State 11/2020

MDT Solution Proposal

Setpoint shift via Glass Push Button II Smart

Possible applications:

The setpoint adjustment with the Glass Push Button II Smart with temperature sensor can be used to adjust the setpoint of the heating per room. This allows the user to adjust the setpoint per room individually. 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 with temperature sensor

BE-GT2TW.01/ BE-GT2TS.01

MDT Heating Actuator

AKH-0400.02/ AKH-0600.02/ AKH-0800.02

Content

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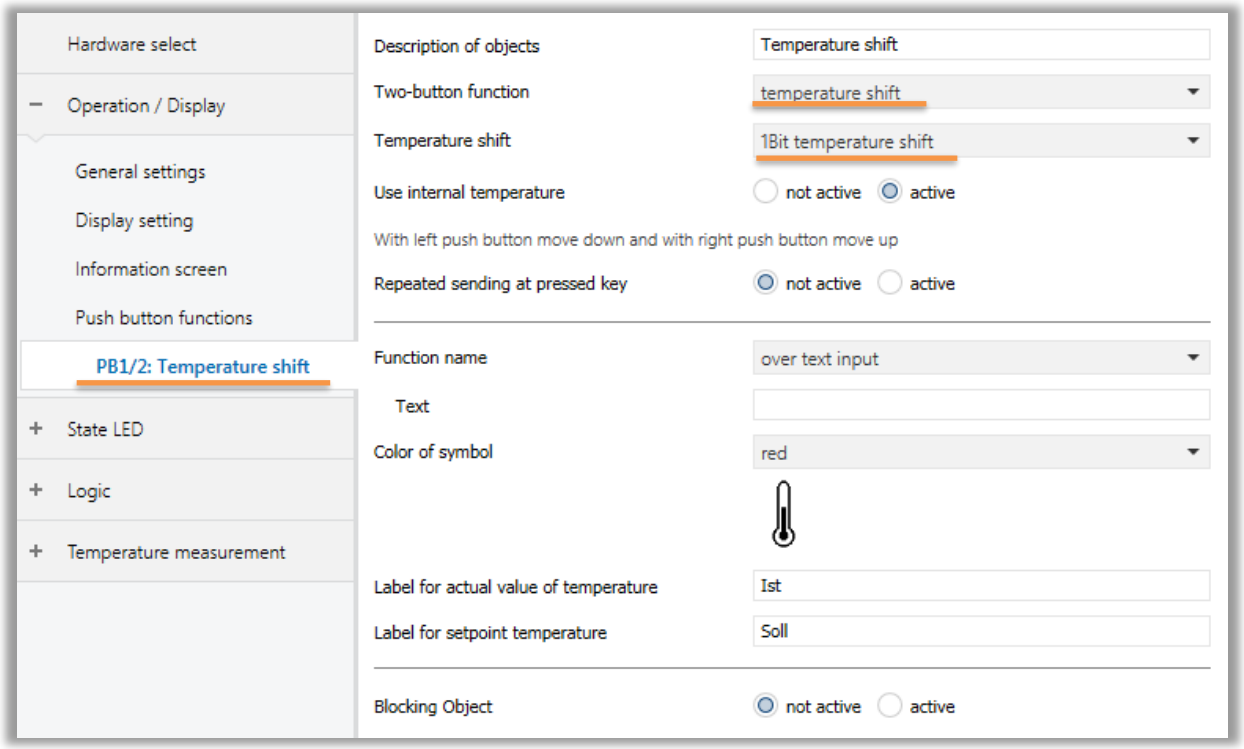
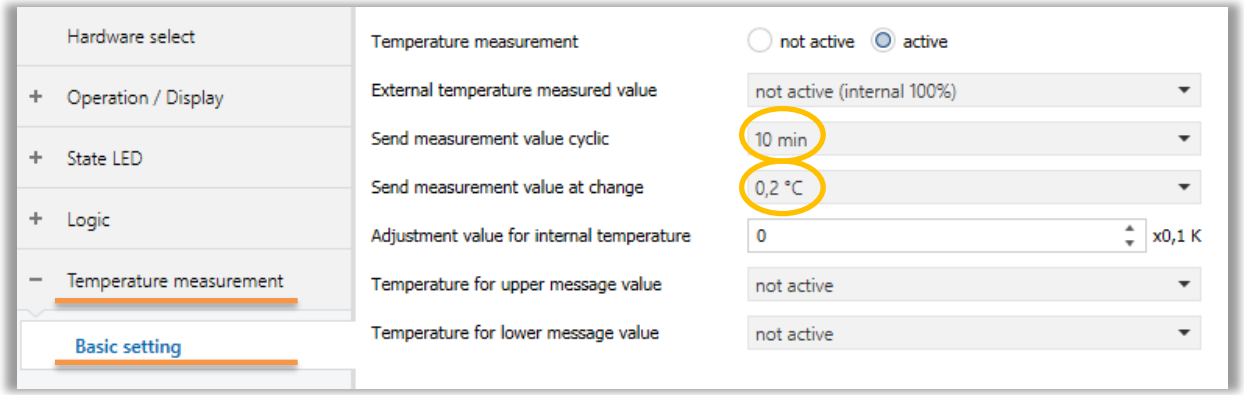
Solution example 1: Setpoint shift via 1 bit

