User Manual

Eclipse

Thermostatic Push Button

Document Version: 1.0

Last Revision: 05.01.2026

Product Code: CR-ECS-86-KNX-THPB

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1. Presentation

Eclipse Thermostatic Push Button is designed to control the ambient in a stylish way, thanks to premium materials and finishes. It is also equipped with multiple sensors to automate the ambient; thus becomes a switch, a sensor and a design material.

Material and Colour Options

Brushed Finish

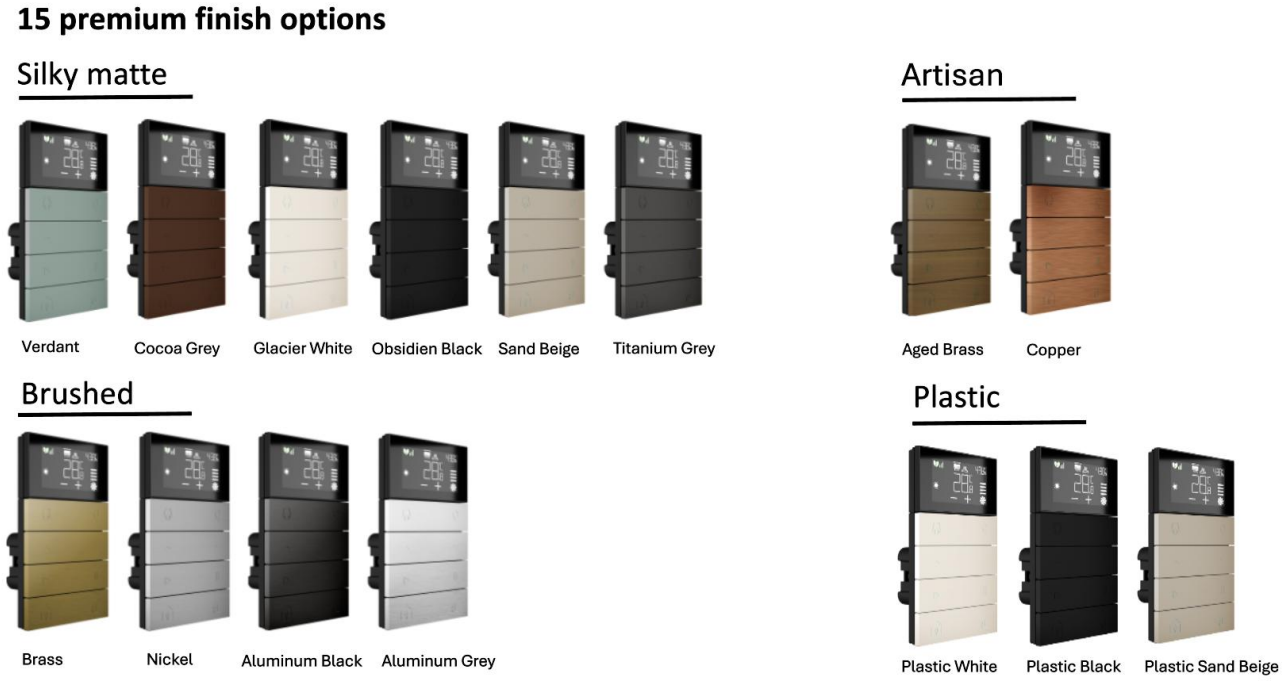
Pure form of nickel, brass and aluminium are brushed with perfect craftsmanship to provide satin effect in each touch to the device.

Silky-Matte Finish

Aluminium is painted with unique colours and coated with special techniques to provide silky feeling in each touch to the product.

Artisan Finish

Expertly formed from pure brass, each item is refined through sophisticated coating or aging techniques.



Ordering Tips:

Use online planner to create an Eclipse Thermostat. https://portal.core.com.tr/

1.1. Main Features

CONFIGURABLE FUNCTIONS:

Eclipse Thermostatic Push Button has several functions like temperature change, operation mode, operating mode, fan control and AC vane control. Functions are configured via ETS and only functions that configured are displayed in the screen.

DUAL THERMOSTAT:

Eclipse Thermostatic Push Button has dual thermostat feature which makes possible to control 2 individual controls of RTC or/and Air Conditioner.

CUSTOMIZABLE BUTTONS:

There are up to 8 backlight icon buttons with 2 and 4 folds options which can be configured to control any function in the room such as switching or dimming; or can be configured to control thermostat functions.

ADAPTIVE BACKLIGHTS:

Light sensor measures ambient light and icon backlights are dimmed according to the light level in the room.

PROXIMITY SENSOR:

Proximity sensor senses the approach and backlights of icons are dimmed up to welcome customer in the dark ambient.

ADAPTIVE BACKLIGHTS:

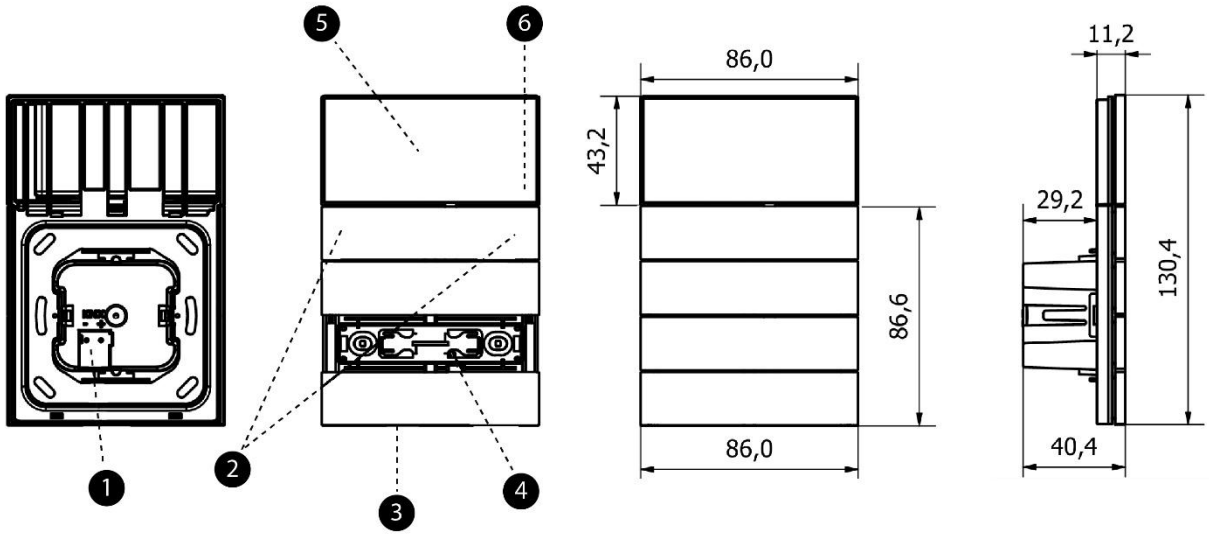
Light sensor measures the ambient light in the room and provides perfect level of brightness for any environment.

CAPACITIVE TOUCH CONTROL:

Eclipse Thermostatic Push Button provides a spacious capacitive touch screen that makes it easy for users to control, read and interpret the temperature and settings.

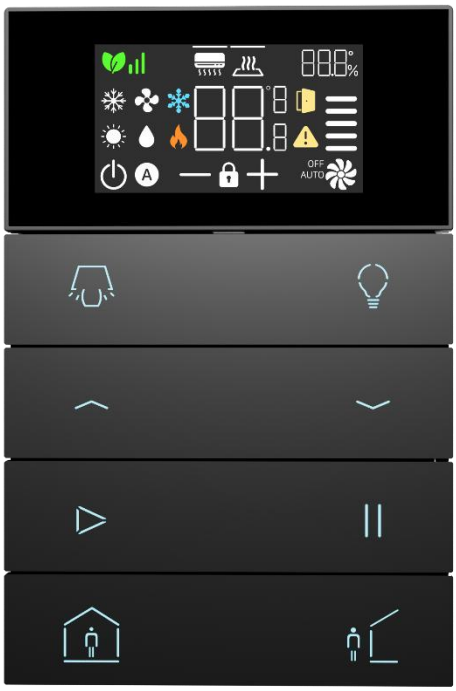
1.2. Dimensions

Dimensional drawing (all dimensions are in mm)



1. KNX Connector
2. Buttons
3. Temperature & Humidity Sensor
4. KNX Programming Button
5. Display with Capacitive Touch Panel
6. Proximity Sensor

1.3. Display Overview



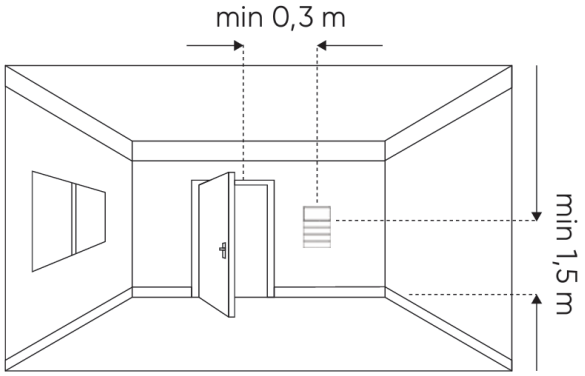
STATUS INDICATIONS	
IAQ Level	Dry/Dehumidification Mode
Cooling Mode	Auto Mode
Heating Mode	Cooling Indication
Fan Mode	Heating Indication
HVAC - Air Conditioner	HVAC - RTC
Setpoint Increment	Setpoint Decrement
HVAC Lock	Fan Speed
Window Contact	AC Error
Seconadrty LCD Display/Setpoint, Room Temperature or Humidity	
Primary LCD Display/Setpoint or Room Temperature	
Thermostat On/Off or Protection Mode Control	

2. Technical Specification

Sensors:	Temperature – Accuracy Rate: +/- 0,2°C Humidity – Accuracy Rate: +/- 2% Proximity & Light
Display:	2.5" VA Display with Capacitive Touch Panel
Dimensions:	130,4 mm X 86 mm X 11,2 mm
Fold Material:	Aluminium, Brass, Nickel, Copper, Aged Brass and Plastic depending on the finish selection
Fold Options	2 Folds – 4 Folds
Power:	29 VDC - from KNX Bus Line
Consumption:	< 20 mA from KNX Bus-line
Connectivity:	KNX-TP
Programming Tool:	ETS
Installation:	German IEC/EN 60670 In wall Box
Operating Temperature:	0°C / +45°C
Storage Temperature:	-10°C / +55°C
Relative Humidity:	95% not condensing
Certification:	Device complies with Electromagnetic Compatibility Directive(2014/30/EU). Tests carried out according to EN55032:2015 and EN55035:2017.

2.1. Installation

2.1.1 Installation Site

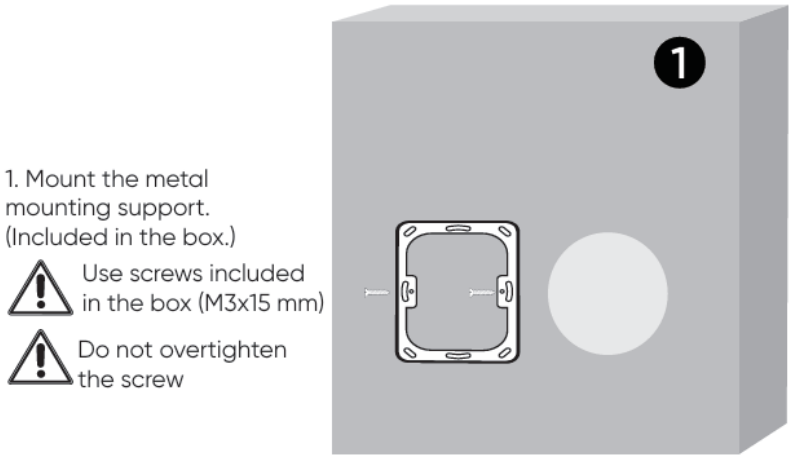


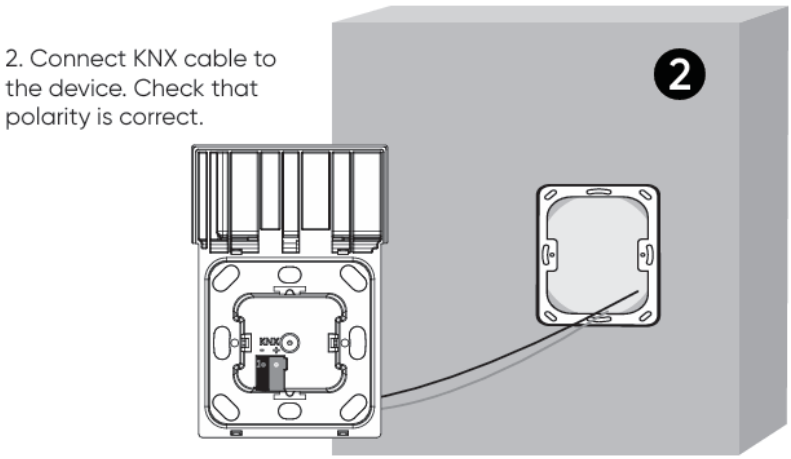
➢ The device should be positioned approximately 150 cm above the ground and 30 cm away from the door.

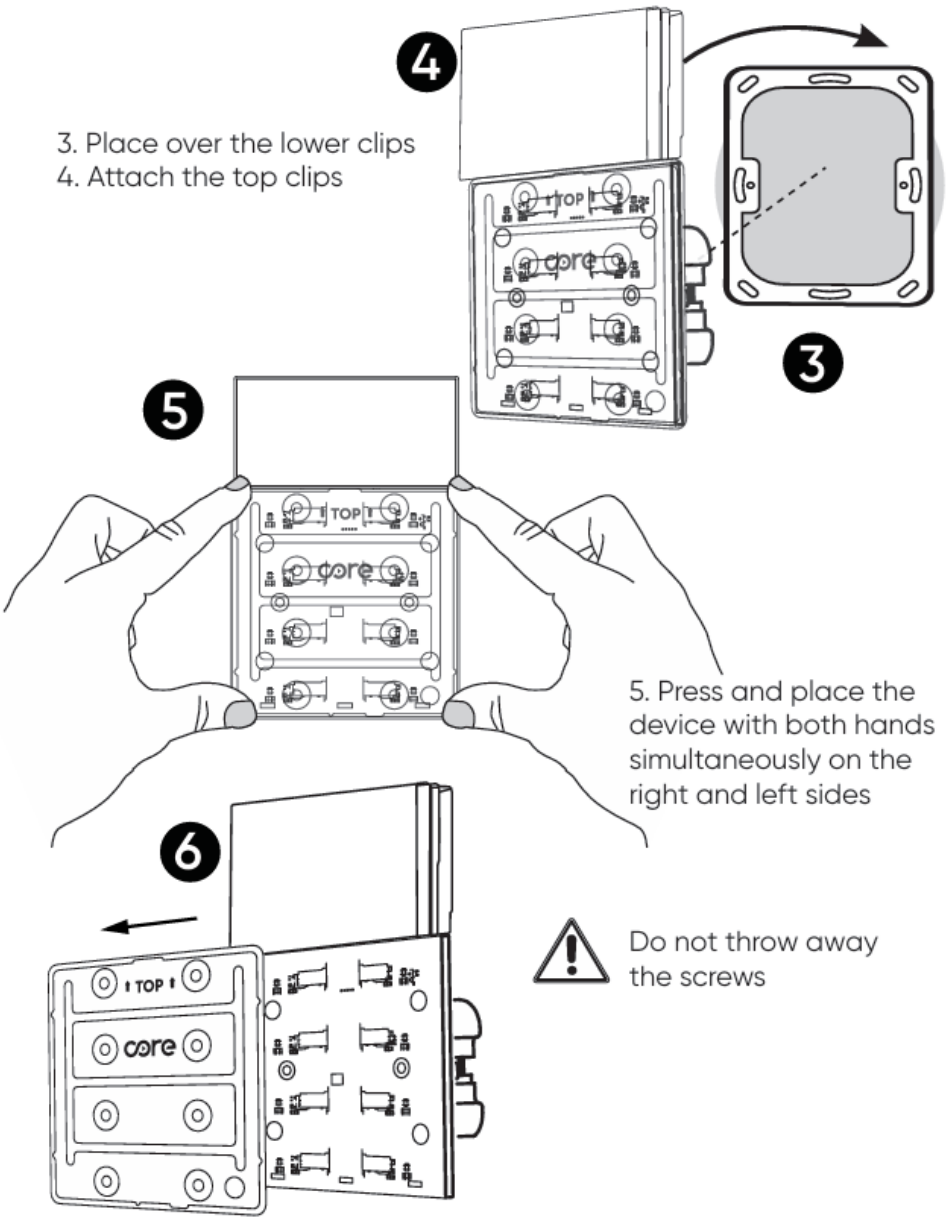
➢ The device should not be installed close to the heat source. The wall opposite the heat source will be appropriate for the installation.

➢ Contact with fluids to the device is to be avoided.

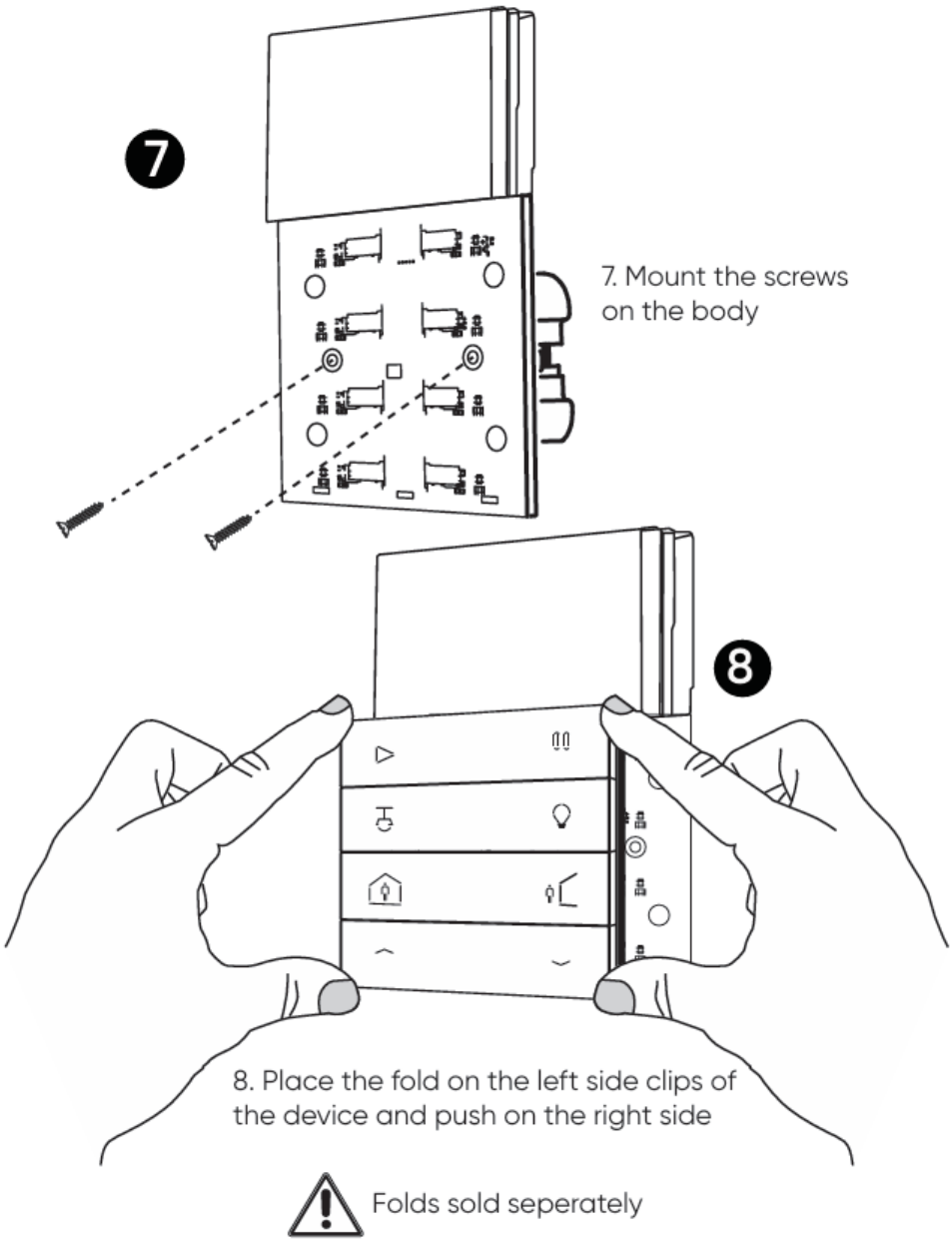
2.1.2. Mounting, Electrical Connection







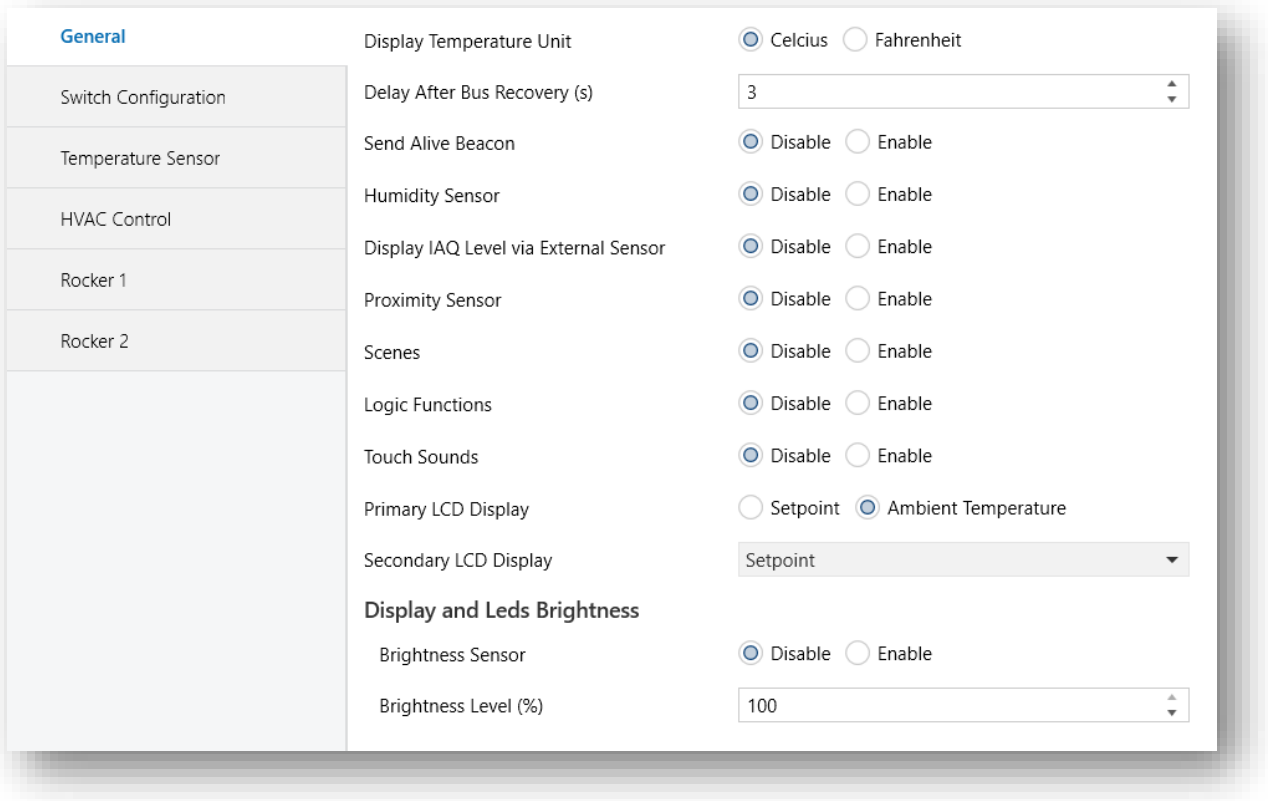
6. Remove the electronic part cover


7
7. Mount the screws on the body
8
8. Place the fold on the left side clips of the device and push on the right side
Folds sold seperately

3. ETS Parameters

Eclipse Thermostatic Push Button must be configured and set up using the standard KNX configuration tool ETS. The ETS database for this device can be downloaded from ETS online catalogue.

3.1. General



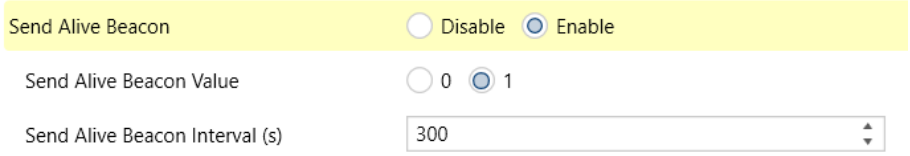
Display Temperature Unit: [**Celsius**, Fahrenheit]

Temperature unit can be selected for the device. Once selected, the device will use your preferred temperature unit for all temperature values displayed on Eclipse Thermostat.

Delay After Bus Voltage Recovery: [1…**10**…255 s]

The parameter defines the behaviour of the device after bus power return. The delay time determines the period between bus voltage recovery and the point after which telegrams can be sent.

Send Alive Beacon: [5…**300**…65535 s]



Parameter used to observe that the device and the application are running. It is disabled by default. When activated, Object Number 1 "Alive Beacon" will send selected value with defined time interval cyclically.

Touch Sounds: [Disable, **Enable**]

This parameter can enable the beeping sound when touching the screen

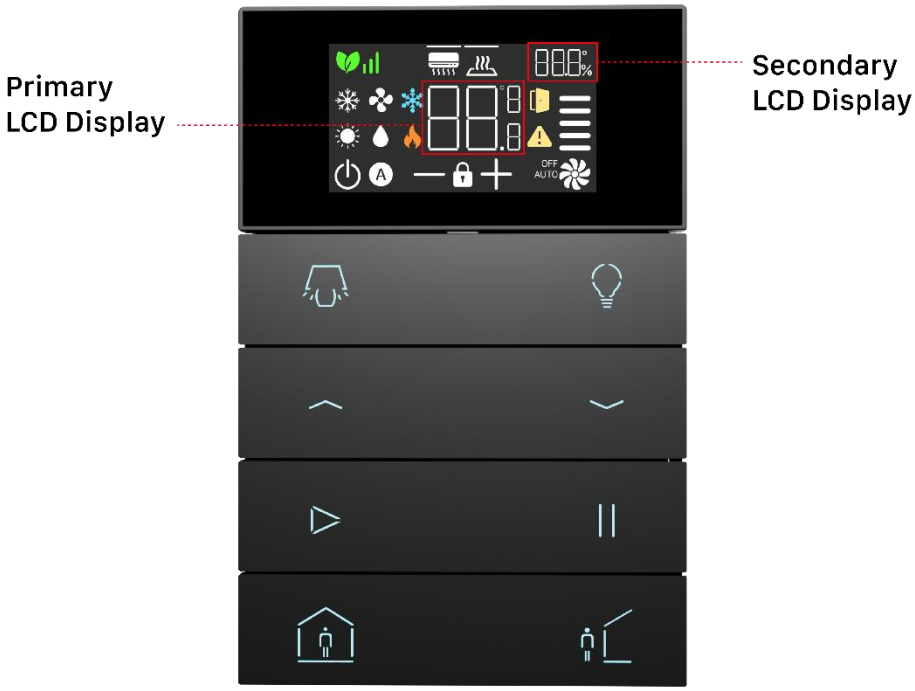
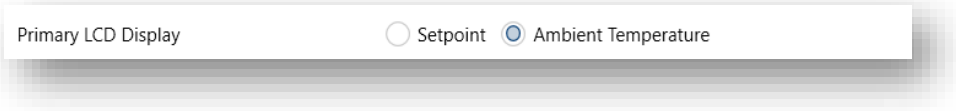


Figure 1 - LCD Display

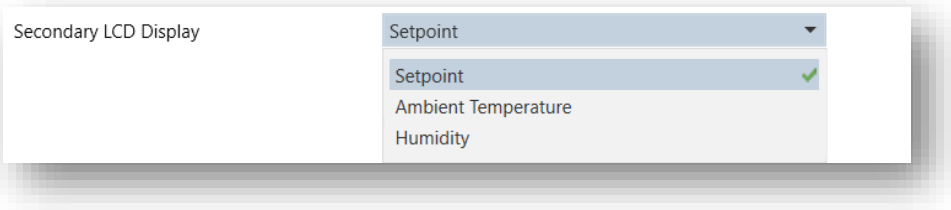
Primary LCD Display: [Setpoint, **Ambient Temperature**]

Primary LCD display can be set to show "Setpoint temperature" value instead of "Ambient temperature".



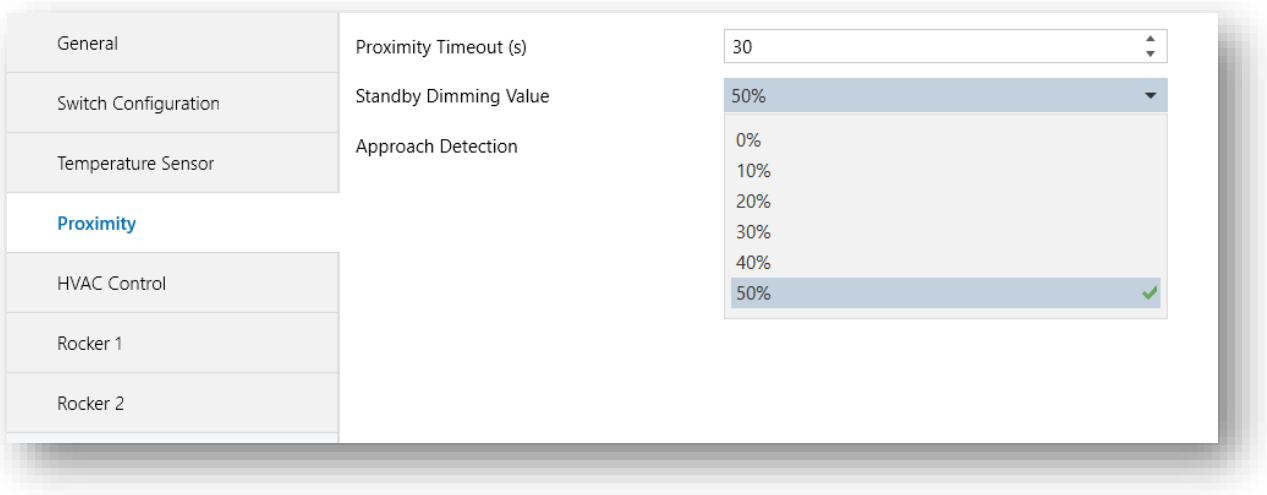
Secondary LCD Display: [**Setpoint**, Ambient Temperature, Humidity]

Secondary LCD display can be set to show following values.

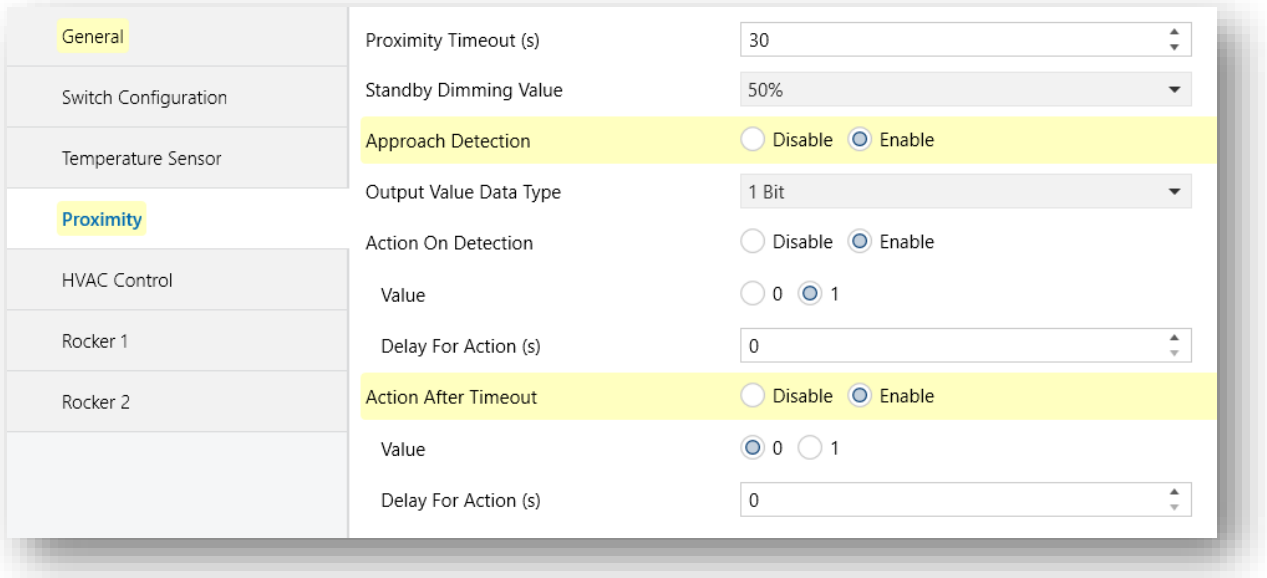


3.1.1 Proximity Sensor

Through the proximity sensor it is possible to keep the Eclipse Thermostat in a stand-by state, setting a level of brightness of the LEDs and the display and reactivate them only when the user approaches to the thermostat.

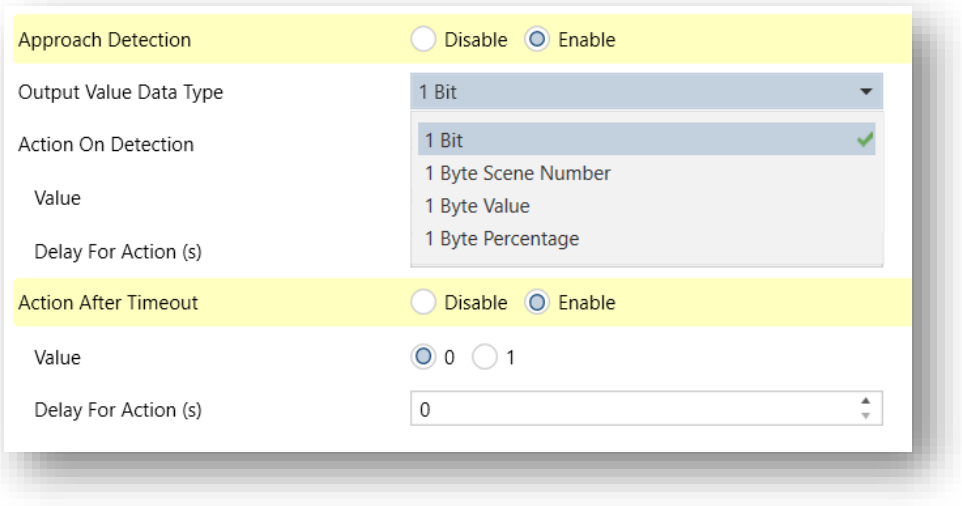


When "Proximity Timeout" is over, [1…**30**…120 s] brightness of LEDs and display will be dimmed to "Standby Dimming Value" until next proximity approach is detected. Stand by dimming value can be selected as follows. [%0, %10, %20, %30, %40 and %50]



Approach Detection: [**Disable**, Enable]

Object "Detection Output" can be activated by enabling "Approach Detection" parameter.



Output data type can be selected 1 Bit or 1 Byte.

Action On Detection:

When enabled, "Detection Output" object will transmit selected value to KNX bus when the user approaches the device. A delay can be set to transmit the value with "Delay For Action" parameter.

Action After Timeout:

When enabled, "Detection Output" object will transmit selected value to KNX bus after proximity timeout expired. A delay can be set to transmit the value with "Delay For Action" parameter.

2	Proximity	Detection Output (Switching)	1 bit	switch	C	-	-	T	-

Brightness calculation when Proximity sensor is activated.

Maximum brightness value= MBV [selected in "General" parameter tab "Leds Brightness" section.]

Standby dimming percentage= SDP [possible values: 0, 10, 20, 30, 40, 50]

Proximity sensor value= PSV [possible values: 0, 1] 0=not detected, 1=default value

Actual brightness formula:

$$\boldsymbol{Actual\ Brightness = MBV\ x\ \frac{SDP + (100 - SDP)\ x\ PSV}{100}}$$

Example 1: MBV=100, SDP=20

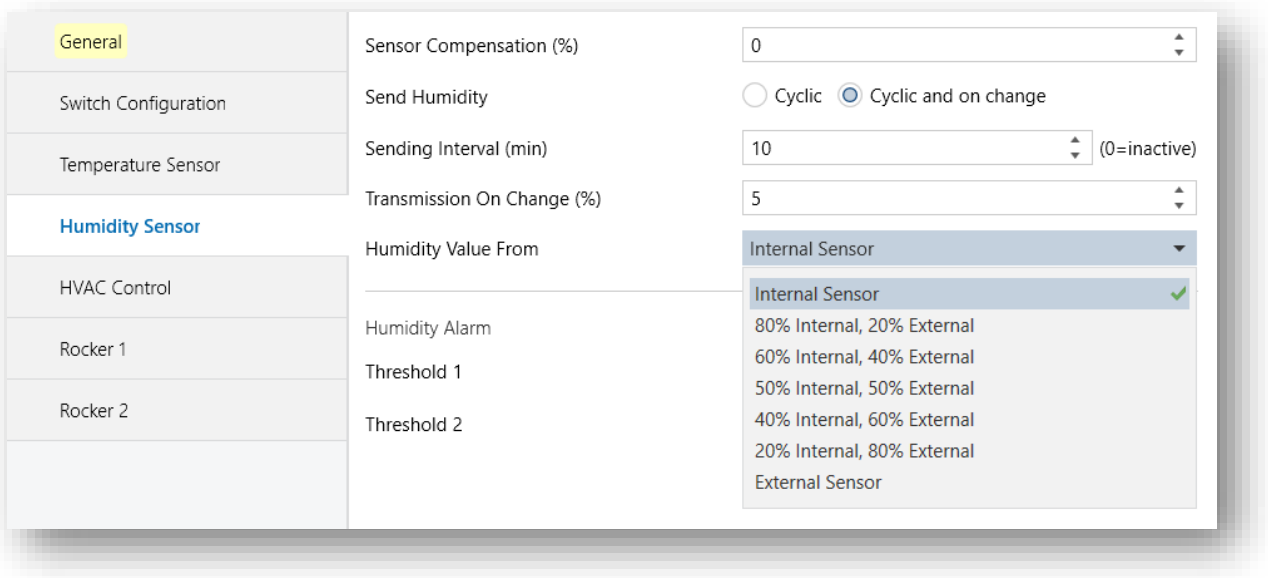
$$\boldsymbol{Actual\ Brightness = 100\ x\ \frac{20 + (100 - 20)\ x\ 0}{100} = 20\ \%}$$

Example 2: MBV=60, SDP=20

$$\boldsymbol{Actual\ Brightness = 60\ x\ \frac{20 + (100 - 20)\ x\ 0}{100} = 12\ \%}$$

3.1.2. Humidity Sensor

Humidity sensor tab contains following parameters.



