 bytes	C	-	W	T	U	Character String (ASCII)
121	State text 2	Input			14 bytes	C	-	W	T	U	Character String (ASCII)
126	Push button operation	Output			1 bit	C	R	-	T	-	state

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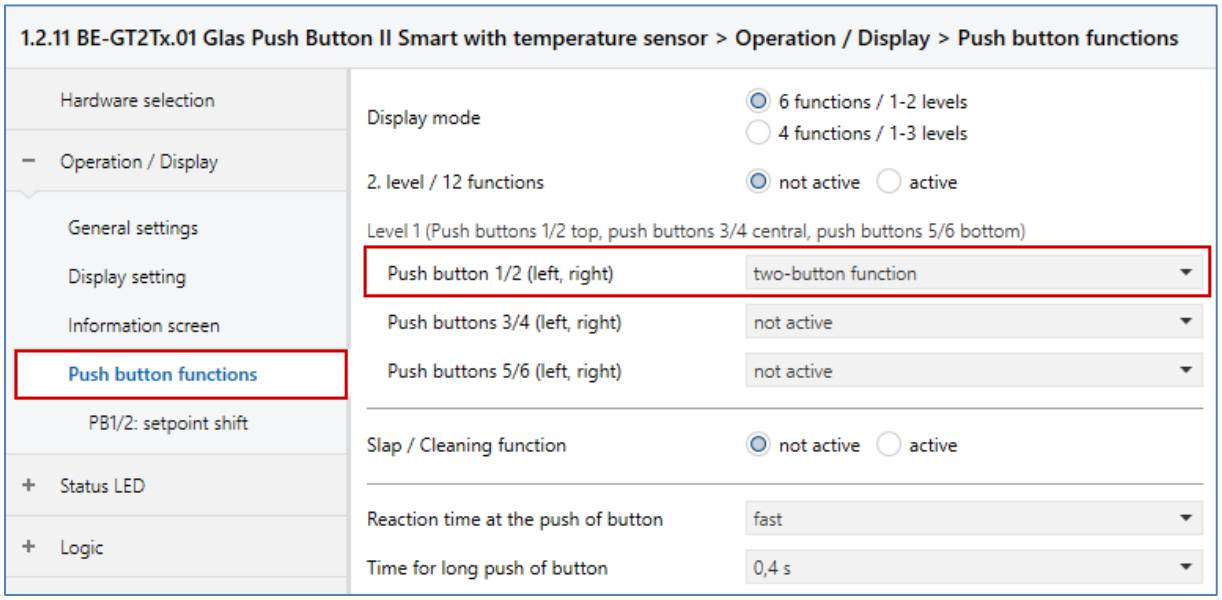
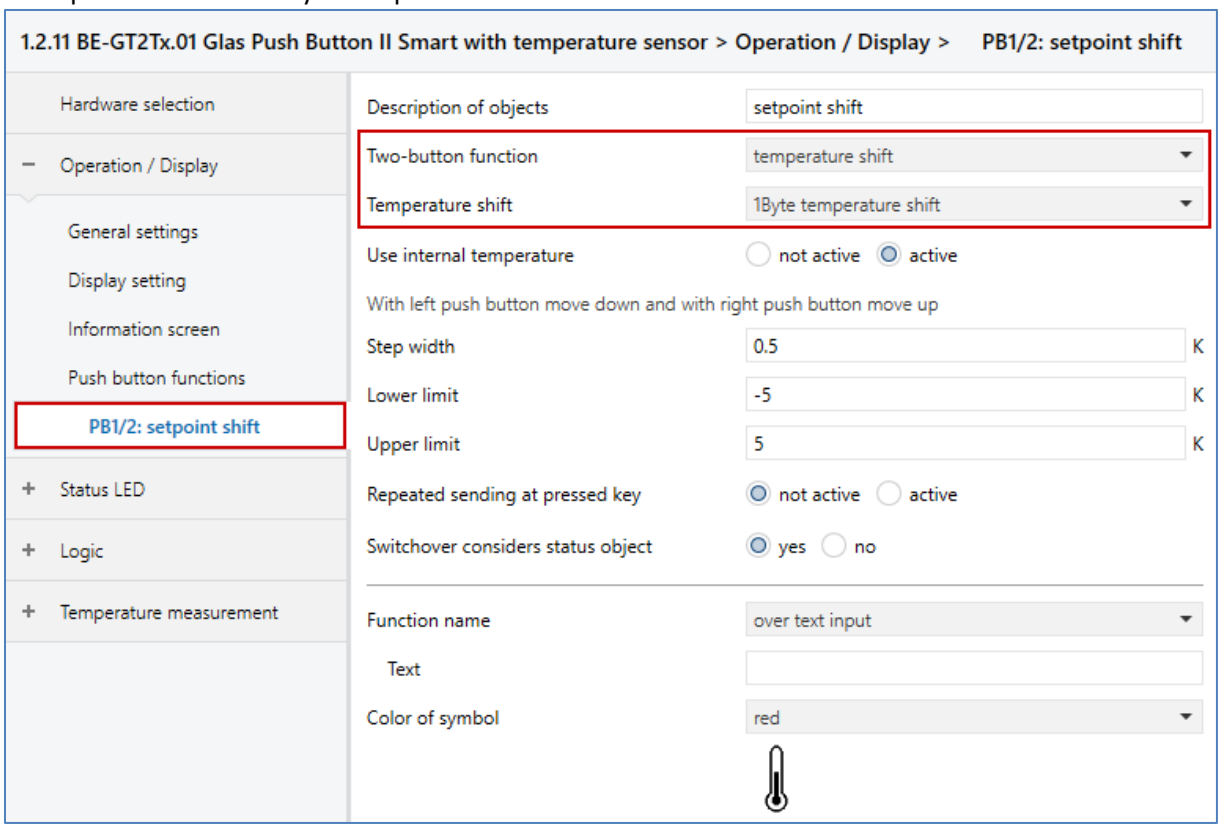
Solution example 2: Setpoint shift via 1 byte (counter pulses)

Settings on Glass Push Button II Smart with temperature sensor:

- Push button functions -> two-button function



- Two-button function -> temperature shift
- Temperature shift -> 1Byte temperature shift



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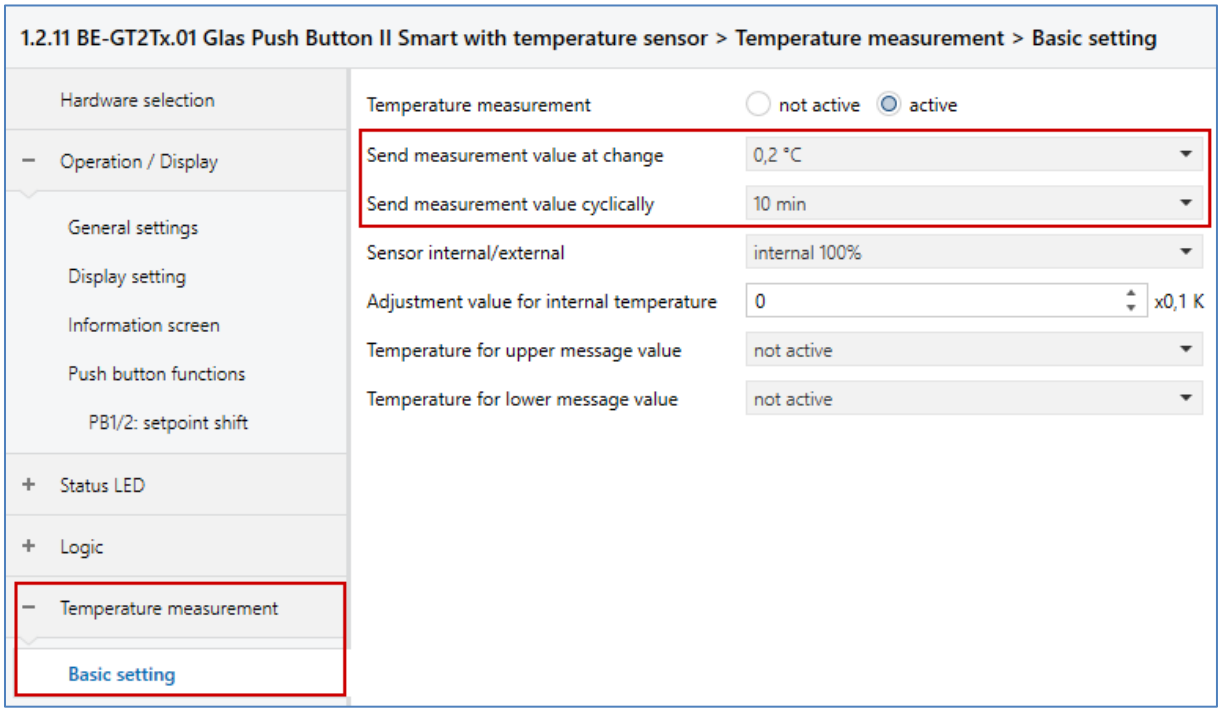
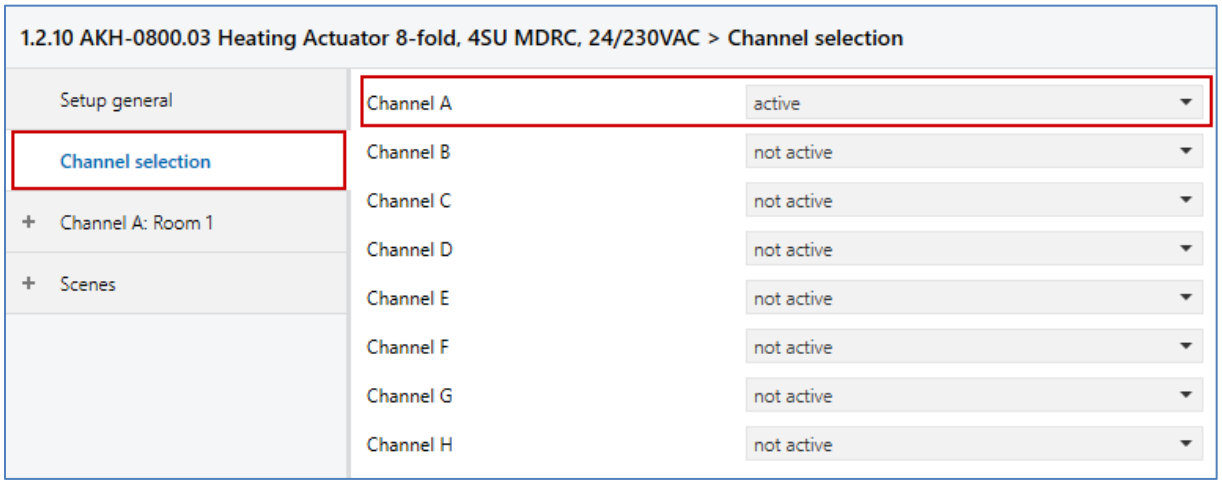
- Send measurement value at change -> 0,2 °C
- Send measurement value cyclically -> 10 min.