Settings on Glass Push Button II Smart with temperature sensor:
- Buttons grouped together (two- function)
- Two-button function: temperature shift
- Temperature shift -> 1Bit temperature shift
- Use internal temperature value -> active

The settings for the grouped buttons are shown in the following figure:



- Settings of the temperature value:
  - Recommended setting:
    "Send measured value cyclically - 10 min" and "Send measured value at change of 0.2 °C”



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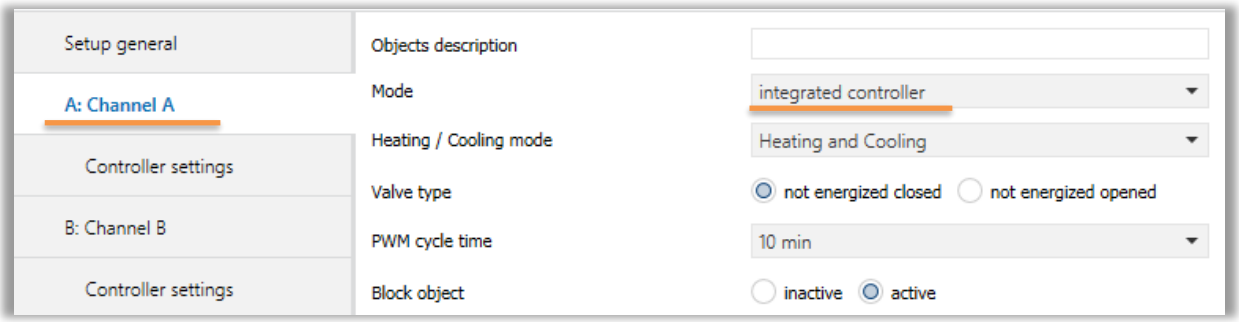
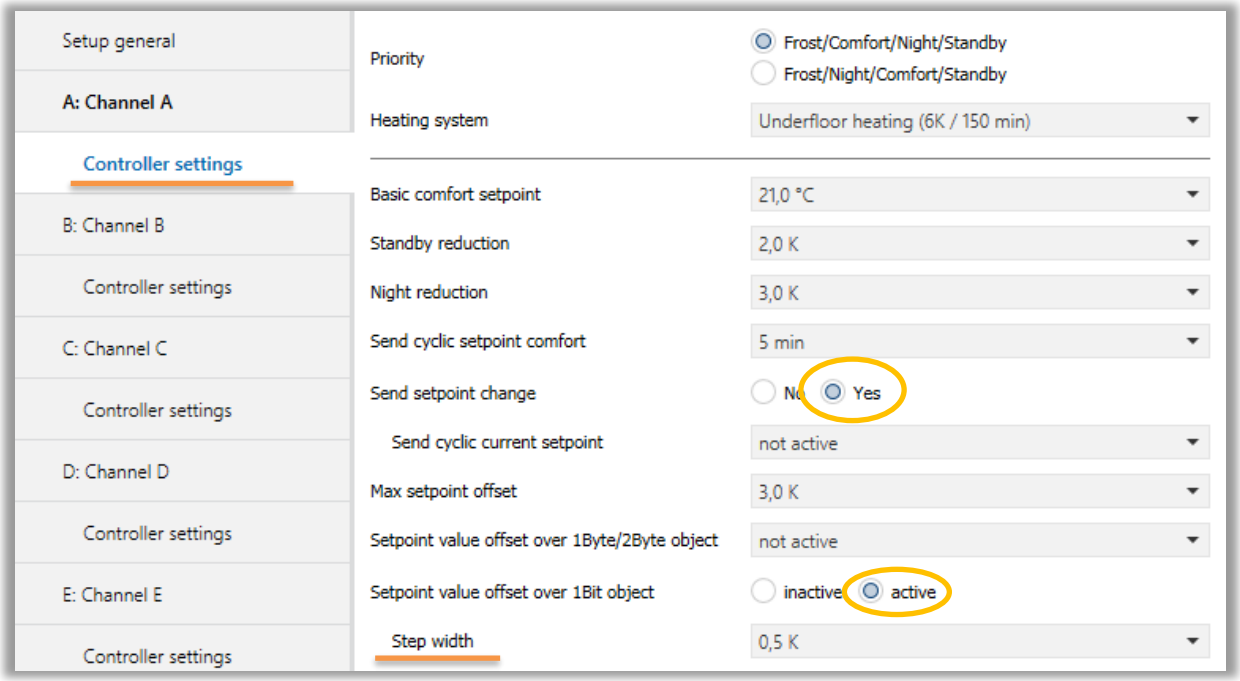
Settings on Heating actuator:
Channel:
- Mode "integrated controller”



"Controller settings":
- Send setpoint changes -> YES
- Setpoint adjustment via -> 1 bit



The step width can be selected according to your own wishes. It specifies the setpoint shift per keystroke.