Sensor Compensation (%):

Measured humidity value can be shifted up or down by using sensor compensation value. [-5…**0**…+5]

Example: Assume that "3" is written to the sensor compensation box. Measured humidity percentage will be increased + 3%. If "-3" is written to the sensor compensation box. Measured humidity percentage will be decreased - 3%.

Send Humidity:

Object Number 3 "Humidity Value – Internal Value (%)" can be sent cyclically or by change of measured humidity.

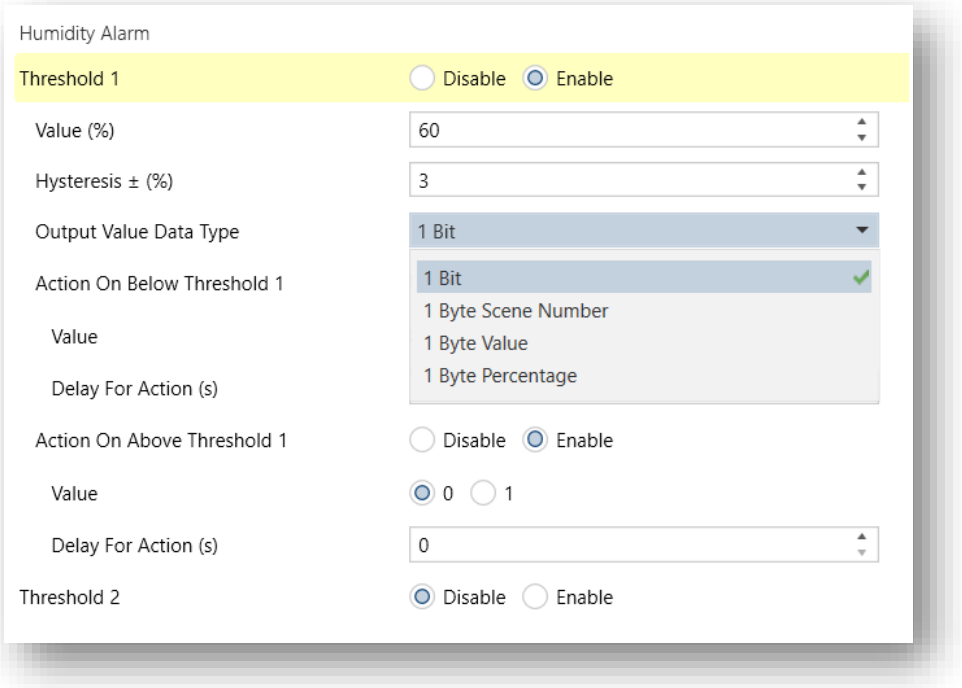
Sending Interval (min) [0…**10**…255] Transmission

on Change (%) [1…**5**…100]

Humidity Value From:

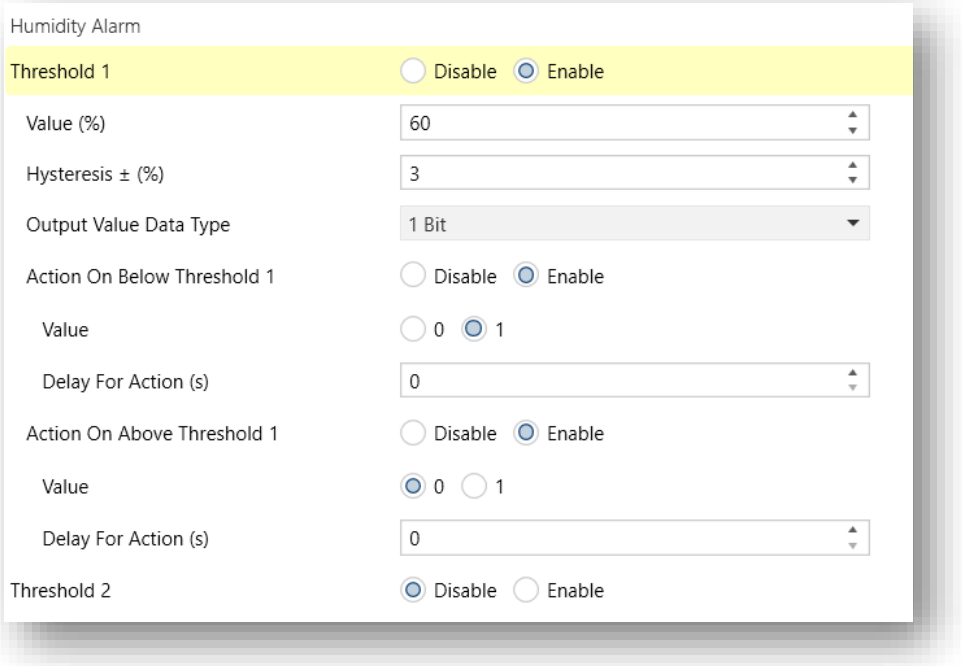
Humidity value can be received by an external humidity sensor directly or partially according to selected percentage.

Humidity Alarm:



2 Thresholds can be defined.

When a threshold is enabled, "Humidity - Threshold x Output" object will appear. Value and hysteresis can be defined. Output data type can be selected as 1 Bit or 1 Byte.



Action On Below Threshold:

When enabled, "Threshold x Output" object will transmit selected value to KNX bus when measured humidity value is less than entered "value(%) - hysteresis(%)" A delay can be set to transmit the value with "Delay For Action" parameter.

Example: Threshold value is %60 and Hysteresis is %3. When measured humidity value is less than %57, "Humidity - Threshold x Output" object will transmit selected value to KNX bus.

Action On Above Threshold:

When enabled, "Threshold x Output" object will transmit selected value to KNX bus when measured humidity value is greater than entered "value(%) + hysteresis(%)" A delay can be set to transmit the value with "Delay For Action" parameter.

Example: Threshold value is %60 and Hysteresis is %3. When measured humidity value is greater than %63, "Humidity - Threshold x Output" object will transmit selected value to KNX bus.

6	Humidity	Threshold 1 Output (Scene No)	1 byte	scene number	C	-	-	T	-
7	Humidity	Threshold 2 Output (Switching)	1 bit	switch	C	-	-	T	-

3.1.3. Display IAQ Level via External Sensor

Eclipse Thermostatic Push Button can display IAQ Level with the IAQ Level icon on display.

When enabled, "Indoor Air Quality – IAQ Level" object will appear for external writing.

9	Indoor Air Quality	IAQ Level (0-Off, 1-Very Good, 2-Good, 3-Medium, 4-Poor, 5-Bad)	1 byte	C	-	W	T	U

IAQ Levels:

Level 1 – Very Good (When Telegram "1" received) (3 bars on IAQ level display)

Level 2 – Good (When Telegram "2" received) (3 bars on IAQ level display)

Level 3 – Medium (When Telegram "3" received) (2 bars on IAQ level display)

Level 4 – Poor (When Telegram "4" received) (1 bar on IAQ level display)

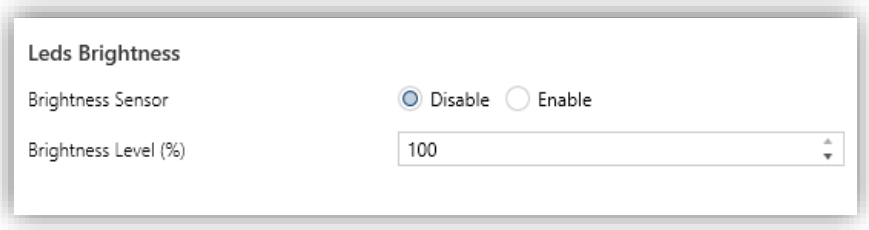
Level 5 – Bad (When Telegram "5" received) (1 bar on IAQ level display)

When the "Indoor Air Quality – IAQ Level" object receives a telegram with the value "0", the IAQ Level icon is hidden and remains invisible until a telegram with a non-zero value is received.
If a value higher than 5 is received, IAQ Level is set to Bad.

3.1.4. Display and Leds Brightness

Brightness Sensor [Disable]

Brightness level can be defined between %0 - %100 for LEDs when brightness sensor is disabled.



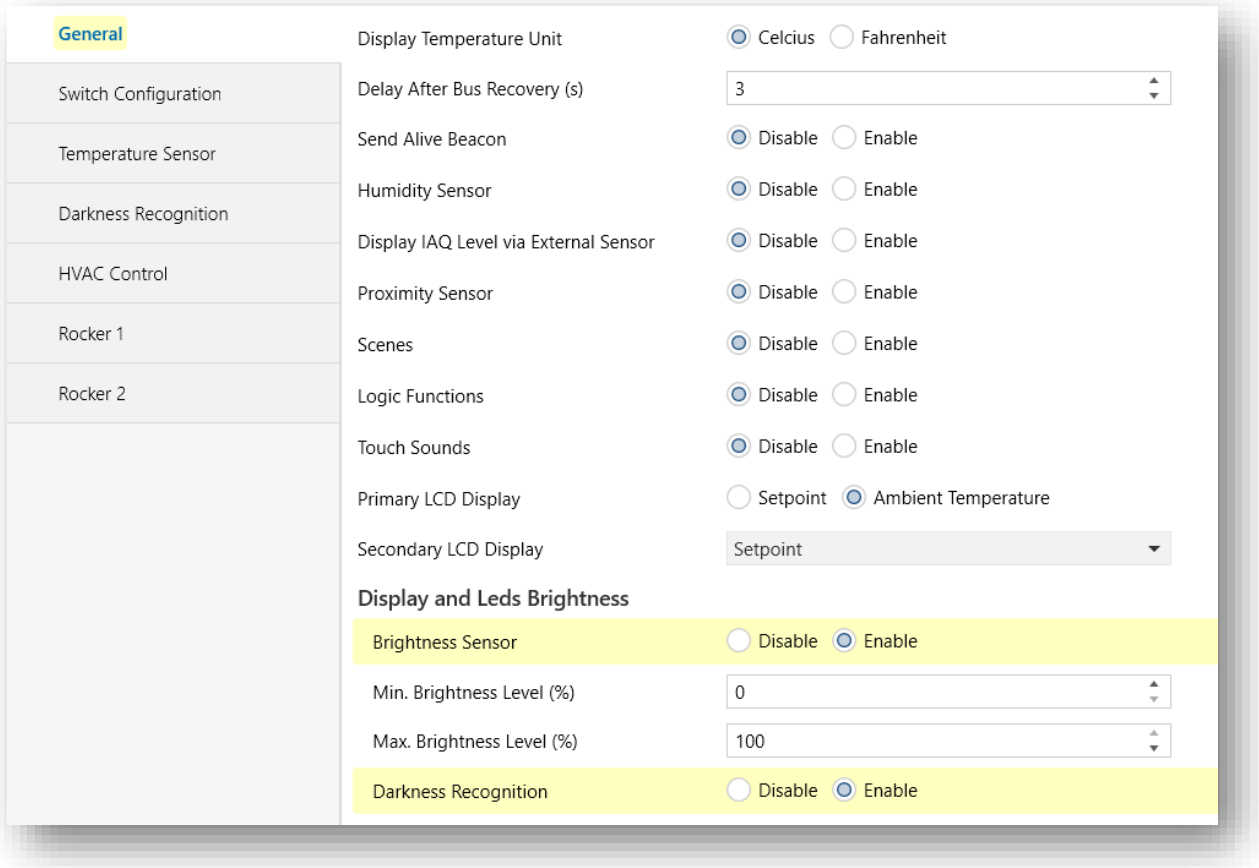
Brightness Sensor [Enable]

Eclipse Thermostatic Push Button adjusts brightness of LEDs and display according to ambient light level which is measured by built-in light sensor.

"Brightness sensor" can be enabled under "General" parameter tab. Minimum and maximum brightness levels can be defined here. LEDs brightness will be adjusted between these two percentage levels.

Min Brightness Value can be defined between %0 - %50. Max

Brightness Value can be defined between %50 - %100.



Brightness calculation when Brightness sensor is enabled.

Maximum Brightness Value= **Max** possible values: [50-100] Brightness

value for darkness (min value) = **Min** possible values: [0-50] default=0

Ambient sensor value= **AS** [0-100 lux] 0=10 lux, 100=X lux

Actual brightness formula:

$$\boldsymbol{Actual\ Brightness} = \boldsymbol{Min} + \frac{(\boldsymbol{Max} - \boldsymbol{Min})\ \boldsymbol{x}\ \boldsymbol{AS}}{\mathbf{100}}$$

Example 1: Max=80, Min=30, AS=30

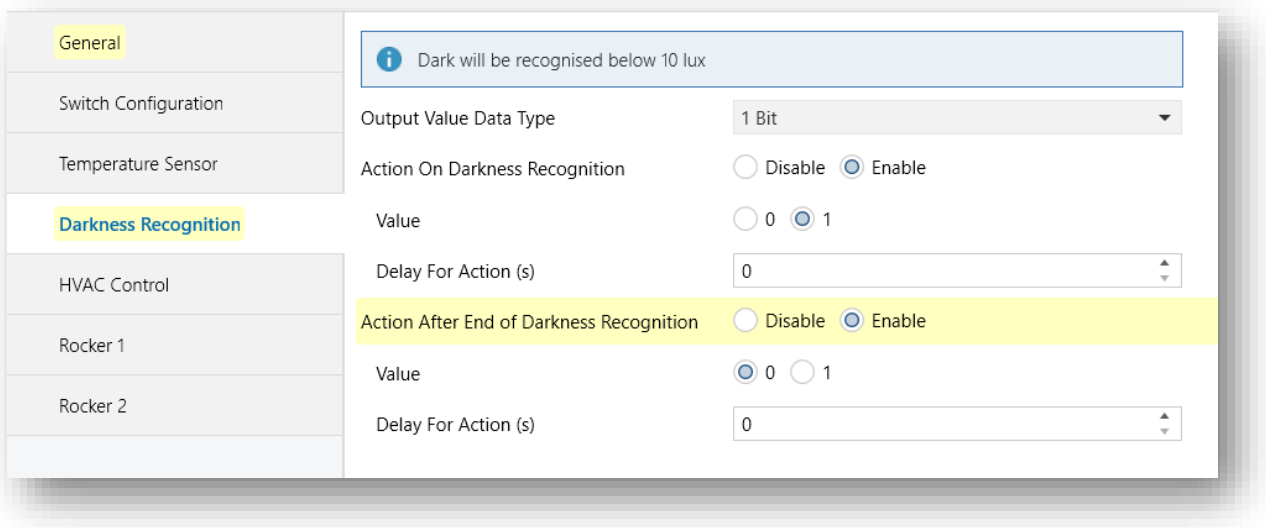
$$\boldsymbol{Actual\ Brightness} = \mathbf{30} + \frac{(\mathbf{80} - \mathbf{30})\ \boldsymbol{x}\ \mathbf{10}}{\mathbf{100}} = \mathbf{45}\ \%$$

Example 2: Max=80, Min=30, AS=70

$$\boldsymbol{Actual\ Brightness} = \mathbf{30} + \frac{(\mathbf{80} - \mathbf{30})\ \boldsymbol{x}\ \mathbf{70}}{\mathbf{100}} = \mathbf{65}\%$$

MBV [50-100]	Y [0-50]	AS [0-100]	Actual Brightness
80	30	0	30%
80	30	10	35%
80	30	20	40%
80	30	30	45%
80	30	40	50%
80	30	50	55%
80	30	60	60%
80	30	70	65%
80	30	80	70%
80	30	90	75%
80	30	100	80%

Darkness Recognition



Object "Darkness Output" can be activated by enabling "Darkness Recognition" parameter. If measured lux value is less than 10 lux, darkness will be recognised and transmitted via this object to KNX bus.

Output data type can be selected 1 Bit or 1 Byte.

Action On Darkness Recognition:

When enabled, "Darkness Output" object will transmit selected value to KNX bus when measured lux value is less than 10 lux. A delay can be set to transmit the value with "Delay For Action" parameter.

Action After End of Darkness Recognition:

When enabled, "Darkness Output" object will transmit selected value to KNX bus when measured lux value is greater than 10 lux. A delay can be set to transmit the value with "Delay For Action" parameter.

3	Darkness Recognition	Darkness Output (Switching)	1 bit	switch	C - - T -

Note: If "Brightness Sensor" is enabled at the same time with "Proximity Sensor", brightness value of LEDs will change accordingly to the formula below.

$$\boldsymbol{Actual\ Brightness} = (\boldsymbol{Min} + \frac{(\boldsymbol{Max} - \boldsymbol{Min})\ \boldsymbol{x}\ \boldsymbol{AS}}{\mathbf{100}})\ \mathbf{x}\ \frac{\boldsymbol{SDP} + (\mathbf{100} - \boldsymbol{SDP})\ \boldsymbol{x}\ \boldsymbol{PSV}}{\mathbf{100}}$$

3.2. Temperature Sensor

Sensor Compensation (x0.1K):

Measured temperature value can be shifted up or down by using sensor calibration value. [-100…**0**…+100]

Example: Assume that "10" is written to the sensor compensation box. Calculation: 10x 0.1 = 1 Celsius, measured temperature *will be increased "+ 1 °C". If "-10" is written measured* temperature *will be decreased "-1 °C".*

Send Temperature:

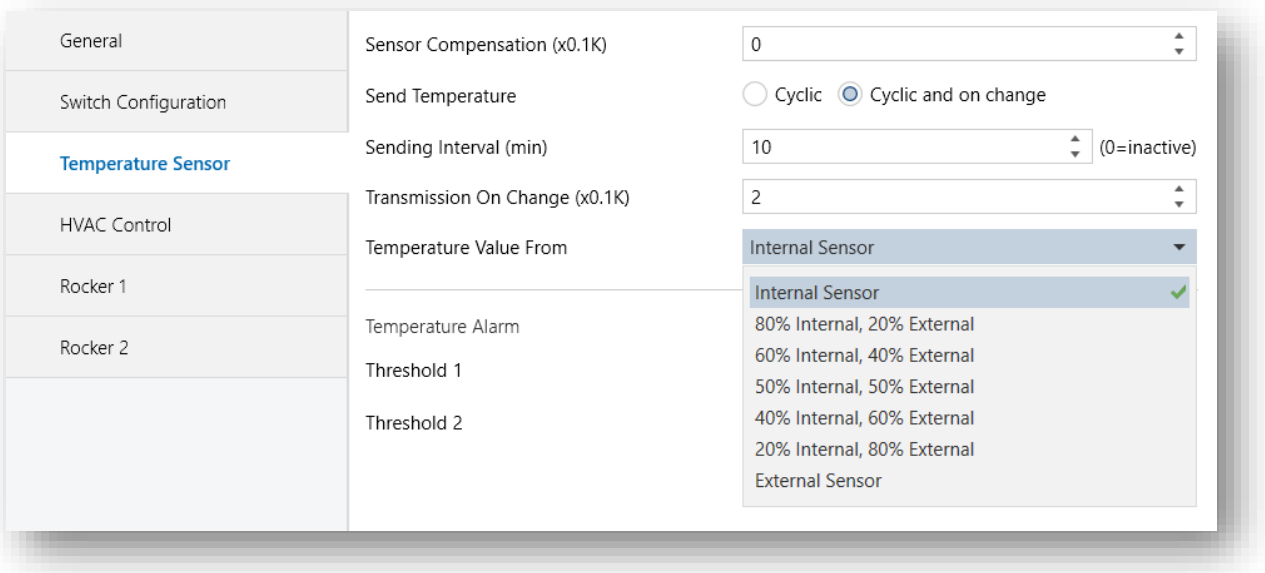
Object Number 8 "Actual Temperature – Internal Value" can be sent cyclically or by change of measured temperature.

Sending Interval (min) [0…**10**…255]

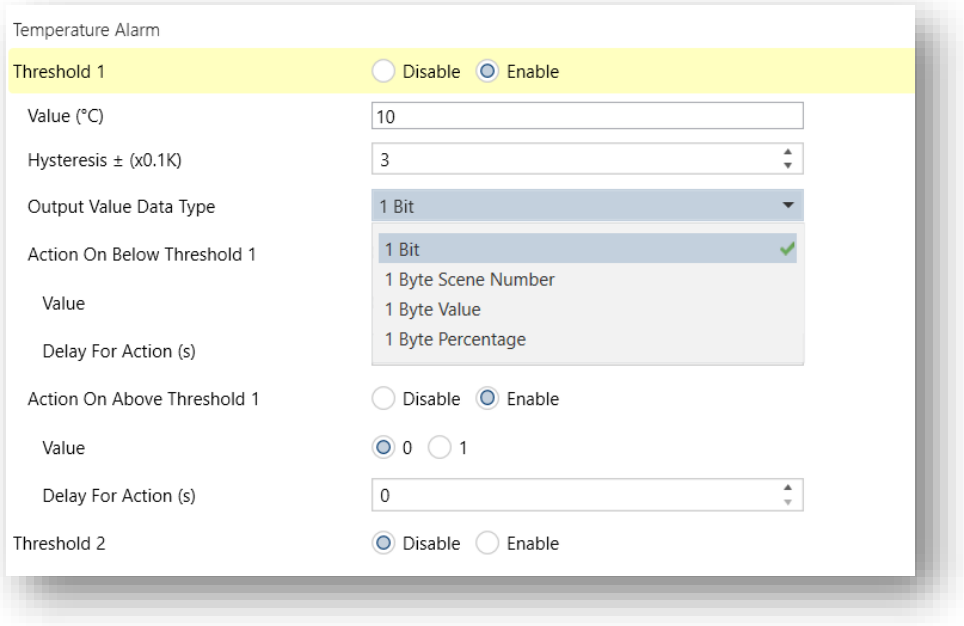
Transmission on Change (x0.1K) [1…**3**…100]

Temperature Value from:

Temperature value can be received from an external temperature sensor directly or partially according to selected percentage.

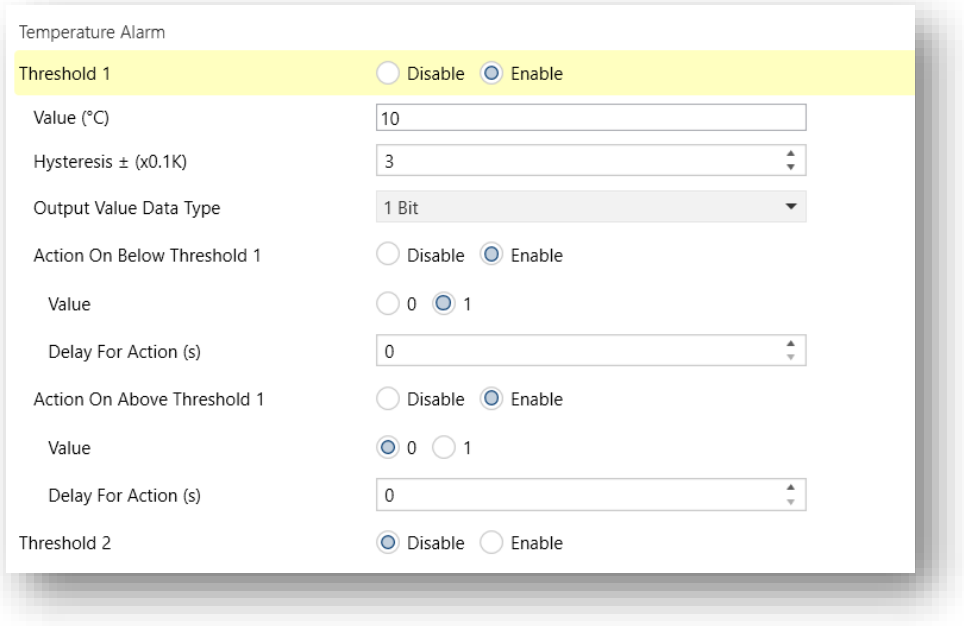


Temperature Alarm:



2 Thresholds can be defined.

When a threshold is enabled, "Temperature - Threshold x Output" object will appear. Value and hysteresis can be defined. Output data type can be selected as 1 Bit or 1 Byte.



Action On Below Threshold:

When enabled, "Threshold x Output" object will transmit selected value to KNX bus when measured temperature value is less than entered "value(°C) – hysteresis (0.1K)". A delay can be set to transmit the value with "Delay For Action" parameter.

Example: Threshold value is 10°C and Hysteresis is 0,3°C. When measured value is less than 9,7°C, "Temperature - Threshold x Output" object will transmit selected value to KNX bus.

Action On Above Threshold:

When enabled, "Threshold x Output" object will transmit selected value to KNX bus when measured temperature value is greater than entered "(°C) + hysteresis (0.1K)". A delay can be set to transmit the value with "Delay For Action" parameter.

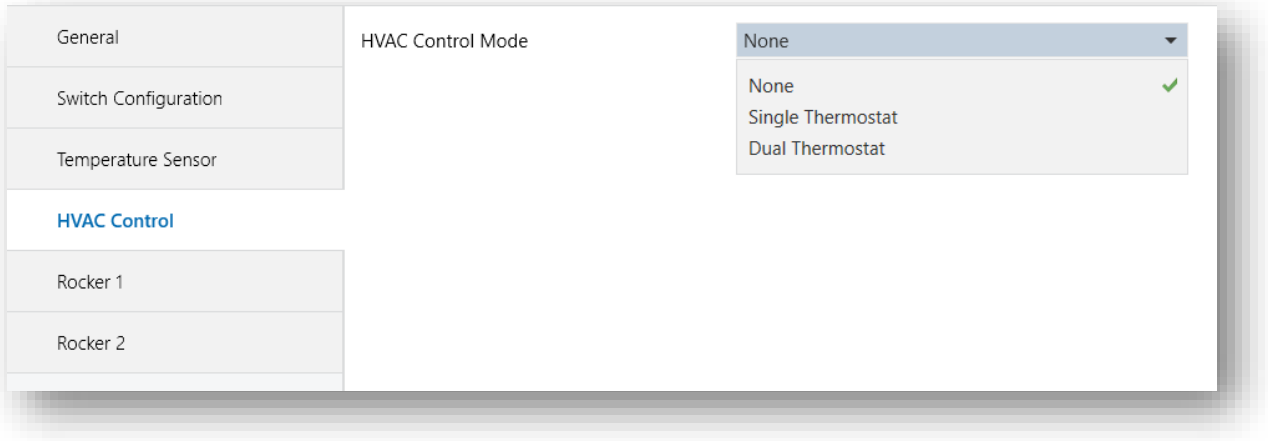
Example: Threshold value is 10°C and Hysteresis is 0,3°C. When measured temperature value is greater than 10,3°C, "Temperature - Threshold x Output" object will transmit selected value to KNX bus.

13	Temperature	Threshold 1 Output (Switching)	1 bit	switch	C - - T -
14	Temperature	Threshold 2 Output (Switching)	1 bit	switch	C - - T -

3.3. HVAC Control

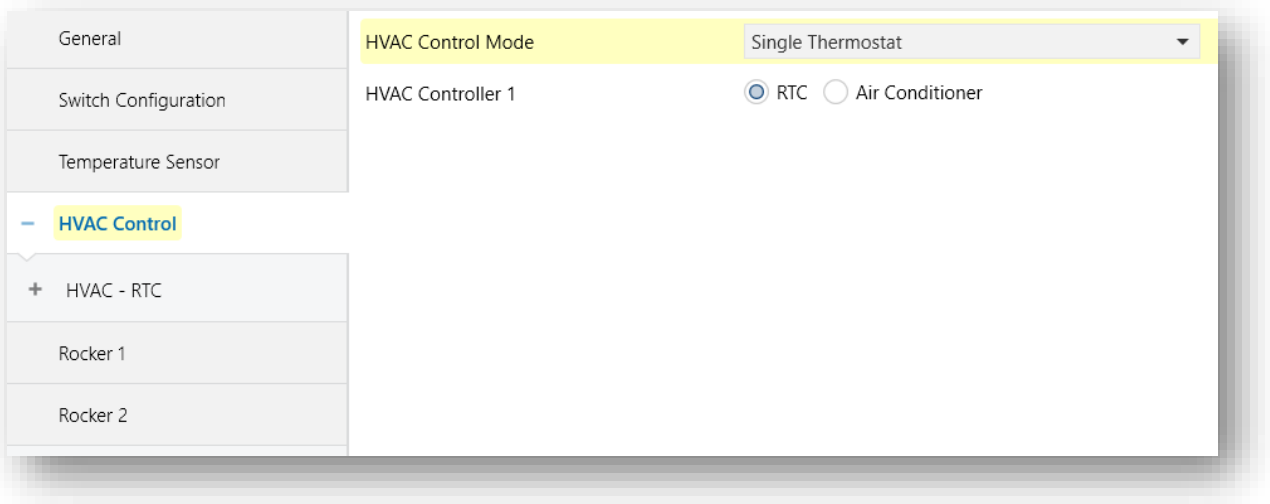
3.3.1 HVAC Control Modes

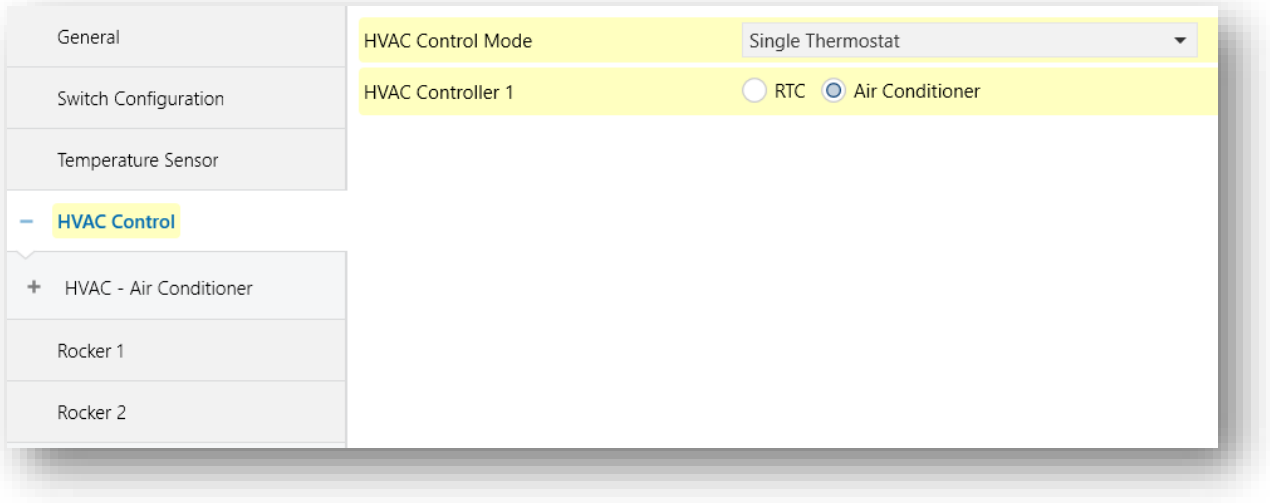
HVAC Control Modes: None, Single Thermostat, Dual Thermostat



3.4. Single Thermostat

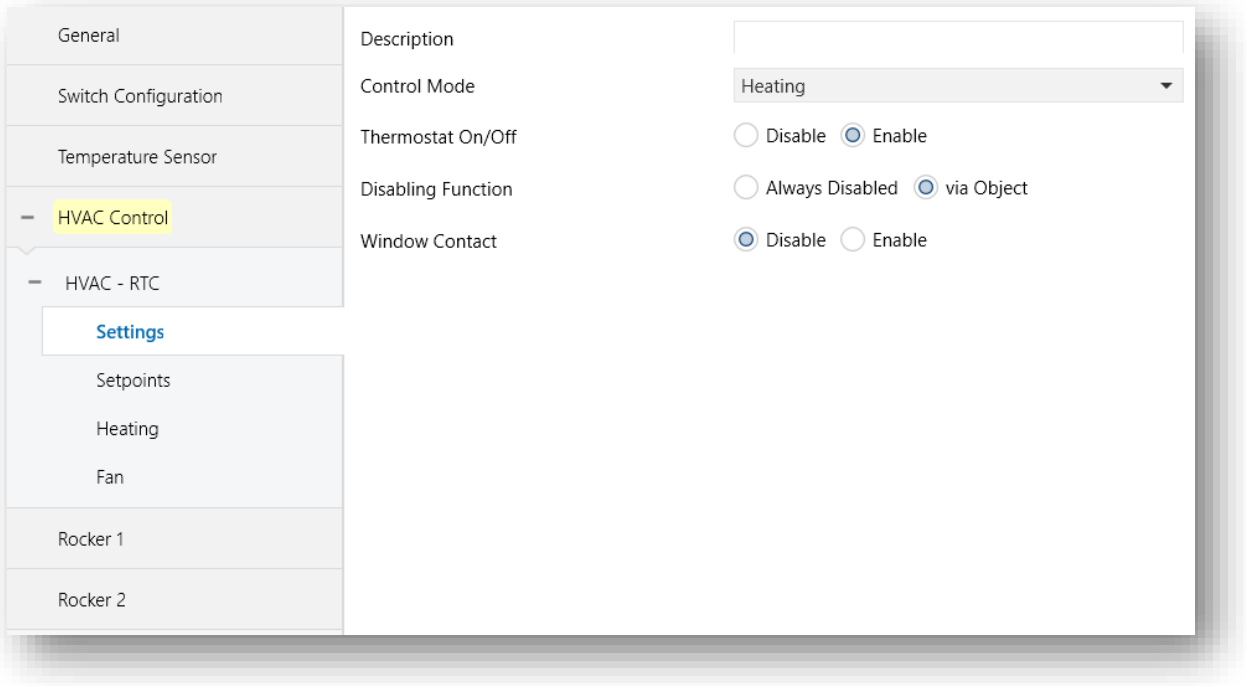
HVAC controller can be selected as RTC (Room Temperature Controller) or Air Conditioner



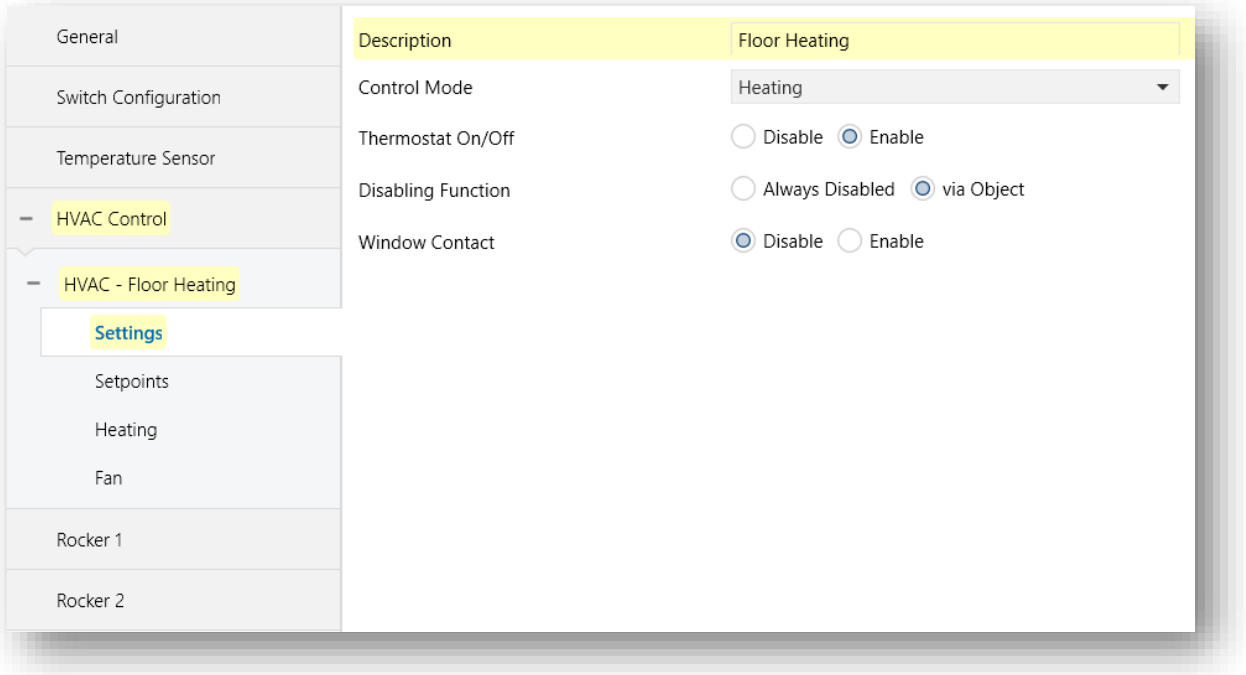


3.4.1. RTC

3.4.1.1. Settings



Description: The description defines the HVAC name and related objects dynamically.