Settings on Heating Actuator:

Activate the desired channel in the channel selection:



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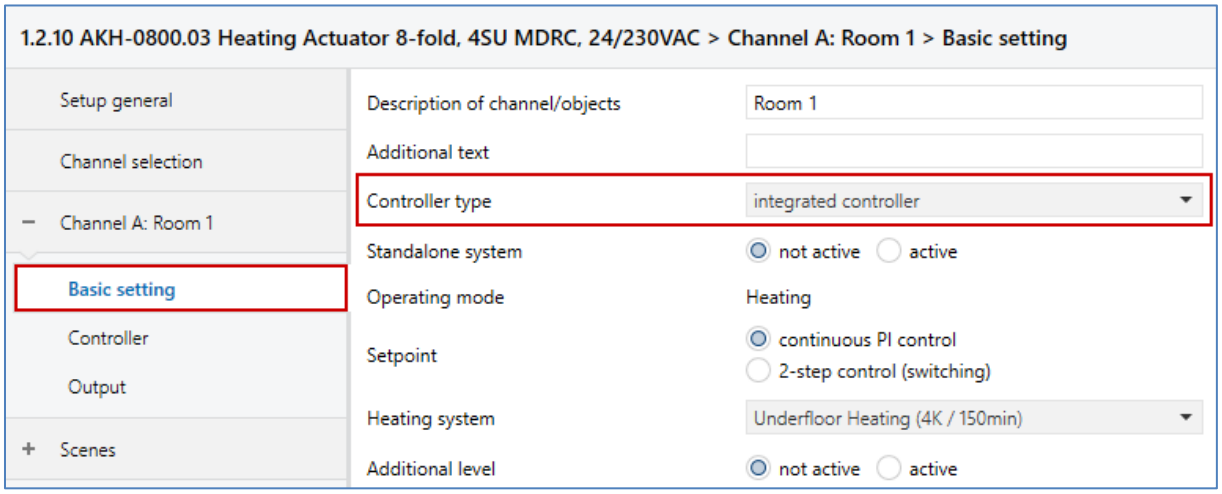
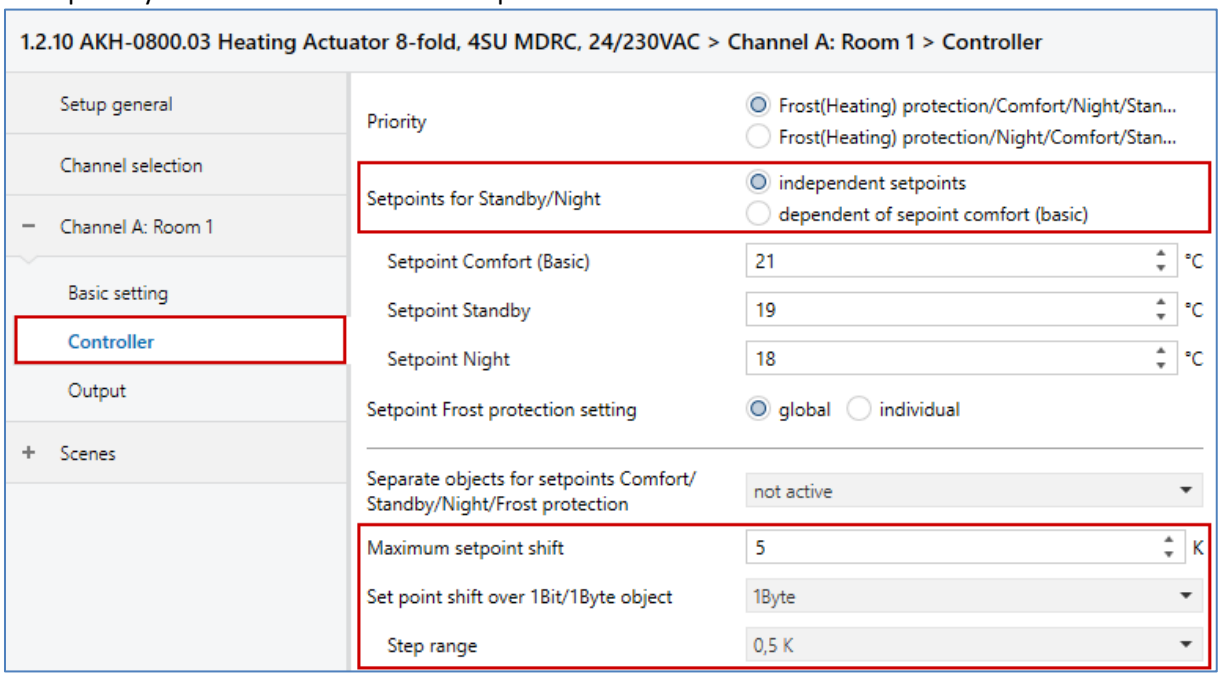
Basic setting:
Controller type -> integrated controller



Controller:
We recommend the use of independent setpoints. The setpoint shift is set to 1 byte, the step range is 0.5 K per keystroke and the maximum setpoint shift is 5 K.



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Group addresses:

The following figure shows the linking of the group addresses for the setpoint shift via 1 byte:

Number	Name	Object Function	Description	Group	Length	C	R	W	T	U	Data Type
1.2.10 AKH-0800.03 Heating Actuator 8-fold, 4SU MDRC, 24/230VAC											
1	Channel A: Room 1	Receive temperature value	current temperature	0/0/5	2 bytes	C	-	W	T	U	temperature (°C)
2	Channel A: Room 1	Preset setpoint			2 bytes	C	-	W	-	-	temperature (°C)
8	Channel A: Room 1	Send current setpoint	current setpoint	0/0/7	2 bytes	C	R	-	T	-	temperature (°C)
9	Channel A: Room 1	Manual setpoint shift (2byte)			2 bytes	C	-	W	-	-	temperature difference (K)
10	Channel A: Room 1	Manual setpoint shift (1byte)	setpoint shift	0/0/6	1 byte	C	-	W	-	-	counter pulses (-128..127)
12	Channel A: Room 1	Control value Heating: Send status			1 byte	C	R	-	T	-	percentage (0..100%)
15	Channel A: Room 1	Send valve state			1 bit	C	R	-	T	-	state
17	Channel A: Room 1	Mode selection			1 byte	C	-	W	-	-	HVAC mode
19	Channel A: Room 1	Switch Comfort operating mode			1 bit	C	-	W	-	-	switch
20	Channel A: Room 1	Switch Night operating mode			1 bit	C	-	W	-	-	switch
21	Channel A: Room 1	Switch Frost protection operating...			1 bit	C	-	W	-	-	switch
22	Channel A: Room 1	DPT_HVAC Mode: Send controlle...			1 byte	C	R	-	T	-	HVAC mode
28	Channel A: Room 1	Diagnostis status	diagnostics	0/0/8	14 bytes	C	R	-	T	-	Character String (ISO 8859-1)
35	Channel A: Room 1	Fault in case of mains failure / sh...			1 bit	C	R	-	T	-	alarm
321	Summer = 1 / Winter = 0	Switchover			1 bit	C	-	W	T	U	switch
327	Fault	At power failure/short circuit			1 bit	C	R	-	T	-	alarm
332	Scene	Activate			1 byte	C	-	W	-	-	scene number
334	Lead value (Outside temper...	Receive measured value			2 bytes	C	-	W	T	U	temperature (°C)
1.2.11 BE-GT2Tx.01 Glas Push Button II Smart with temperature sensor											
0	PB1/2: setpoint shift	Setpoint shift (1Byte)	setpoint shift	0/0/6	1 byte	C	-	-	T	-	counter pulses (-128..127)
2	PB1/2: setpoint shift	State current setpoint	current setpoint	0/0/7	2 bytes	C	-	W	T	U	temperature (°C)
3	PB1/2: setpoint shift	State setpoint shift	setpoint shift	0/0/6	1 byte	C	-	W	T	U	counter pulses (-128..127)
106	Day / Night	Day = 1 / Night = 0			1 bit	C	-	W	T	U	boolean
107	Presence	Input			1 bit	C	-	W	T	U	switch
108	Temperature measured value	Output	current temperature	0/0/5	2 bytes	C	R	-	T	-	temperature (°C)
112	Time	Receive current value			3 bytes	C	-	W	T	U	time of day
114	Time/Date	Receive current values			8 bytes	C	-	W	T	U	date time
119	Message text (lowest priority)	Input			14 bytes	C	-	W	T	U	Character String (ASCII)
120	State text 1	Input			14 bytes	C	-	W	T	U	Character String (ASCII)
121	State text 2	Input			14 bytes	C	-	W	T	U	Character String (ASCII)
126	Push button operation	Output			1 bit	C	R	-	T	-	state