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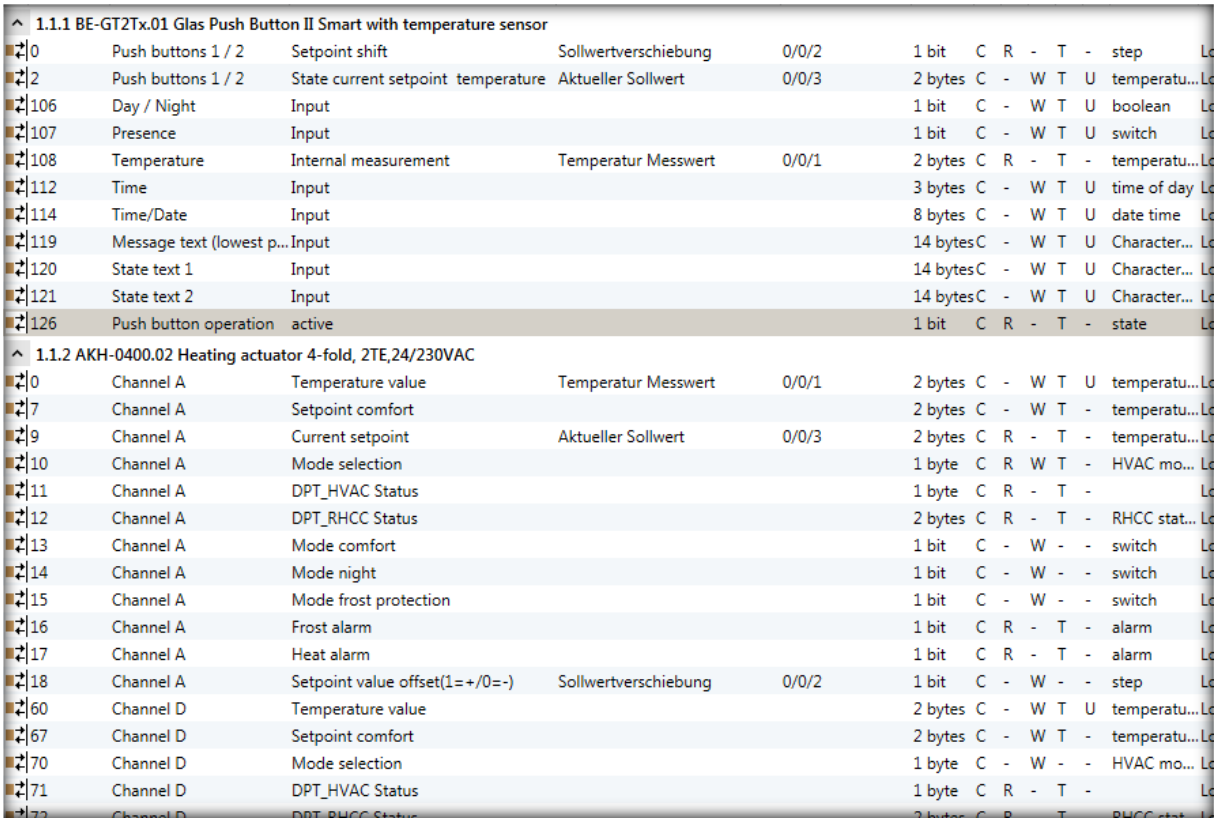
Group addresses:

Linking the group addresses:



1.1.1 BE-GT2Tx.01 Glas Push Button II Smart with temperature sensor													
0	Push buttons 1 / 2	Setpoint shift	Sollwertverschiebung	0/0/2	1 bit	C	R	-	T	-	step	Lo
2	Push buttons 1 / 2	State current setpoint temperature	Aktueller Sollwert	0/0/3	2 bytes	C	-	W	T	U	temperatu...	Lo
106	Day / Night	Input			1 bit	C	-	W	T	U	boolean	Lo
107	Presence	Input			1 bit	C	-	W	T	U	switch	Lo
108	Temperature	Internal measurement	Temperatur Messwert	0/0/1	2 bytes	C	R	-	T	-	temperatu...	Lo
112	Time	Input			3 bytes	C	-	W	T	U	time of day	Lo
114	Time/Date	Input			8 bytes	C	-	W	T	U	date time	Lo
119	Message text (lowest p...	Input			14 bytes	C	-	W	T	U	Character...	Lo
120	State text 1	Input			14 bytes	C	-	W	T	U	Character...	Lo
121	State text 2	Input			14 bytes	C	-	W	T	U	Character...	Lo
126	Push button operation	active			1 bit	C	R	-	T	-	state	Lo
1.1.2 AKH-0400.02 Heating actuator 4-fold, 2TE,24/230VAC													
0	Channel A	Temperature value	Temperatur Messwert	0/0/1	2 bytes	C	-	W	T	U	temperatu...	Lo
7	Channel A	Setpoint comfort			2 bytes	C	-	W	T	-	temperatu...	Lo
9	Channel A	Current setpoint	Aktueller Sollwert	0/0/3	2 bytes	C	R	-	T	-	temperatu...	Lo
10	Channel A	Mode selection			1 byte	C	R	W	T	-	HVAC mo...	Lo
11	Channel A	DPT_HVAC Status			1 byte	C	R	-	T	-		Lo
12	Channel A	DPT_RHCC Status			2 bytes	C	R	-	T	-	RHCC stat...	Lo
13	Channel A	Mode comfort			1 bit	C	-	W	-	-	switch	Lo
14	Channel A	Mode night			1 bit	C	-	W	-	-	switch	Lo
15	Channel A	Mode frost protection			1 bit	C	-	W	-	-	switch	Lo
16	Channel A	Frost alarm			1 bit	C	R	-	T	-	alarm	Lo
17	Channel A	Heat alarm			1 bit	C	R	-	T	-	alarm	Lo
18	Channel A	Setpoint value offset(1=+/0=-)	Sollwertverschiebung	0/0/2	1 bit	C	-	W	-	-	step	Lo
60	Channel D	Temperature value			2 bytes	C	-	W	T	U	temperatu...	Lo
67	Channel D	Setpoint comfort			2 bytes	C	-	W	T	-	temperatu...	Lo
70	Channel D	Mode selection			1 byte	C	-	W	-	-	HVAC mo...	Lo
71	Channel D	DPT_HVAC Status			1 byte	C	R	-	T	-		Lo