16	HVAC 1 - Floor Heating	Heating/Cooling Status (1-Heat, 0-Cool)	1 bit	cooling/heating	C	R	-	T	-
17	HVAC 1 - Floor Heating	Heating 2 Point Control Value	1 bit	switch	C	R	-	T	-
20	HVAC 1 - Floor Heating	Heating Indication	1 bit	state	C	R	-	T	-
29	HVAC 1 - Floor Heating	Protection Mode Status	1 bit	state	C	R	-	T	-
30	HVAC 1 - Floor Heating	Setpoint Control	2 bytes	temperature (°C)	C	-	W	-	U
31	HVAC 1 - Floor Heating	Setpoint Status	2 bytes	temperature (°C)	C	R	-	T	-
32	HVAC 1 - Floor Heating	Setpoint (-/+)	1 bit	step	C	-	W	-	U
54	HVAC 1 - Floor Heating	Thermostat On/Off	1 bit	switch	C	-	W	-	U
55	HVAC 1 - Floor Heating	Thermostat On/Off Status	1 bit	switch	C	R	-	T	-
56	HVAC 1 - Floor Heating	Window Contact (0-Open, 1-Close)	1 bit	open/close	C	-	W	T	U
57	HVAC 1 - Floor Heating	Disabling Function (1-Disable, 0-Enable)	1 bit	boolean	C	-	W	-	-
58	HVAC 1 - Floor Heating	Disabling Function Status (1-Disable, 0-Enab...	1 bit	boolean	C	R	-	T	-

Control Modes: Heating, Cooling, Heating and Cooling]

Thermostat On/Off: [Disable, **Enable**]

It is possible to disable thermostat on/off feature. If enabled, the state of thermostat can be changed and when it is in off state, it stops thermostat logic. Press and hold thermostat on/off icon on display for 2 seconds to change the state to off. Clicking the icon will change the state to on state when thermostat is in off state.

Disabling Function: [Always disabled, **via Object**]

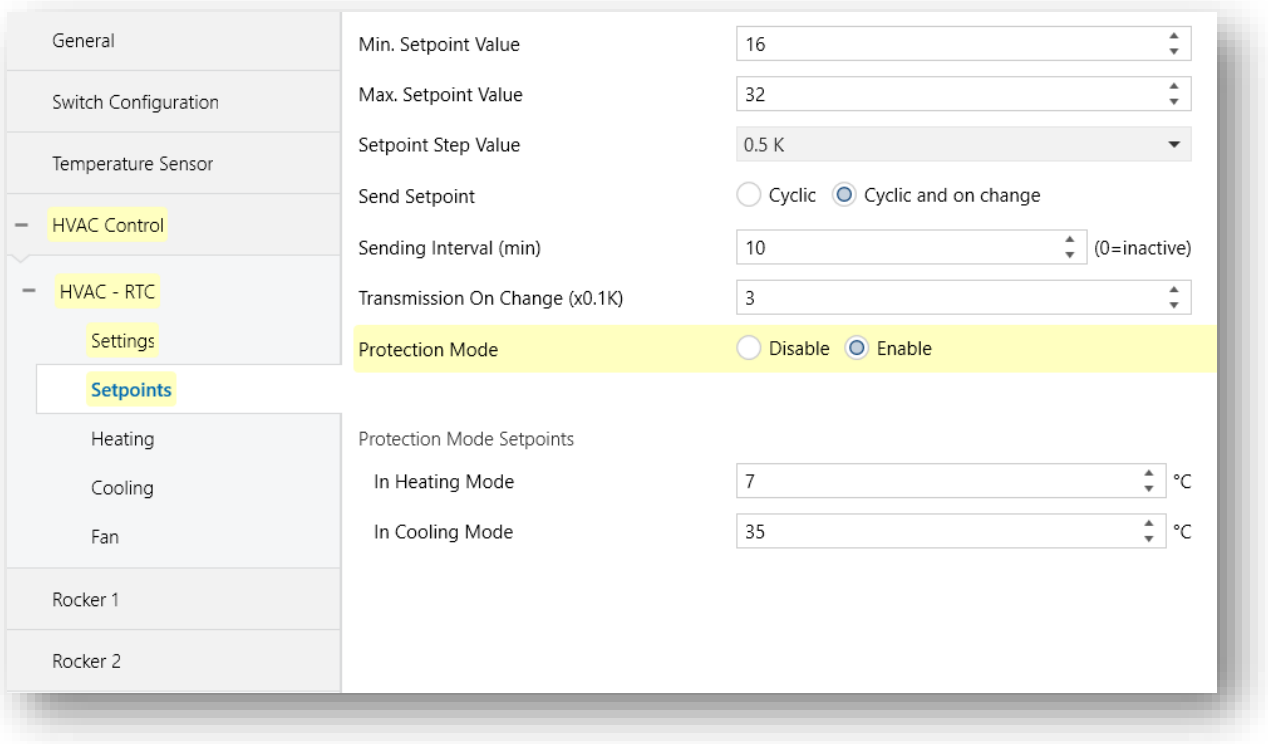
It is possible to disable the thermostat. When disabled, thermostat logic continues to work but it is only allowed to control thermostat via KNX bus.

Window Contact: [**Disable**, Enable]

Object "Window Contact" can be used to take thermostat control in stand-by position according to the window status. If window is open, thermostat will go into protection mode and off state, and it will not be possible to control the thermostat until window is closed. The object can be inverted for window open and close states.

When enabled, "Protection Mode Status" object appears. This object will transmit "1" telegram when RTC is in protection mode and "0" telegram when it is not. Protection Mode Setpoints for Heating and Cooling mode parameter becomes visible in RTC Setpoints section.

3.4.1.2. Setpoints



Min. Setpoint Value: [5…**16**…40]

Defines the minimum temperature setpoint value for the thermostat function. Any temperature value lower than Min. Setpoint Value cannot be written or selected on setpoint temperature objects. If a setpoint value lower than Min. Setpoint is received, RTC is set to min. setpoint.

Max. Setpoint Value: [5…**32**…40]

Defines the maximum temperature setpoint value for the thermostat function. Any temperature value higher than Max. Setpoint Value cannot be written or selected on temperature objects. If a setpoint value higher than Max. Setpoint is received, RTC is set to max. setpoint.

Setpoint Step Value: [0.1…**0.5**…1]

Increase/Decrease value of current setpoint.

Send Setpoint (°C): [Cyclic…Cyclic on change]

Current setpoint can be sent cyclically or by change of measured temperature via status Setpoint object.

Sending interval (min): [0…**10**…255] 0=Inactive

Defines the time period of sending setpoint value via "Status Setpoint" object.

Transmission on change (x0.1 K): [1…**3**…100]

Defines the minimum temperature change to send setpoint value via "Status Setpoint" object.

Protection Mode: [**Disable**, Enable]

This parameter is only visible when thermostat on/off parameter is disabled.

When enabled, Object "Protection Mode" can be used to activate or deactivate the protection mode. Object "Protection Mode Status" will send current status of protection mode after change.

28	HVAC 1 - RTC	Protection Mode	1 bit	state	C - W T U
29	HVAC 1 - RTC	Protection Mode Status	1 bit	state	C R - T -

Protection mode can be activated or deactivated by clicking Icon on display. When activated, the icon blinks until it is deactivated.

Protection Mode Setpoints:

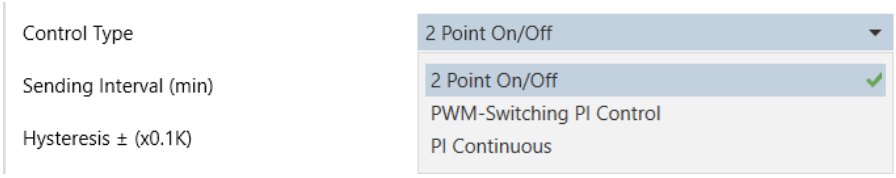
This parameter is only visible when protection mode and/or window contact is enabled.

Protection mode setpoints can be defined in this parameter according to heating or cooling mode.

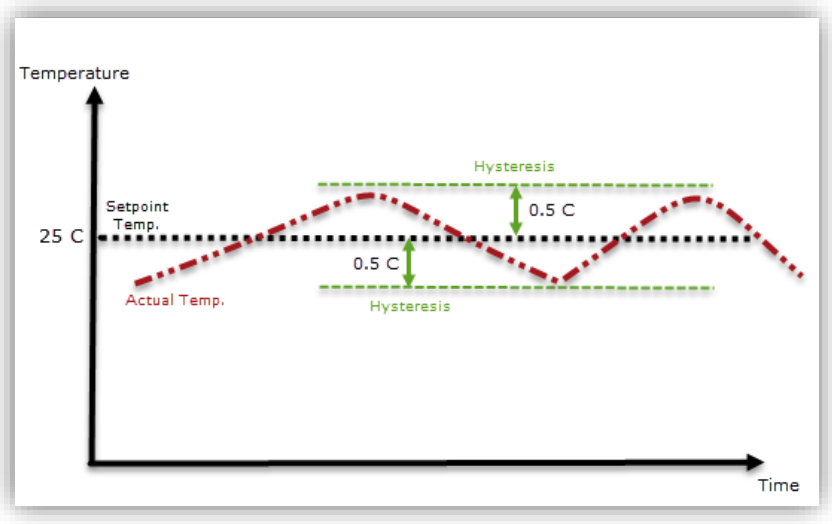
Setpoint adjustment is not allowed when RTC is in protection mode.

3.4.1.3. Heating - Control Type: [2-Point Control ON/OFF]

Control Type: [2-Point Control (On/Off), Switching PI Control (PWM), Continuous PI Control]



Operates as a simple switch around the setpoint temperature using hysteresis values. "Hysteresis" prevents the output value from oscillation and give larger margin to turning heat or cool on and off. If system is more an active system, hysteresis values should be given larger and more inactive values.

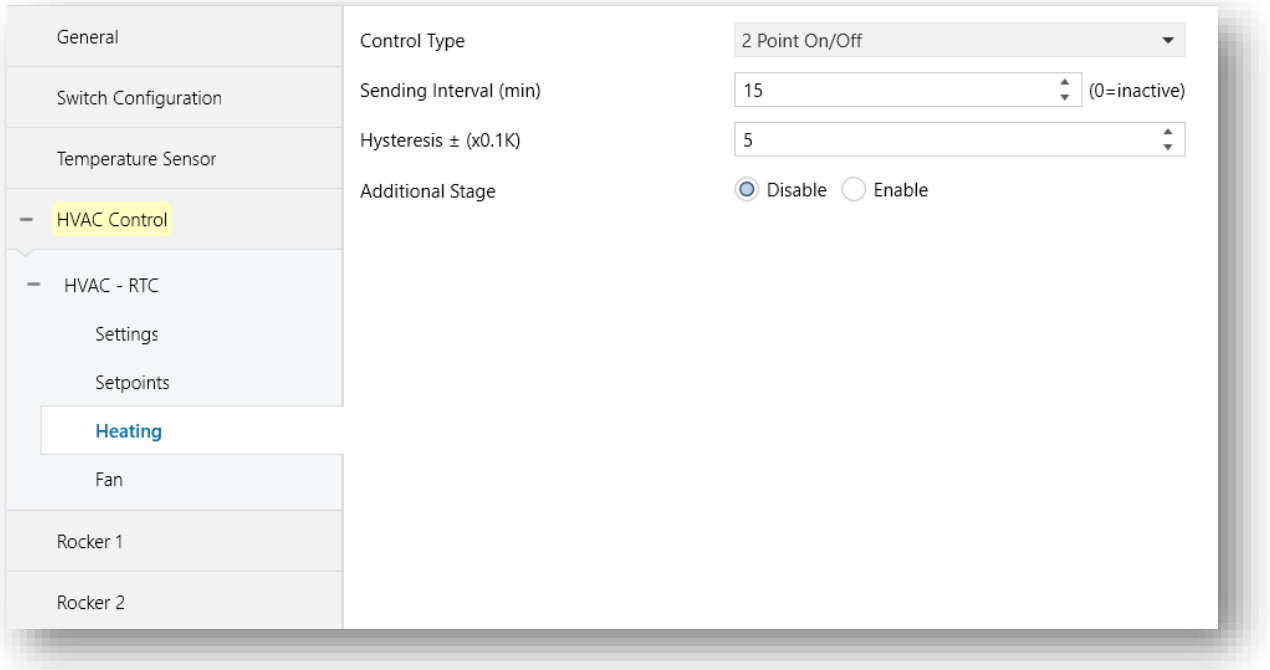


Sending Interval (min): [0…**15**…255] 0=inactive

Determines cyclic sending period of Object "Heating 2 Point Control Value".

Hysteresis +/- (x 0.1 °C): [1…**5**…255]

Determines Hysteresis value to control "Heating 2 Point Control Value" output more accurate. "Hysteresis" prevents the output value from oscillation and give larger margin to turning heat or cool ON and OFF. If system is more an active system, hysteresis values should be given larger and more inactive values.

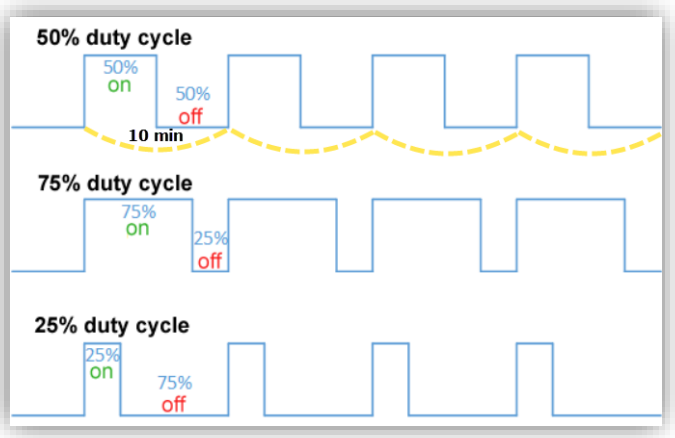


3.4.1.4. Heating - Control Type: [Switching PI Control PWM]

PI algorithm is used to calculate control signal. After calculation, control signal is converted into a pulse-interval signal. This means PWM cycle is divided into "1 bit ON/OFF" output commands based on control value. PWM period and type of heating should be selected according to the used room and type of heating.

PWM Period Time (min): [1…**10**…255]

Defines PWM period time. If control value is calculated %50. Then control value will be ON for 5 minutes and OFF for second 5 minutes. Please check following graphic.



Heating Type: Multiple heating types with preset parameters are available to the user.

Floor Heating (5K/240)

How Water Heating (5K/150)

Electrical Heating (4K/100)

Fan coil (4K/90)

User Defined

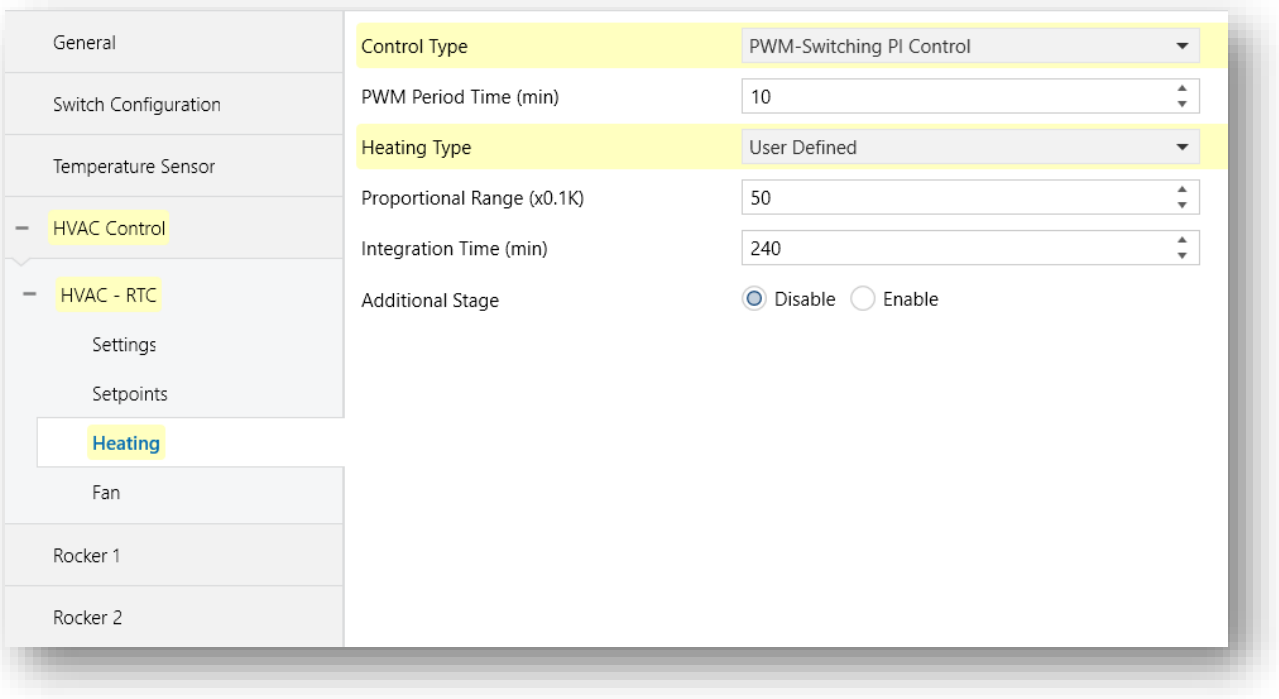
If the required heating type is not available, individual parameters can be specified in the "User Defined" configuration.

Proportional Range (x0.1 °C): [10…**50**…100]

Defines the proportional range of control. Parameter changes the control speed of the controller.

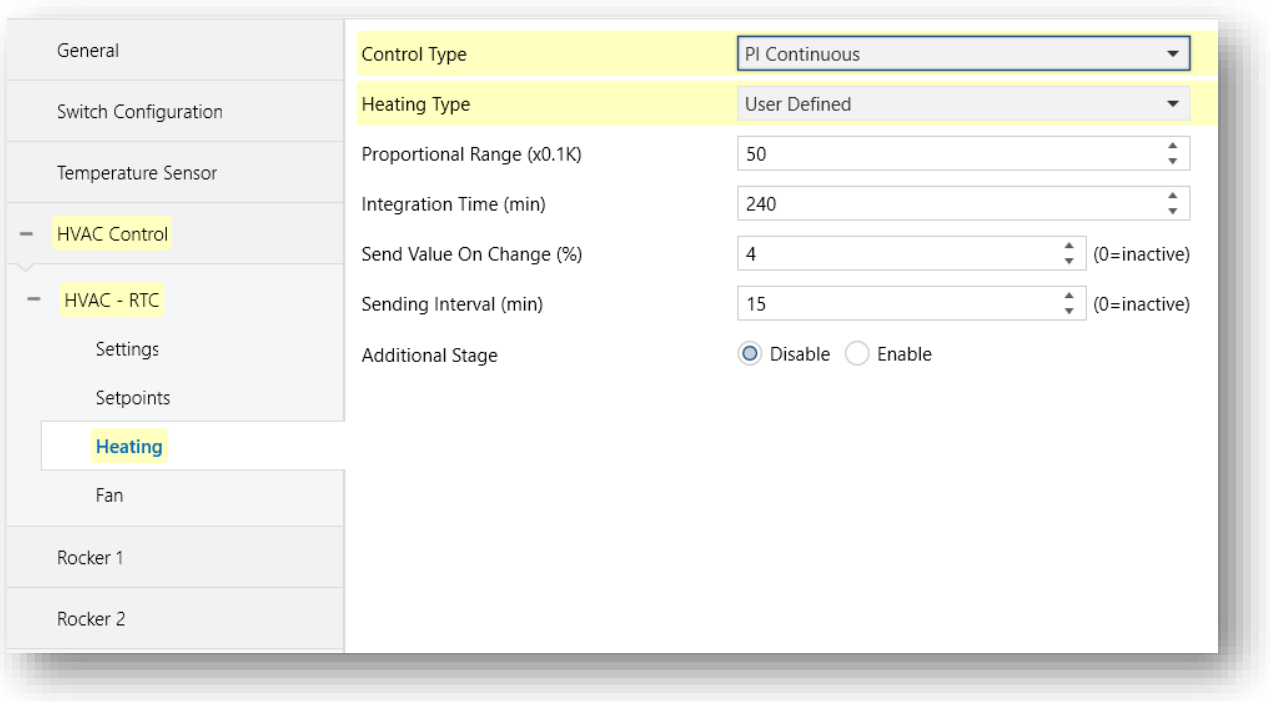
Integration Time (min): [1…**240**…255]

Defines the reset time of controller. Integration Time has the effect of moving the room temperature slowly toward and ultimately reaching the setpoint value. Depending on the type of system used, parameter needs to have different values. In general, the more inactive the overall system, the greater time is needed.



3.4.1.5. Heating - Control Type: [PI Continuous]

PI algorithm is used to calculate control signal and adjusts its output value between 0% and 100% to match the difference between the actual temperature and the setpoint temperature and enables an accurate regulation of the room temperature to the setpoint value. PI values should be selected compatible with the room and the type of heating system that needs to be controlled. Default PI values are defined for most common heating types. User defined values can be used for different rooms and different heating types for better performance. Using default values as a reference point and adjusting these values according to system might increase controller performance.



Heating Type: Multiple heating types with preset parameters are available to the user.

Floor Heating (5K/240)

How Water Heating (5K/150)

Electrical Heating (4K/100)

Fan coil (4K/90)

User Defined

If the required heating type is not available, individual parameters can be specified in the "User Defined" configuration.

Proportional Range (x0.1 °C): [10…**50**…100]

Defines the proportional range of control. Parameter changes the control speed of the controller.

Integration Time (min): [1…**240**…255]

Defines the reset time of controller. Integration Time has the effect of moving the room temperature slowly toward, and ultimately reaching the setpoint value. Depending on the type of system used, parameter needs to have different values. In general, the more inactive the overall system, the greater time is needed.

Send Value on Change (%): [0…**4**…100] 0=inactive

Heating control value will be sent on change of percentage via Object "Heating PI Control Value".

Sending Interval (min): [0…**15**…255]

Determines cyclic sending period of Object "Heating PI Control Value".

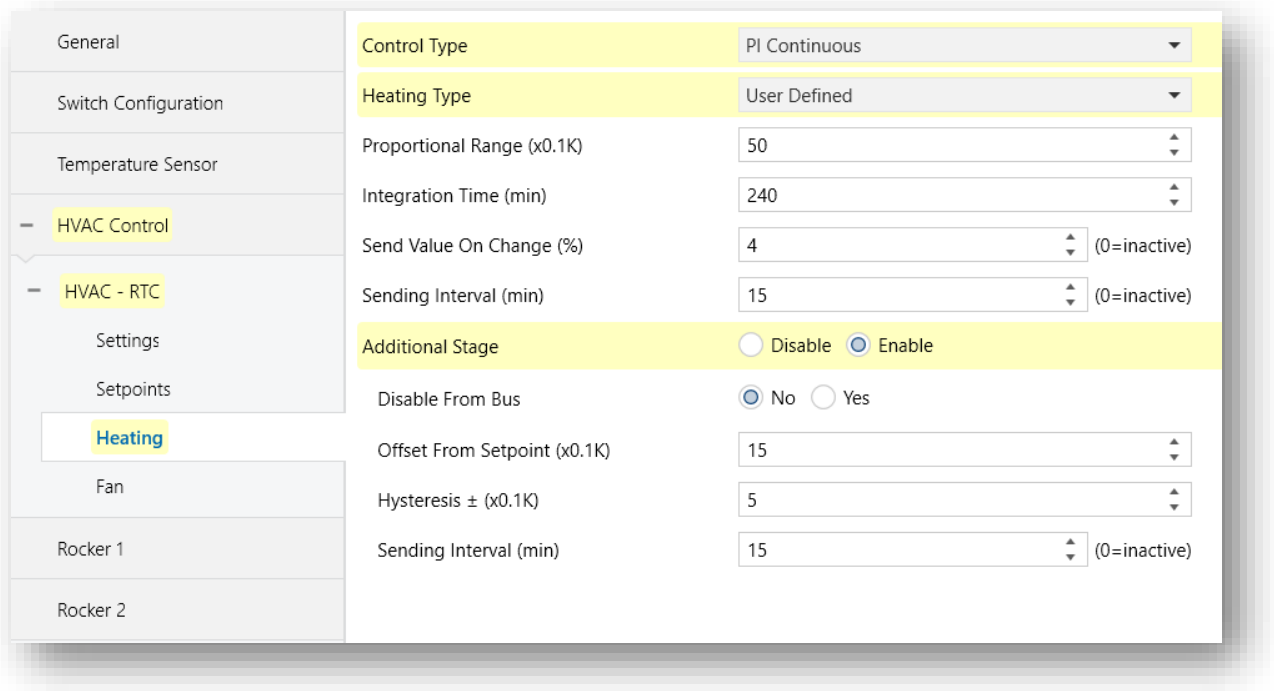
3.4.1.6. Heating - Additional Stage

Additional Stage: [**Disable**…Enable]

Additional Heating Control object can be enabled if an extra Heating Control Value is needed on top of main Heat Control Value.

Object "Heating Additional Stage Value" is created when parameter is enabled.

Disable from Bus: Object "Heating Additional Stage (0-Disable)" can be used to disable additional heating control any time by writing True/False.



Offset from Setpoint (x 0.1 °C): [1…**15**…255]

Defines a separate setpoint value based on main Setpoint temperature for Object "Heating Additional Stage Value". In this way, Additional Heating Source will be activated/deactivated depending on new temperature setpoint.

Example: Assume that a room has two types of different heating sources. (Main heating source, additional heating source)

Setpoint temperature is 24 degree for the "Heating Control Value" (main heating source.)

If "Offset from Setpoint" parameter is; -20 x 0.1 C° =-2 °C.

In this scenario, the setpoint for heating is set to 24 °C. When the temperature falls below 22 °C, additional heating should be switched on so that the room heats up again rapidly.

Hysteresis +/- (x 0.1 °C): [1…**5**…255]

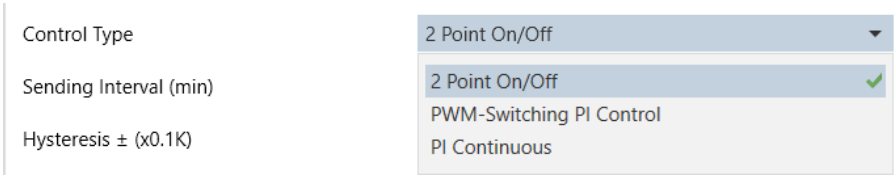
Determines Hysteresis value to control Heating Additional Stage Value more accurate. "Hysteresis" prevents the output value from oscillation and give larger margin to turning heat or cool ON and OFF. If system is more an active system, hysteresis values should be given larger and more inactive values.

Sending Interval (min): [0…**15**…255]

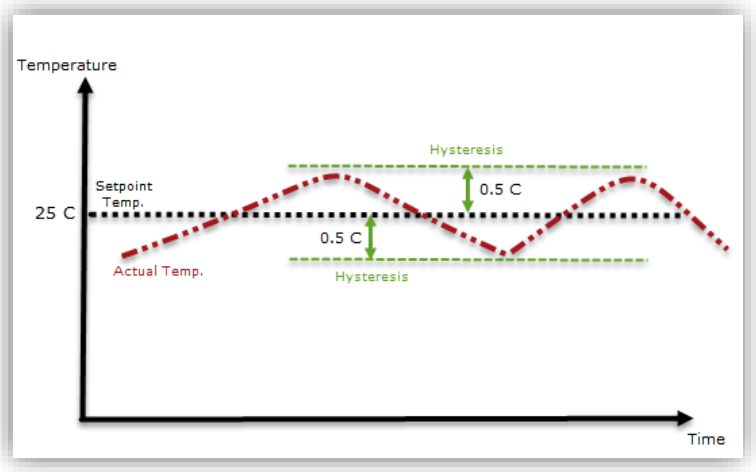
Determines cyclic sending period of Object "Heating Additional Stage Value".

3.4.1.7. Cooling - Control Type: [2-Point Control ON/OFF]

Control Type: [2-Point Control (On/Off), Switching PI Control (PWM), Continuous PI Control]



Operates as a simple switch around the setpoint temperature using hysteresis values. "Hysteresis" prevents the output value from oscillation and give larger margin to turning heat or cool on and off. If system is more an active system, hysteresis values should be given larger and more inactive values.

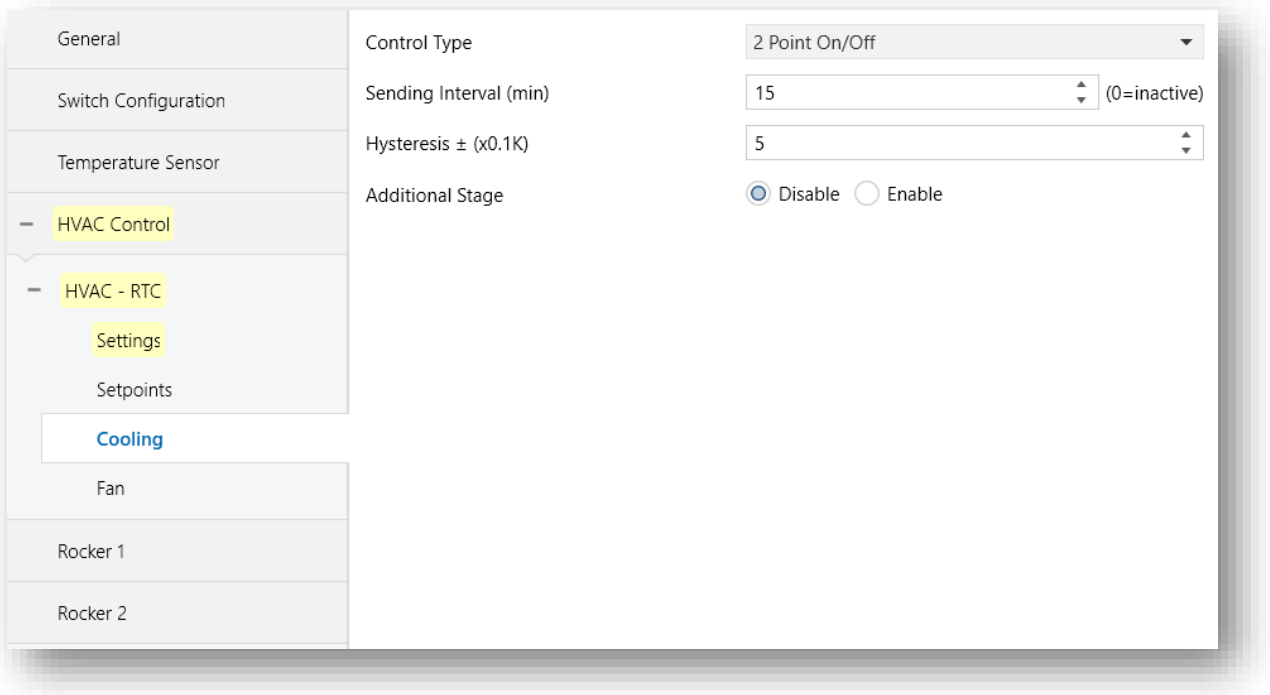


Sending Interval (min): [0…**15**…255] 0=inactive

Determines cyclic sending period of Object "General Thermostat - Cooling 2 Point Control Value".

Hysteresis +/- (x 0.1 °C): [1…**5**…255]

Determines Hysteresis value to control "Heating 2 Point Control Value" output more accurate. "Hysteresis" prevents the output value from oscillation and give larger margin to turning heat or cool ON and OFF. If system is more an active system, hysteresis values should be given larger and more inactive values.

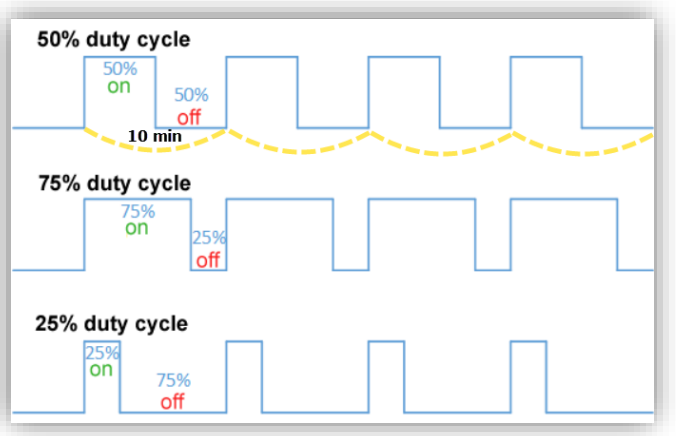


3.4.1.8. Cooling - Control Type: [Switching PI Control PWM]

PI algorithm is used to calculate control signal. After calculation, control signal is converted into a pulse-interval signal. This means PWM cycle is divided into "1 bit ON/OFF" output commands based on control value. PWM period and type of cooling should be selected according to the used room and type of cooling source.

PWM Period Time (min): [1…**10**…255]

Defines PWM period time. If control value is calculated %50. Then control value will be ON for 5 minutes and OFF for second 5 minutes. Please check following graphic.



Type of Cooling: Multiple cooling types with preset parameters are available to the user.

Cooling Ceiling (5K/240)

Fan coil (4K/90)

User Defined

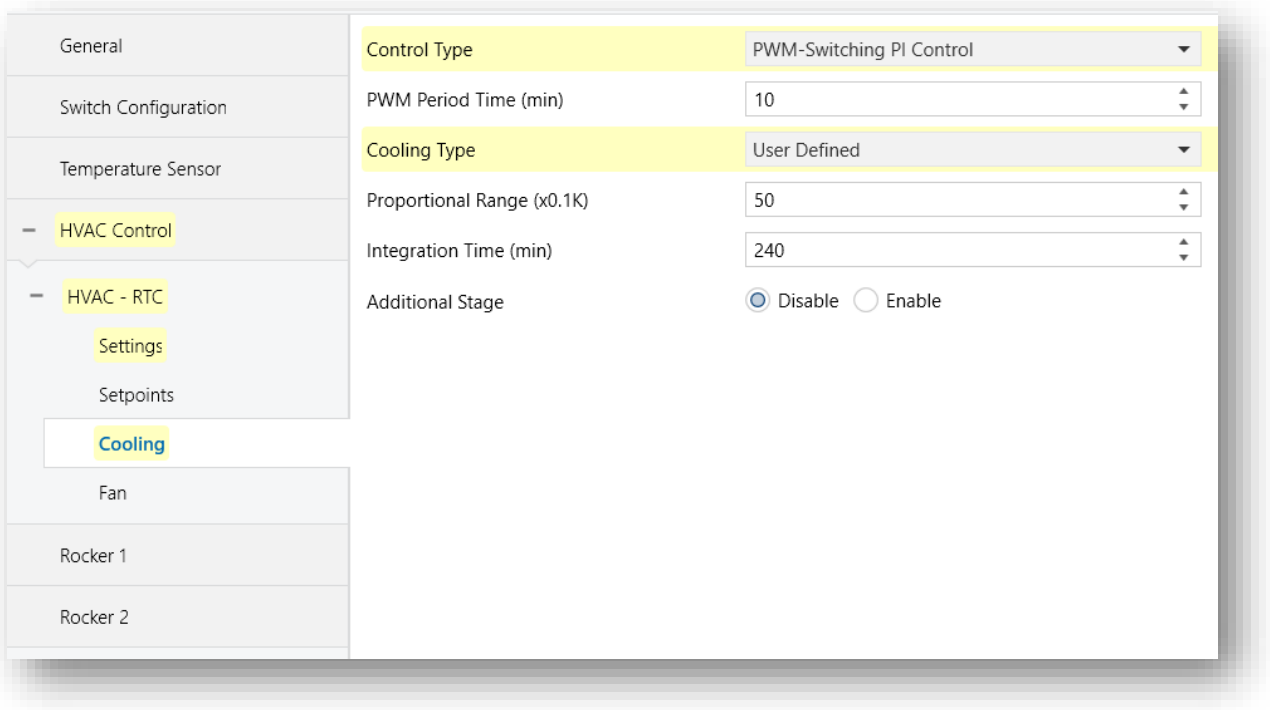
If required cooling type is not available, individual parameters can be specified in the "User Defined" configuration.

Proportional Range (x0.1 °C): [10…**50**…100]

Defines the proportional range of control. Parameter changes the control speed of the controller.

Integration Time (min): [1…**240**…255]

Defines the reset time of controller. Integration Time has the effect of moving the room temperature slowly toward and ultimately reaching the setpoint value. Depending on the type of system used, parameter needs to have different values. In general, the more inactive the overall system, the greater time is needed.



3.4.1.9. Cooling - Control Type: [PI Continuous]

PI algorithm is used to calculate control signal and adjusts its output value between 0% and 100% to match the difference between the actual temperature and the setpoint temperature and enables an accurate regulation of the room temperature to the setpoint value. PI values should be selected compatible with the room and the type of heating system that needs to be controlled. Default PI values are defined for most common cooling types. User defined values can be used for different rooms and different cooling types for better performance. Using default values as a reference point and adjusting these values according to system might increase controller performance.

Cooling Type: Multiple cooling types with preset parameters are available to the user.