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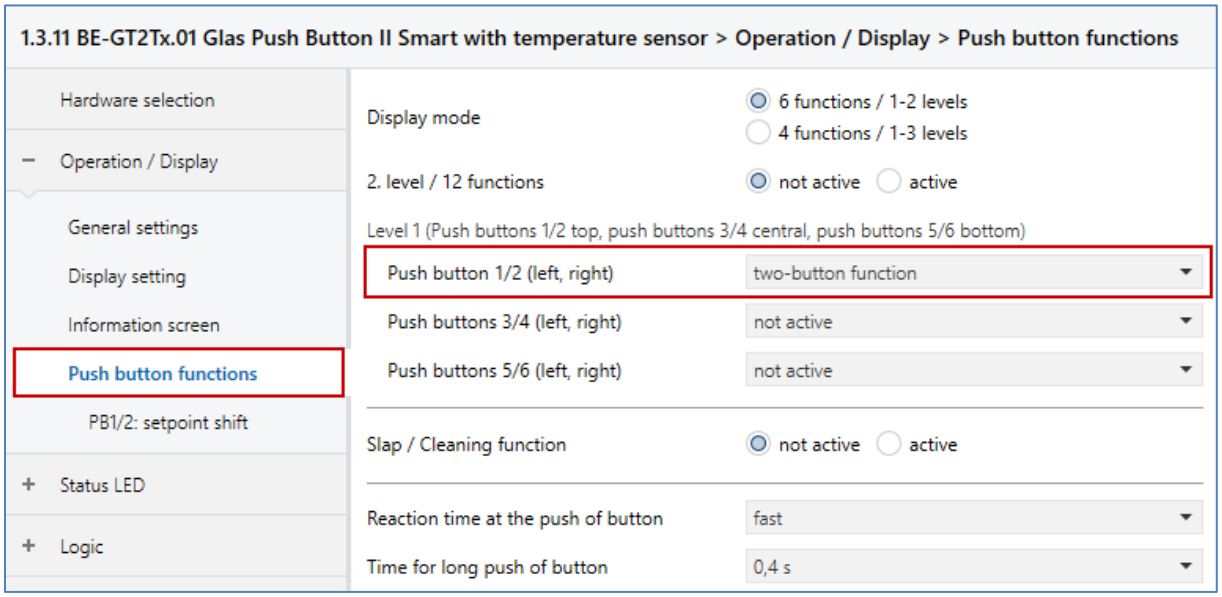
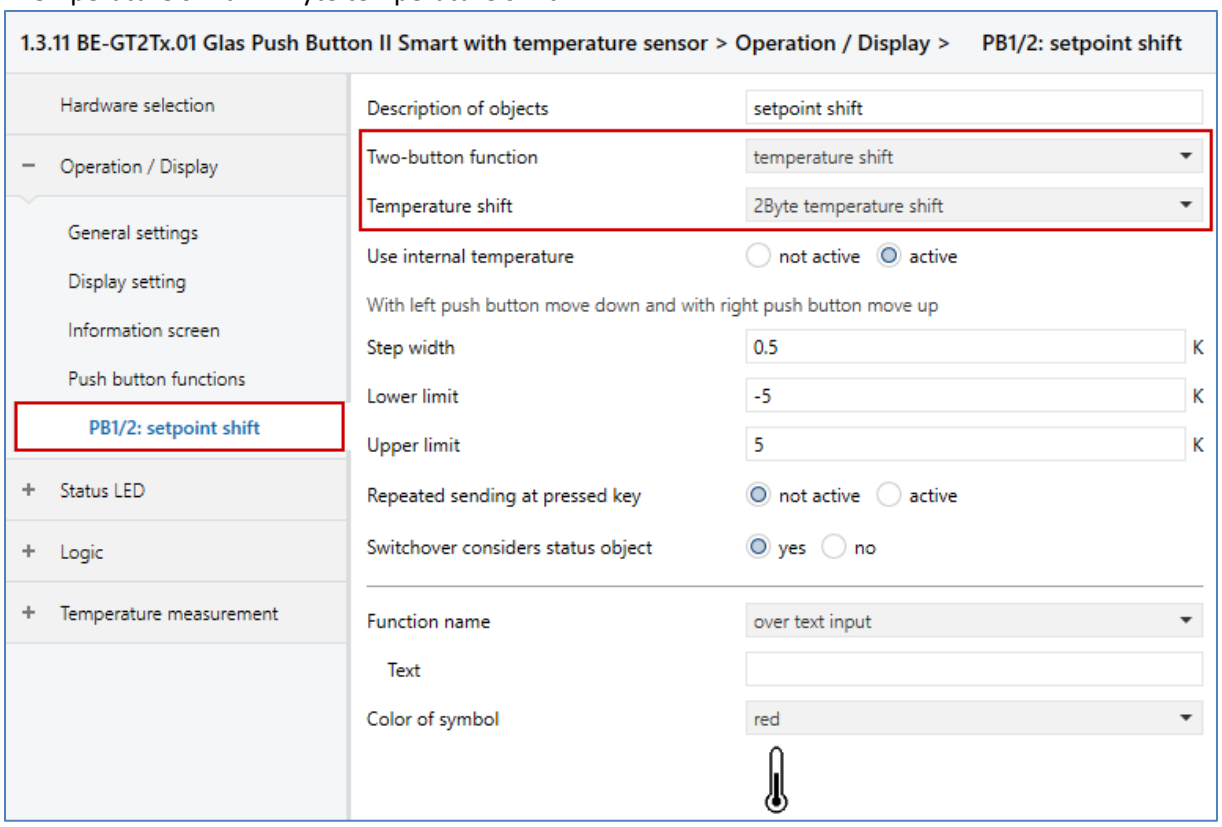
Solution example 3: Setpoint shift via 2 byte (temperature difference)

Settings on Glass Push Button II Smart with temperature sensor:

- Push button functions -> two-button function



- Two-button function -> temperature shift
- Temperature shift -> 2Byte temperature shift



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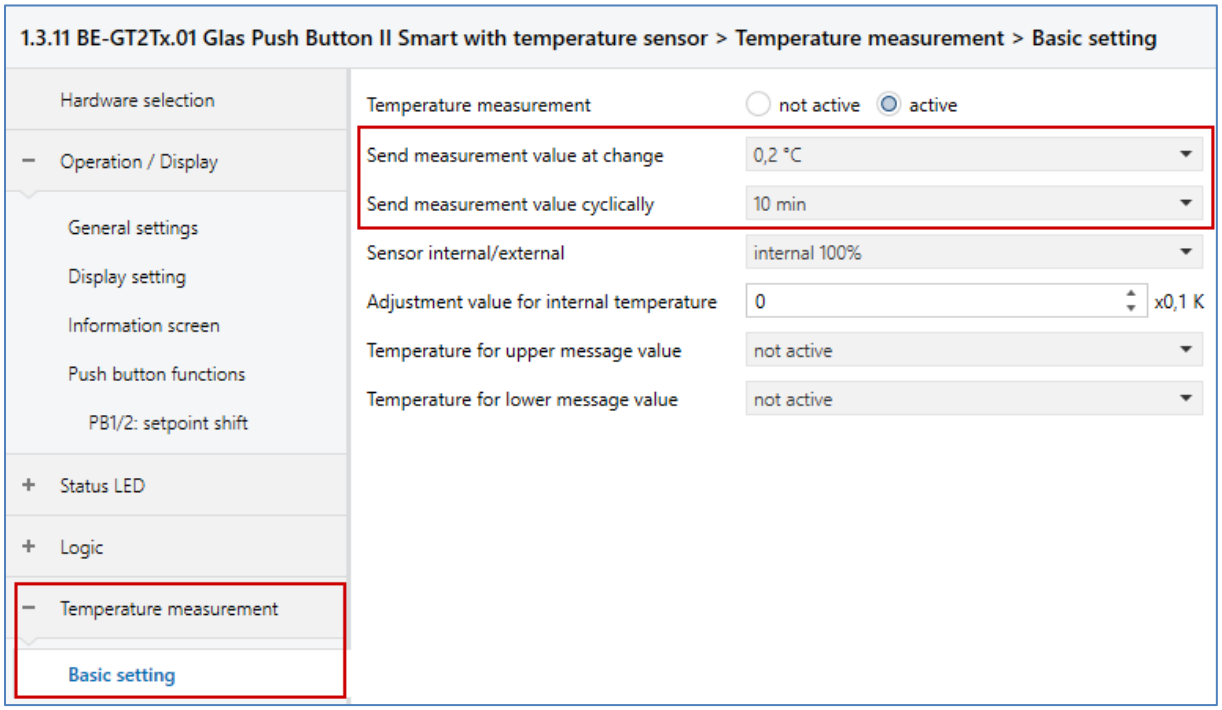
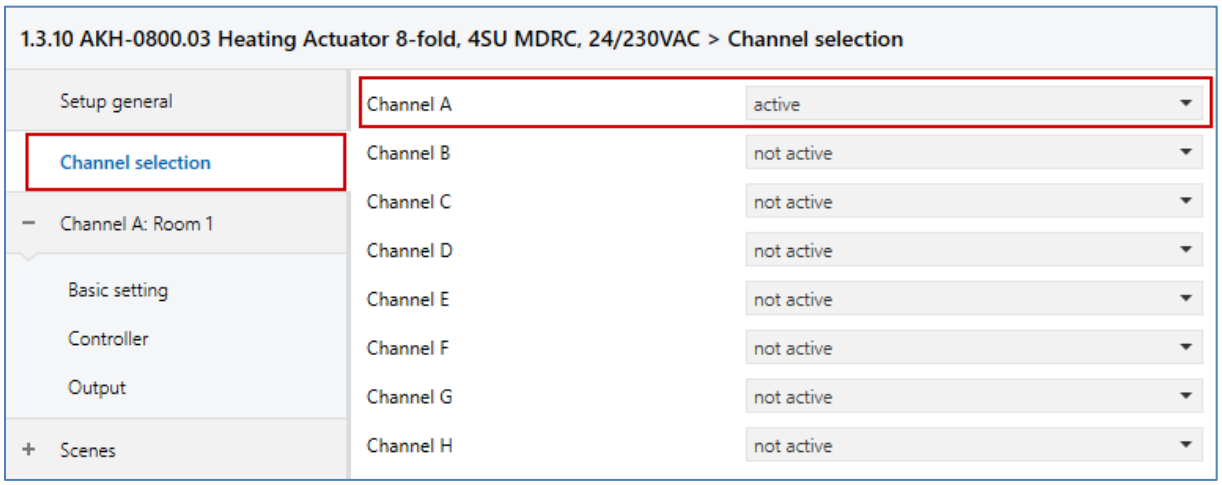
- Send measurement value at change -> 0,2 °C
- Send measurement value cyclically -> 10 min.