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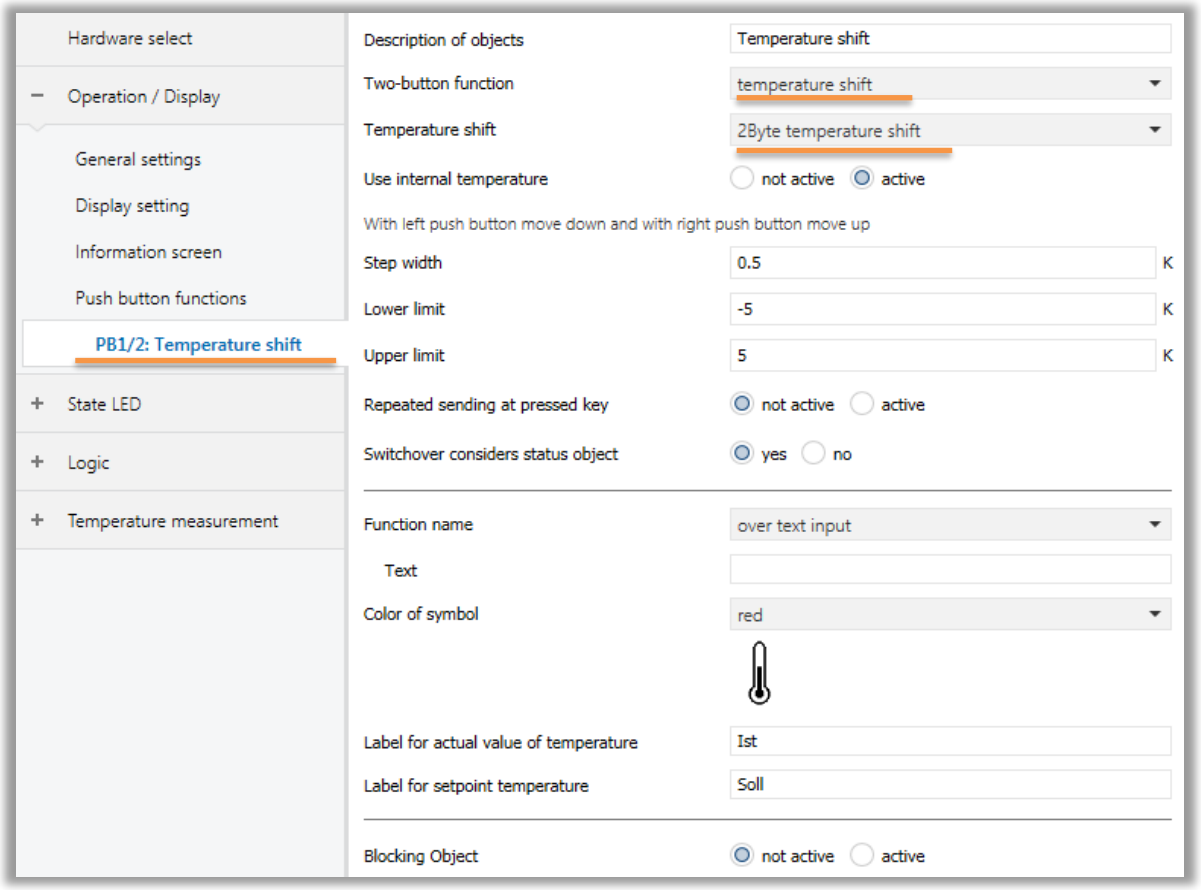
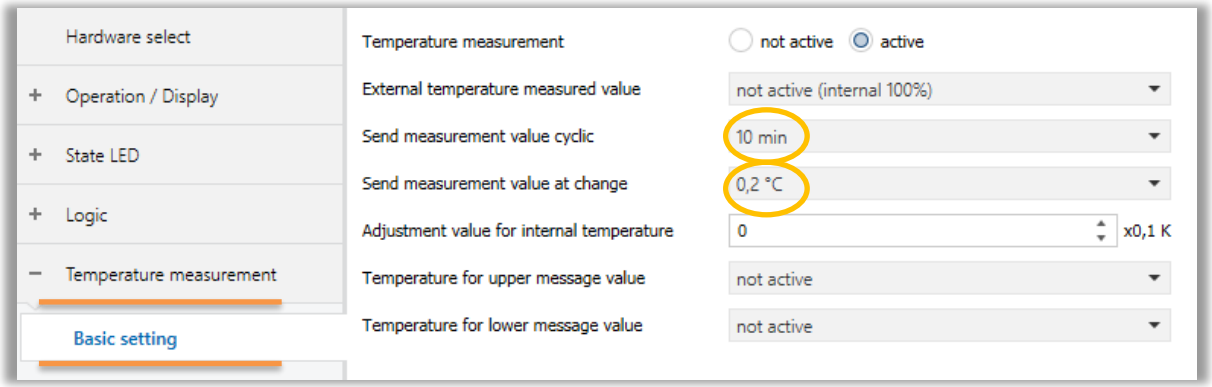
Solution example 2: Setpoint shift via 1Byte or 2Byte