Cooling Ceiling (5K/240)

Fan coil (4K/90)

User Defined

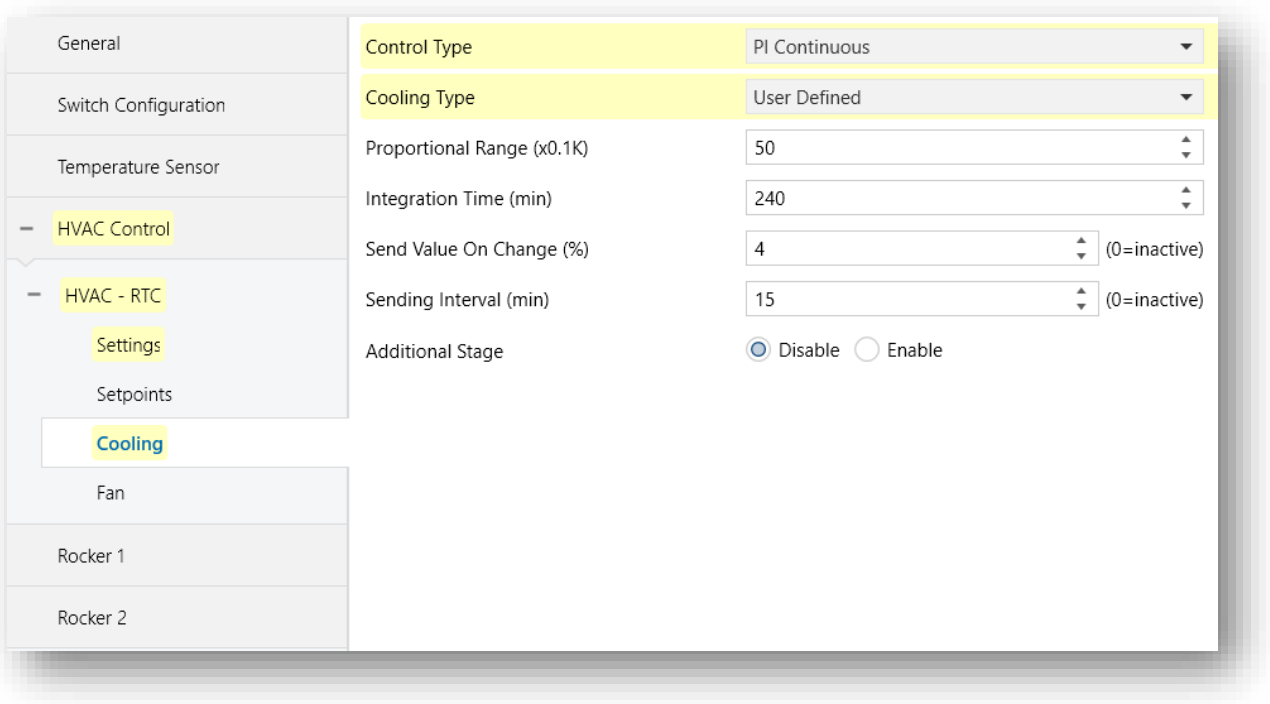
If the required cooling type is not available, individual parameters can be specified in the "User Defined" configuration.

Send Value On Change (%): [0…**4**…100] 0=inactive

Cooling control value will be sent on change of percentage via Object "Cooling PI Control Value".

Sending Interval (min): [0…**15**…255]

Determines cyclic sending period of Object "Cooling PI Control Value".



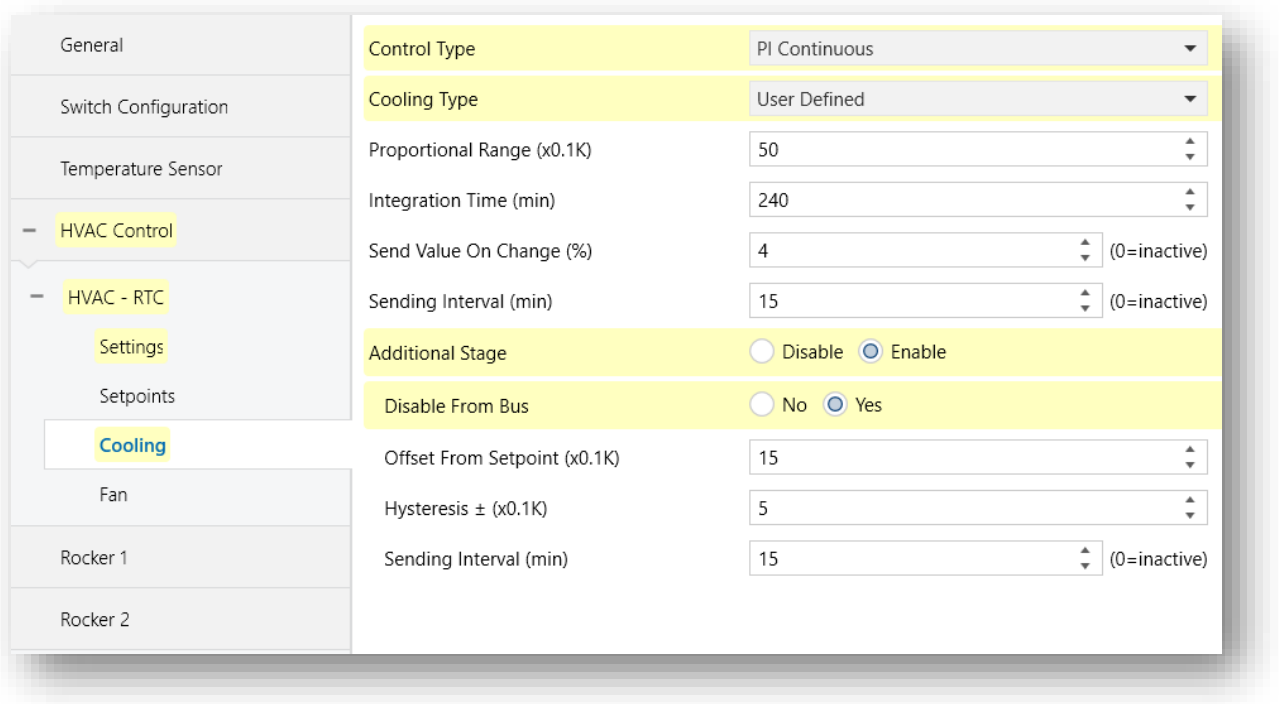
3.4.1.10. Cooling - Additional Stage

Additional Stage: [**Disable**…Enable]

Additional Cooling Control object can be enabled if an extra Cooling Control Value is needed on top of main Cooling Control Value.

Object "Cooling Additional Stage Value" is created when parameter is enabled.

Disable from Bus: Object "Cooling Additional Stage (0-Disable)" can be used to disable additional heating control any time by writing True/False.



Offset from Setpoint (x 0.1 °C): [1…**15**…255]

Defines a separate setpoint value based on main Setpoint temperature for Object "Cooling Additional Stage Value". In this way, Additional Cooling Source will be activated/deactivated depending on new temperature setpoint.

Example: Assume that a room has two type of different heating sources. (Main cooling source, additional cooling source)

Setpoint temperature is 24 degree for the "Cooling Control Value" (main cooling source.)

If "Offset from Setpoint" parameter is; -20 x 0.1 C° =-2 °C.

In this scenario, the setpoint for cooling is set to 24 °C. When the temperature rises above 26 °C, additional cooling should be switched on so that the room cools off again rapidly.

Hysteresis +/- (x 0.1 °C): [1…**5**…255]

Determines Hysteresis value to control Cooling Additional Stage Value more accurate. "Hysteresis" prevents the output value from oscillation and give larger margin to turning heat or cool ON and OFF. If system is more an active system, hysteresis values should be given larger and more inactive values.

Sending Interval (min): [0…**15**…255]

Determines cyclic sending period of Object "Cooling Additional Stage Value".

3.4.1.11. Heating & Cooling

Control mode of thermostat can be selected for Heating, Cooling, and Heating & Cooling.

If Heating & Cooling control mode is selected parameter tabs of "Heating" and "Cooling" will place with same parameters. However, parameter tabs of "Thermostat Settings" and "Setpoint Temperature" will have some additional parameters.

Please check below.

-Thermostat Settings

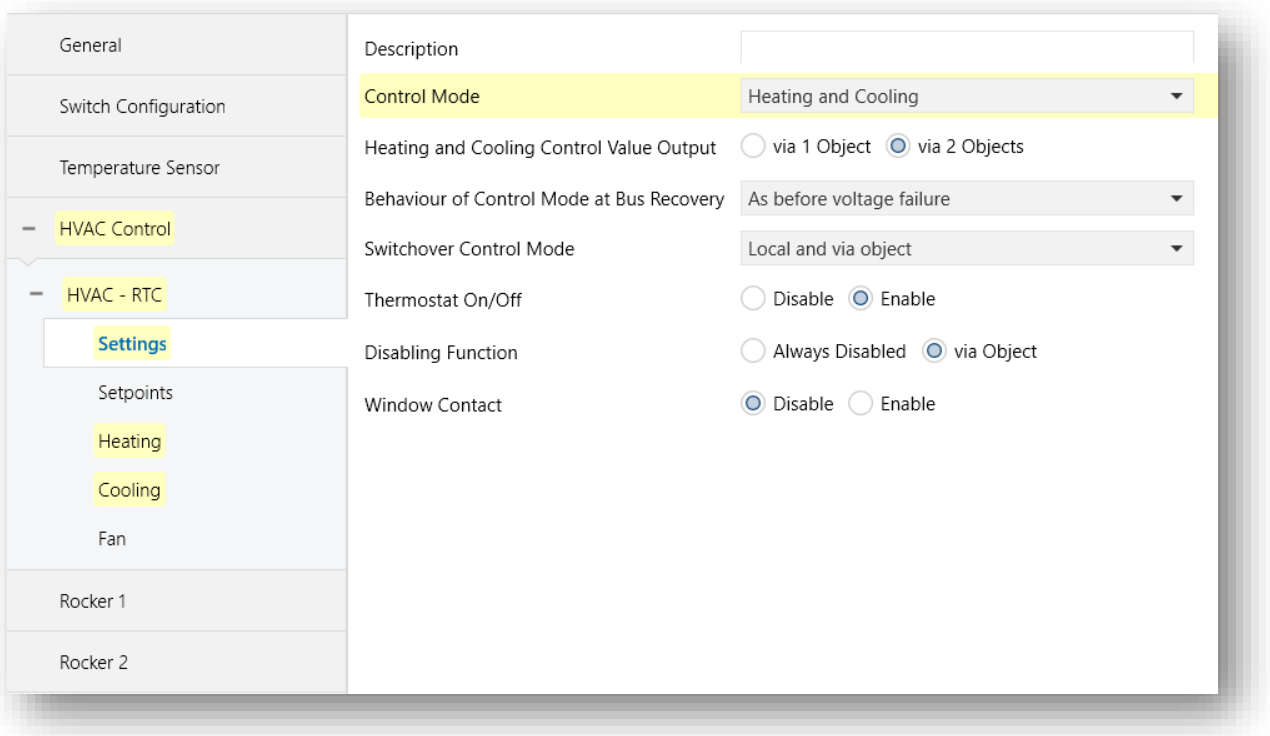
Heating & Cooling Control Value Output: Output value for Heating and Cooling can be sent via same object or 2 separate objects.

If "via 1 Object" option is selected Object "Heating/Cooling Control Value" will be activated.

19	HVAC 1 - RTC	Heating/Cooling PI Control Value	1 byte	percentage (0..10...	C	R	-	T	-

If "via 2 Objects" option is selected Object "General Thermostat (RTC) – Heating Control Value" and Object "General Thermostat (RTC) – Cooling Control Value" will be activated.

17	HVAC 1 - RTC	Heating PI Control Value	1 byte	percentage (0..100%)	C	R	-	T	-
18	HVAC 1 - RTC	Cooling PI Control Value	1 byte	percentage (0..100%)	C	R	-	T	-



Behavior of Control Mode at Bus Recovery:

The parameter defines the behavior of the control mode after bus power return. Control mode can be changed to following options after a power return:

As before voltage failure
Heating
Cooling

Switchover Control Mode: [Only via Object, Local and via Object, Automatic]

Parameter makes it possible to switch between the heating and cooling mode of the general thermostat.

Only via Object:

Switchover can be applied only "via Object" manually using Object "General Thermostat (RTC)– Heat/Cool Switchover".

$01= Heating [1.100 DPT_cooling/heating]

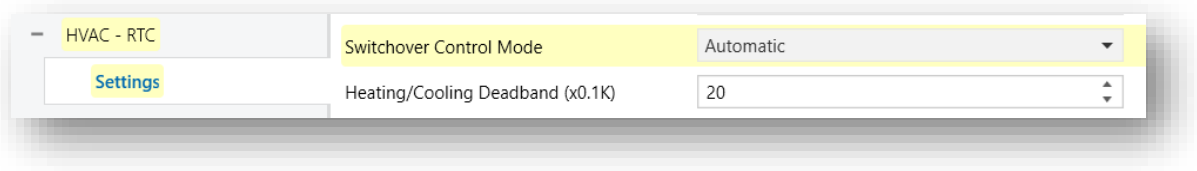
$00= Cooling [1.100 DPT_cooling/heating]

15	HVAC 1 - RTC	Heating/Cooling Switchover (1-Heat, 0-Cool)	1 bit	cooling/heating	C	-	W	-	U
16	HVAC 1 - RTC	Heating/Cooling Status (1-Heat, 0-Cool)	1 bit	cooling/heating	C	R	-	T	-

Local and via Object:

Switchover can be applied locally on Control Element Page and also "via Object" manually using Object "Heating/Cooling Switchover".

Automatic: The thermostat switches automatically between heating and cooling and to the associated setpoint according to defined "Deadband". Object "Thermostat – Heat/Cool Status" will transmit the status after switchover.



Heating Cooling Deadband (x 0.1 °C): [0…**20**…255]

Deadband defines the range between setpoint temperature and measured temperature. If deadband is exceeded, switchover will be applied.

-Heating/Cooling Object Description

Heating / Cooling Indication

Object "Heating Indication" defines a state for recent heating command. It indicates that heating source is recently having an active command to heat. In same way, Object "Cooling Indication" defines a state for recent cooling command. It indicates that cooling source is recently having an active command to cool.

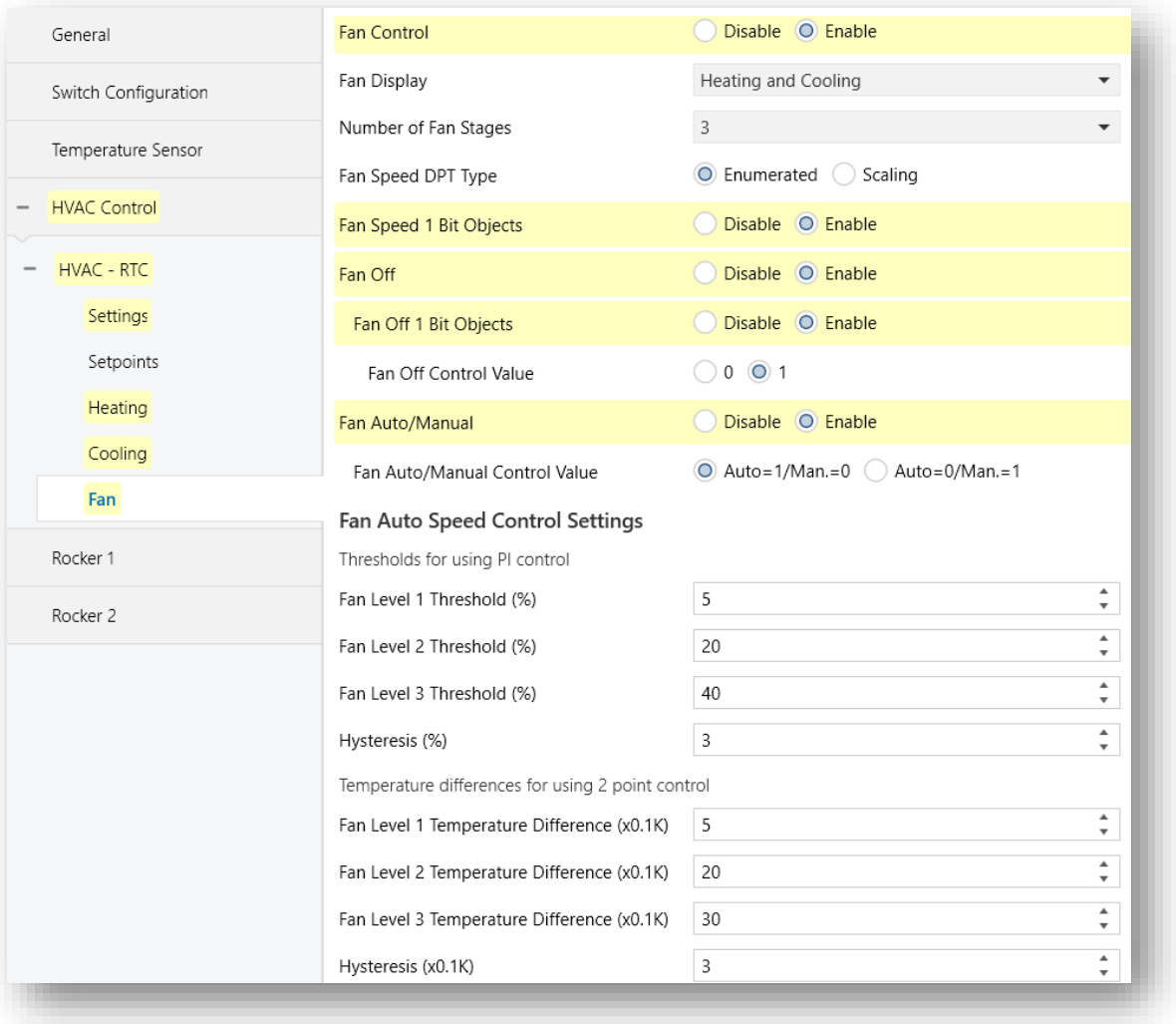
20	HVAC 1 - RTC	Heating Indication	1 bit	state	C	R	-	T	-
21	HVAC 1 - RTC	Cooling Indication	1 bit	state	C	R	-	T	-

Example: Heating mode is active. Setpoint Temperature 22 °C, Actual Temperature 21 °C.

Heating control value is sending ON command to heating source and "heating indication" is instantly informing about heating command.

10:59:52.375	1.5.8	0/7/3	GroupValue_Write	Setpoint Indication	0C 4C | 22 °C
10:59:52.398	1.5.8	0/7/6	GroupValue_Write	Actual Temperature	0C 6A | 22.6 °C
11:00:26.114	1.5.8	0/7/4	GroupValue_Write	Heating Control Value	$00 | Off
11:00:52.635	1.5.8	0/7/3	GroupValue_Write	Setpoint Indication	0C 4C | 22 °C
11:00:52.658	1.5.8	0/7/6	GroupValue_Write	Actual Temperature	0C 6A | 22.6 °C
11:01:05.541	15.15.241	0/7/18	GroupValue_Write	External Value	0C 1A | 21 °C
11:01:07.700	1.5.8	0/7/6	GroupValue_Write	Actual Temperature	0C 1A | 21 °C
11:01:08.299	1.5.8	0/7/4	GroupValue_Write	Heating Control Value	$01 | On
11:01:08.320	1.5.8	0/7/23	GroupValue_Write	Heating Indication	$01 | Active

3.4.1.12. Fan



Fan Display: [Heating, Cooling, Heating and Cooling]

Fan can be visible only for selected control modes.

Number of Fan Stages: [1…**3**…5]

Number of Fan levels can be changed according to control unit. Object will be available according to selection.

Fan Stage Object Type: [1 bit, **1 Byte**]

Type of Fan stage object can be changed as 1 bit or 1 Byte. 1 Byte object can be used as "Enumerated" or "Scaling".

Fan Speed Enumerated (1, 2, 3, 4) (Mismatched data has no effect on fan speed)

Fan Speed Scaling (25, 50, 75, 100) % (see fan speed scaling value table)

33	HVAC 1 - RTC	Fan Speed Manual (1,2,3,4)	1 byte	fan stage (0..255)	C	-	W	-	U
34	HVAC 1 - RTC	Fan Speed Manual Status (1,2,3,4)	1 byte	fan stage (0..255)	C	R	-	T	-
37	HVAC 1 - RTC	Fan Speed Status (1,2,3,4)	1 byte	fan stage (0..255)	C	R	-	T	-

35	HVAC 1 - RTC	Fan Speed Manual (25,50,75,100)%	1 byte	percentage (0..100%)	C	-	W	-	U
36	HVAC 1 - RTC	Fan Speed Manual Status (25,50,75,100)%	1 byte	percentage (0..100%)	C	R	-	T	-
38	HVAC 1 - RTC	Fan Speed Status (25,50,75,100)%	1 byte	percentage (0..100%)	C	R	-	T	-

Fan Speed Manual Object:

It is used to change the fan speed manually. When telegram is received, fan speed mode switches to manual mode. Mismatched data has no effect on fan speed.

Fan Speed Manual Status Object:

It transmits the actual fan speed in fan manual mode. This object does not transmit any telegram in fan automatic mode.

Fan Speed Status Object:

It transmits the actual fan speed in both manual mode and automatic mode.

1 bit objects:

39	HVAC 1 - RTC	Fan 1	1 bit	state	C	-	W	-	U
40	HVAC 1 - RTC	Fan 1 Status	1 bit	state	C	R	-	T	-
41	HVAC 1 - RTC	Fan 2	1 bit	state	C	-	W	-	U
42	HVAC 1 - RTC	Fan 2 Status	1 bit	state	C	R	-	T	-
43	HVAC 1 - RTC	Fan 3	1 bit	state	C	-	W	-	U
44	HVAC 1 - RTC	Fan 3 Status	1 bit	state	C	R	-	T	-
45	HVAC 1 - RTC	Fan 4	1 bit	state	C	-	W	-	U
46	HVAC 1 - RTC	Fan 4 Status	1 bit	state	C	R	-	T	-
47	HVAC 1 - RTC	Fan 5	1 bit	state	C	-	W	-	U
48	HVAC 1 - RTC	Fan 5 Status	1 bit	state	C	R	-	T	-

Fan Off:

When enabled, fan stage 0 will be activated for 1 byte fan speed control objects. When fan speed is 0, the fan will be turned off.

33	HVAC 1 - RTC	Fan Speed Manual (0,1,2,3,4)	1 byte	fan stage (0..255)	C	-	W	-	U
34	HVAC 1 - RTC	Fan Speed Manual Status (0,1,2,3,4)	1 byte	fan stage (0..255)	C	R	-	T	-
37	HVAC 1 - RTC	Fan Speed Status (0,1,2,3,4)	1 byte	fan stage (0..255)	C	R	-	T	-
35	HVAC 1 - RTC	Fan Speed Manual (0,25,50,75,100)%	1 byte	percentage (0..100%)	C	-	W	-	U
36	HVAC 1 - RTC	Fan Speed Manual Status (0,25,50,75,100)%	1 byte	percentage (0..100%)	C	R	-	T	-
38	HVAC 1 - RTC	Fan Speed Status (0,25,50,75,100)%	1 byte	percentage (0..100%)	C	R	-	T	-

Fan Off 1 Bit Object:

When enabled, Fan Off and Fan Off Status objects will appear. Value can be selected for activating fan off.

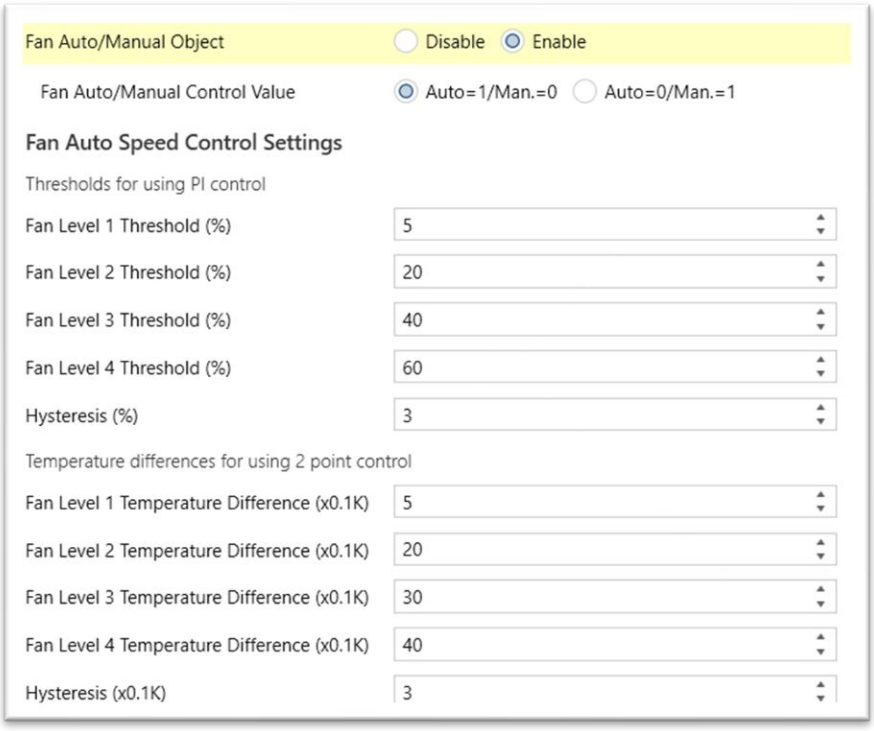
51	HVAC 1 - RTC	Fan Off (1-Off)	1 bit	state	C	-	W	-	U
52	HVAC 1 - RTC	Fan Off Status (1-Off)	1 bit	state	C	R	-	T	-

Fan Auto/Manual Object:

This parameter enables fan auto function. Value can be selected for activating fan auto mode.

49	HVAC 1 - RTC	Fan Auto/Manual (1-Auto)	1 bit	enable	C	-	W	-	U
50	HVAC 1 - RTC	Fan Auto/Manual Status (1-Auto)	1 bit	enable	C	R	-	T	-

When fan auto mode is activated, fan speed is evaluated according to heating/cooling control types. For PI Continuous and PWM-Switching PI Control types, the device changes the fan speed according to PI Control value and entered thresholds. For 2 point on/off control type, the device changes the fan speed according to entered temperature differences.



Fan Step (-/+) Object:

It is used to change the fan speed with 1 bit telegrams. Each "1" telegram received increases the fan speed and each "0" telegram received decreases the fan speed cyclically. The order is:

Fan Off > Fan 1 > Fan 2 > Fan 3 > Fan 4 > Fan 5 > Fan Auto > Fan Off > Fan 1 > .....

53	HVAC 1 - RTC	Fan Step (-/+)	1 bit	step	C	-	W	-	-

Fan Speed Scaling Value Table:

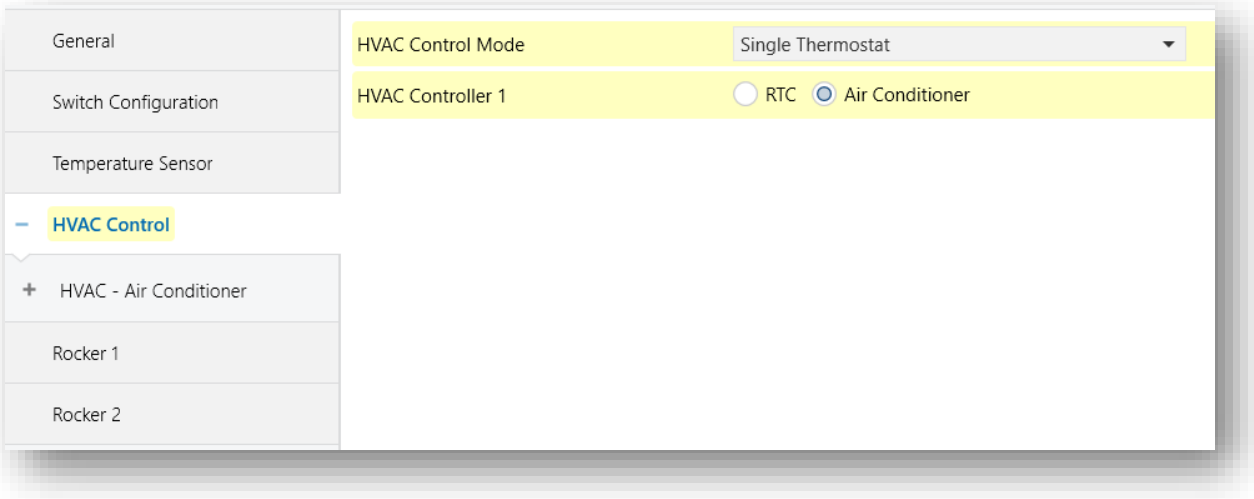
Fan Off disabled:

	FAN Speed 1	FAN Speed 2	FAN Speed 3	FAN Speed 4	FAN Speed 5
Control	0-100%				
Status	100%				
Control	0-99%	100%			
Status	50%	100%			
Control	0-66%	67-99%	100%		
Status	33%	67%	100%		
Control	0-49%	50-74%	75-99%	100%	
Status	25%	50%	75%	100%	
Control	0-39%	40-59%	60-79%	80-99%	100%
Status	20%	40%	60%	80%	100%

Fan Off enabled:

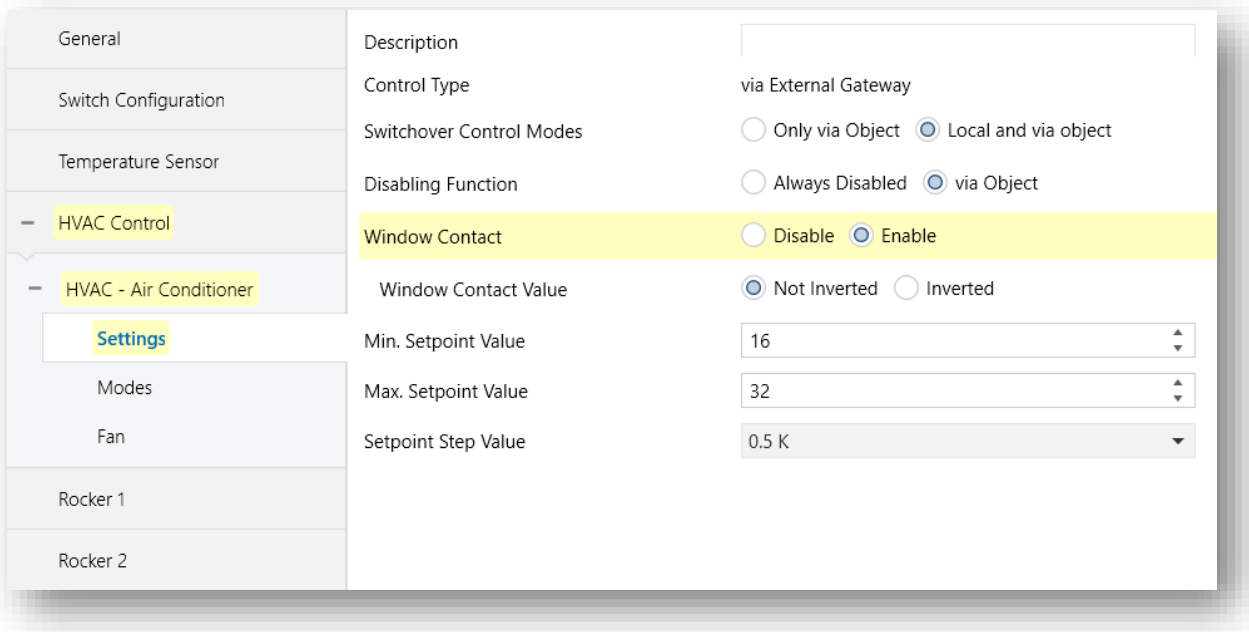
	FAN Off	FAN Speed 1	FAN Speed 2	FAN Speed 3	FAN Speed 4	FAN Speed 5
Control	0-99%	100%				
Status	0%	100%				
Control	0-49%	50-99%	100%			
Status	0%	50%	100%			
Control	0-32%	33-66%	67-99%	100%		
Status	0%	33%	67%	100%		
Control	0-24%	25-49%	50-74%	75-99%	100%	
Status	0%	25%	50%	75%	100%	
Control	0-19%	20-39%	40-59%	60-79%	80-99%	100%
Status	0%	20%	40%	60%	80%	100%

3.4.2. Air Conditioner

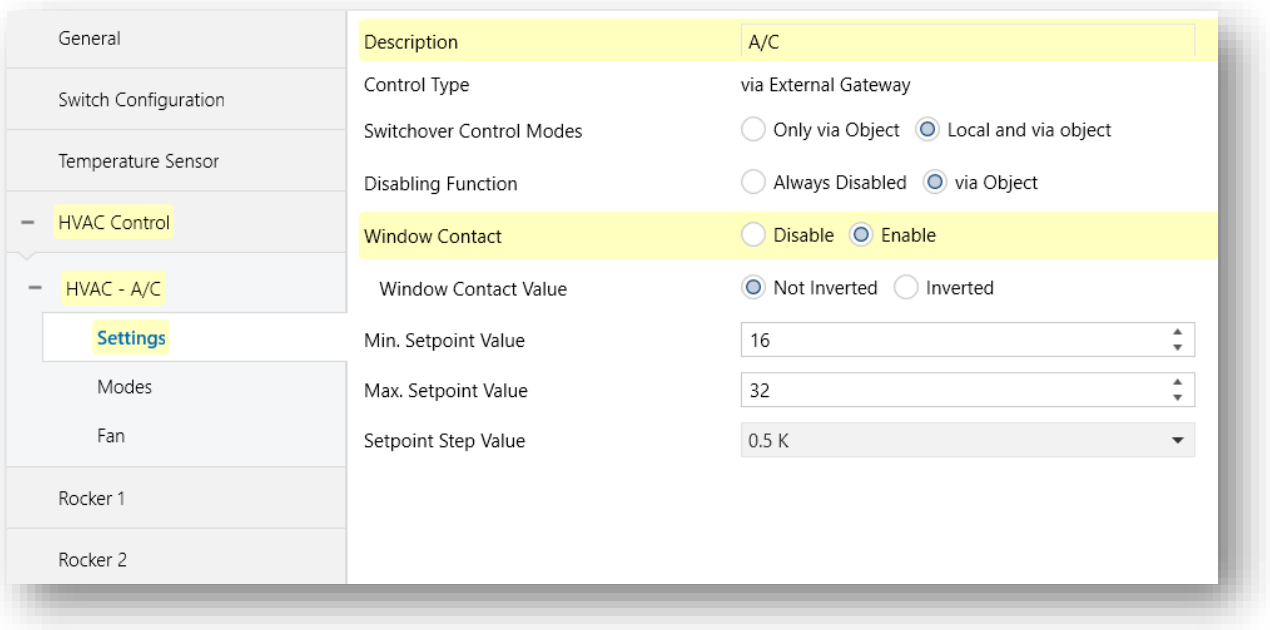


If Air Conditioner control mode is selected, parameters and objects will change especially for Air Conditioners. Please check below.

3.4.2.1. Settings



Description: The description defines the HVAC name and related objects dynamically.



59	HVAC 1 - A/C	Control On/Off	1 bit	switch	C	-	-	T	-
60	HVAC 1 - A/C	Control On/Off Status	1 bit	switch	C	-	W	T	U
61	HVAC 1 - A/C	Setpoint Control	2 bytes	temperature (°C)	C	-	-	T	-
62	HVAC 1 - A/C	Setpoint Status	2 bytes	temperature (°C)	C	-	W	T	U
63	HVAC 1 - A/C	Setpoint (-/+)	1 bit	step	C	-	W	T	U
66	HVAC 1 - A/C	Control Modes (0-Auto, 1-Heat, 3-Cool, 9-Fa...	1 byte	HVAC control mode	C	-	-	T	-
67	HVAC 1 - A/C	Control Modes Status (0-Auto, 1-Heat, 3-Co...	1 byte	HVAC control mode	C	-	W	T	U
78	HVAC 1 - A/C	Fan Speed Enumerated (1,2,3)	1 byte	fan stage (0..255)	C	-	-	T	-
79	HVAC 1 - A/C	Fan Speed Enumerated Status (1,2,3)	1 byte	fan stage (0..255)	C	-	W	T	U
94	HVAC 1 - A/C	Error 1 Bit (1-Error, 0-No Error)	1 bit	alarm	C	-	W	T	U
95	HVAC 1 - A/C	Window Contact (0-Open, 1-Close)	1 bit	open/close	C	-	W	T	U
96	HVAC 1 - A/C	Disabling Function (1-Disable, 0-Enable)	1 bit	boolean	C	-	W	-	-
97	HVAC 1 - A/C	Disabling Function Status (1-Disable, 0-Enab...	1 bit	boolean	C	R	-	T	-

Control Type: [**via External Gateway**]

An External VRV KNX gateway must be used in combination with Eclipse Thermostatic Push Button.

Switchover Control Mode: [Only via Object, Local and via Object]

Parameter makes it possible to switch between control modes of the air conditioner.

Only via Object:

Switchover can be applied only "via Object" manually using related objects

Local and via Object:

Switchover can be applied locally on the device and also "via Object" manually using related objects.

Disabling Function: [Always disabled, **via Object**]

It is possible to disable the thermostat. When disabled, it is only allowed to control thermostat via KNX bus.

Window Contact: [Disable, Enable**]**

Object "Window Contact" can be used to take thermostat control in stand-by position according to the window status. If window is open thermostat will transmit off command to air conditioner and go into off state, and it will not be possible to control the thermostat until window is closed.

Min. Setpoint Value: [5…**16**…40]

Defines the minimum temperature setpoint value for the thermostat function. Any temperature value lower than Min. Setpoint Value cannot be written or selected on setpoint temperature objects.