Settings on Heating Actuator:

Activate the desired channel in the channel selection:



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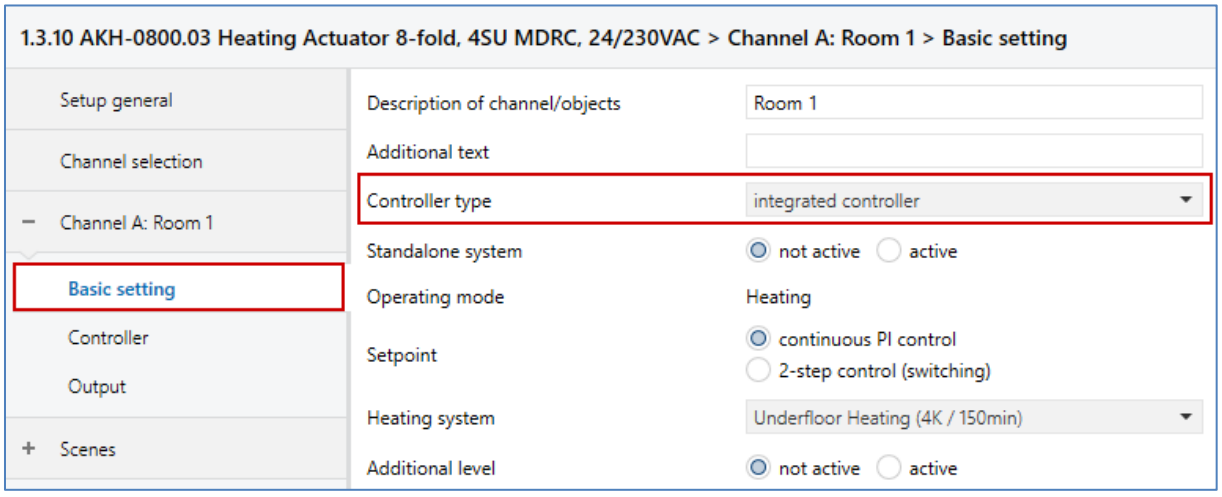
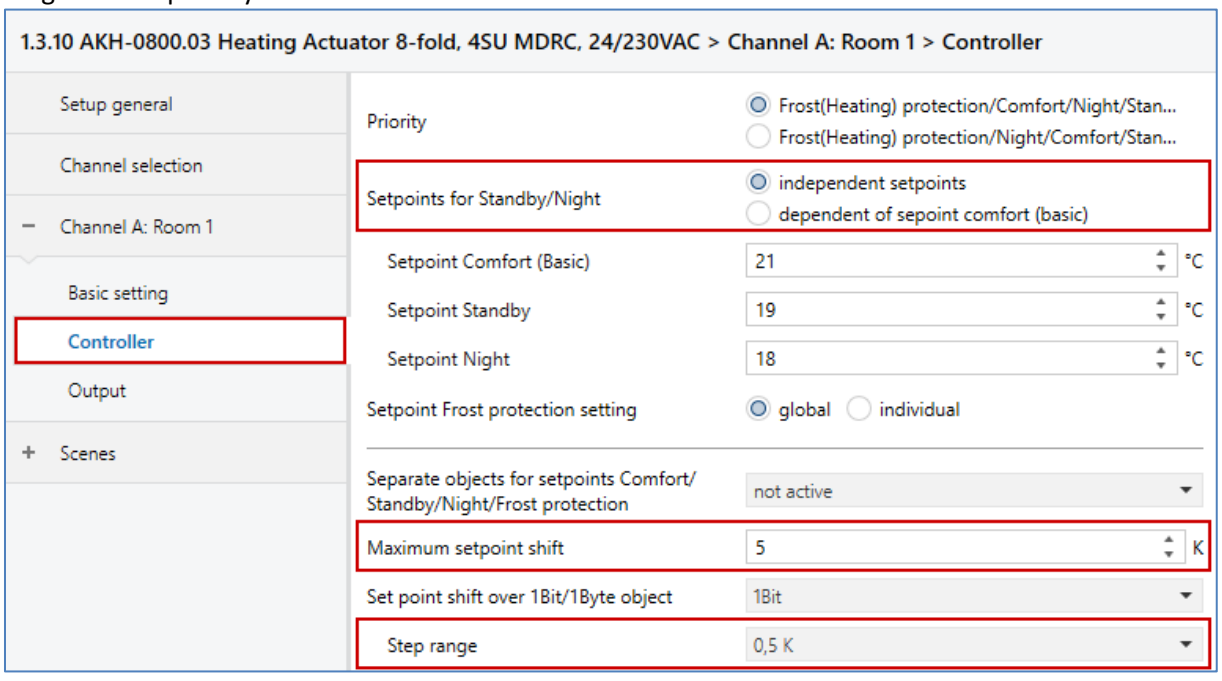
Basic setting:
Controller type -> integrated controller



Controller:
We recommend the use of independent setpoints. The maximum setpoint shift is 5 K and the step range is 0.5 K per keystroke.



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Group addresses:

The following figure shows the linking of the group addresses for the setpoint shift via 2 byte (temperature difference):

Number	Name	Object Function	Description	Group	Length	C	R	W	T	U	Data Type
1.3.10 AKH-0800.03 Heating Actuator 8-fold, 4SU MDRC, 24/230VAC											
1	Channel A: Room 1	Receive temperature value	current temperature	0/0/9	2 bytes	C	-	W	T	U	temperature (°C)
2	Channel A: Room 1	Preset setpoint			2 bytes	C	-	W	-	-	temperature (°C)
8	Channel A: Room 1	Send current setpoint	current setpoint	0/0/11	2 bytes	C	R	-	T	-	temperature (°C)
9	Channel A: Room 1	Manual setpoint shift (2byte)	setpoint shift	0/0/10	2 bytes	C	-	W	-	-	temperature difference (K)
10	Channel A: Room 1	Manual setpoint shift (1=+ / 0=-)			1 bit	C	-	W	-	-	step
12	Channel A: Room 1	Control value Heating: Send status			1 byte	C	R	-	T	-	percentage (0..100%)
15	Channel A: Room 1	Send valve state			1 bit	C	R	-	T	-	state
17	Channel A: Room 1	Mode selection			1 byte	C	-	W	-	-	HVAC mode
19	Channel A: Room 1	Switch Comfort operating mode			1 bit	C	-	W	-	-	switch
20	Channel A: Room 1	Switch Night operating mode			1 bit	C	-	W	-	-	switch
21	Channel A: Room 1	Switch Frost protection operating...			1 bit	C	-	W	-	-	switch
22	Channel A: Room 1	DPT_HVAC Mode: Send controlle...			1 byte	C	R	-	T	-	HVAC mode
28	Channel A: Room 1	Diagnostis status	diagnostics	0/0/12	14 bytes	C	R	-	T	-	Character String (ISO 8859-1)
35	Channel A: Room 1	Fault in case of mains failure / sh...			1 bit	C	R	-	T	-	alarm
321	Summer = 1 / Winter = 0	Switchover			1 bit	C	-	W	T	U	switch
327	Fault	At power failure/short circuit			1 bit	C	R	-	T	-	alarm
332	Scene	Activate			1 byte	C	-	W	-	-	scene number
334	Lead value (Outside temper...	Receive measured value			2 bytes	C	-	W	T	U	temperature (°C)
1.3.11 BE-GT2Tx.01 Glas Push Button II Smart with temperature sensor											
0	PB1/2: setpoint shift	Setpoint shift (2Byte)	setpoint shift	0/0/10	2 bytes	C	-	-	T	-	temperature difference (K)
2	PB1/2: setpoint shift	State current setpoint	current setpoint	0/0/11	2 bytes	C	-	W	T	U	temperature (°C)
3	PB1/2: setpoint shift	State setpoint shift	setpoint shift	0/0/10	2 bytes	C	-	W	T	U	temperature difference (K)
106	Day / Night	Day = 1 / Night = 0			1 bit	C	-	W	T	U	boolean
107	Presence	Input			1 bit	C	-	W	T	U	switch
108	Temperature measured value	Output	current temperature	0/0/9	2 bytes	C	R	-	T	-	temperature (°C)
112	Time	Receive current value			3 bytes	C	-	W	T	U	time of day
114	Time/Date	Receive current values			8 bytes	C	-	W	T	U	date time
119	Message text (lowest priority)	Input			14 bytes	C	-	W	T	U	Character String (ASCII)
120	State text 1	Input			14 bytes	C	-	W	T	U	Character String (ASCII)
121	State text 2	Input			14 bytes	C	-	W	T	U	Character String (ASCII)
126	Push button operation	Output			1 bit	C	R	-	T	-	state