Settings on Glass Push Button II Smart with temperature sensor:
- Buttons grouped
- Two-button function: temperature shift
- Temperature shift -> 1Bit temperature shift
- Use internal temperature value -> active

The settings for the grouped buttons are shown in the following figure (here: 2 Byte):



- Settings of the temperature value:
  - Recommended setting:
    "Send measured value cyclically - 10 min" and "Send measured value at change of 0.2 °C"



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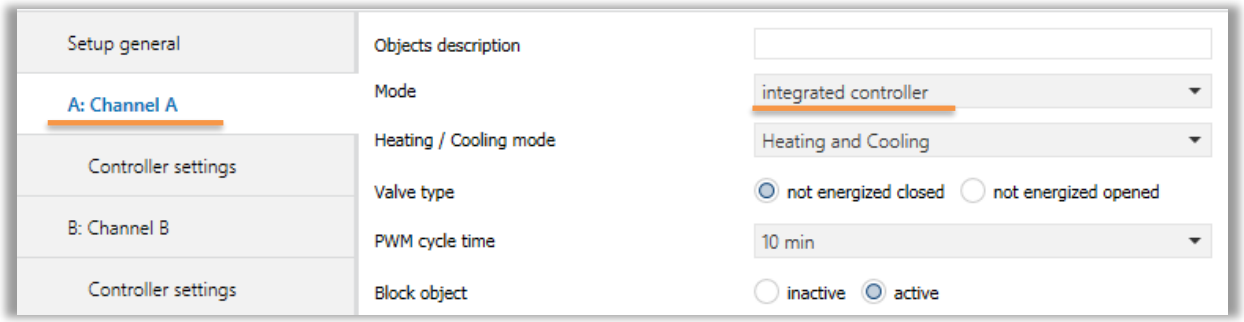
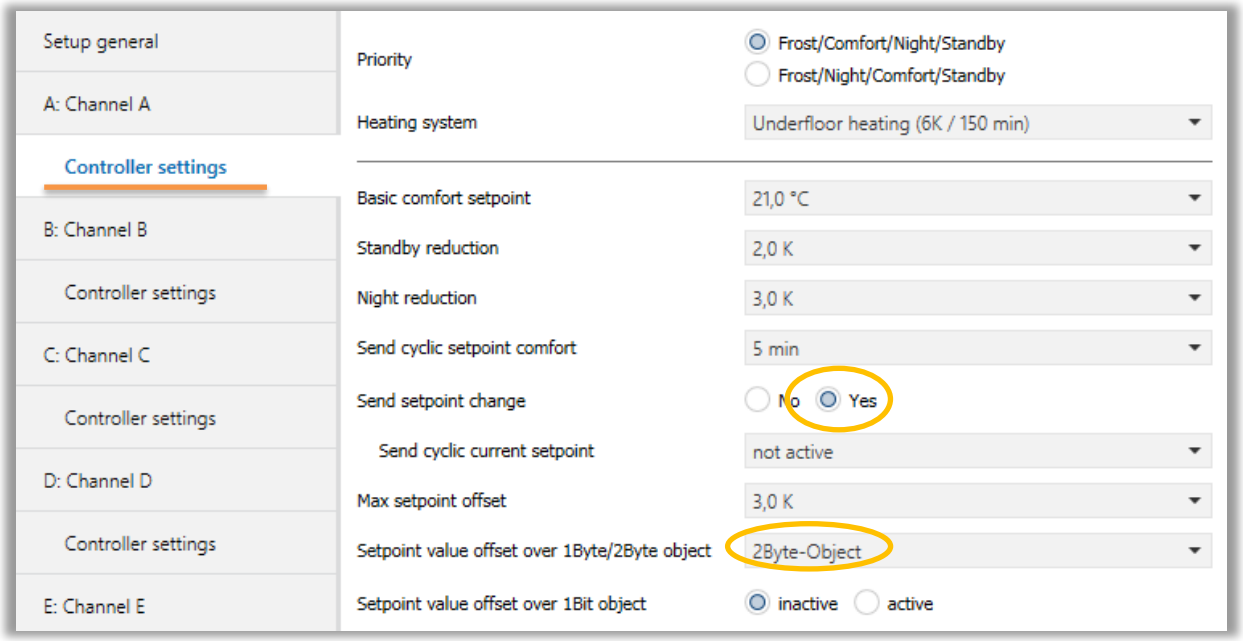
Settings on Heating actuator:
“Channel”:
- Mode "integrated controller”



"Controller settings":
- Send setpoint changes -> YES
- Setpoint adjustment via -> 2Byte / 1Byte



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Group addresses:

The objects on the glass push button and the actuator are the same for both types of shift, only the length (1Byte or 2Byte) is different.

Here the example for shift via 2Byte.