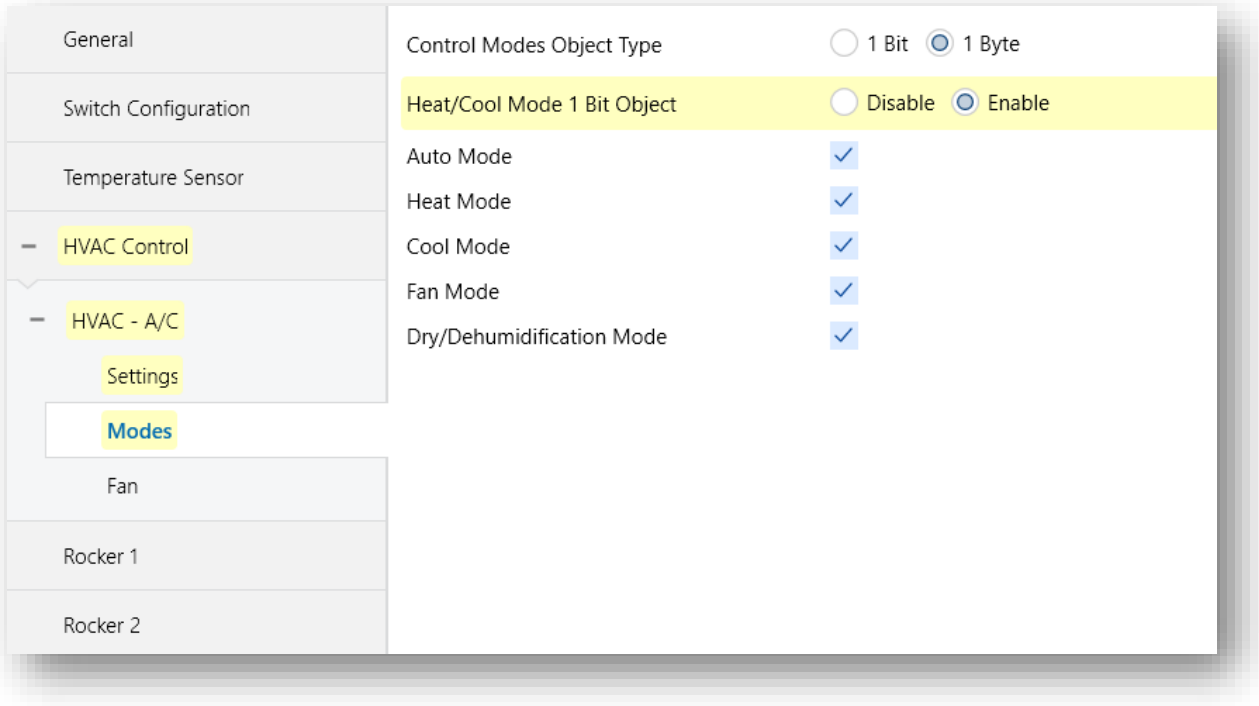
Max. Setpoint Value: [5…**32**…40]

Defines the maximum temperature setpoint value for the thermostat function. Any temperature value higher than Max. Setpoint Value cannot be written or selected on temperature objects.

Setpoint Step Value: [0.1…**0.5**…1]

Increase/Decrease value of current setpoint.

3.4.2.2. Modes



Control Mode Object Type: [1 bit, **1 Byte**]

Control mode can be selected using Object "Control Modes (0-Auto, 1-Heat, 3-Cool, 9-Fan, 14-Dry)". Mismatched data has no effect on air conditioner modes

66	HVAC 1 - Air Conditioner	Control Modes (0-Auto, 1-Heat, 3-Cool, 9-Fan, 14-Dry)	1 byte	HVAC control mode	C - - T -
67	HVAC 1 - Air Conditioner	Control Modes Status (0-Auto, 1-Heat, 3-Cool, 9-Fan, 14-Dry)	1 byte	HVAC control mode	C - W T U

Or

68	HVAC 1 - Air Conditioner	Auto Mode	1 bit	state	C - - T -
69	HVAC 1 - Air Conditioner	Auto Mode Status	1 bit	state	C - W T U
70	HVAC 1 - Air Conditioner	Heat Mode	1 bit	state	C - - T -
71	HVAC 1 - Air Conditioner	Heat Mode Status	1 bit	state	C - W T U
72	HVAC 1 - Air Conditioner	Cool Mode	1 bit	state	C - - T -
73	HVAC 1 - Air Conditioner	Cool Mode Status	1 bit	state	C - W T U
74	HVAC 1 - Air Conditioner	Fan Mode	1 bit	state	C - - T -
75	HVAC 1 - Air Conditioner	Fan Mode Status	1 bit	state	C - W T U
76	HVAC 1 - Air Conditioner	Dry Mode	1 bit	state	C - - T -
77	HVAC 1 - Air Conditioner	Dry Mode Status	1 bit	state	C - W T U

Modes to be shown on display can be selected.

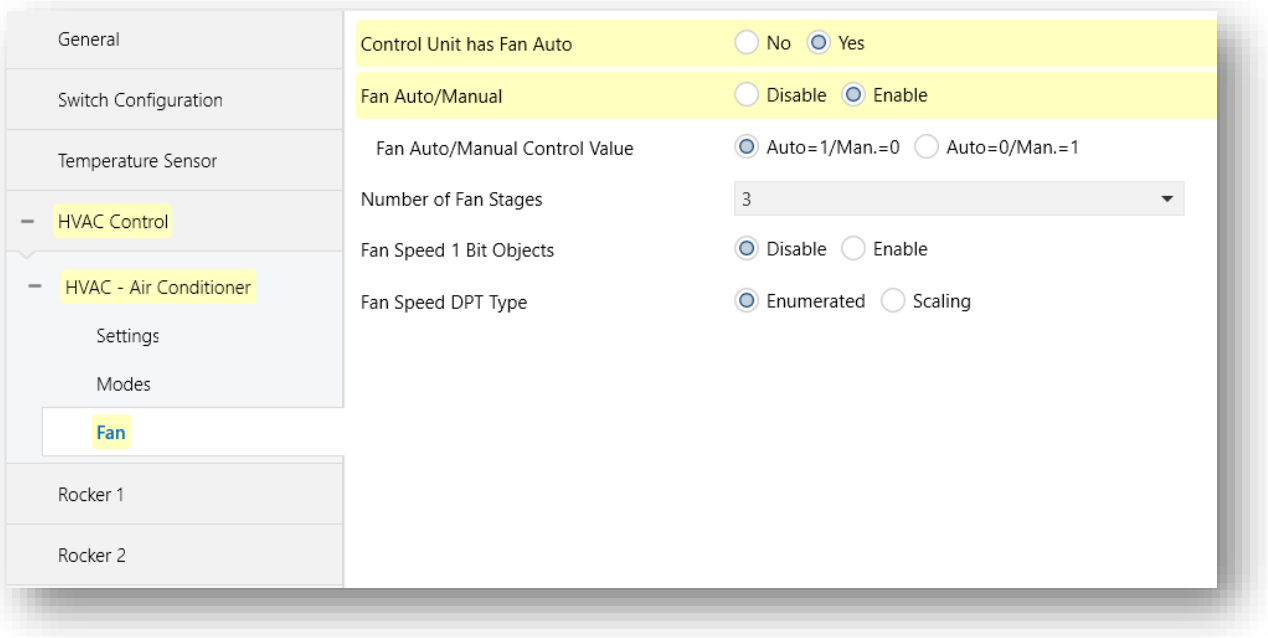
Auto Mode	✓
Heat Mode	✓
Cool Mode	✓
Fan Mode	✓
Dry/Dehumidification Mode	✓

Heat/Cool Mode 1 Bit Object: [**Disable**, Enable]

Parameter enables the switchover object to change between heating and cooling mode.

64	HVAC 1 - Air Conditioner	Control Mode Heat/Cool (1-Heat, 0-Cool)	1 bit	cooling/heating	C - - T -
65	HVAC 1 - Air Conditioner	Control Mode Heat/Cool Status (1-Heat, 0-Cool)	1 bit	cooling/heating	C - W T U

3.4.2.3. Fan



Control Unit has Fan Auto:

Parameter can be activated if actuator has a "Fan auto" function.

Fan Auto/Manual Object:

"Fan auto" command can be sent to the actuator via Object "Fan Auto/Manual (1-Auto)" will be visible.

92	HVAC 1 - Air Conditioner	Fan Auto/Manual (1-Auto)	1 bit	enable	C - - T -
93	HVAC 1 - Air Conditioner	Fan Auto/Manual Status (1-Auto)	1 bit	enable	C - W T U

Fan Auto/Manual Control Value:

Fan auto command can be used inverse. [True or False]

Number of Fan Stages: [1…**3**…5]

Number of Fan levels can be changed according to control unit. Object will be available according to selection.

78	HVAC 1 - Air Conditioner	Fan Speed Enumerated (0,1,2,3)	1 byte	fan stage (0..255)	C - - T -
79	HVAC 1 - Air Conditioner	Fan Speed Enumerated Status (0,1,2,3)	1 byte	fan stage (0..255)	C - W T U

Fan Stage Object Type: [1 bit, **1 Byte**]

Type of Fan stage object can be changed as 1 bit or 1 Byte. 1 Byte object can be used as "Enumerated" or "Scaling".

1 Byte objects;

Fan Speed Enumerated (0, 1, 2, 3, 4,5) (Mismatched data has no effect on fan speed status display)
Fan Speed Scaling (0, 20, 40, 60, 80, 100) % (see fan speed scaling value table)

1 bit objects;

82	HVAC 1 - Air Conditioner	Fan 1	1 bit	state	C - - T -
83	HVAC 1 - Air Conditioner	Fan 1 Status	1 bit	state	C - W T U
84	HVAC 1 - Air Conditioner	Fan 2	1 bit	state	C - - T -
85	HVAC 1 - Air Conditioner	Fan 2 Status	1 bit	state	C - W T U
86	HVAC 1 - Air Conditioner	Fan 3	1 bit	state	C - - T -
87	HVAC 1 - Air Conditioner	Fan 3 Status	1 bit	state	C - W T U
88	HVAC 1 - Air Conditioner	Fan 4	1 bit	state	C - - T -
89	HVAC 1 - Air Conditioner	Fan 4 Status	1 bit	state	C - W T U
90	HVAC 1 - Air Conditioner	Fan 5	1 bit	state	C - - T -
91	HVAC 1 - Air Conditioner	Fan 5 Status	1 bit	state	C - W T U

Fan Speed Scaling Value Table:

Fan Auto disabled:

	FAN Speed 1	*FAN Speed 2*	*FAN Speed 3*	*FAN Speed 4*	*FAN Speed 5*
Status (Receiving)	*100%*				
Control (Transmitting)	*100%*				
Status (Receiving)	*50-99%*	*100%*			
Control (Transmitting)	*50%*	*100%*			
Status (Receiving)	*33-66%*	*67-99%*	*100%*		
Control (Transmitting)	*33%*	*67%*	*100%*		
Status (Receiving)	*25-49%*	*50-74%*	*75-99%*	*100%*	
Control (Transmitting)	*25%*	*50%*	*75%*	*100%*	
Status (Receiving)	*20-39%*	*40-59%*	*60-79%*	*80-99%*	*100%*
Control (Transmitting)	*20%*	*40%*	*60%*	*80%*	*100%*

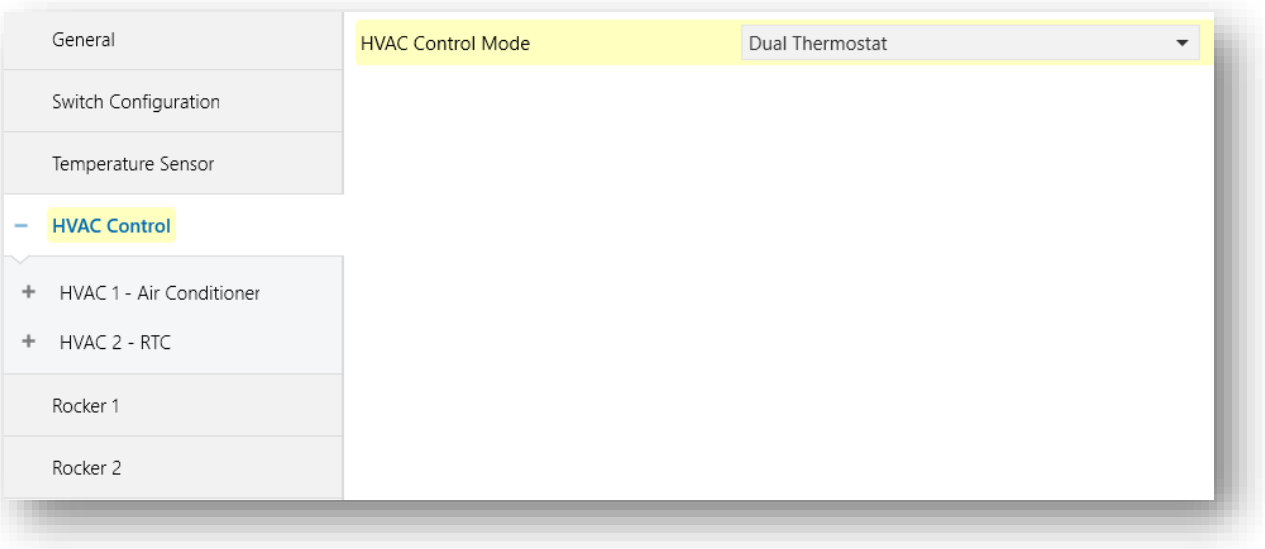
Mismatched data has no effect on fan speed status display

Fan Auto enabled:

	FAN Auto	*FAN Speed 1*	*FAN Speed 2*	*FAN Speed 3*	*FAN Speed 4*	*FAN Speed 5*
Status (Receiving)	*0-99%*	*100%*				
Control (Transmitting)	*0%*	*100%*				
Status (Receiving)	*0-49%*	*50-99%*	*100%*			
Control (Transmitting)	*0%*	*50%*	*100%*			
Status (Receiving)	*0-32%*	*33-66%*	*67-99%*	*100%*		
Control (Transmitting)	*0%*	*33%*	*67%*	*100%*		
Status (Receiving)	*0-24%*	*25-49%*	*50-74%*	*75-99%*	*100%*	
Control (Transmitting)	*0%*	*25%*	*50%*	*75%*	*100%*	
Status (Receiving)	*0-19%*	*20-39%*	*40-59%*	*60-79%*	*80-99%*	*100%*
Control (Transmitting)	*0%*	*20%*	*40%*	*60%*	*80%*	*100%*

3.5. Dual Thermostat

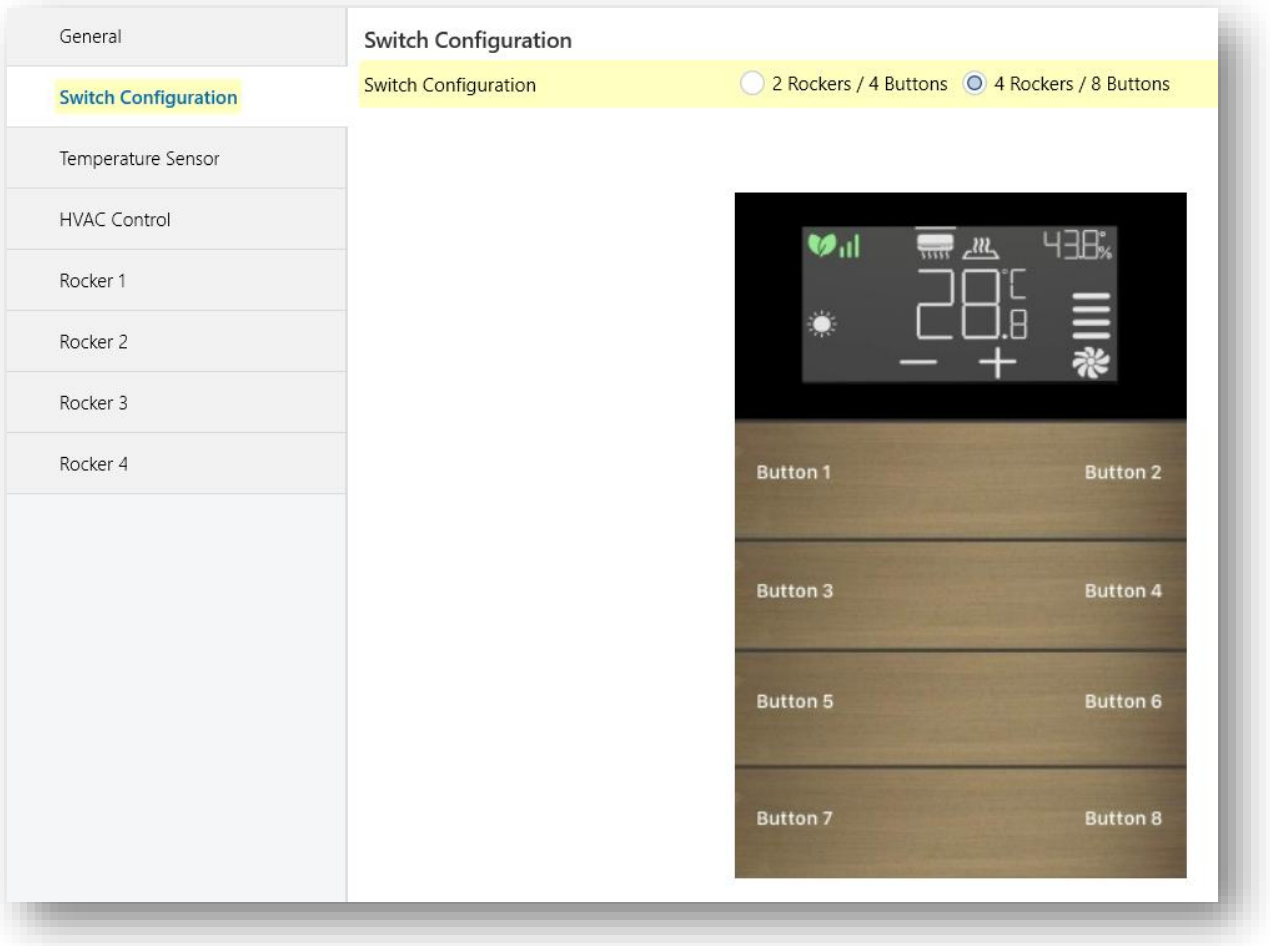
It is possible to use Eclipse Thermostat as dual thermostat. When used, it is possible to control 2 individual thermostat logics with one device.



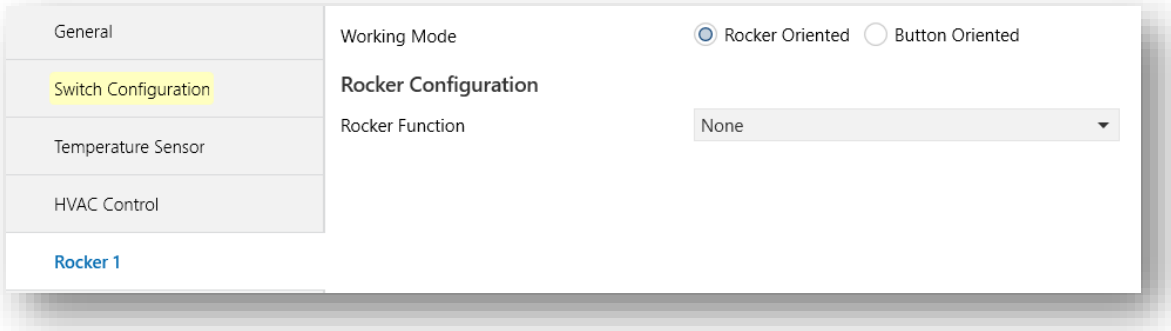
HVAC 1 is defined as Air Conditioner and HVAC 2 is defined as RTC. See 3.4.1 RTC and 3.4.2 Air conditioner for detailed configuration of HVAC Controllers.

3.6. Switch Configuration

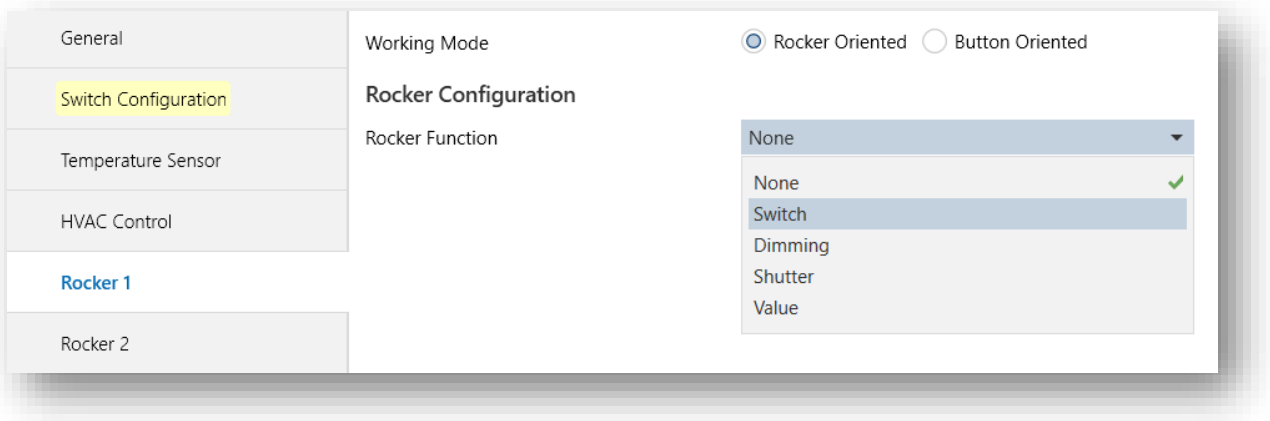
Select rocker/fold count for Eclipse switch. [2, 4]



Two working modes are available for rocker. [Rocker oriented, Button Oriented]

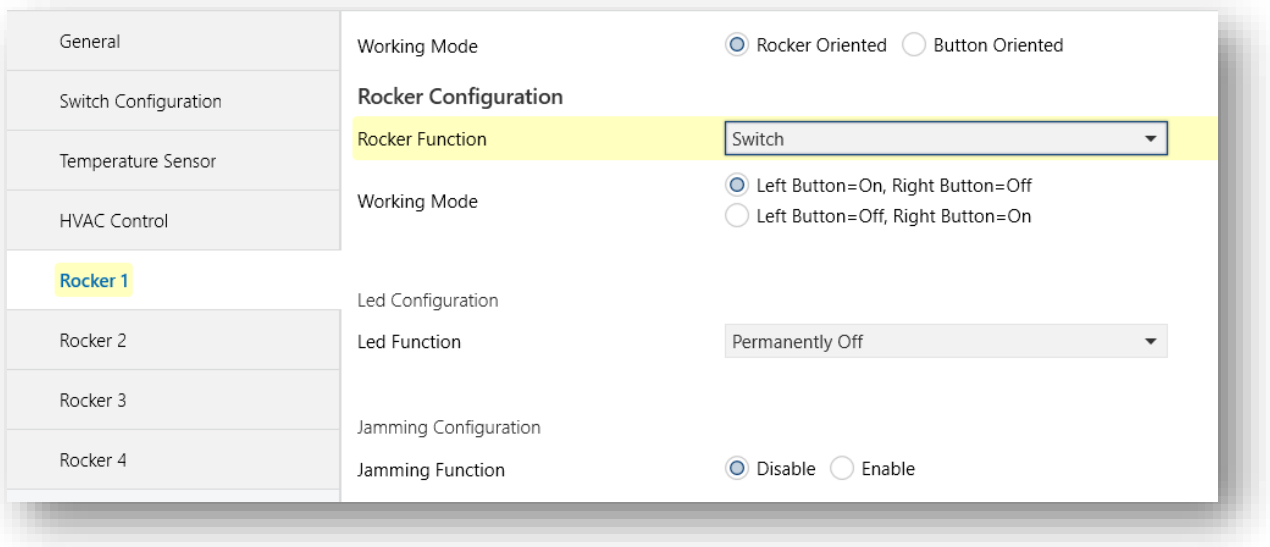


Rocker oriented functions: [Switch, Dimming, Shutter, Value]



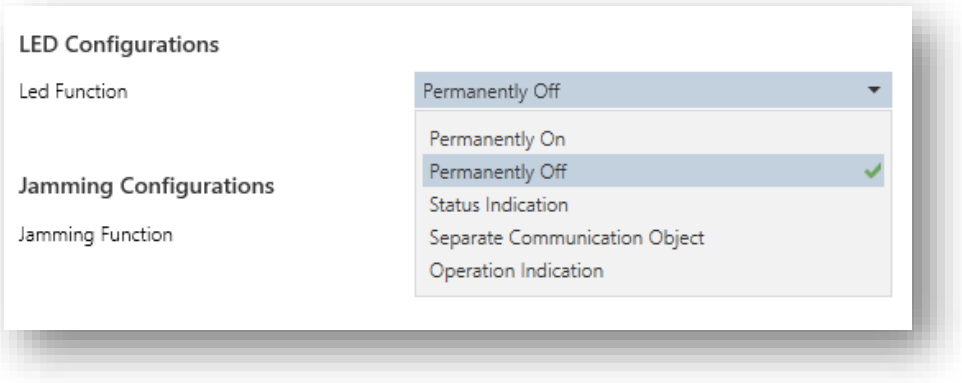
3.6.1. Rocker Oriented [Switch]

Working mode is selectable for left and right buttons. [Left Button = ON; Right Button=OFF]

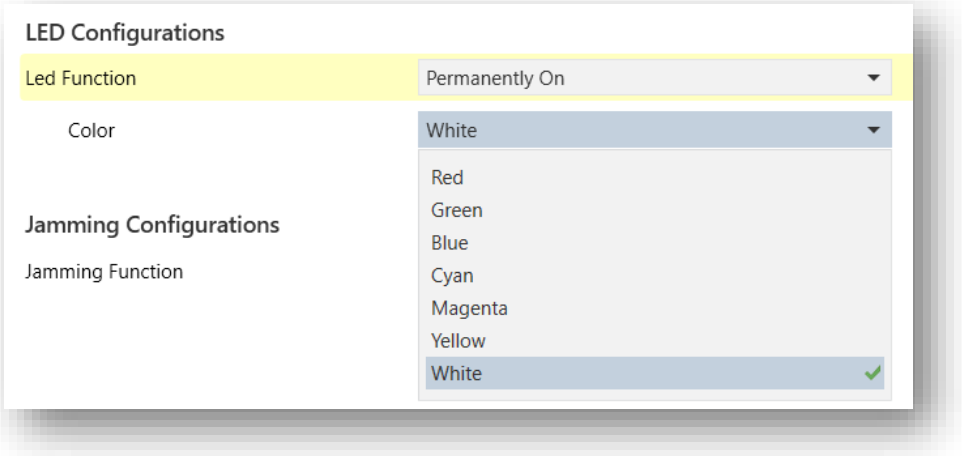


Led configurations:

Available functions: Permanently OFF, Permanently ON, Status Indication, Separate Communication Object and Operation Indication.



Led Function [Permanently ON]: LED is always ON for selected color. [Red, Green, Blue, Cyan, Magenta, Yellow, White]

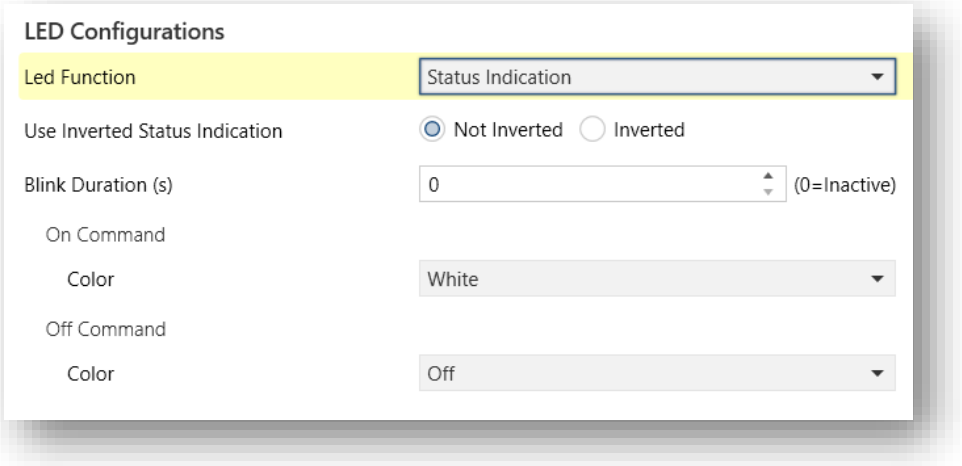


Led Function [Permanently OFF]: LED is always OFF.

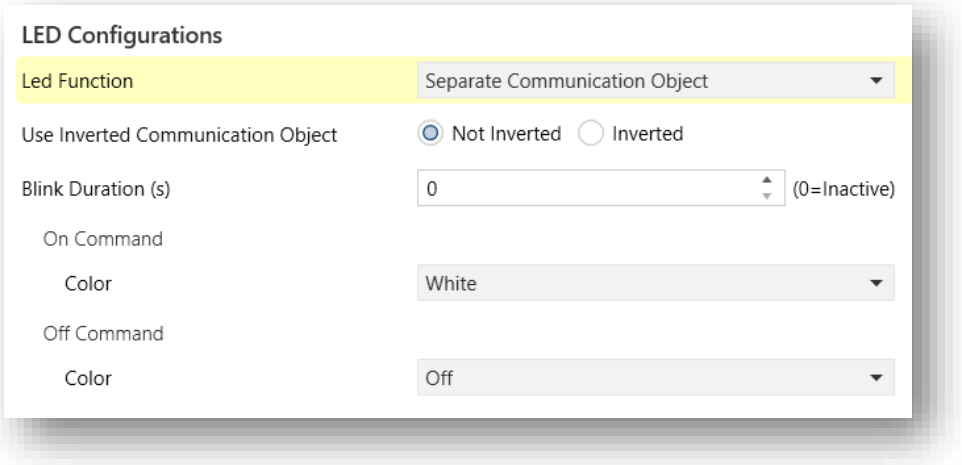
Led Function [Status indication]: LED color will change according to status information.

On command [white] – OFF Command [Off]

Blink duration: Status LED of the pressed rocker button will blink for the time period selected at "Blink Duration(s)" parameter. (Blinking interval is fixed.)

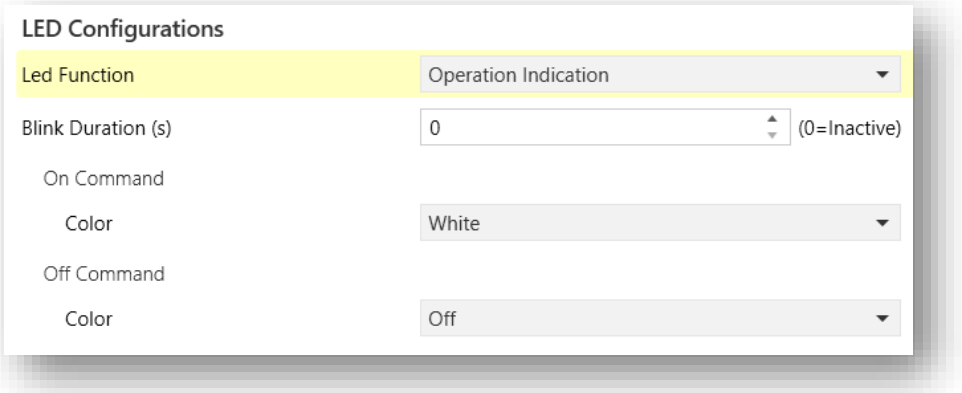


Led Function [Separate Communication Object]: LED color will change according to value received by LED status object.



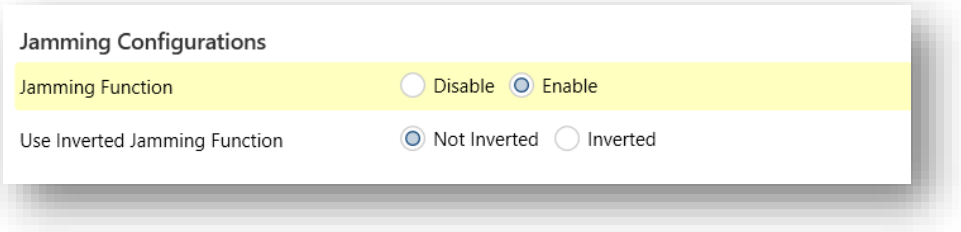
Led Function [Operation indication]: Status LED of rocker button will stay on color selected for "OFF command" until it is pressed. The pressed button will stay on color selected for "ON command" until it is released.

Blink duration: Status LED of the pressed rocker button will blink for the time period selected at "Blink Duration(s)" parameter. (Blinking interval is fixed.)



Jamming Configurations

Jamming function is used to block to respective button or rocker via "Rocker - Jamming" by writing "true or false" data from the bus. Button will not work until it is enabled via jamming object.



3.6.2. Rocker Oriented [Dimming]

Working mode is selectable for left and right buttons. [Left Button = ON/Brighter; Right Button=OFF/Darker]

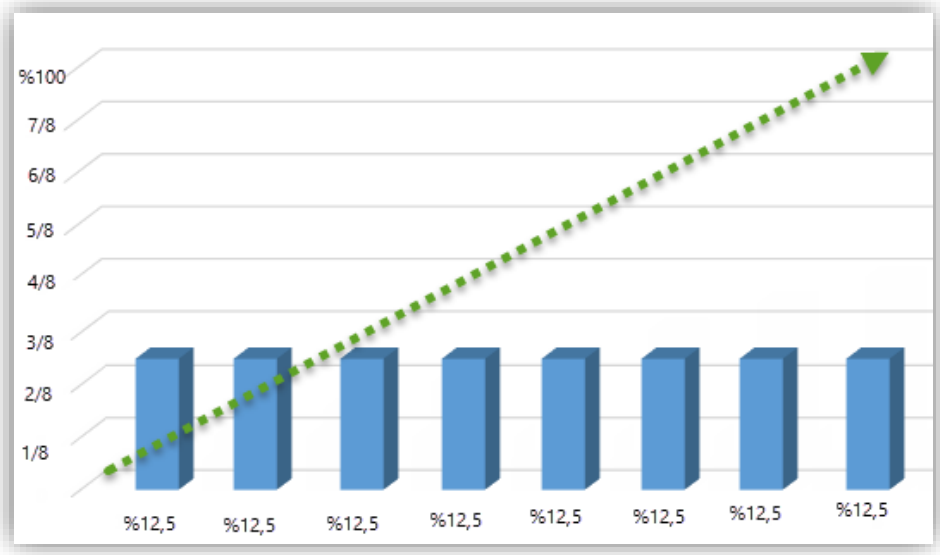
Long Press Duration (x100 ms): Long press duration can be changed. [0…**10**...65535]

As default; 100 ms x 10=1000 ms (1 second)

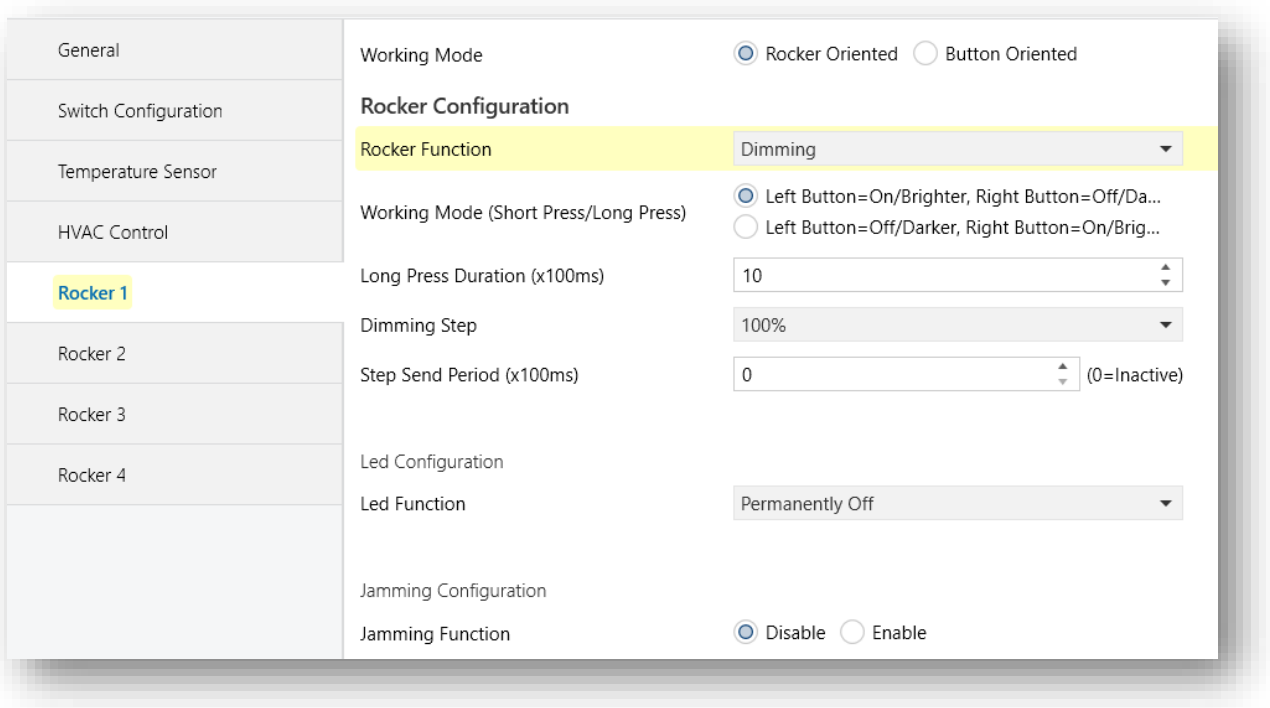
Switch will start to send dimming up/down commands after each press longer than "1 second".