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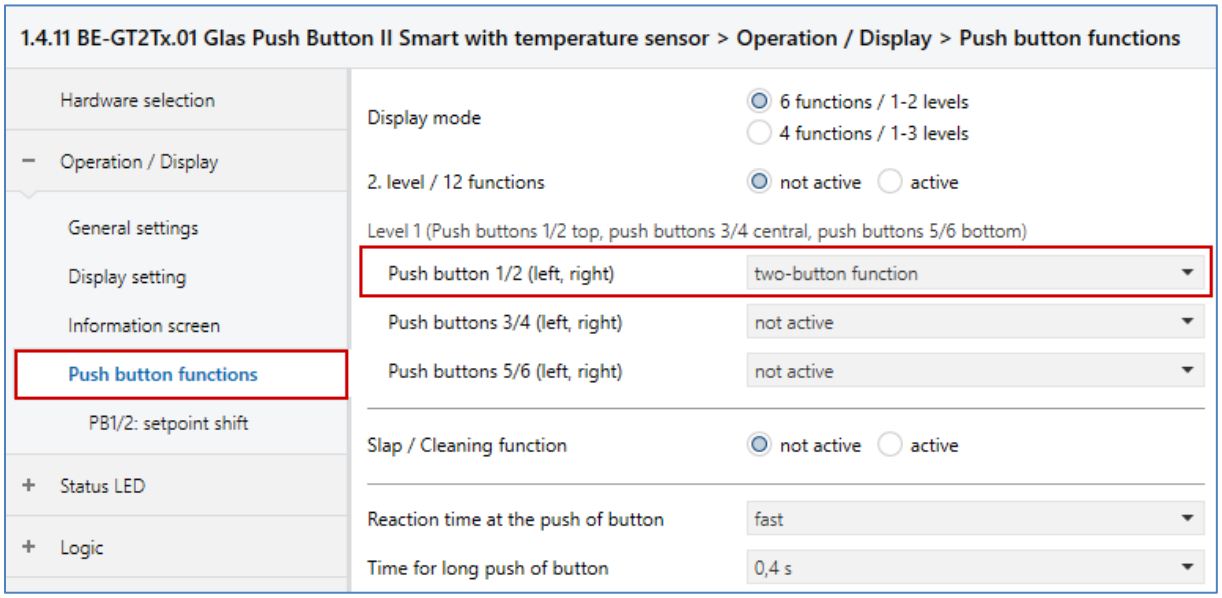
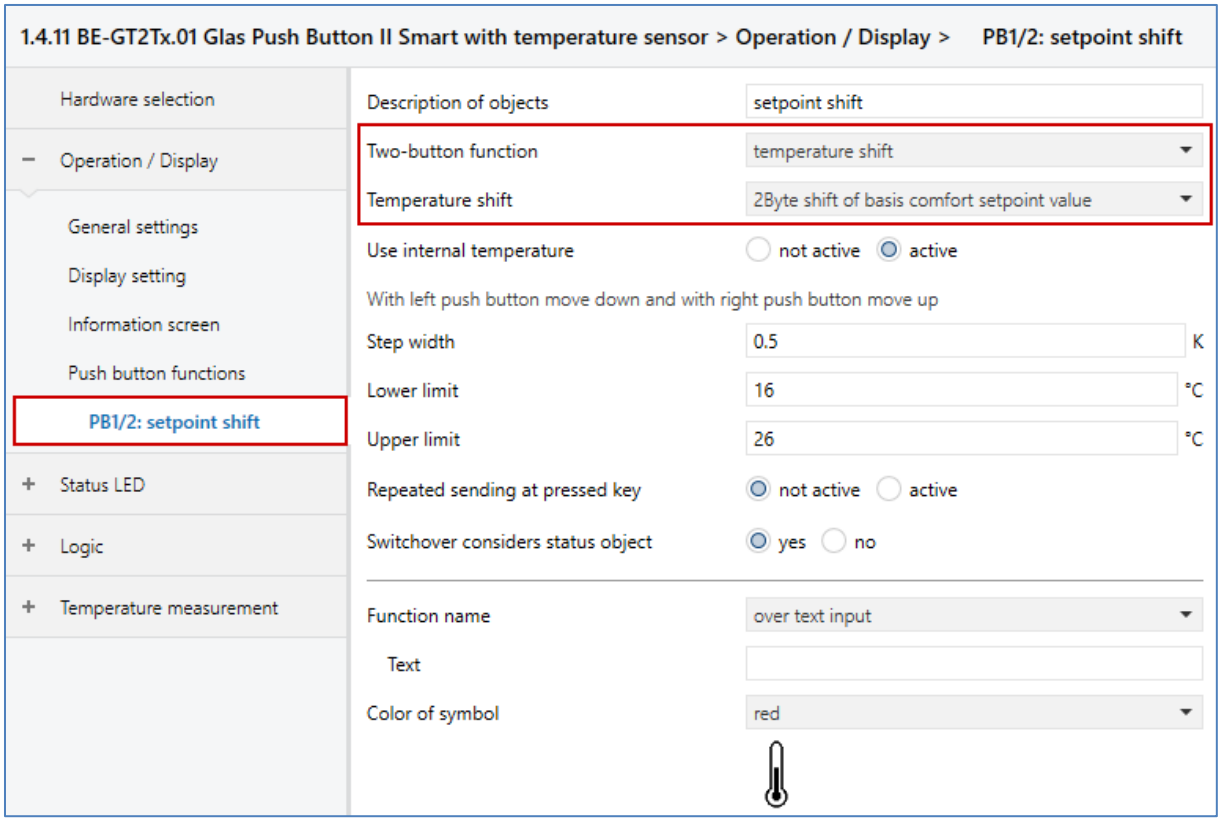
Solution example 4: Setpoint shift via 2 byte (absolute value)

Settings on Glass Push Button II Smart with temperature sensor:

- Push button functions -> two-button function



- Two-button function -> temperature shift
- Temperature shift -> 2Byte shift of basis comfort setpoint value



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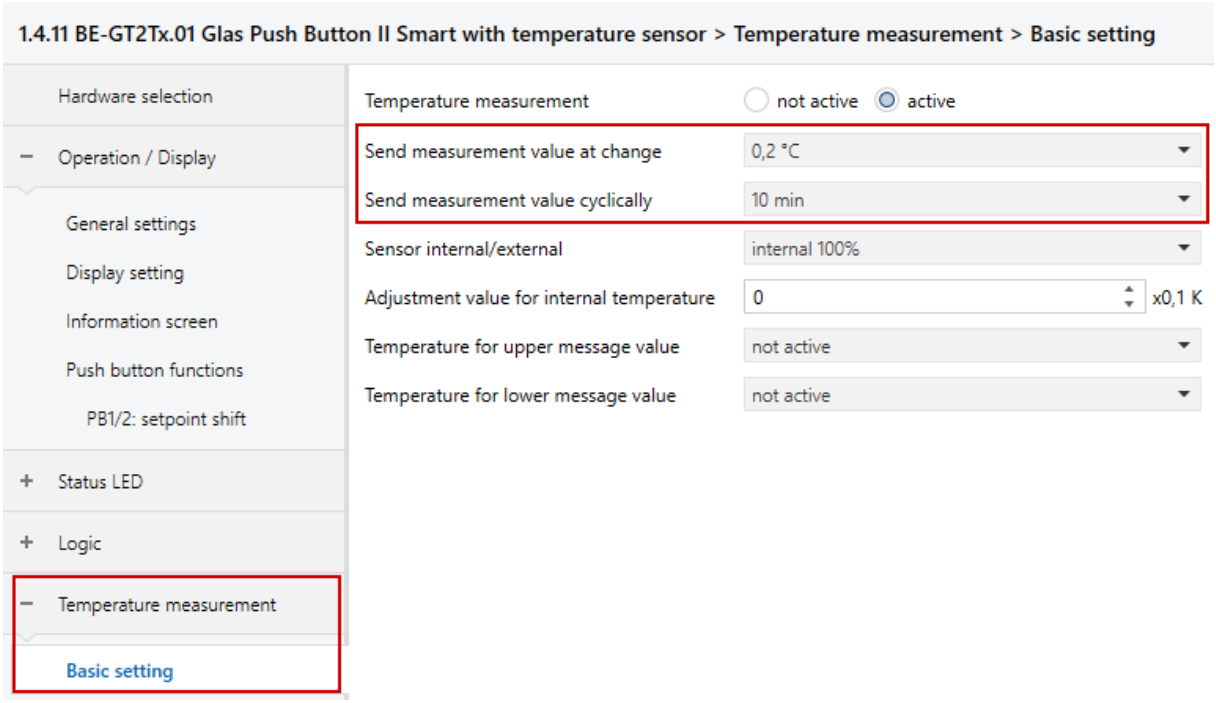
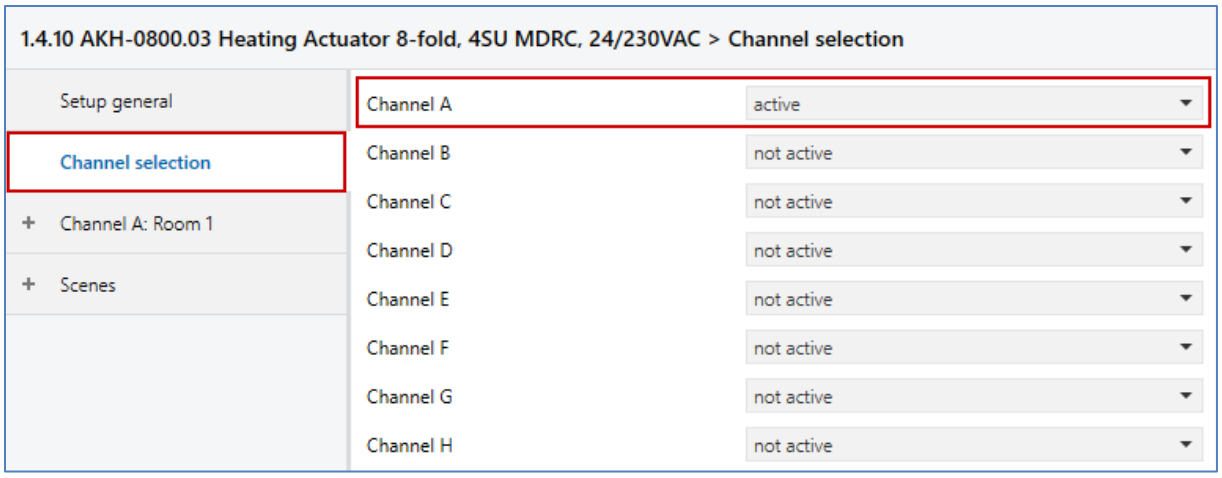
- Send measurement value at change -> 0,2 °C
- Send measurement value cyclically -> 10 min.



