MDT Solution Proposal

Heating Actuator channels in master-slave operation

Possible applications:

If several valve drives for the same room have to be divided to different channels of a heating actuator, a kind of master-slave operation is recommended. Here, one channel is responsible for the control (master) and another channel or several other channels (slave/s) follow the "master" via its output control value.

Used devices:

MDT Heating Actuator

AKH-0x00.02

Content

Settings: Master channel

The Master channel is set to "Integrated Controller". This means that the regulation is done here.

Additional settings in the Master channel:
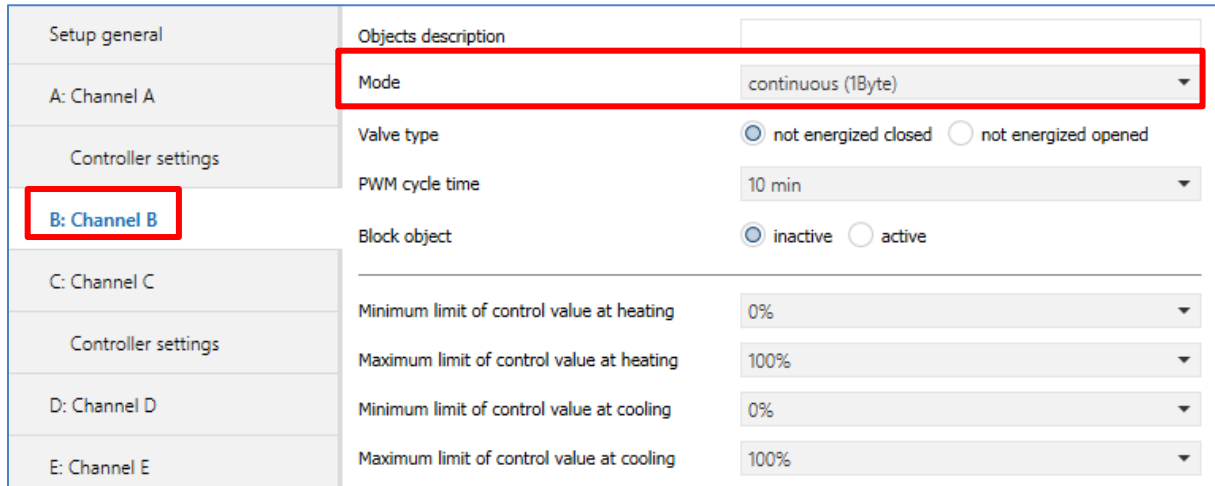- "Send state control value" → "at changes and cyclic"

The setting is shown in the following figure:

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Settings: Slave channel

As the Slave channel is not controlling itself, it is operated in the mode "continuous (1Byte)".

The setting is shown in the following figure:

Setup general	Objects description	
A: Channel A	Mode	continuous (1Byte) ▼
Controller settings	Valve type	⦿ not energized closed ○ not energized opened
B: Channel B	PWM cycle time	10 min ▼
C: Channel C	Block object	⦿ inactive ○ active
Controller settings	Minimum limit of control value at heating	0% ▼
D: Channel D	Maximum limit of control value at heating	100% ▼
	Minimum limit of control value at cooling	0% ▼
E: Channel E	Maximum limit of control value at cooling	100% ▼

Group addresses

Channels that are operated as Slaves now only have one communication object. This is linked with the status control value of the Master channel. Any number of further channels can now follow.

0	A: Channel A	Temperature value			2 bytes	C	-	W	T U	temperature (°C)
3	A: Channel A	State control value	Status control value Channel A	1/0/0	1 byte	C	R	-	T -	percentage (0..100%)
7	A: Channel A	Setpoint comfort			2 bytes	C	-	W	T -	temperature (°C)
10	A: Channel A	Mode selection			1 byte	C	R	W	T -	HVAC mode
11	A: Channel A	DPT_HVAC Status			1 byte	C	R	-	T -	
12	A: Channel A	DPT_RHCC Status			2 bytes	C	R	-	T -	RHCC status
13	A: Channel A	Mode comfort			1 bit	C	-	W	- -	switch
14	A: Channel A	Mode night			1 bit	C	-	W	- -	switch
15	A: Channel A	Mode frost protection			1 bit	C	-	W	- -	switch
16	A: Channel A	Frost alarm			1 bit	C	R	-	T -	alarm
17	A: Channel A	Heat alarm			1 bit	C	R	-	T -	alarm
19	A: Channel A	Diagnosis text			14 bytes	C	R	-	T -	Character String (ASCII)
20	B: Channel B	Control value	Status control value Channel A	1/0/0	1 byte	C	-	W	T U	percentage (0..100%)