1.1.1 BE-GT2Tx.01 Glas Push Button II Smart with temperature sensor													
0	Push buttons 1 / 2	Setpoint shift	Sollwertverschiebung 2Byte	0/0/4	2 bytes	C	R	-	T	-	temperatu...	Lo
2	Push buttons 1 / 2	State current setpoint temperature	Aktueller Sollwert	0/0/3	2 bytes	C	-	W	T	U	temperatu...	Lo
3	Push buttons 1 / 2	State setpoint shift	Sollwertverschiebung 2Byte	0/0/4	2 bytes	C	-	W	T	U	temperatu...	Lo
106	Day / Night	Input			1 bit	C	-	W	T	U	boolean	Lo
107	Presence	Input			1 bit	C	-	W	T	U	switch	Lo
108	Temperature	Internal measurement	Temperatur Messwert	0/0/1	2 bytes	C	R	-	T	-	temperatu...	Lo
112	Time	Input			3 bytes	C	-	W	T	U	time of day	Lo
114	Time/Date	Input			8 bytes	C	-	W	T	U	date time	Lo
119	Message text (lowest p...	Input			14 bytes	C	-	W	T	U	Character...	Lo
120	State text 1	Input			14 bytes	C	-	W	T	U	Character...	Lo
121	State text 2	Input			14 bytes	C	-	W	T	U	Character...	Lo
126	Push button operation	active			1 bit	C	R	-	T	-	state	Lo
1.1.2 AKH-0400.02 Heating actuator 4-fold, 2TE,24/230VAC													
0	Channel A	Temperature value	Temperatur Messwert	0/0/1	2 bytes	C	-	W	T	U	temperatu...	Lo
7	Channel A	Setpoint comfort			2 bytes	C	-	W	T	-	temperatu...	Lo
8	Channel A	Setpoint value offset	Sollwertverschiebung 2Byte	0/0/4	2 bytes	C	-	W	-	-	temperatu...	Lo
9	Channel A	Current setpoint	Aktueller Sollwert	0/0/3	2 bytes	C	R	-	T	-	temperatu...	Lo
10	Channel A	Mode selection			1 byte	C	R	W	T	-	HVAC mo...	Lo
11	Channel A	DPT_HVAC Status			1 byte	C	R	-	T	-		Lo
12	Channel A	DPT_RHCC Status			2 bytes	C	R	-	T	-	RHCC stat...	Lo
13	Channel A	Mode comfort			1 bit	C	-	W	-	-	switch	Lo
14	Channel A	Mode night			1 bit	C	-	W	-	-	switch	Lo
15	Channel A	Mode frost protection			1 bit	C	-	W	-	-	switch	Lo
16	Channel A	Frost alarm			1 bit	C	R	-	T	-	alarm	Lo
17	Channel A	Heat alarm			1 bit	C	R	-	T	-	alarm	Lo

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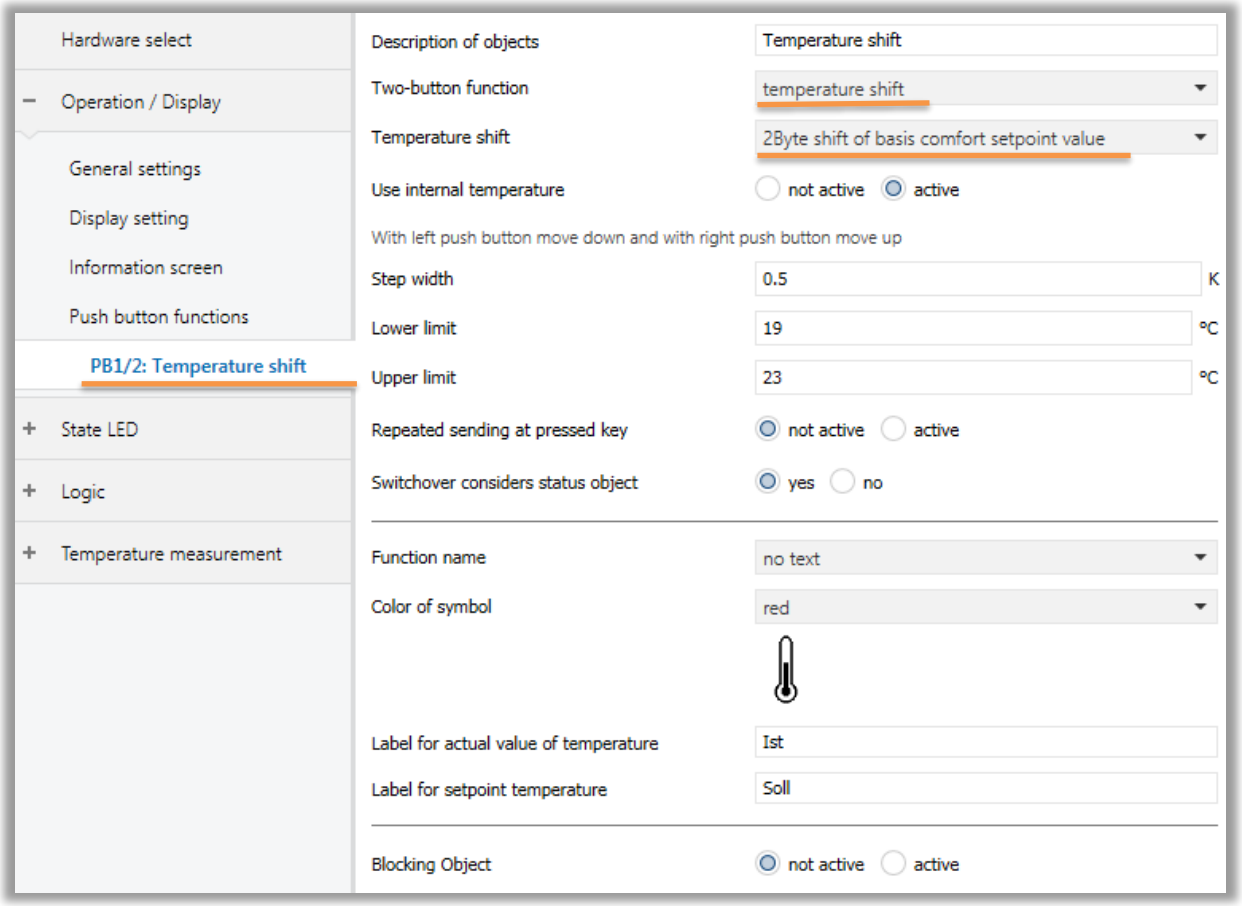
Solution example 3: 2Byte shift of basis comfort setpoint value