Settings on Heating Actuator:

Activate the desired channel in the channel selection:



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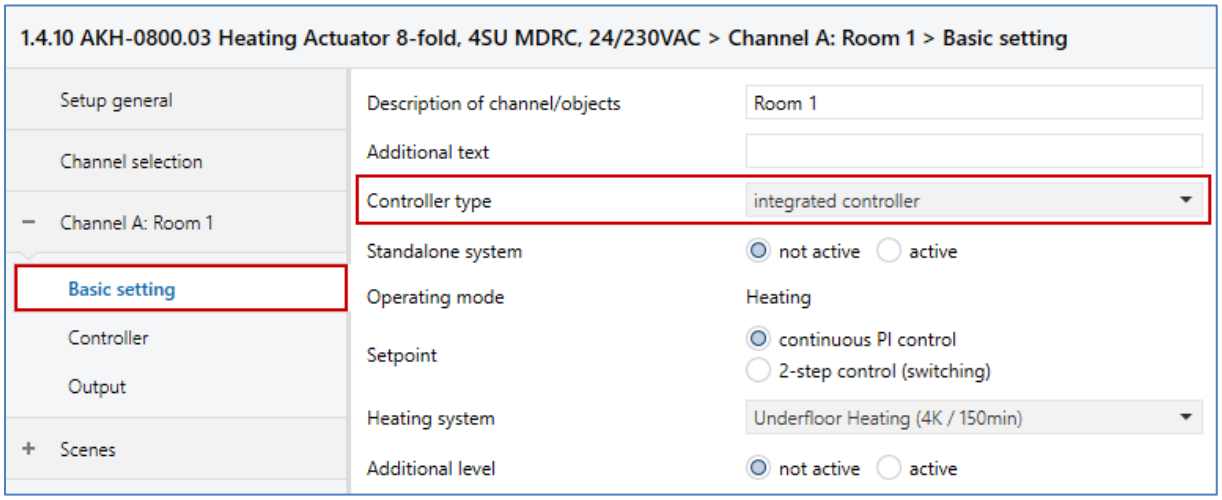
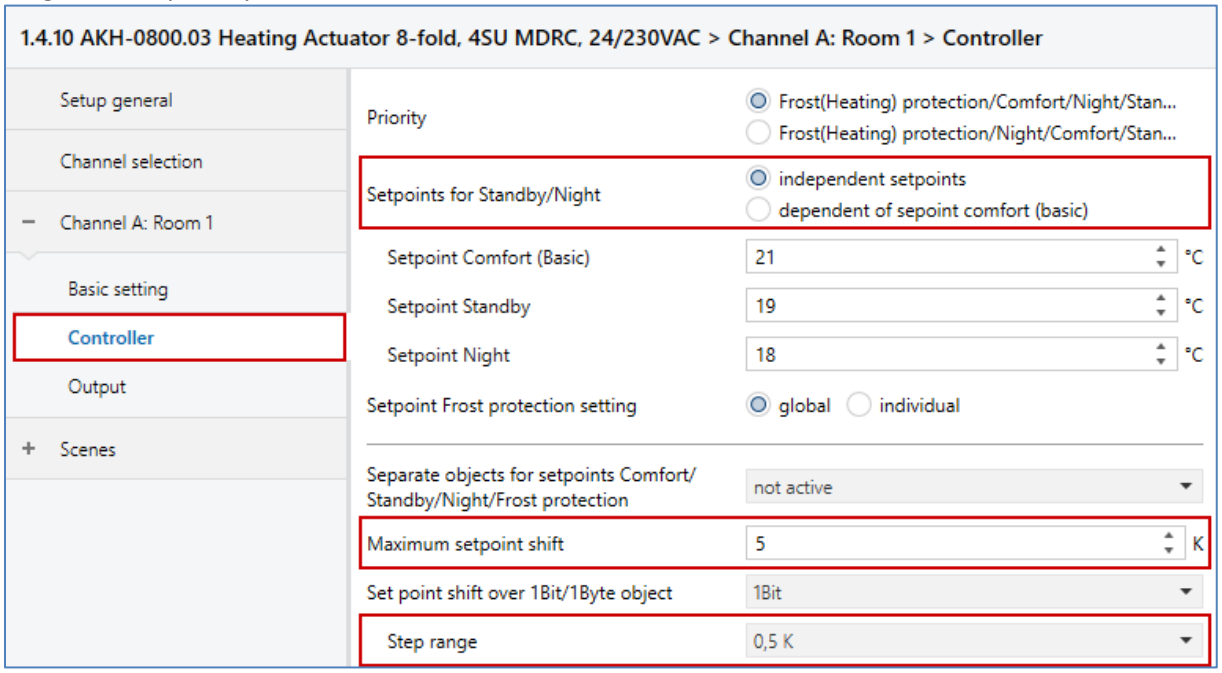
Basic setting:
Controller type -> integrated controller



Controller:
We recommend the use of independent setpoints. The maximum setpoint shift is 5 K and the step range is 0.5 K per keystroke.



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Group addresses:

The following figure shows the linking of the group addresses for the setpoint shift via 2 byte (temperature integer):

Number	Name	Object Function	Description	Group	Length	C	R	W	T	U	Data Type
1.4.10 AKH-0800.03 Heating Actuator 8-fold, 4SU MDRC, 24/230VAC											
1	Channel A: Room 1	Receive temperature value	current temperature	0/0/13	2 bytes	C	-	W	T	U	temperature (°C)
2	Channel A: Room 1	Preset setpoint	setpoint value	0/0/14	2 bytes	C	-	W	-	-	temperature (°C)
8	Channel A: Room 1	Send current setpoint	current setpoint	0/0/15	2 bytes	C	R	-	T	-	temperature (°C)
9	Channel A: Room 1	Manual setpoint shift (2byte)			2 bytes	C	-	W	-	-	temperature difference (K)
10	Channel A: Room 1	Manual setpoint shift (1=+ / 0=-)			1 bit	C	-	W	-	-	step
12	Channel A: Room 1	Control value Heating: Send status			1 byte	C	R	-	T	-	percentage (0..100%)
15	Channel A: Room 1	Send valve state			1 bit	C	R	-	T	-	state
17	Channel A: Room 1	Mode selection			1 byte	C	-	W	-	-	HVAC mode
19	Channel A: Room 1	Switch Comfort operating mode			1 bit	C	-	W	-	-	switch
20	Channel A: Room 1	Switch Night operating mode			1 bit	C	-	W	-	-	switch
21	Channel A: Room 1	Switch Frost protection operating...			1 bit	C	-	W	-	-	switch
22	Channel A: Room 1	DPT_HVAC Mode: Send controlle...			1 byte	C	R	-	T	-	HVAC mode
28	Channel A: Room 1	Diagnostis status	diagnostics	0/0/16	14 bytes	C	R	-	T	-	Character String (ISO 8859-1)
35	Channel A: Room 1	Fault in case of mains failure / sh...			1 bit	C	R	-	T	-	alarm
321	Summer = 1 / Winter = 0	Switchover			1 bit	C	-	W	T	U	switch
327	Fault	At power failure/short circuit			1 bit	C	R	-	T	-	alarm
332	Scene	Activate			1 byte	C	-	W	-	-	scene number
334	Lead value (Outside temper...	Receive measured value			2 bytes	C	-	W	T	U	temperature (°C)
1.4.11 BE-GT2Tx.01 Glas Push Button II Smart with temperature sensor											
0	PB1/2: setpoint shift	Basis comfort setpoint	setpoint value	0/0/14	2 bytes	C	-	-	T	-	temperature (°C)
2	PB1/2: setpoint shift	State current setpoint	current setpoint	0/0/15	2 bytes	C	-	W	T	U	temperature (°C)
3	PB1/2: setpoint shift	State basis comfort setpoint	current setpoint	0/0/15	2 bytes	C	-	W	T	U	temperature (°C)
106	Day / Night	Day = 1 / Night = 0			1 bit	C	-	W	T	U	boolean
107	Presence	Input			1 bit	C	-	W	T	U	switch
108	Temperature measured value	Output	current temperature	0/0/13	2 bytes	C	R	-	T	-	temperature (°C)
112	Time	Receive current value			3 bytes	C	-	W	T	U	time of day
114	Time/Date	Receive current values			8 bytes	C	-	W	T	U	date time
119	Message text (lowest priority)	Input			14 bytes	C	-	W	T	U	Character String (ASCII)
120	State text 1	Input			14 bytes	C	-	W	T	U	Character String (ASCII)
121	State text 2	Input			14 bytes	C	-	W	T	U	Character String (ASCII)
126	Push button operation	Output			1 bit	C	R	-	T	-	state