Dimming Step: Dimming step percentage can be changed to specify the maximum dimming step width of a dimming telegram. With a dimming message, you can dim by a maximum of X %.

(%100 option represents "Start-stop" dimming function. Other percentage values correspond to "step dimming function".)

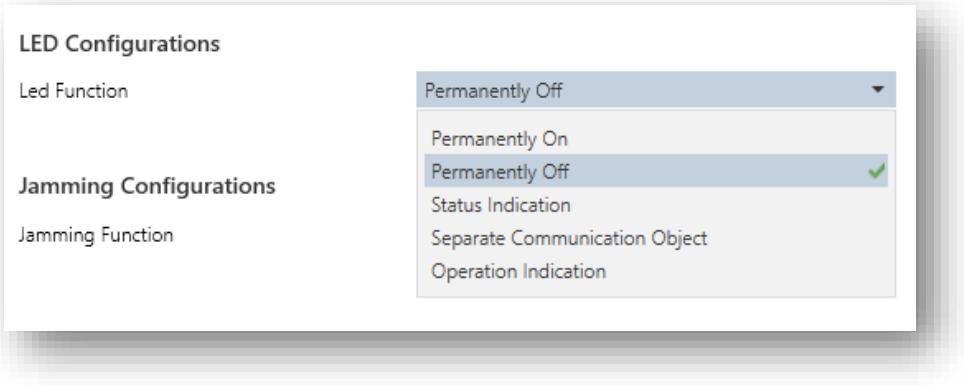


Step Send Period: Defines time interval between two dimming step commands.

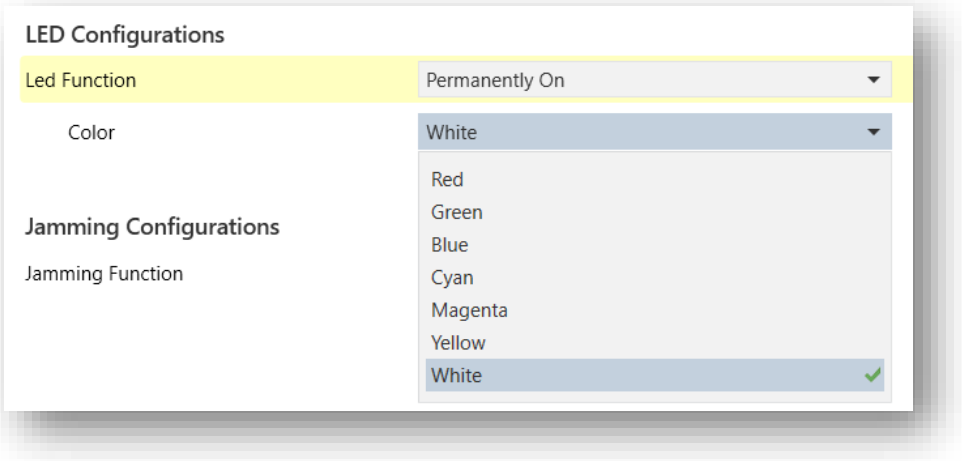


Led configurations:

Available functions: Permanently OFF, Permanently ON, Status Indication, Separate Communication Object and Operation Indication.



Led Function [Permanently ON]: LED is always ON for selected color. [Red, Green, Blue, Cyan, Magenta, Yellow, White]

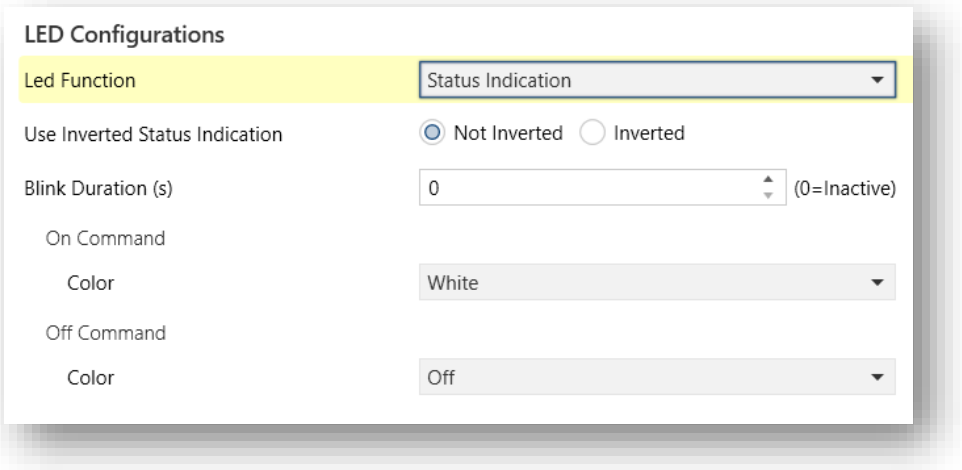


Led Function [Permanently OFF]: LED is always OFF.

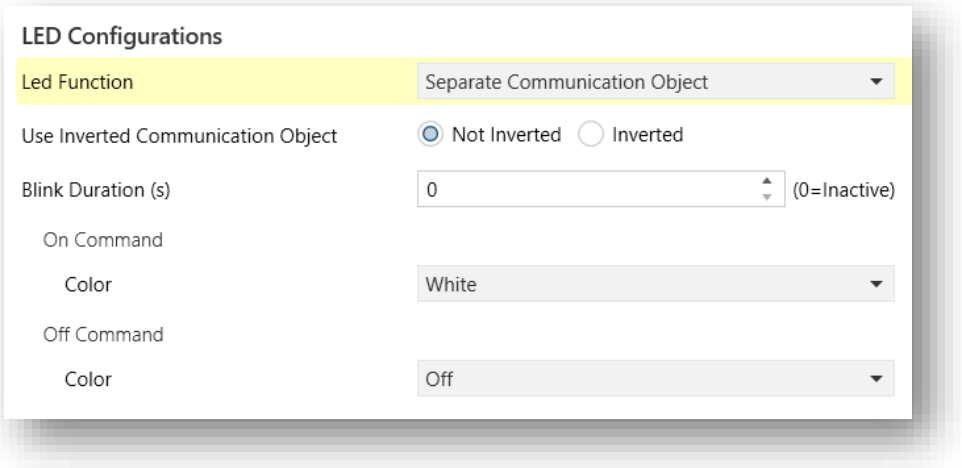
Led Function [Status indication]: LED color will change according to status information.

On command [white] – OFF Command [Off]

Blink duration: Status LED of the pressed rocker button will blink for the time period selected at "Blink Duration(s)" parameter. (Blinking interval is fixed.)

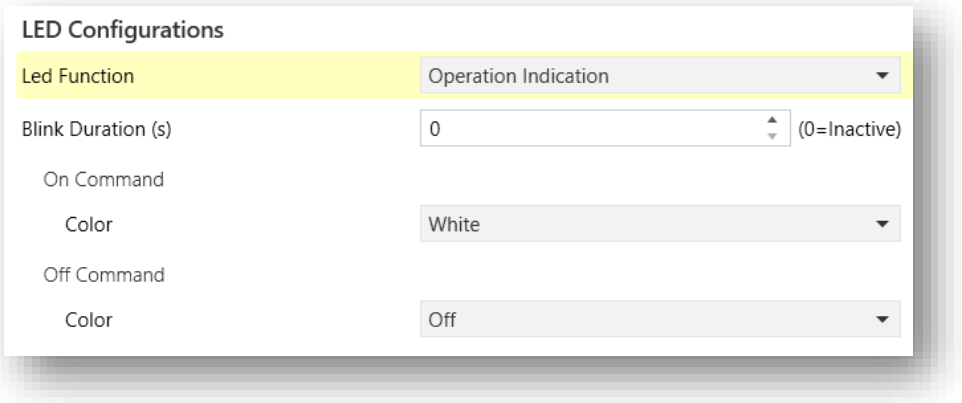


Led Function [Separate Communication Object]: LED color will change according to value received by LED status object.



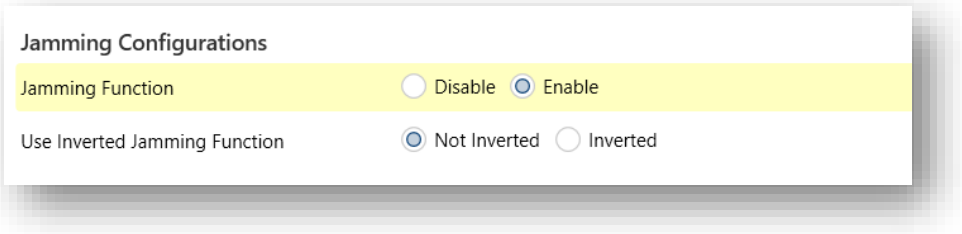
Led Function [Operation indication]: Status LED of rocker button will stay on color selected for "OFF command" until it is pressed. The pressed button will stay on color selected for "ON command" until it is released.

Blink duration: Status LED of the pressed rocker button will blink for the time period selected at "Blink Duration(s)" parameter. (Blinking interval is fixed.)



Jamming Configurations

Jamming function is used to block to respective button or rocker via Rocker - Jamming" by writing "true or false" data from the bus. Button will not work until it is enabled via jamming object.



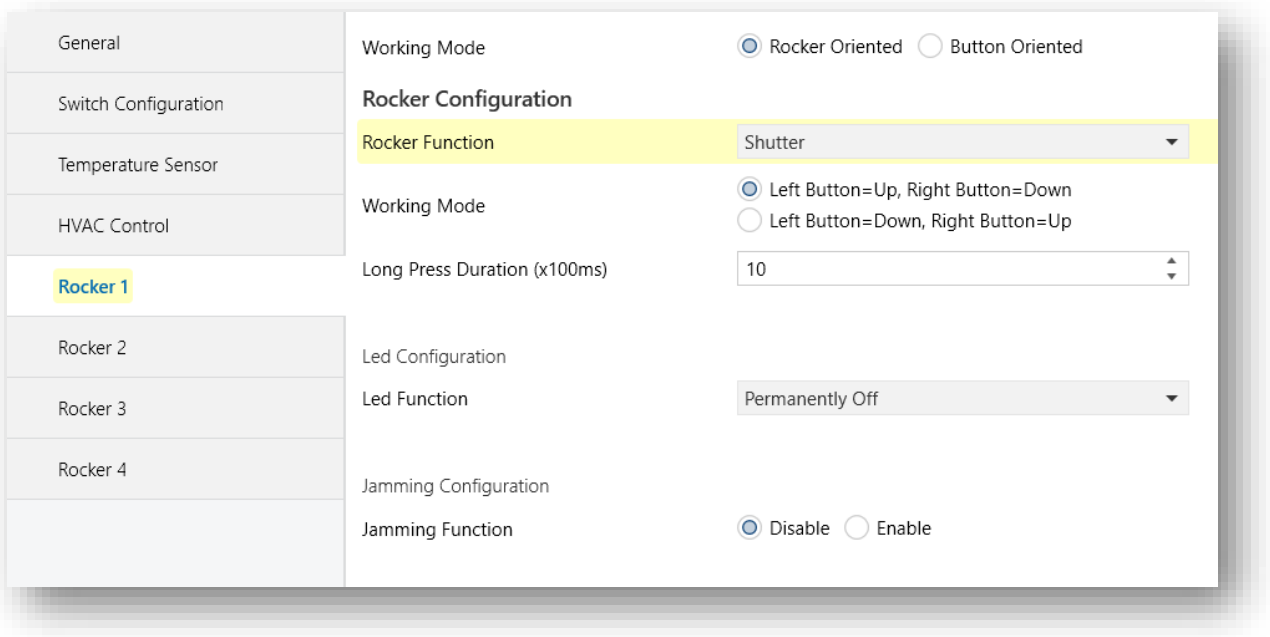
3.6.3. Rocker Oriented [Shutter]

Working mode is selectable for left and right buttons. [Left Button = UP; Right Button=DOWN]

Long Press Duration (x100 ms): Long press duration can be changed. [0…**10**...65535]

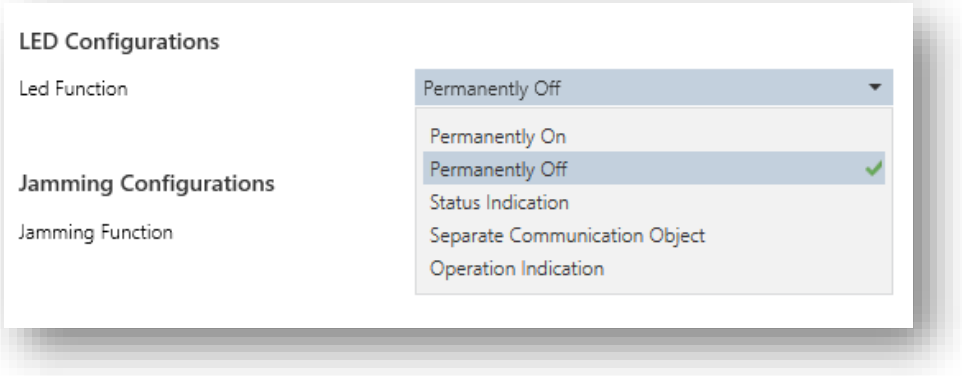
As default; 100 ms x 10=1000 ms (1 second)

Switch will start to send move up/down commands after each press longer than "1 second". Switch will send Step/Stop command on each short press,

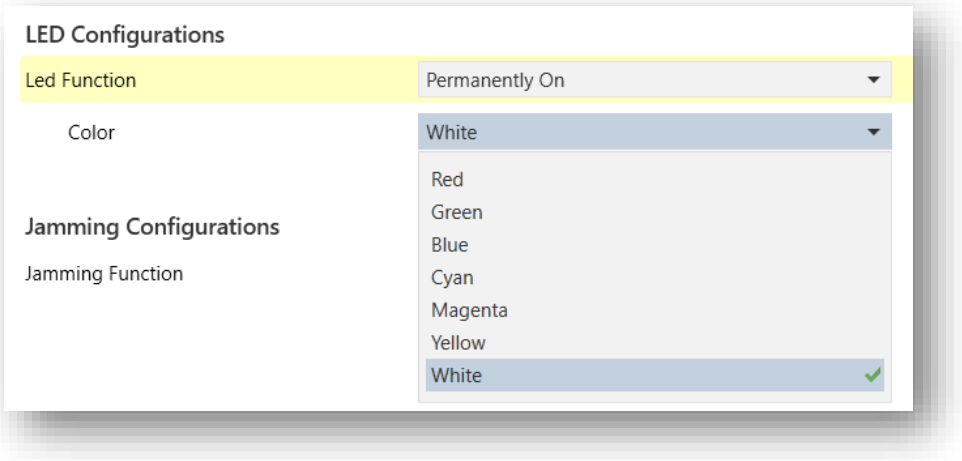


Led configurations:

Available functions: Permanently OFF, Permanently ON, Status Indication, Separate Communication Object and Operation Indication.



Led Function [Permanently ON]: LED is always ON for selected color. [Red, Green, Blue, Cyan, Magenta, Yellow, White]

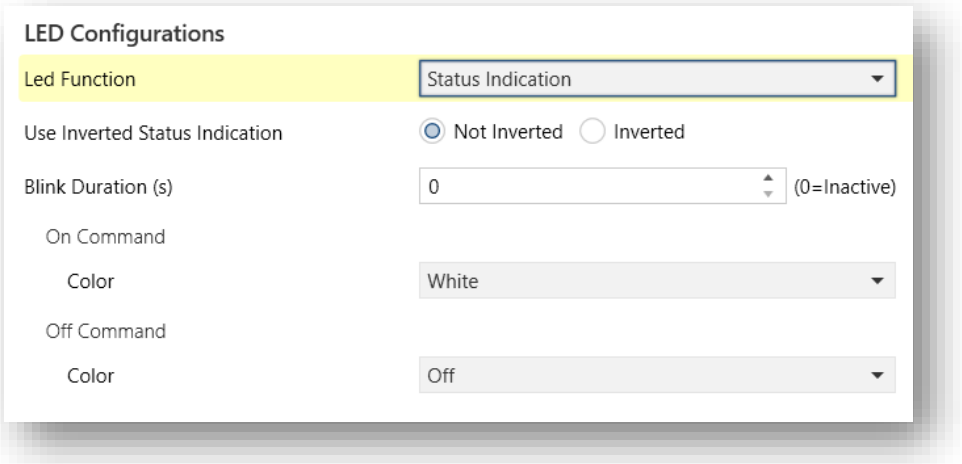


Led Function [Permanently OFF]: LED is always OFF.

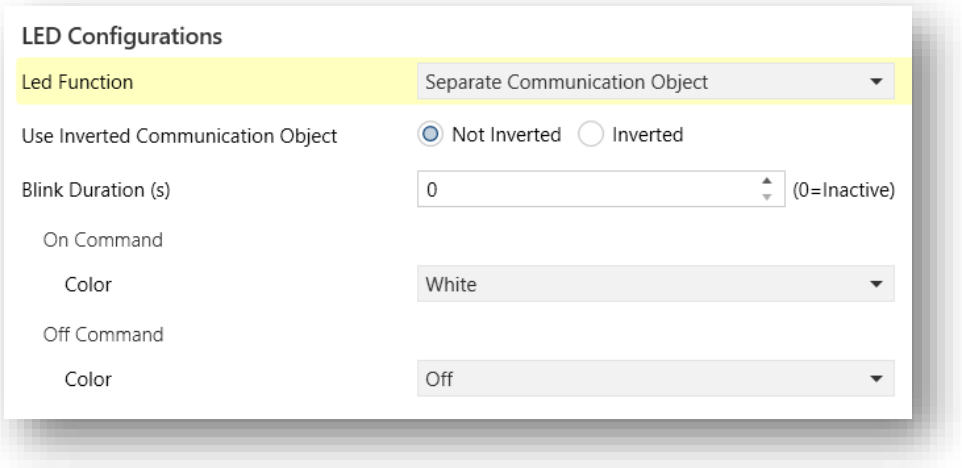
Led Function [Status indication]: LED color will change according to status information.

On command [white] – OFF Command [Off]

Blink duration: Status LED of the pressed rocker button will blink for the time period selected at "Blink Duration(s)" parameter. (Blinking interval is fixed.)

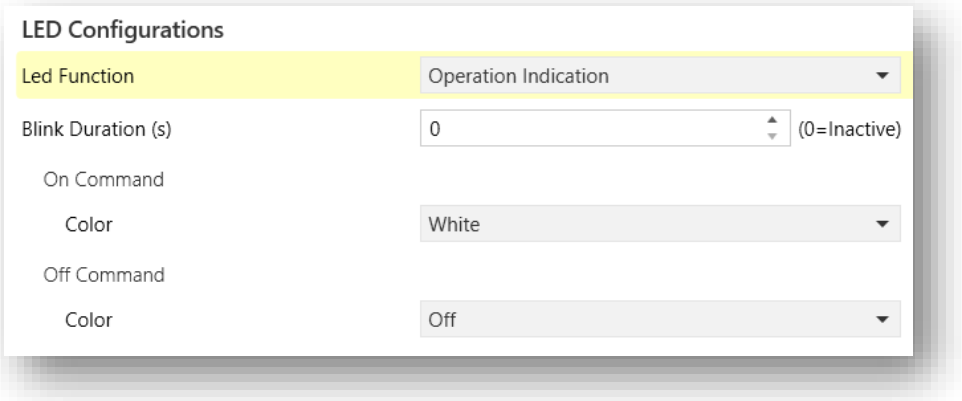


Led Function [Separate Communication Object]: LED color will change according to value received by LED status object.



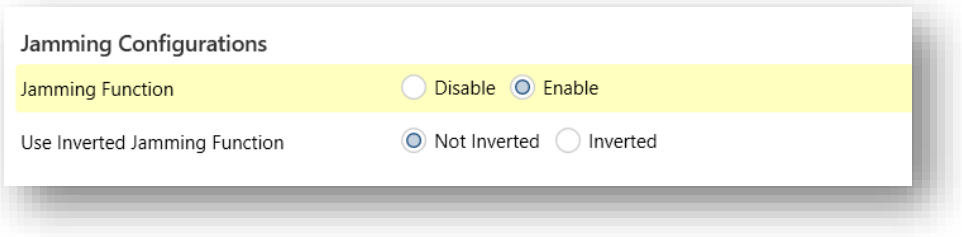
Led Function [Operation indication]: Status LED of rocker button will stay on color selected for "OFF command" until it is pressed. The pressed button will stay on color selected for "ON command" until it is released.

Blink duration: Status LED of the pressed rocker button will blink for the time period selected at "Blink Duration(s)" parameter. (Blinking interval is fixed.)



Jamming Configurations

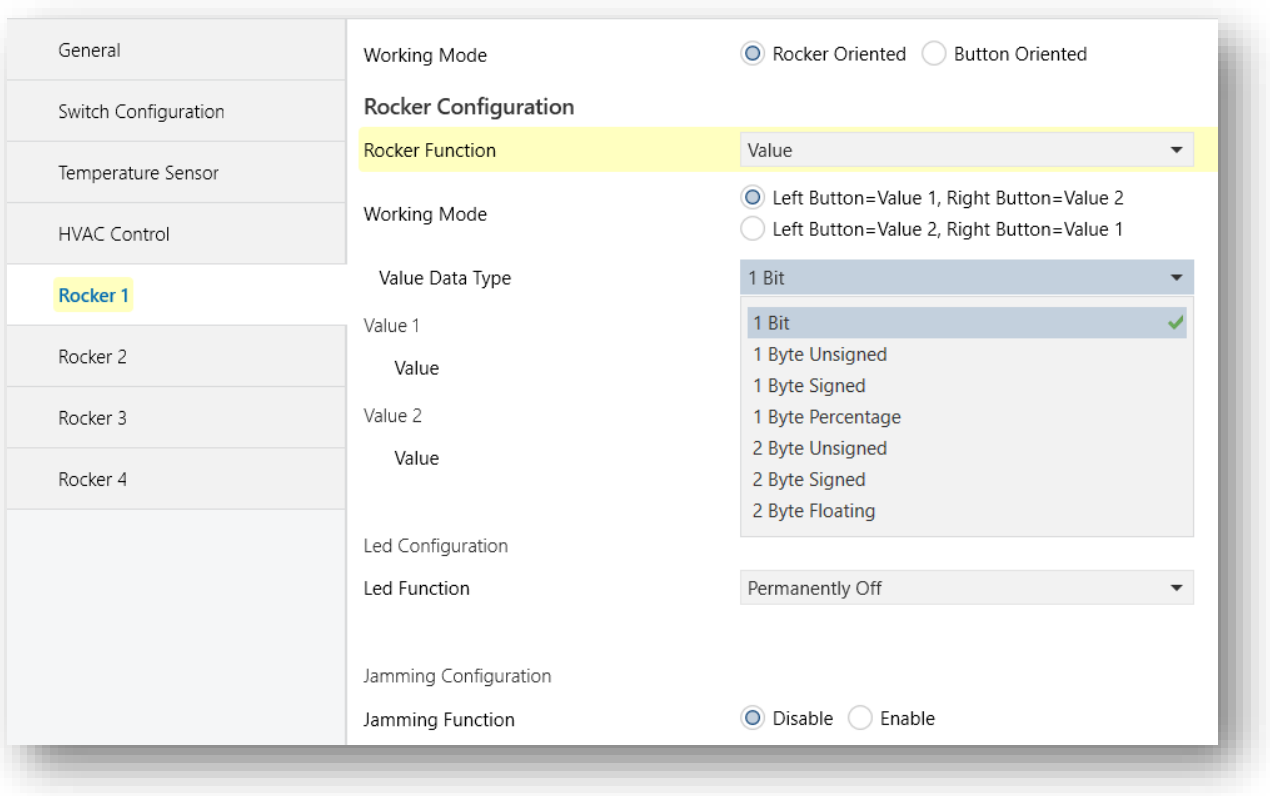
Jamming function is used to block to respective button or rocker via "Rocker - Jamming" by writing "true or false" data from the bus. Button will not work until it is enabled via jamming object.



3.6.4. Rocker Oriented [Value]

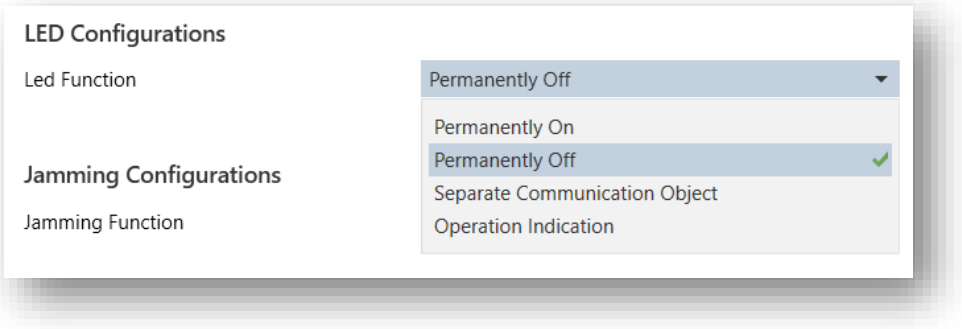
Working mode is selectable for left and right buttons. [Left Button = VALUE 1; Right Button= VALUE 2]

Selectable data types:
1 bit value
1 byte Unsigned Value
1 Byte Signed Value
1 Byte Percentage
2 Byte Unsigned Value
2 Byte Signed Value
2 Bytes Floating Value

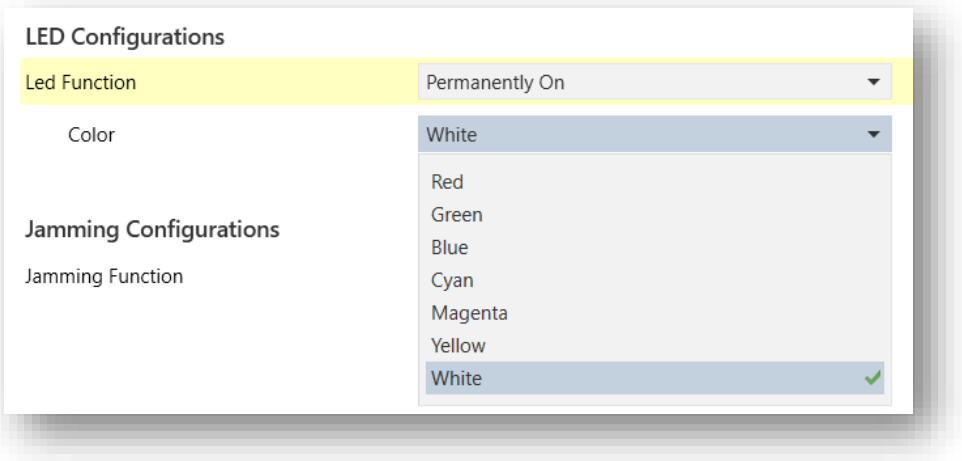


Led configurations:

Available functions: Permanently OFF, Permanently ON, Status Indication, Separate Communication Object and Operation Indication.

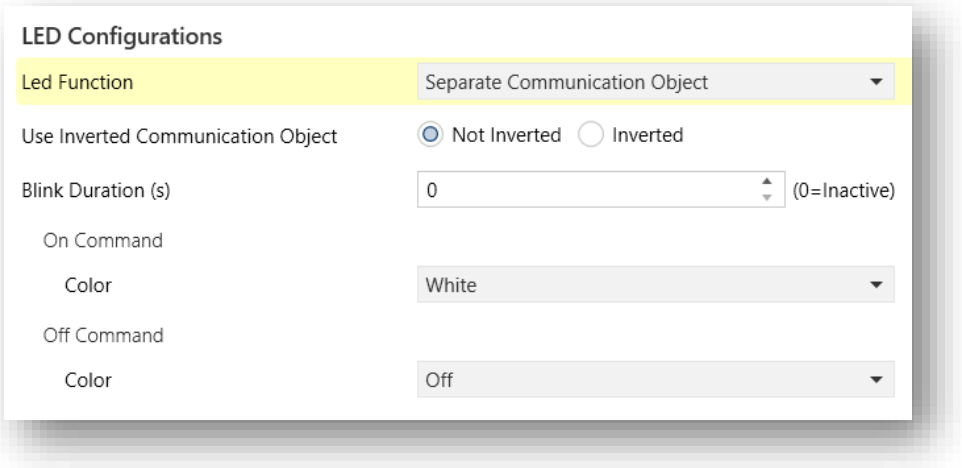


Led Function [Permanently ON]: LED is always ON for selected color. [Red, Green, Blue, Cyan, Magenta, Yellow, White]



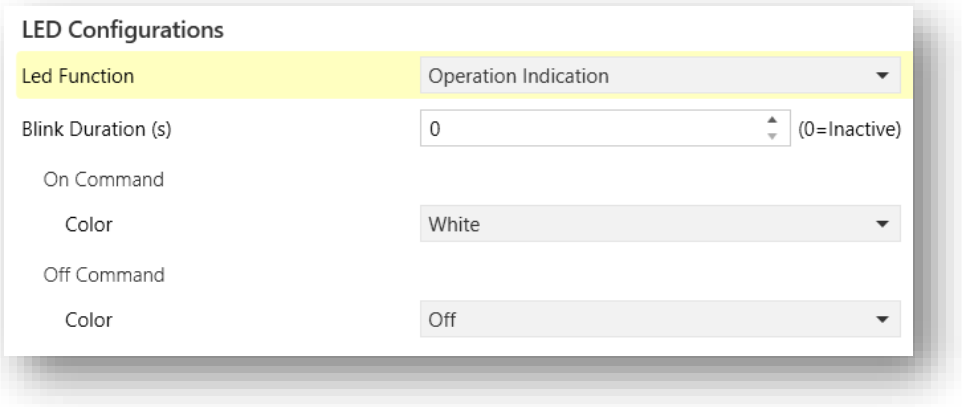
Led Function [Permanently OFF]: LED is always OFF.

Led Function [Separate Communication Object]: LED color will change according to value received by LED status object.



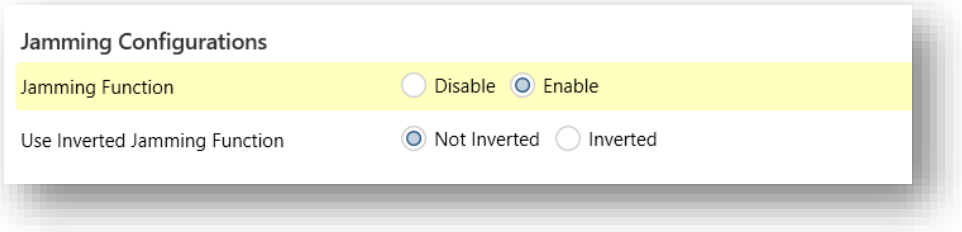
Led Function [Operation indication]: Status LED of rocker button will stay on color selected for "OFF command" until it is pressed. The pressed button will stay on color selected for "ON command" until it is released.

Blink duration: Status LED of the pressed rocker button will blink for the time period selected at "Blink Duration(s)" parameter. (Blinking interval is fixed.)



Jamming Configurations

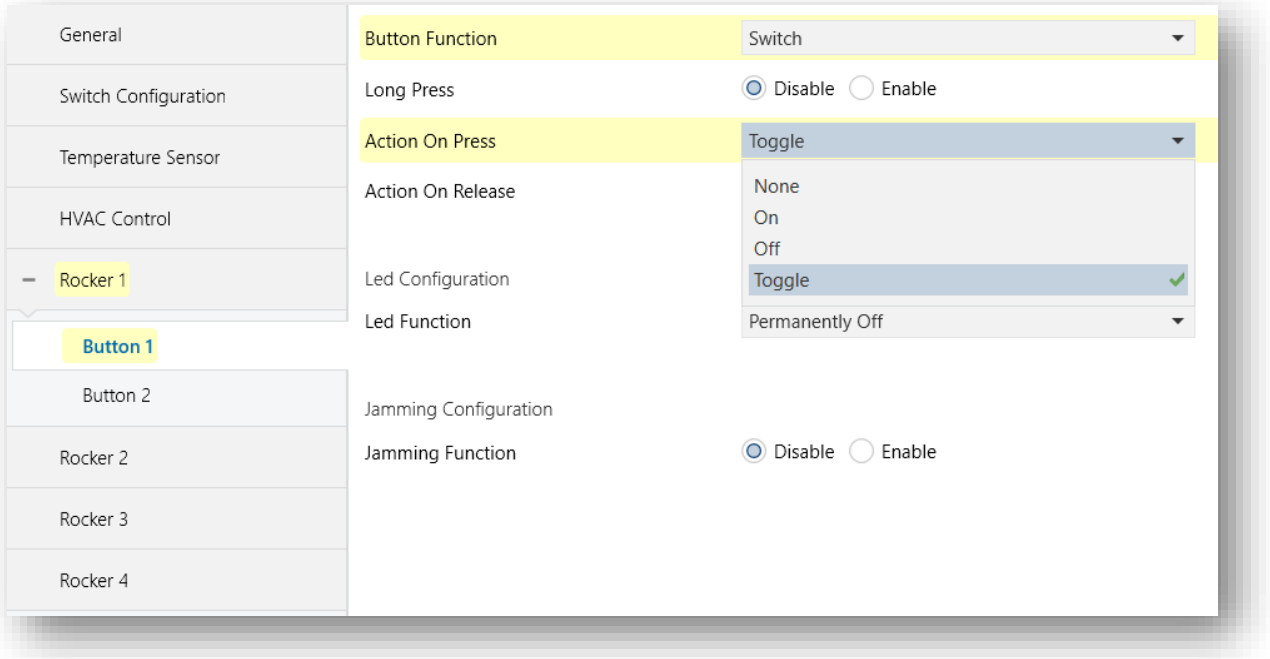
Jamming function is used to block to respective button or rocker via "Rocker - Jamming" by writing "true or false" data from the bus. Button will not work until it is enabled via jamming object.



3.6.5. Button Oriented [Switch]

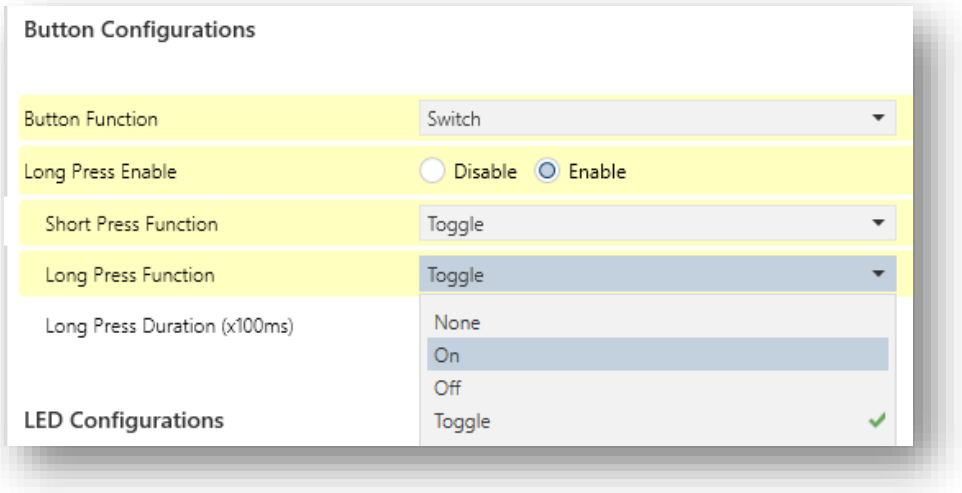
Action on press: [On, Off, Toggle] selected data will be sent to KNX bus for each press of button.

Action on release: [On, Off, Toggle] selected data will be sent to KNX bus for each release of button.



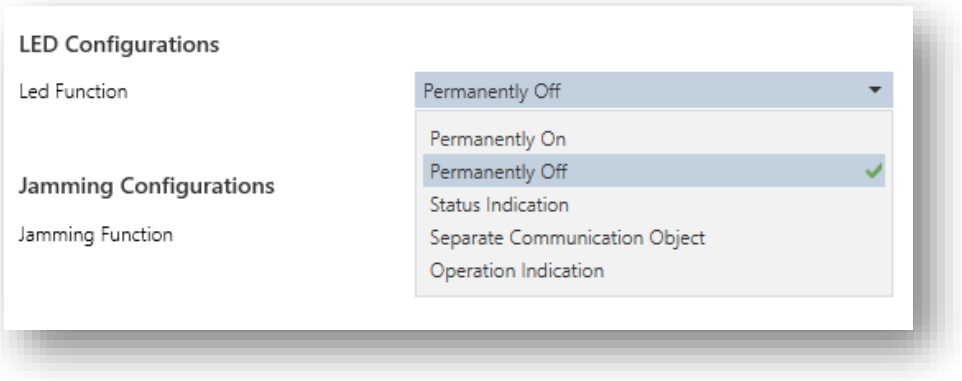
Long press function can be activated. Disabled as default.

ON, Off, Toggle commands can be sent separately using short and long press functions.

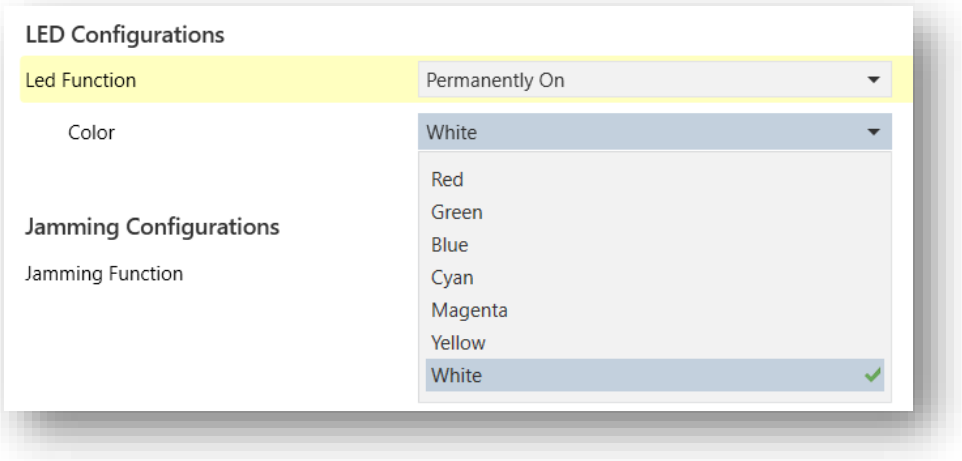


Led configurations:

Available functions: Permanently OFF, Permanently ON, Status Indication, Separate Communication Object and Operation Indication.