This is a special case because this is not a classic setpoint shift but the basic comfort setpoint is changed as an absolute value. As a result, the setpoints for the other operating modes also change, as these refer to the basic comfort value. With the classic setpoint shift, the parameterised base value - and thus the reference value for the other operating modes - remains the same and is only shifted as the difference in K (Kelvin). This special case is usually required when visualisations are also in the project. These can usually no setpoint shift but only the change of the absolute value. Both methods should not be mixed because problems can often occur here!

Settings on Glass Push Button II Smart with temperature sensor:
- Buttons grouped
- Two-button function: temperature shift
- Temperature shift -> 2Byte shift of basis comfort setpoint value
- Use internal temperature value -> active

The settings for the grouped buttons are shown in the following figure:



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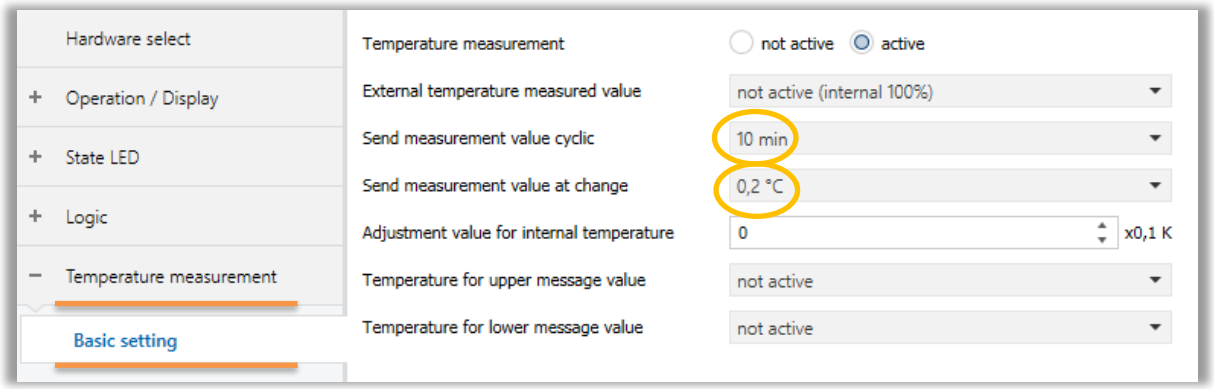
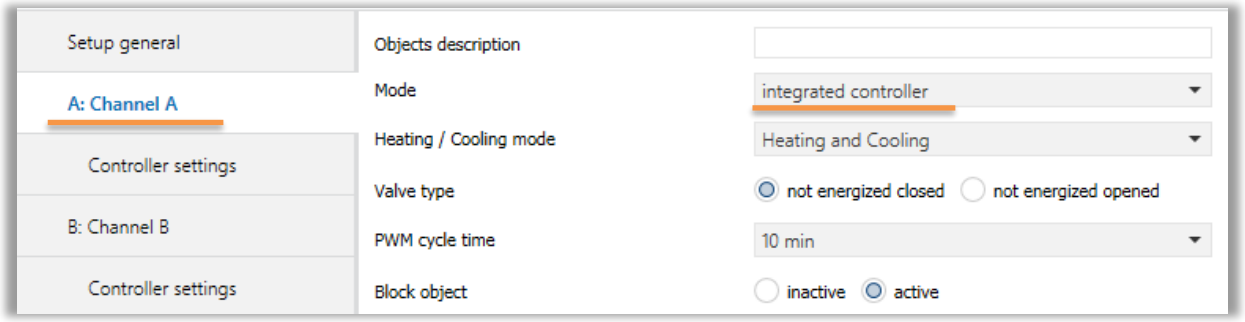
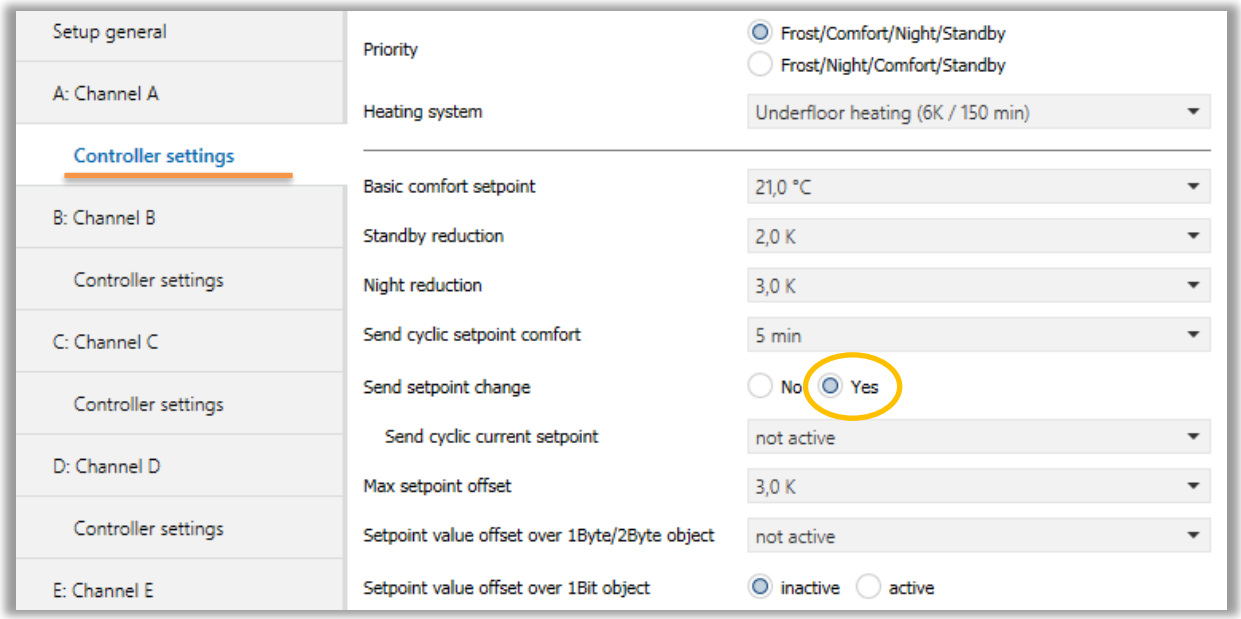
- Settings of the temperature value:
  - Recommended setting:
    "Send measured value cyclically - 10 min" and "Send measured value at change of 0.2 °C"