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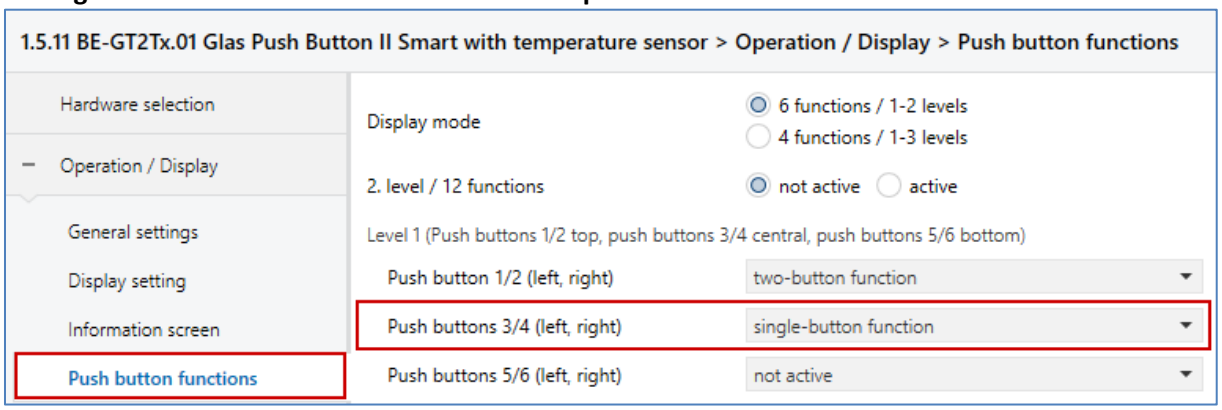
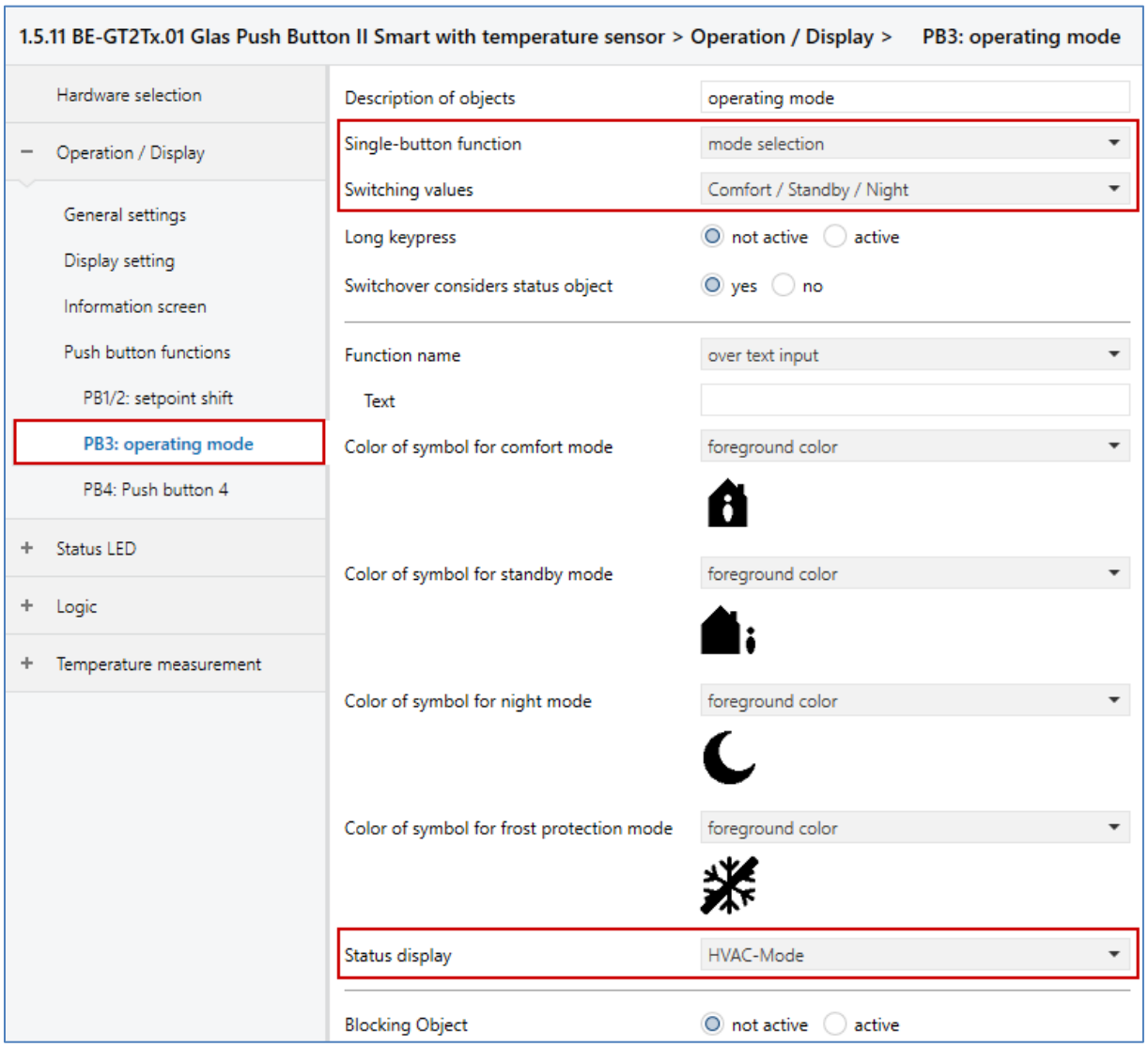
Additional function:

Operating mode selection:

Settings on *Glass Push Button II Smart* with temperature sensor:





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Group addresses:

The following are the required links between the *Glass Push Button II Smart* and the Heating Actuator AKH-0x00.03, based on solution example 1.

	Number	Name	Object Function	Description	Group	Length	C	R	W	T	U	Data Type
	1.5.10 AKH-0800.03 Heating Actuator 8-fold, 4SU MDRC, 24/230VAC											
	1	Channel A: Room 1	Receive temperature value	current temperature	0/0/1	2 bytes	C	-	W	T	U	temperature (°C)
	2	Channel A: Room 1	Preset setpoint			2 bytes	C	-	W	-	-	temperature (°C)
	8	Channel A: Room 1	Send current setpoint	current setpoint	0/0/3	2 bytes	C	R	-	T	-	temperature (°C)
	9	Channel A: Room 1	Manual setpoint shift (2byte)			2 bytes	C	-	W	-	-	temperature difference (K)
	10	Channel A: Room 1	Manual setpoint shift (1=+ / 0...	setpoint shift	0/0/2	1 bit	C	-	W	-	-	step
	12	Channel A: Room 1	Control value Heating: Send st...			1 byte	C	R	-	T	-	percentage (0..100%)
	14	Channel A: Room 1	Control value > 0%: send status	control value > 0 %	0/0/19	1 bit	C	R	-	T	-	state
	17	Channel A: Room 1	Mode selection	operating mode selection	0/0/17	1 byte	C	-	W	-	-	HVAC mode
	19	Channel A: Room 1	Switch Comfort operating mode			1 bit	C	-	W	-	-	switch
	20	Channel A: Room 1	Switch Night operating mode			1 bit	C	-	W	-	-	switch
	21	Channel A: Room 1	Switch Frost protection operati...			1 bit	C	-	W	-	-	switch
	22	Channel A: Room 1	DPT_HVAC Mode: Send contro...	operating mode status	0/0/18	1 byte	C	R	-	T	-	HVAC mode
	28	Channel A: Room 1	Diagnostis status	diagnostics	0/0/4	14 bytes	C	R	-	T	-	Character String (ISO 8859-1)
	35	Channel A: Room 1	Fault in case of mains failure /...			1 bit	C	R	-	T	-	alarm
	321	Summer = 1 / Winter = 0	Switchover			1 bit	C	-	W	T	U	switch
	327	Fault	At power failure/short circuit			1 bit	C	R	-	T	-	alarm
	332	Scene	Activate			1 byte	C	-	W	-	-	scene number
	334	Lead value (Outside temper...	Receive measured value			2 bytes	C	-	W	T	U	temperature (°C)
	1.5.11 BE-GT2Tx.01 Glas Push Button II Smart with temperature sensor											
	0	PB1/2: setpoint shift	Setpoint shift (18it)	setpoint shift	0/0/2	1 bit	C	-	-	T	-	step
	2	PB1/2: setpoint shift	State current setpoint	current setpoint	0/0/3	2 bytes	C	-	W	T	U	temperature (°C)
	10	PB3: operating mode	Mode selection (HVAC-Mode)	operating mode selection	0/0/17	1 byte	C	-	-	T	-	HVAC mode
	11	PB3: operating mode	State HVAC-Mode	operating mode status	0/0/18	1 byte	C	-	W	T	U	HVAC mode
	15	PB4: Push button 4	Toggle			1 bit	C	-	-	T	-	switch
	16	PB4: Push button 4	Value for toggle			1 bit	C	-	W	T	U	switch
	77	LED 1	Switch	control value > 0 %	0/0/19	1 bit	C	-	W	T	U	switch
	78	LED 2	Switch	control value > 0 %	0/0/19	1 bit	C	-	W	T	U	switch
	106	Day / Night	Day = 1 / Night = 0			1 bit	C	-	W	T	U	boolean
	107	Presence	Input			1 bit	C	-	W	T	U	switch
	108	Temperature measured value	Output	current temperature	0/0/1	2 bytes	C	R	-	T	-	temperature (°C)
	112	Time	Receive current value			3 bytes	C	-	W	T	U	time of day
	114	Time/Date	Receive current values			8 bytes	C	-	W	T	U	date time
	119	Message text (lowest priority)	Input			14 bytes	C	-	W	T	U	Character String (ASCII)
	120	State text 1	Input			14 bytes	C	-	W	T	U	Character String (ASCII)
	121	State text 2	Input			14 bytes	C	-	W	T	U	Character String (ASCII)
	126	Push button operation	Output			1 bit	C	R	-	T	-	state