Led Function [Permanently ON]: LED is always ON for selected color. [Red, Green, Blue, Cyan, Magenta, Yellow, White]

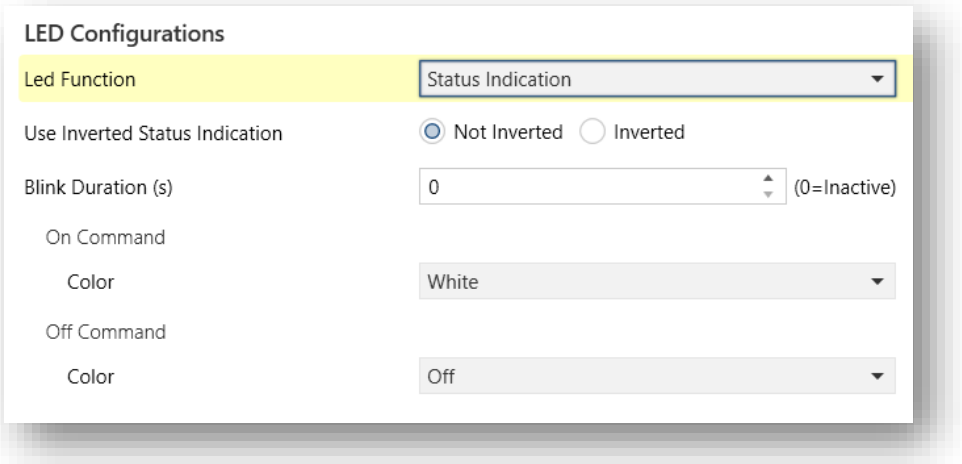


Led Function [Permanently OFF]: LED is always OFF.

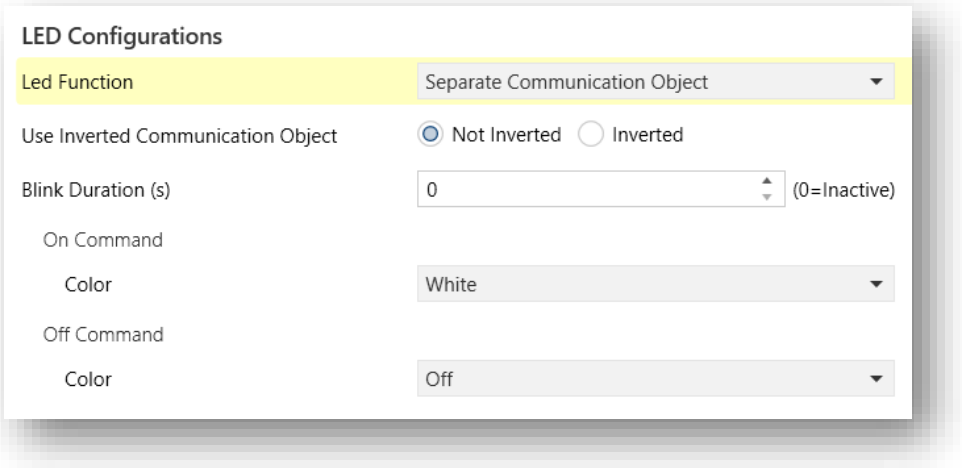
Led Function [Status indication]: LED color will change according to status information.

On command [white] – OFF Command [Off]

Blink duration: Status LED of the pressed rocker button will blink for the time period selected at "Blink Duration(s)" parameter. (Blinking interval is fixed.)

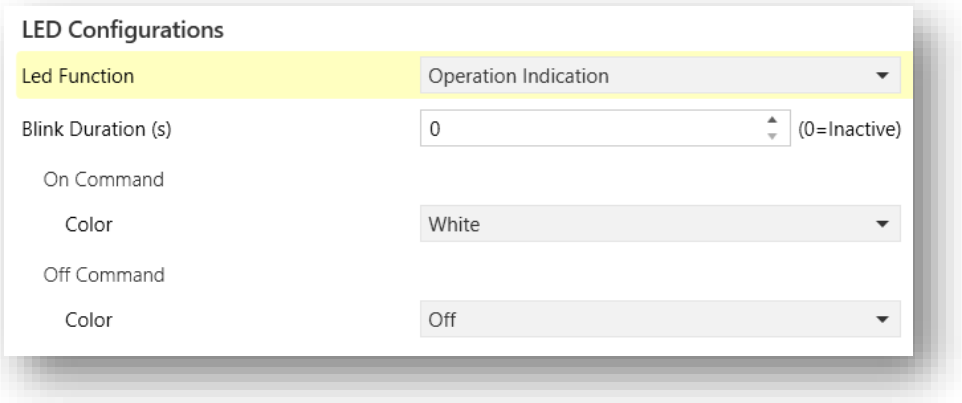


Led Function [Separate Communication Object]: LED color will change according to value received by LED status object.



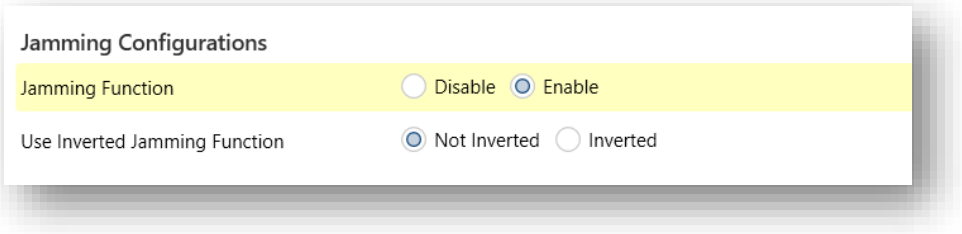
Led Function [Operation indication]: Status LED of rocker button will stay on color selected for "OFF command" until it is pressed. The pressed button will stay on color selected for "ON command" until it is released.

Blink duration: Status LED of the pressed rocker button will blink for the time period selected at "Blink Duration(s)" parameter. (Blinking interval is fixed.)



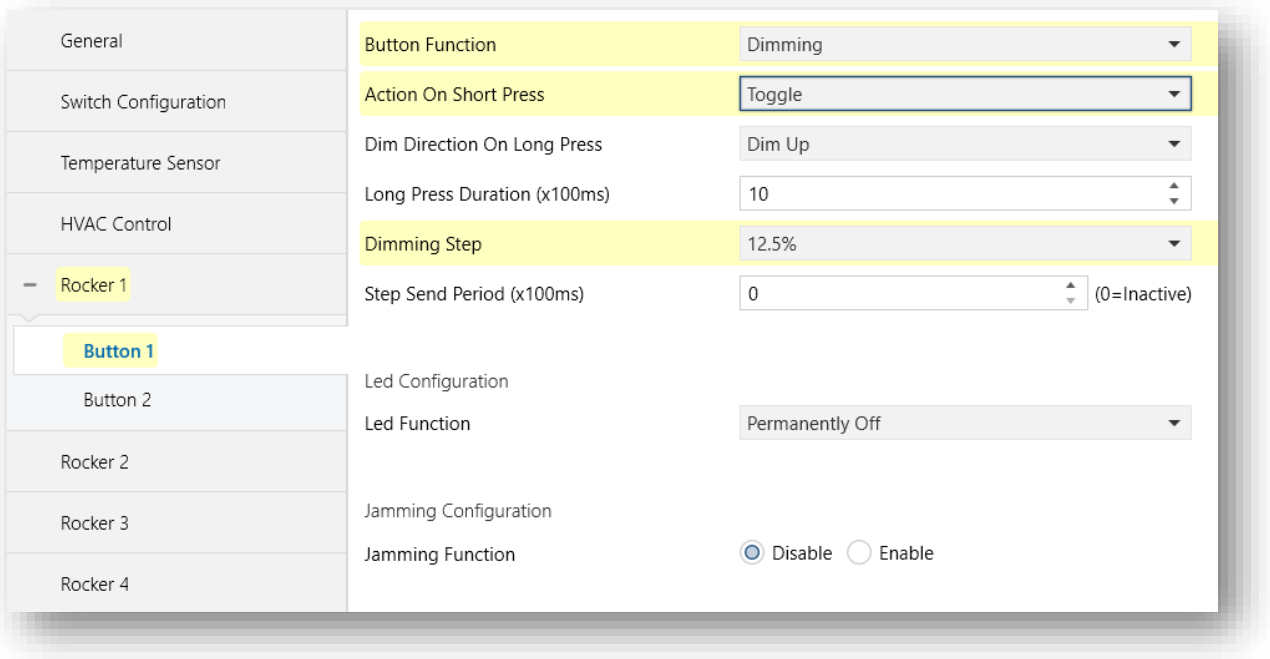
Jamming Configurations

Jamming function is used to block to respective button or rocker via "Rocker - Jamming" by writing "true or false" data from the bus. Button will not work until it is enabled via jamming object.



3.6.6. Button Oriented [Dimming]

"Action on press" can be selected for ON, OFF, TOGGLE commands. Using Long press function, Dim direction is changeable for UP, DOWN, UP/DOWN commands.



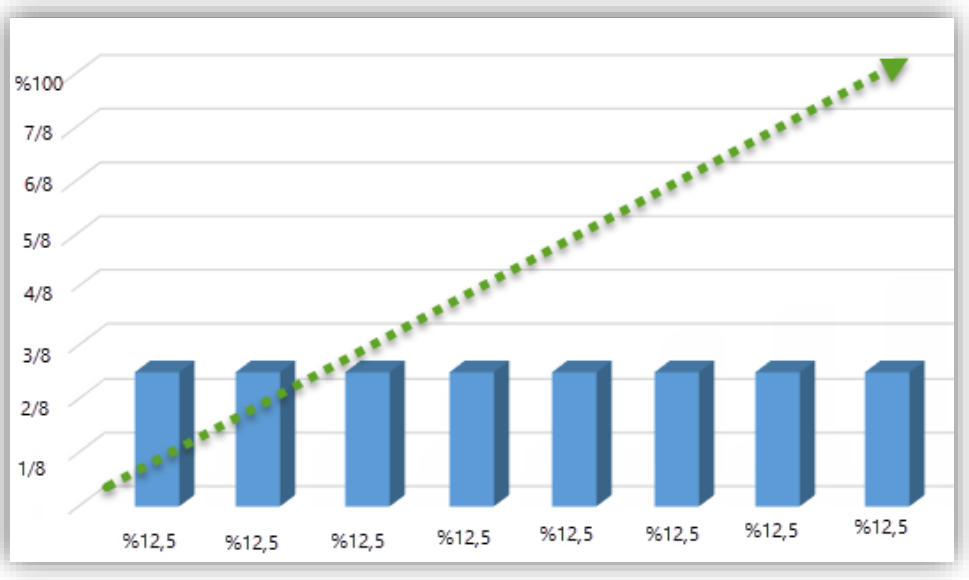
Long Press Duration (x100 ms): Long press duration can be changed. [0…**10**...65535]

As default; 100 ms x 10=1000 ms (1 second)

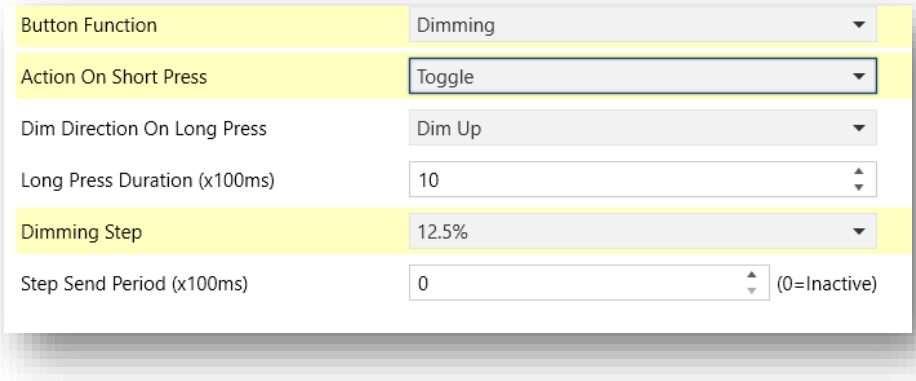
Switch will start to send dimming up/down commands after each press longer than "1 second".

Dimming Step: Dimming step percentage can be changed to specify the maximum dimming step width of a dimming telegram. With a dimming message, you can dim by a maximum of X %.

(%100 option represents "Start-stop" dimming function. Other percentage values correspond to "step dimming function".)

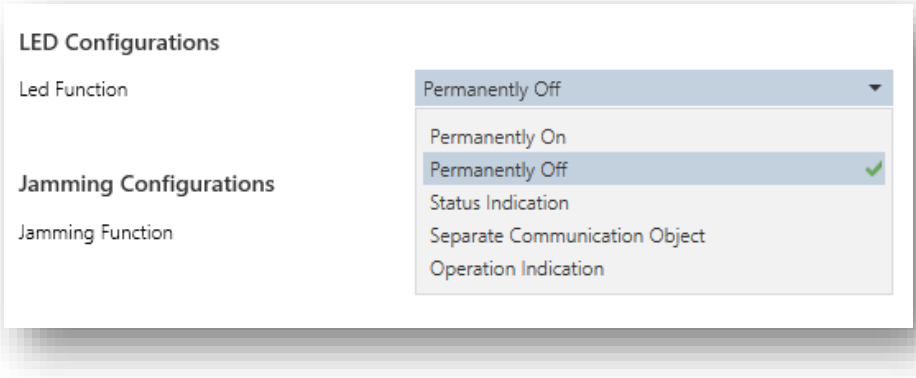


Step Send Period: Defines time interval between two dimming step commands. This interval is another parameter to change dimming speed of the lighting source.

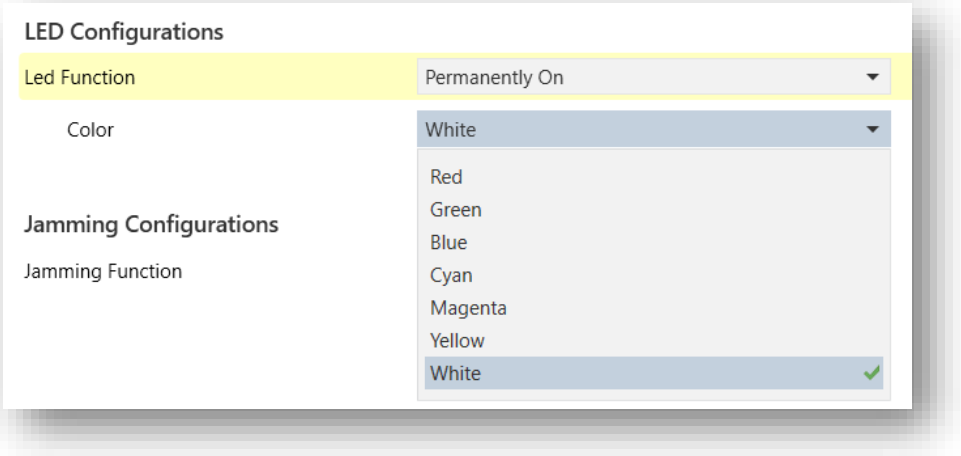


Led configurations:

Available functions: Permanently OFF, Permanently ON, Status Indication, Separate Communication Object and Operation Indication.



Led Function [Permanently ON]: LED is always ON for selected color. [Red, Green, Blue, Cyan, Magenta, Yellow, White]

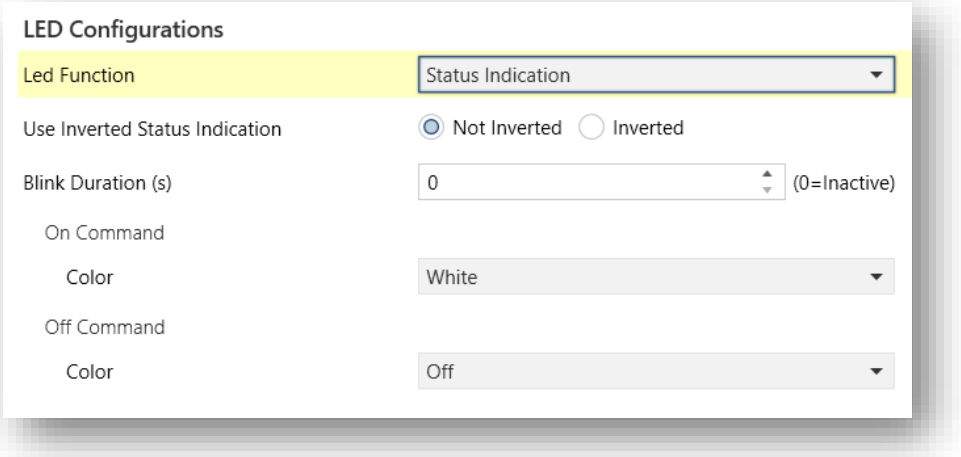


Led Function [Permanently OFF]: LED is always OFF.

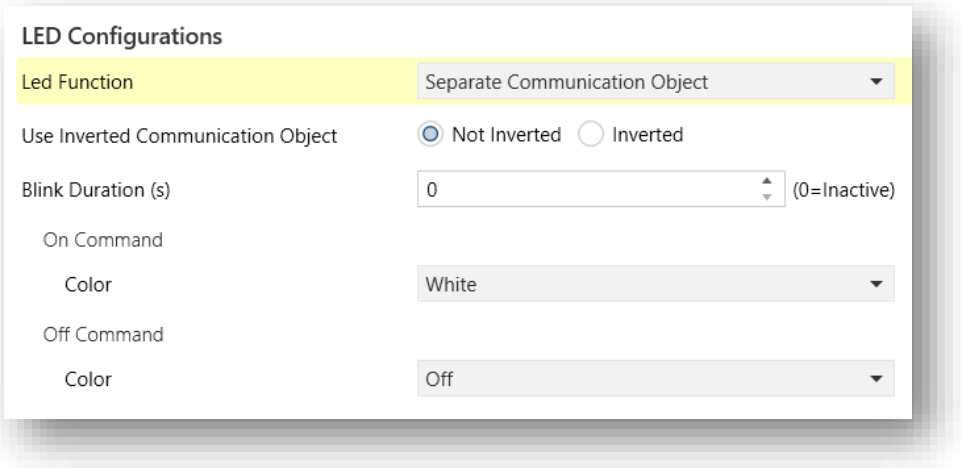
Led Function [Status indication]: LED color will change according to status information.

On command [white] – OFF Command [Off]

Blink duration: Status LED of the pressed rocker button will blink for the time period selected at "Blink Duration(s)" parameter. (Blinking interval is fixed.)

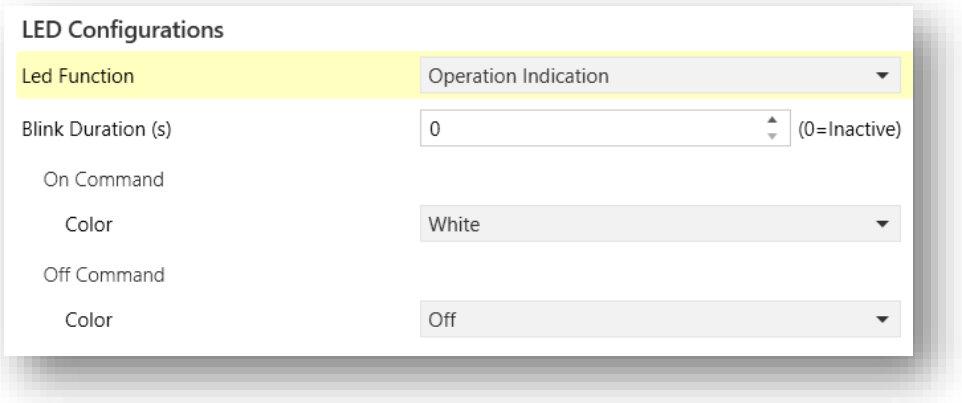


Led Function [Separate Communication Object]: LED color will change according to value received by LED status object.



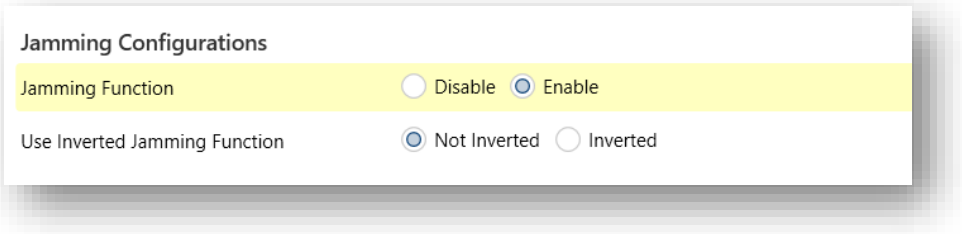
Led Function [Operation indication]: Status LED of rocker button will stay on color selected for "OFF command" until it is pressed. The pressed button will stay on color selected for "ON command" until it is released.

Blink duration: Status LED of the pressed rocker button will blink for the time period selected at "Blink Duration(s)" parameter. (Blinking interval is fixed.)



Jamming Configurations

Jamming function is used to block to respective button or rocker via "Rocker - Jamming" by writing "true or false" data from the bus. Button will not work until it is enabled via jamming object.



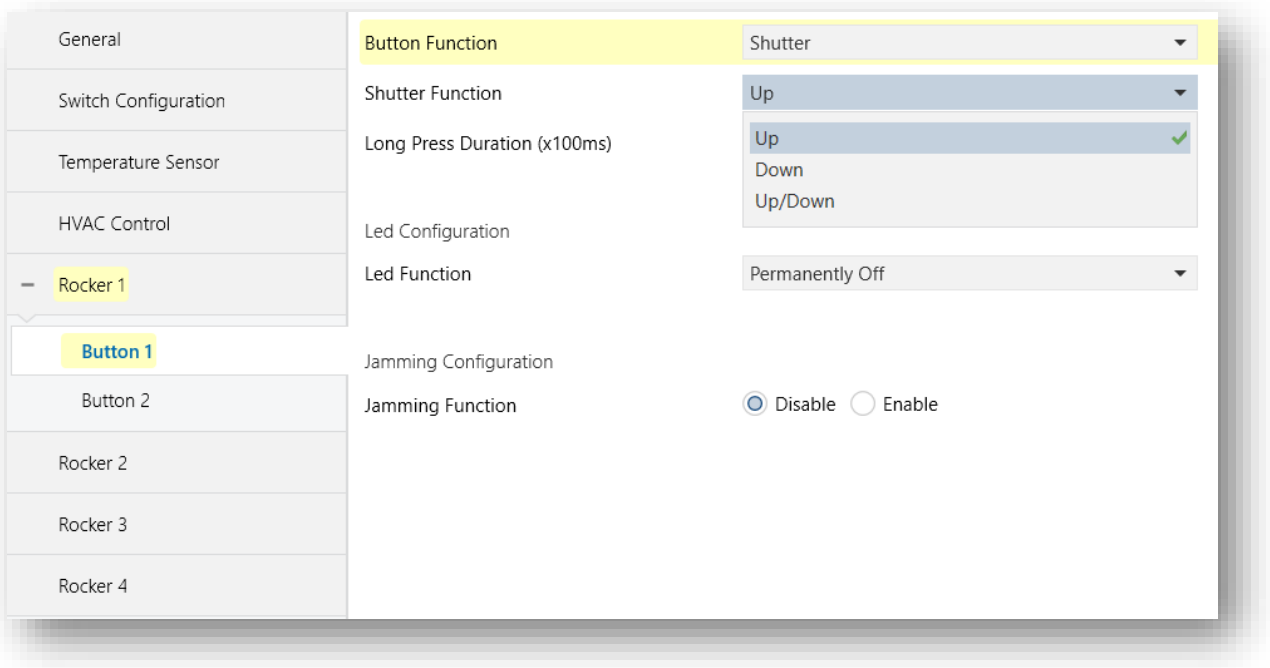
3.6.7. Button Oriented [Shutter]

Shutter command can be selected for each long press [UP, DOWN, TOGGLE].

Switch will start to send [UP, DOWN, TOGGLE] commands after each press longer than "1 second". Switch will send Step/Stop command on each short press,

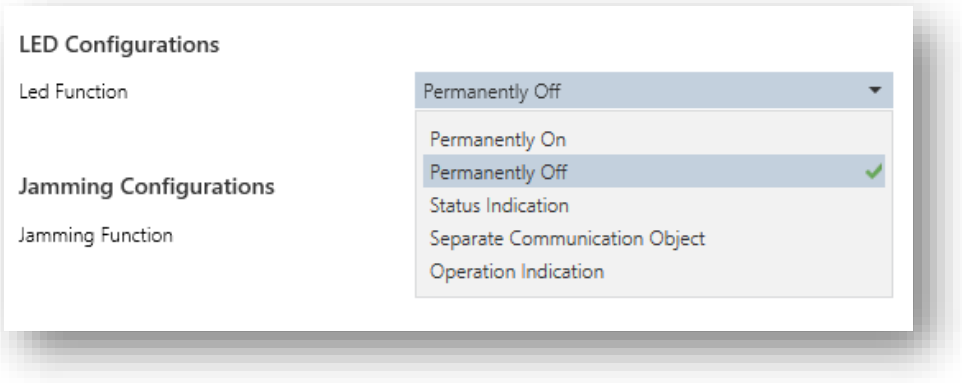
Long Press Duration (x100 ms): Long press duration can be changed. [0…**10**...65535]

As default; 100 ms x 10=1000 ms (1 second)

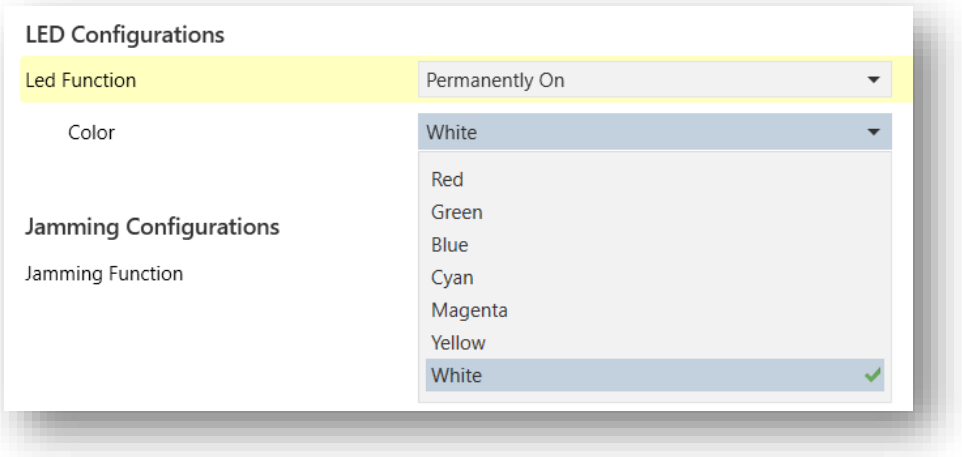


Led configurations:

Available functions: Permanently OFF, Permanently ON, Status Indication, Separate Communication Object and Operation Indication.



Led Function [Permanently ON]: LED is always ON for selected color. [Red, Green, Blue, Cyan, Magenta, Yellow, White]

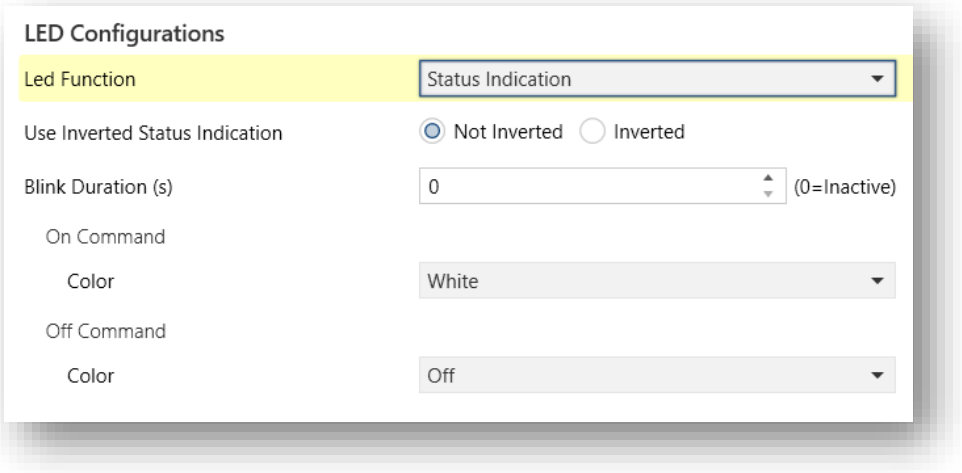


Led Function [Permanently OFF]: LED is always OFF.

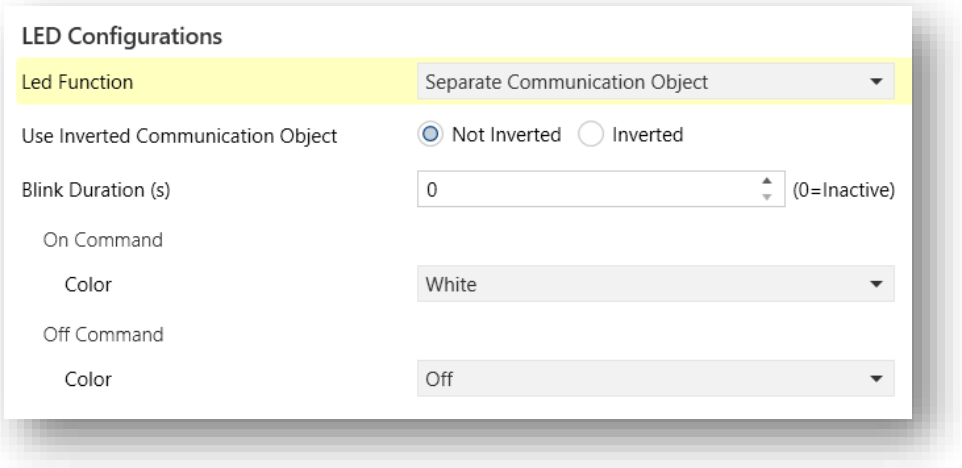
Led Function [Status indication]: LED color will change according to status information.

On command [white] – OFF Command [Off]

Blink duration: Status LED of the pressed rocker button will blink for the time period selected at "Blink Duration(s)" parameter. (Blinking interval is fixed.)

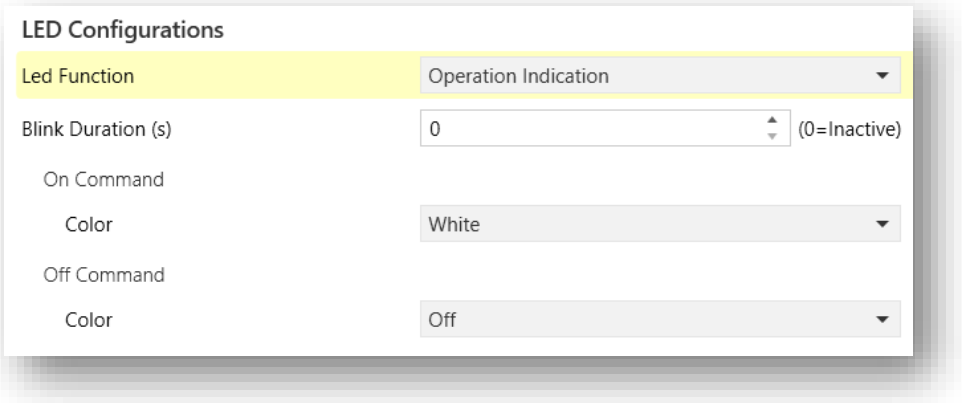


Led Function [Separate Communication Object]: LED color will change according to value received by LED status object.



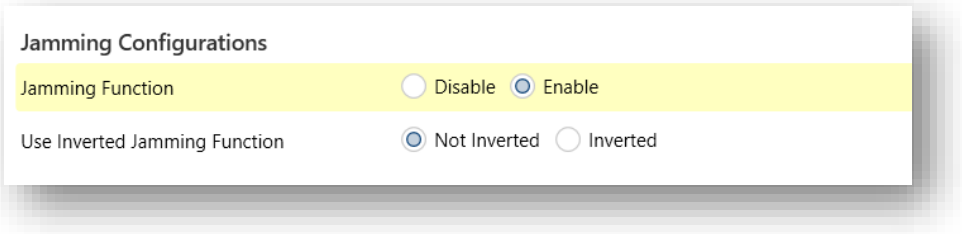
Led Function [Operation indication]: Status LED of rocker button will stay on color selected for "OFF command" until it is pressed. The pressed button will stay on color selected for "ON command" until it is released.

Blink duration: Status LED of the pressed rocker button will blink for the time period selected at "Blink Duration(s)" parameter. (Blinking interval is fixed.)



Jamming Configurations

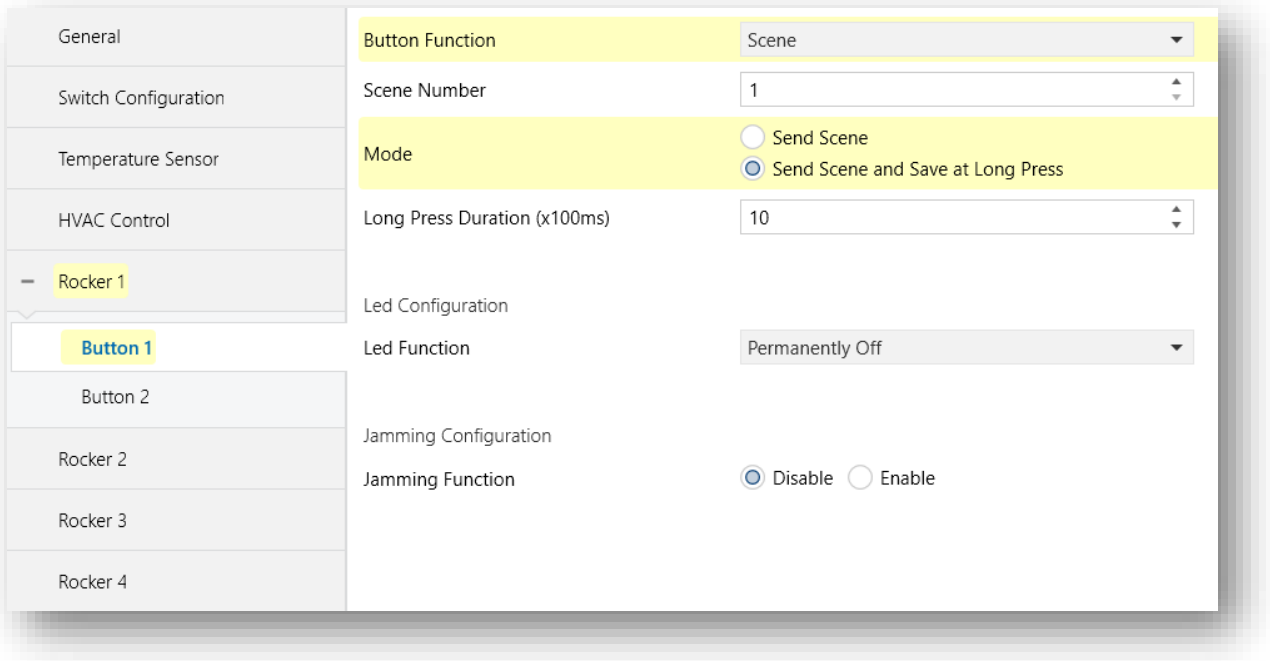
Jamming function is used to block to respective button or rocker via "Rocker - Jamming" by writing "true or false" data from the bus. Button will not work until it is enabled via jamming object.



3.6.8. Button Oriented [Scene]

Scene number determines which scene (1…64) is to be recalled and stored. 64 different scenes can be managed by using single group address on different buttons.

Each short press will call the selected scene. Storing of the current scene can be triggered by long press action. Please check example group monitor record.



Example: Short press -> Button 1 is calling scene number 1.

Long press ->Button 1 is sending the "store scene command" for scene number 1.