Settings on Heating actuator:
"Channel":
- Mode ->"integrated controller"



"Controller settings":
- Send setpoint changes -> YES



Settings for "setpoint shift" are not required and can be deactivated.

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Group addresses:

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
1.1.2 AKH-0400.02 V2.4												
0	A: Channel A	Temperature value	Temperatur Messwert	0/0/1	2 bytes	C	-	W	T	U	temperatu...	Low
1	A: Channel A	Flow temperature			2 bytes	C	-	W	-	-	temperatu...	Low
3	A: Channel A	State control value			1 byte	C	R	-	T	-	percentag...	Low
7	A: Channel A	Setpoint comfort	Basis Komfort Sollwert	0/0/6	2 bytes	C	-	W	T	-	temperatu...	Low
9	A: Channel A	Current setpoint	Aktueller Sollwert	0/0/3	2 bytes	C	R	-	T	-	temperatu...	Low
10	A: Channel A	Mode selection			1 byte	C	-	W	-	-	HVAC mode	Low
11	A: Channel A	DPT_HVAC Status			1 byte	C	R	-	T	-		Low
12	A: Channel A	DPT_RHCC Status			2 bytes	C	R	-	T	-	RHCC status	Low
13	A: Channel A	Mode comfort			1 bit	C	-	W	-	-	switch	Low
14	A: Channel A	Mode night			1 bit	C	-	W	-	-	switch	Low
15	A: Channel A	Mode frost protection			1 bit	C	-	W	-	-	switch	Low
16	A: Channel A	Frost alarm			1 bit	C	R	-	T	-	alarm	Low
17	A: Channel A	Heat alarm			1 bit	C	R	-	T	-	alarm	Low
80	Summer / Winter	Switchover			1 bit	C	-	W	T	U	switch	Low
84	Fault	At power failure/short circuit			1 bit	C	R	-	T	-	alarm	High
87	Scene	Activate			1 byte	C	-	W	-	-	scene num...	Low
1.1.14 BE-GT2Tx.01 Smart II V2.1												
0	Push buttons 1 / 2	Basis comfort setpoint	Basis Komfort Sollwert	0/0/6	2 bytes	C	R	-	T	-	temperatu...	Low
2	Push buttons 1 / 2	State current setpoint temperature	Aktueller Sollwert	0/0/3	2 bytes	C	-	W	T	U	temperatu...	Low
3	Push buttons 1 / 2	State basis comfort setpoint	Basis Komfort Sollwert	0/0/6	2 bytes	C	-	W	T	U	temperatu...	Low
106	Day / Night	Input			1 bit	C	-	W	T	U	boolean	Low
107	Presence	Input			1 bit	C	-	W	T	U	switch	Low
108	Temperature	Internal measurement	Temperatur Messwert	0/0/1	2 bytes	C	R	-	T	-	temperatu...	Low
112	Time	Input			3 bytes	C	-	W	T	U	time of day	Low
114	Time/Date	Input			8 bytes	C	-	W	T	U	date time	Low
116	Message 2	Input			1 bit	C	-	W	T	U	alarm	Low
119	Message text (lowest priority)	Input			14 bytes	C	-	W	T	U	Character...	Low
120	State text 1	Input			14 bytes	C	-	W	T	U	Character...	Low
121	State text 2	Input			14 bytes	C	-	W	T	U	Character...	Low
124	State value 3	Value in Lux			2 bytes	C	-	W	T	U	lux (Lux)	Low
126	Push button operation	active			1 bit	C	R	-	T	-	state	Low

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