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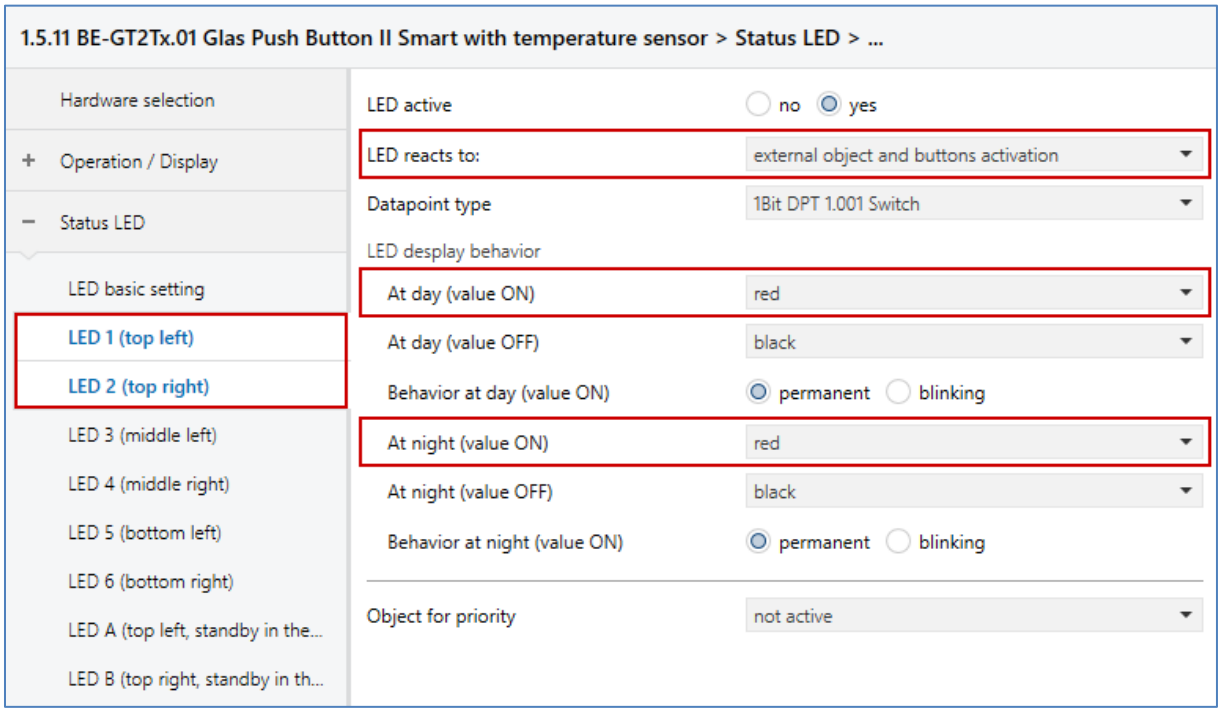
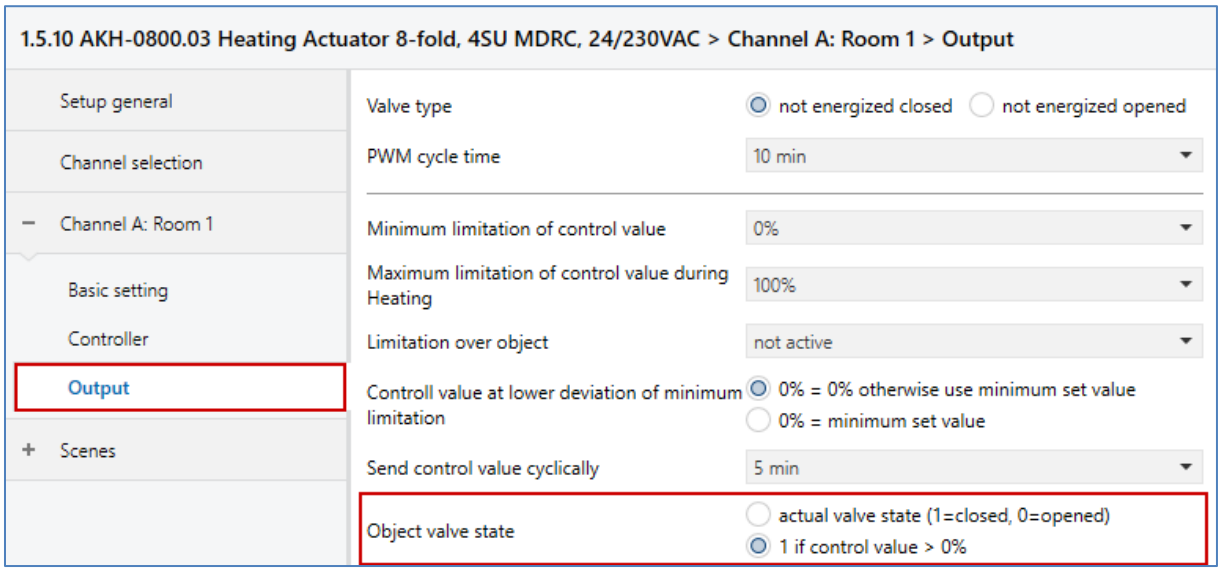
Heating message via *Glass Push Button II Smart* LEDs:

It is possible to display a heating message via the LEDs of the *Glass Push Button II Smart.*
If the control value is > 0 %, the LEDs around the setpoint shift function should light up red for example.

Settings on *Glass Push Button II Smart* with temperature sensor:



Settings on Heating Actuator:



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Group addresses:

The following are the required links between the *Glass Push Button II Smart* and the Heating Actuator AKH-0x00.03, based on solution example 1.

Number	Name	Object Function	Description	Group	Length	C	R	W	T	U	Data Type
1.5.10 AKH-0800.03 Heating Actuator 8-fold, 4SU MDRC, 24/230VAC											
1	Channel A: Room 1	Receive temperature value	current temperature	0/0/1	2 bytes	C	-	W	T	U	temperature (°C)
2	Channel A: Room 1	Preset setpoint			2 bytes	C	-	W	-	-	temperature (°C)
8	Channel A: Room 1	Send current setpoint	current setpoint	0/0/3	2 bytes	C	R	-	T	-	temperature (°C)
9	Channel A: Room 1	Manual setpoint shift (2byte)			2 bytes	C	-	W	-	-	temperature difference (K)
10	Channel A: Room 1	Manual setpoint shift (1=+ / 0...	setpoint shift	0/0/2	1 bit	C	-	W	-	-	step
12	Channel A: Room 1	Control value Heating: Send st...			1 byte	C	R	-	T	-	percentage (0..100%)
14	Channel A: Room 1	Control value > 0%: send status	control value > 0 %	0/0/19	1 bit	C	R	-	T	-	state
17	Channel A: Room 1	Mode selection	operating mode selection	0/0/17	1 byte	C	-	W	-	-	HVAC mode
19	Channel A: Room 1	Switch Comfort operating mode			1 bit	C	-	W	-	-	switch
20	Channel A: Room 1	Switch Night operating mode			1 bit	C	-	W	-	-	switch
21	Channel A: Room 1	Switch Frost protection operati...			1 bit	C	-	W	-	-	switch
22	Channel A: Room 1	DPT_HVAC Mode: Send contro...	operating mode status	0/0/18	1 byte	C	R	-	T	-	HVAC mode
28	Channel A: Room 1	Diagnostis status	diagnostics	0/0/4	14 bytes	C	R	-	T	-	Character String (ISO 8859-1)
35	Channel A: Room 1	Fault in case of mains failure /...			1 bit	C	R	-	T	-	alarm
321	Summer = 1 / Winter = 0	Switchover			1 bit	C	-	W	T	U	switch
327	Fault	At power failure/short circuit			1 bit	C	R	-	T	-	alarm
332	Scene	Activate			1 byte	C	-	W	-	-	scene number
334	Lead value (Outside temper...	Receive measured value			2 bytes	C	-	W	T	U	temperature (°C)
1.5.11 BE-GT2Tx.01 Glas Push Button II Smart with temperature sensor											
0	PB1/2: setpoint shift	Setpoint shift (18it)	setpoint shift	0/0/2	1 bit	C	-	-	T	-	step
2	PB1/2: setpoint shift	State current setpoint	current setpoint	0/0/3	2 bytes	C	-	W	T	U	temperature (°C)
10	PB3: operating mode	Mode selection (HVAC-Mode)	operating mode selection	0/0/17	1 byte	C	-	-	T	-	HVAC mode
11	PB3: operating mode	State HVAC-Mode	operating mode status	0/0/18	1 byte	C	-	W	T	U	HVAC mode
15	PB4: Push button 4	Toggle			1 bit	C	-	-	T	-	switch
16	PB4: Push button 4	Value for toggle			1 bit	C	-	W	T	U	switch
77	LED 1	Switch	control value > 0 %	0/0/19	1 bit	C	-	W	T	U	switch
78	LED 2	Switch	control value > 0 %	0/0/19	1 bit	C	-	W	T	U	switch
106	Day / Night	Day = 1 / Night = 0			1 bit	C	-	W	T	U	boolean
107	Presence	Input			1 bit	C	-	W	T	U	switch
108	Temperature measured value	Output	current temperature	0/0/1	2 bytes	C	R	-	T	-	temperature (°C)
112	Time	Receive current value			3 bytes	C	-	W	T	U	time of day
114	Time/Date	Receive current values			8 bytes	C	-	W	T	U	date time
119	Message text (lowest priority)	Input			14 bytes	C	-	W	T	U	Character String (ASCII)
120	State text 1	Input			14 bytes	C	-	W	T	U	Character String (ASCII)
121	State text 2	Input			14 bytes	C	-	W	T	U	Character String (ASCII)
126	Push button operation	Output			1 bit	C	R	-	T	-	state

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