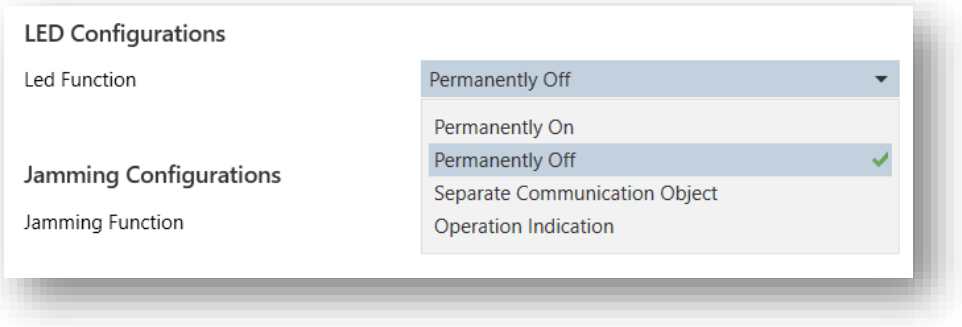
#	Time	Destination A	Destinatior	Info	Type	DPT
1	10/03/2023 11:35:32.962	0/7/7	Scene	$00 | Activate #1	GroupValue_Write	18.001 scene control
2	10/03/2023 11:35:34.704	0/7/7	Scene	$80 | Learn #1	GroupValue_Write	18.001 scene control

Long Press Duration (x100 ms): Long press duration can be changed. [0…**10**...65535]

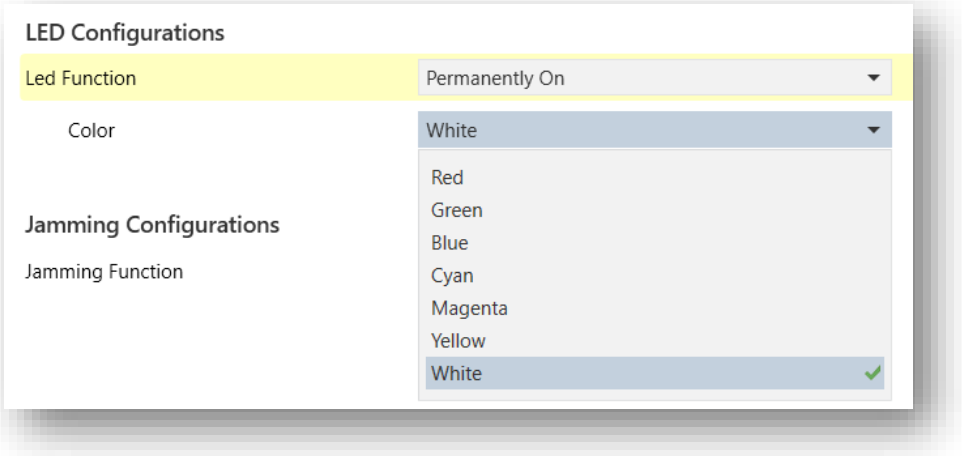
As default; 100 ms x 10=1000 ms (1 second)

Led configurations:

Available functions: Permanently OFF, Permanently ON, Status Indication, Separate Communication Object and Operation Indication.

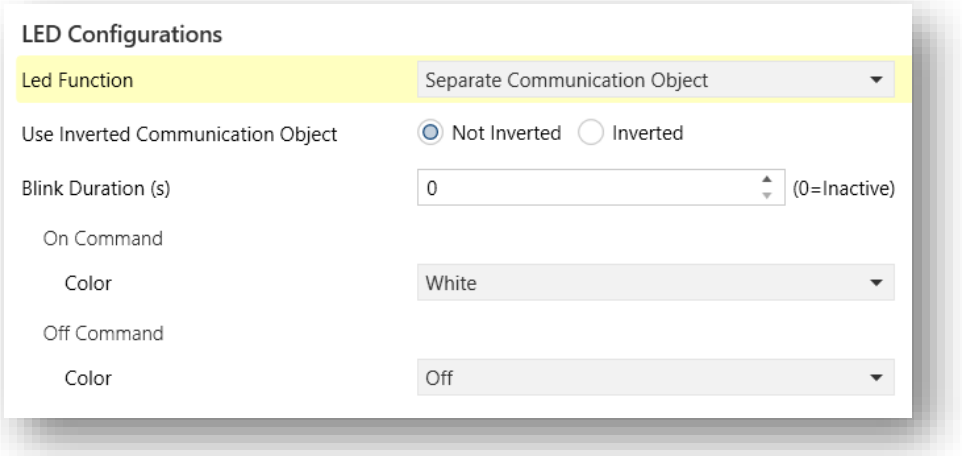


Led Function [Permanently ON]: LED is always ON for selected color. [Red, Green, Blue, Cyan, Magenta, Yellow, White]



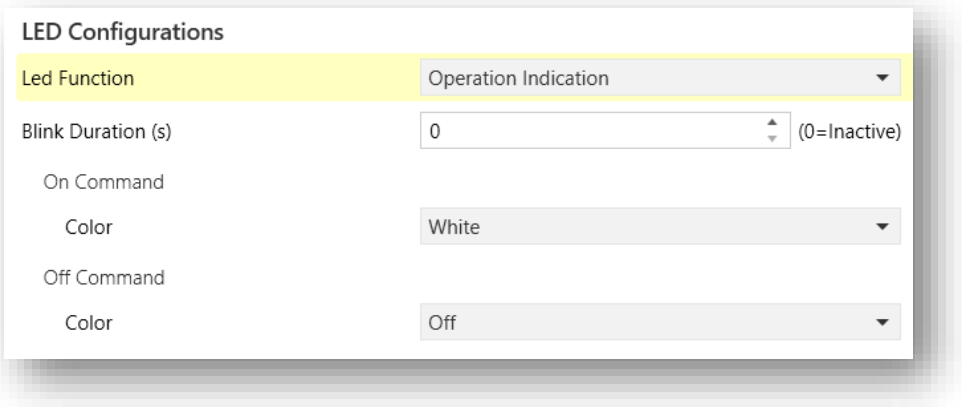
Led Function [Permanently OFF]: LED is always OFF.

Led Function [Separate Communication Object]: LED color will change according to value received by LED status object.



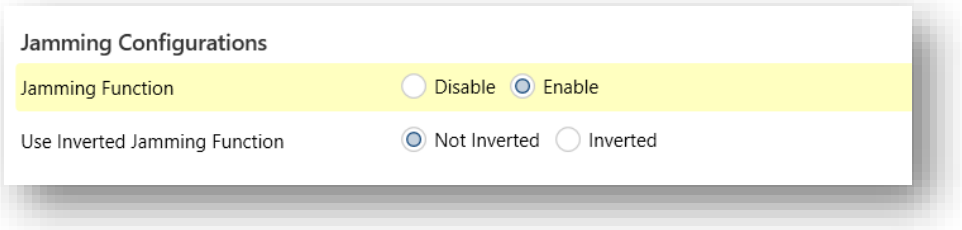
Led Function [Operation indication]: Status LED of rocker button will stay on color selected for "OFF command" until it is pressed. The pressed button will stay on color selected for "ON command" until it is released.

Blink duration: Status LED of the pressed rocker button will blink for the time period selected at "Blink Duration(s)" parameter. (Blinking interval is fixed.)



Jamming Configurations

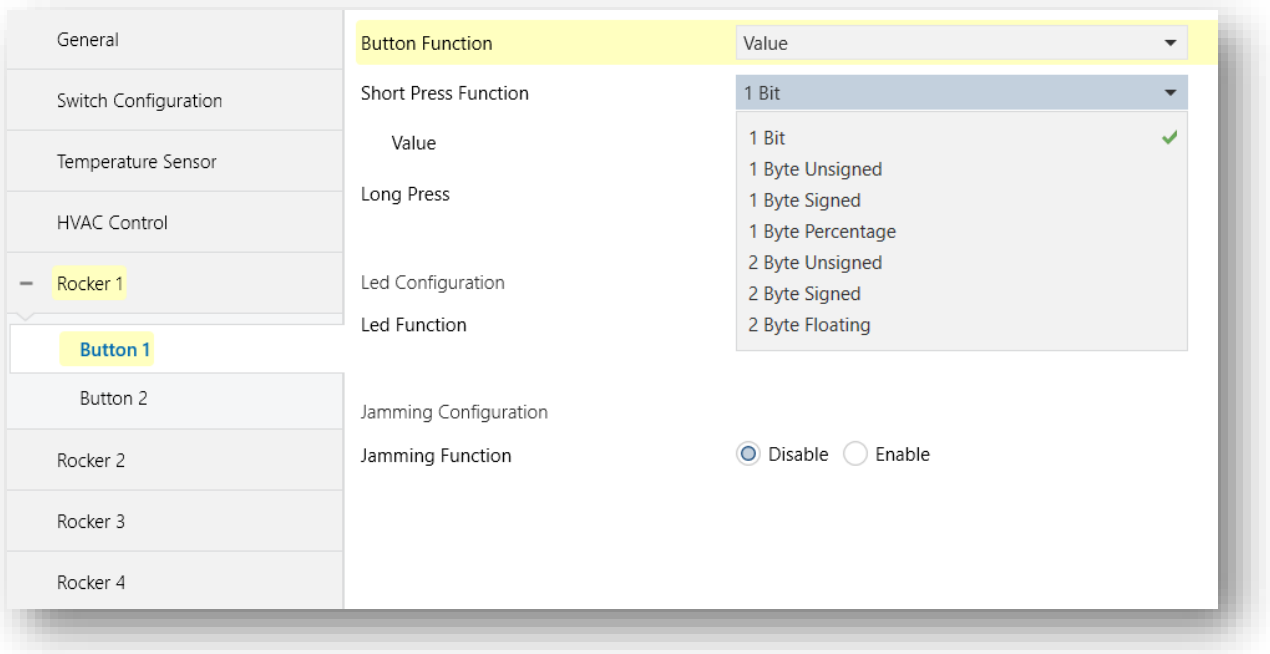
Jamming function is used to block to respective button or rocker via "Rocker - Jamming" by writing "true or false" data from the bus. Button will not work until it is enabled via jamming object.



3.6.9. Button Oriented [Value]

"Action on press" determines the data type for the short press. When button is pressed, this type of data will be sent KNX bus via respective communication object.

Long press function can be enable to send another data type by pressing longer to the same button.

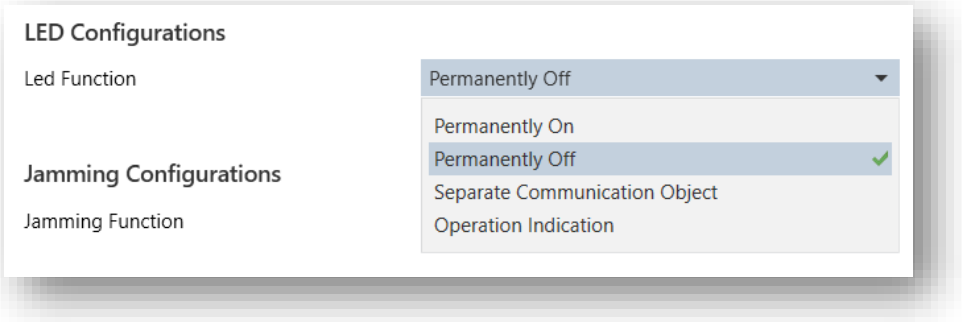


Long Press Duration (x100 ms): Long press duration can be changed. [0…**10**...65535]

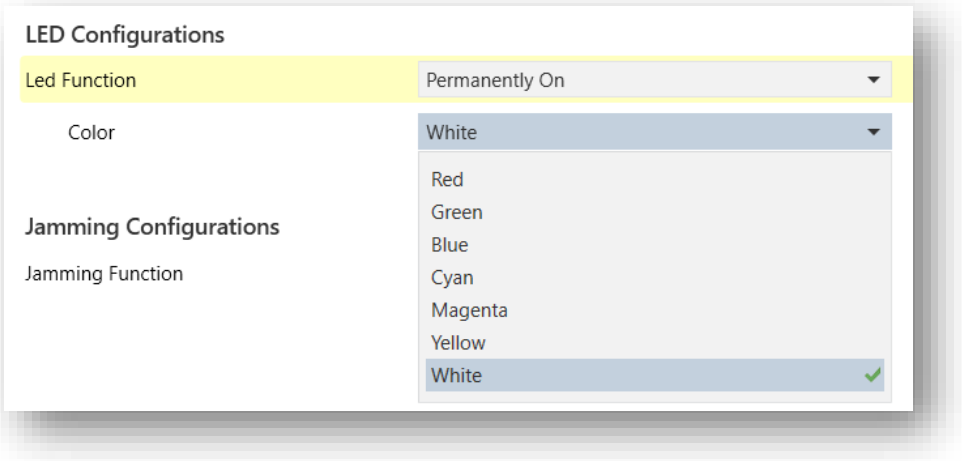
As default; 100 ms x 10=1000 ms (1 second)

Led configurations:

Available functions: Permanently OFF, Permanently ON, Status Indication, Separate Communication Object and Operation Indication.

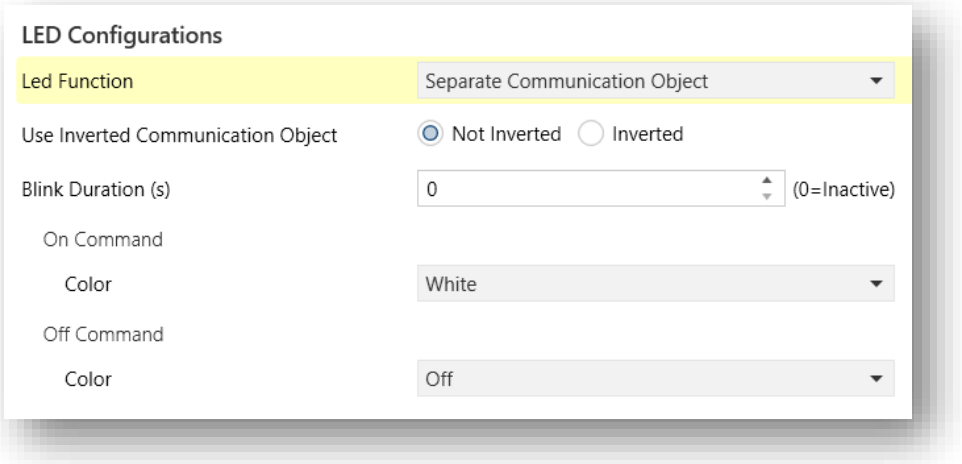


Led Function [Permanently ON]: LED is always ON for selected color. [Red, Green, Blue, Cyan, Magenta, Yellow, White]



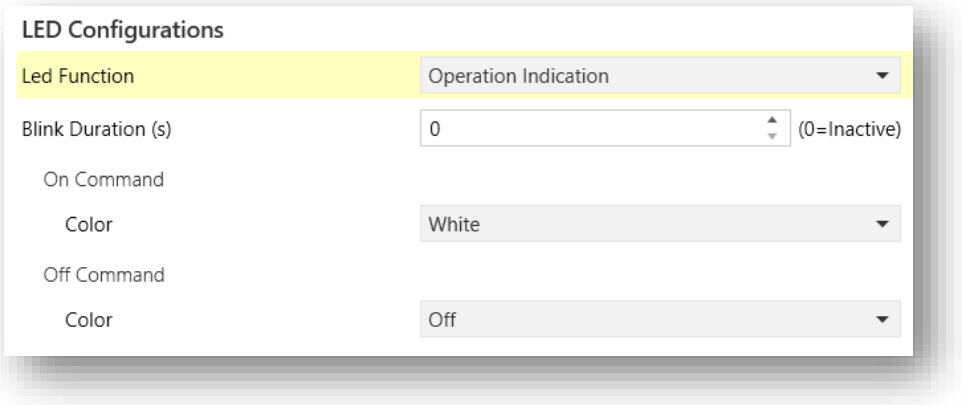
Led Function [Permanently OFF]: LED is always OFF.

Led Function [Separate Communication Object]: LED color will change according to value received by LED status object.



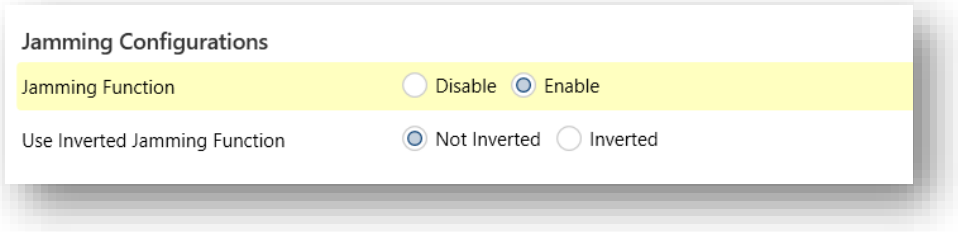
Led Function [Operation indication]: Status LED of rocker button will stay on color selected for "OFF command" until it is pressed. The pressed button will stay on color selected for "ON command" until it is released.

Blink duration: Status LED of the pressed rocker button will blink for the time period selected at "Blink Duration(s)" parameter. (Blinking interval is fixed.)



Jamming Configurations

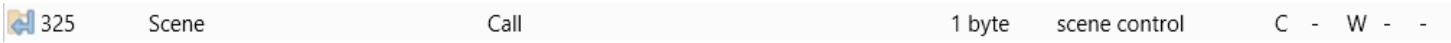
Jamming function is used to block to respective button or rocker via "Rocker - Jamming" by writing "true or false" data from the bus. Button will not work until it is enabled via jamming object.

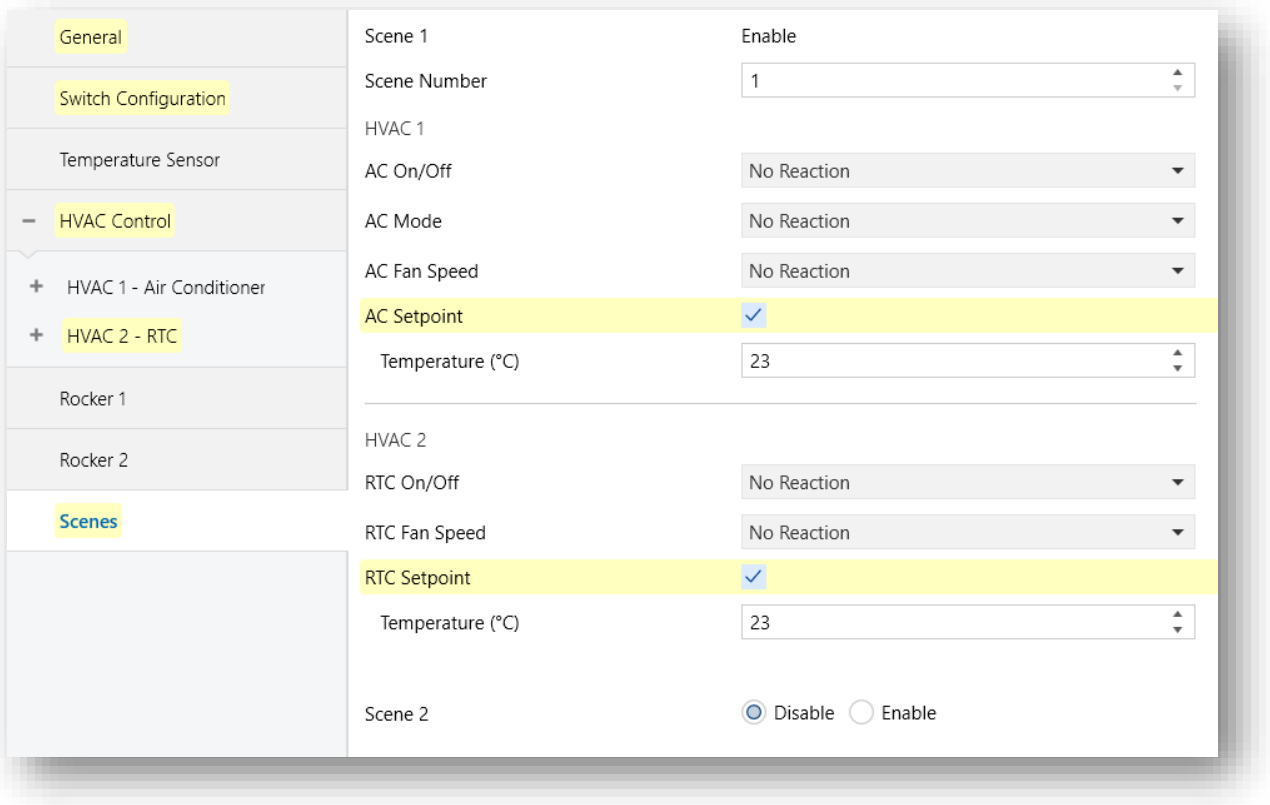


3.7. Scenes

Eclipse Thermostatic Push Button has 4 scenes available to change the states of HVAC 1 and HVAC 2 via recalling a scene.

Scene number can be individually selected between 1 and 64 for each scene. Thus, scenes can be recalled by using "Scene number" via "Scene – Call".





Possible actions for RTC:

RTC On/Off: No Reaction, On, Off ***(Only visible when Thermostat On/Off enabled)***

RTC Operating Mode: No Reaction, No Protection, Protection ***(Only visible when Thermostat On/Off disabled and protection mode enabled)***

RTC Fan Speed: 1, 2, 3, 4, 5, Auto, Off ***(Only visible when Fan Control Enabled) (Selecting nonmatched fan speed with the fan parameters will have no effect on fan speed)***

RTC Setpoint: 5…40

Possible actions for Air Conditioner:

AC On/Off: No Reaction, On, Off

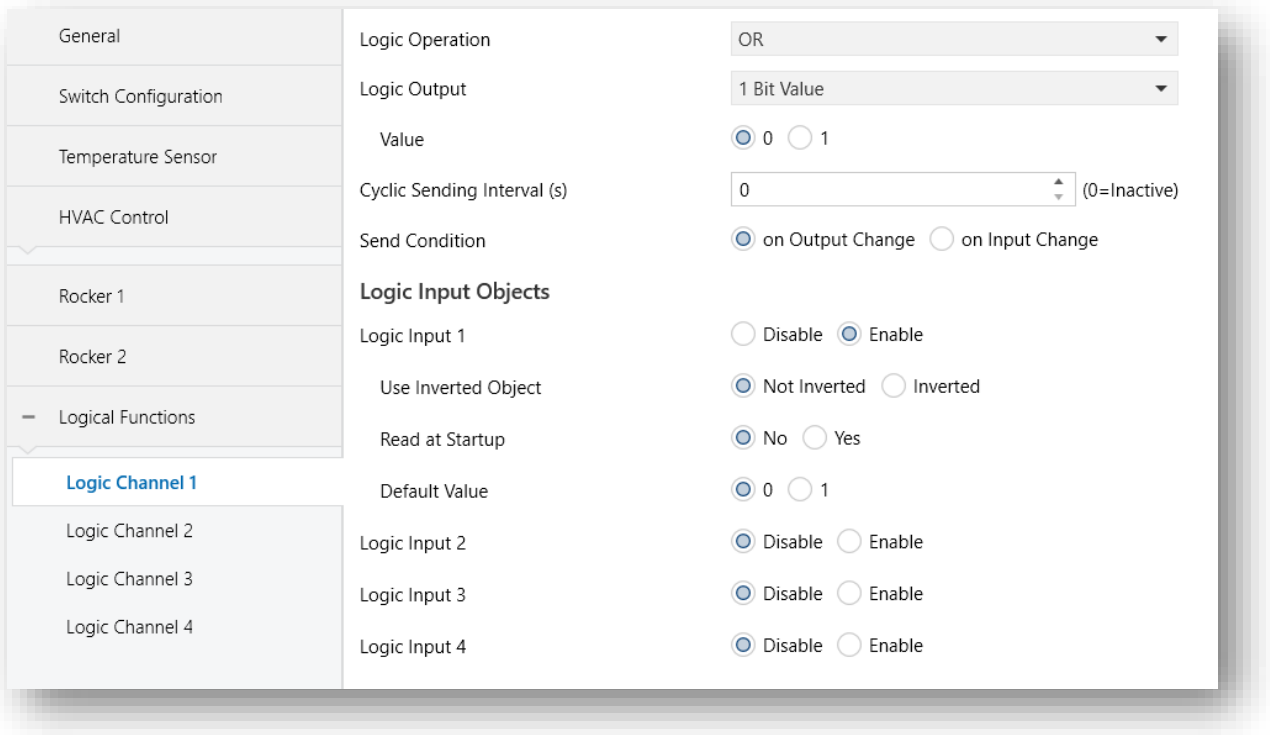
AC Mode: Auto, Heat, Cool, Fan, Dry

AC Fan Speed: 1, 2, 3, 4, 5, Auto ***(Selecting nonmatched fan speed with the fan parameters will have no effect on fan speed)***

AC Setpoint: 5…40

3.8. Logic Functions

Logic function tab contains "Logic channels (4)" which are available with three different logic gates. [OR, AND, XOR]



Logic operation: [OR, AND, XOR]

Logic Output:
1 bit
1 byte unsigned value
1 byte signed value
1 byte percentage
2 byte unsigned value
2 byte signed value
2 byte floating value

Send condition:

[On output change] Output object sends on output change.

[On input change] Output object sends on input change.

Logic Input Objects: [Logic input 1-4]

Each logic channel has a maximum of 4 logic input objects.

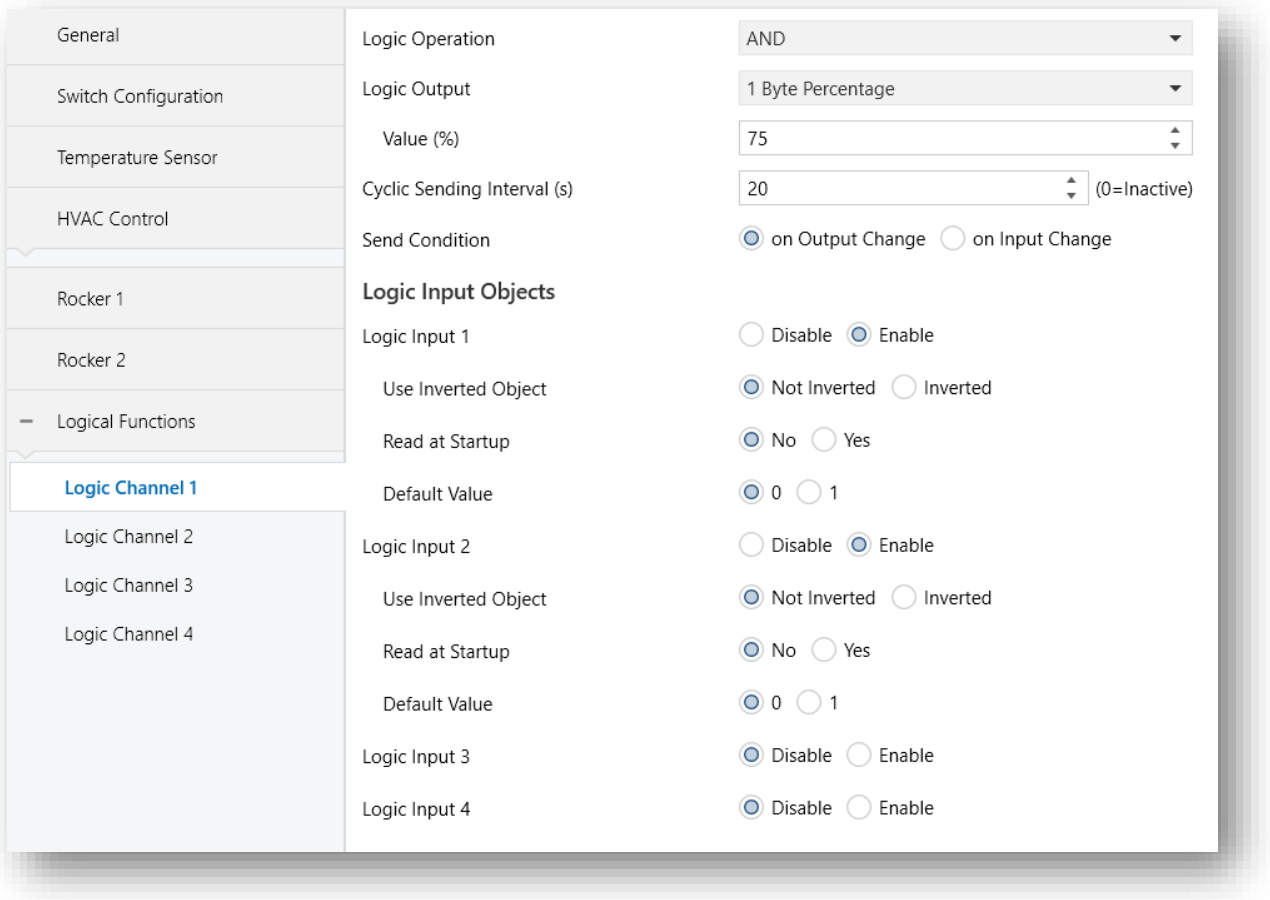
Logic input 1 [Use inverted Object]: Object value will be inverted before the processing in the logic gate.

Logic input 1 [Read at Start-up]: Object will be read out after switch is power return.

Logic input 1 [Default value]: Defines default value of the input object.

Example:

"Input 1" and "Input 2" objects are defined for "AND" logic operation. If both objects are "True" at the same time, then output object will send "1 byte percentage" %75 value for every 20 seconds periodically.

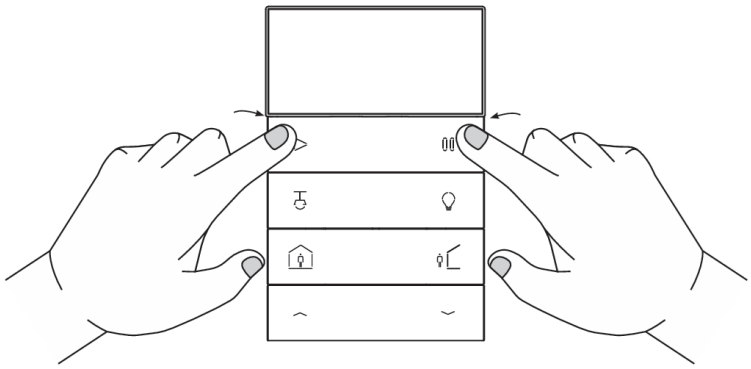


Address	Name	Description	Central	Pass	Data Type	Length	No.	Last Value
0/7/3	Input 1		No	No	boolean	1 bit	1	$01 | True
0/7/4	Input 2		No	No	boolean	1 bit	1	$01 | True
0/7/5	Output (1 Byte)		No	No	percentage (0..100%)	1 byte	1	$BF | 75%

4. Commissioning

For commissioning the device, the following activities are required:

- Make electrical connections
- Turn on the bus power supply
- Switch the device operation to programming mode
    - Alternatively, instead of using programming button, it is possible to switch operation of the device to programming mode **by pressing button 1 and button 2 simultaneously for 5 seconds.**



- Download into device the physical address and the configuration with ETS program
- At the end of the download operation of the device returns to normal mode
- Now the device is programmed and ready to use

Configuration and commissioning of the device require the use of ETS4 or later releases. These activities must be carried out according to the design of the building automation system done by a qualified planner.

5. Communication Objects

No	Name	Function	Object Size	Flags	Datapoint Type
1	General	Alive Beacon	1 Bit	R-CT--	[1.17] DPT_Trigger
2	Proximity	Detection Output	1 Byte	--CT--	
3	Darkness Recognition	Darkness Output	1 Byte	--CT--	
4	Humidity	Internal Value (%)	2 Bytes	R-CT--	[9.7] DPT_Value_Humidity
5	Humidity	External Value (%)	2 Bytes	-WCTU-	[9.7] DPT_Value_Humidity
6	Humidity	Threshold 1 Output	1 Byte	--CT--	
7	Humidity	Threshold 2 Output	1 Byte	--CT--	
8	Indoor Air Quality	IAQ Level (0-Off, 1-Very Good, 2-Good, 3-Medium, 4-Poor, 5-Bad)	1 Byte	R-CT--	
9	Indoor Air Quality	IAQ Level (0-Off, 1-Very Good, 2-Good, 3-Medium, 4-Poor, 5-Bad)	1 Byte	-WCTU-	
10	Indoor Air Quality	IAQ Alarm Output	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
11	Temperature	Actual Temperature (°C)	2 Bytes	R-CT--	[9.1] DPT_Value_Temp
12	Temperature	External Temperature (°C)	2 Bytes	-WCTU-	[9.1] DPT_Value_Temp
13	Temperature	Threshold 1 Output	1 Byte	--CT--	
14	Temperature	Threshold 2 Output	1 Byte	--CT--	
15	RTC 1	Heating/Cooling Switchover	1 Bit	-WC-U-	[1.100] DPT_Heat_Cool
16	RTC 1	Heating/Cooling Switchover Status	1 Bit	R-CT--	[1.100] DPT_Heat_Cool
17	RTC 1	Heating Control Value [0,1,Percentage %]	1 Byte	R-CT--	[5.1] DPT_Scaling
18	RTC 1	Cooling Control Value [0,1,Percentage %]	1 Byte	R-CT--	[5.1] DPT_Scaling
19	RTC 1	Heating/Cooling Control Value [0,1,Percentage %]	1 Byte	R-CT--	[5.1] DPT_Scaling
20	RTC 1	Heating Indication (0-Inactive,1-Active)	1 Bit	R-CT--	[1.11] DPT_State
21	RTC 1	Cooling Indication (0-Inactive,1-Active)	1 Bit	R-CT--	[1.11] DPT_State
22	RTC 1	Additional Heating Controller Disable	1 Bit	-WC-U-	[1.3] DPT_Enable
23	RTC 1	Additional Heating Controller Status	1 Bit	R-CT--	[1.3] DPT_Enable
24	RTC 1	Additional Heating Control Value	1 Bit	R-CT--	[1.1] DPT_Switch
25	RTC 1	Additional Cooling Controller Disable	1 Bit	-WC-U-	[1.3] DPT_Enable
26	RTC 1	Additional Cooling Controller Status	1 Bit	R-CT--	[1.3] DPT_Enable
27	RTC 1	Additional Cooling Control Value	1 Bit	R-CT--	[1.1] DPT_Switch
28	RTC 1	Protection Mode	1 Bit	-WC-U-	[1.11] DPT_State
29	RTC 1	Protection Mode Status	1 Bit	R-CT--	[1.11] DPT_State
30	RTC 1	Setpoint Control	2 Bytes	-WC-U-	[9.1] DPT_Value_Temp
31	RTC 1	Setpoint Status	2 Bytes	R-CT--	[9.1] DPT_Value_Temp
32	RTC 1	Setpoint (-/+)	1 Bit	-WC-U-	[1.7] DPT_Step
33	RTC 1	Fan Speed Manual Enumerated	1 Byte	-WC-U-	[5.100] DPT_FanStage
34	RTC 1	Fan Speed Manual Enumerated Status	1 Byte	R-CT--	[5.100] DPT_FanStage
35	RTC 1	Fan Speed Manual Scaling	1 Byte	-WC-U-	[5.1] DPT_Scaling
36	RTC 1	Fan Speed Manual Scaling Status	1 Byte	R-CT--	[5.1] DPT_Scaling
37	RTC 1	Fan Speed Status	1 Byte	R-CT--	[5.100] DPT_FanStage

38	RTC 1	Fan Speed Status	1 Byte	R-CT--	[5.1] DPT_Scaling
39	RTC 1	Fan 1	1 Bit	-WC-U-	[1.11] DPT_State
40	RTC 1	Fan 1 Status	1 Bit	R-CT--	[1.11] DPT_State
41	RTC 1	Fan 2	1 Bit	-WC-U-	[1.11] DPT_State
42	RTC 1	Fan 2 Status	1 Bit	R-CT--	[1.11] DPT_State
43	RTC 1	Fan 3	1 Bit	-WC-U-	[1.11] DPT_State
44	RTC 1	Fan 3 Status	1 Bit	R-CT--	[1.11] DPT_State
45	RTC 1	Fan 4	1 Bit	-WC-U-	[1.11] DPT_State
46	RTC 1	Fan 4 Status	1 Bit	R-CT--	[1.11] DPT_State
47	RTC 1	Fan 5	1 Bit	-WC-U-	[1.11] DPT_State
48	RTC 1	Fan 5 Status	1 Bit	R-CT--	[1.11] DPT_State
49	RTC 1	Fan Auto/Manual (1-Auto)	1 Bit	-WC-U-	[1.3] DPT_Enable
50	RTC 1	Fan Auto/Manual Status (1-Auto)	1 Bit	R-CT--	[1.3] DPT_Enable
51	RTC 1	Fan Off (1-Off)	1 Bit	-WC-U-	[1.11] DPT_State
52	RTC 1	Fan Off Status (1-Off)	1 Bit	R-CT--	[1.11] DPT_State
53	RTC 1	Fan Step (-/+)	1 Bit	-WC---	[1.7] DPT_Step
54	RTC 1	Thermostat On/Off	1 Bit	-WC-U-	[1.1] DPT_Switch
55	RTC 1	Thermostat On/Off Status	1 Bit	R-CT--	[1.1] DPT_Switch
56	RTC 1	Window Contact	1 Bit	-WCTU-	[1.19] DPT_Window_Door
57	RTC 1	Disabling Function (1-Disable, 0=Enable)	1 Bit	-WC---	[1.2] DPT_Bool
58	RTC 1	Disabling Function Status (1-Disable, 0=Enable)	1 Bit	R-CT--	[1.2] DPT_Bool
59	Air Conditioner 1	Control On/Off	1 Bit	--CT--	[1.1] DPT_Switch
60	Air Conditioner 1	Control On/Off Status	1 Bit	-WCTU-	[1.1] DPT_Switch
61	Air Conditioner 1	Setpoint Control	2 Bytes	--CT--	[9.1] DPT_Value_Temp
62	Air Conditioner 1	Setpoint Status	2 Bytes	-WCTU-	[9.1] DPT_Value_Temp
63	Air Conditioner 1	Setpoint (-/+)	1 Bit	-WCTU-	[1.7] DPT_Step
64	Air Conditioner 1	Control Mode Heat/Cool (1-Heat, 0-Cool)	1 Bit	--CT--	[1.100] DPT_Heat_Cool
65	Air Conditioner 1	Control Mode Heat/Cool Status (1-Heat, 0-Cool)	1 Bit	-WCTU-	[1.100] DPT_Heat_Cool
66	Air Conditioner 1	Control Modes (0-Auto, 1-Heat, 3-Cool, 9-Fan, 14-Dry)	1 Byte	--CT--	[20.105] DPT_HVACContrMode
67	Air Conditioner 1	Control Modes Status (0-Auto, 1-Heat, 3-Cool, 9-Fan, 14-Dry)	1 Byte	-WCTU-	[20.105] DPT_HVACContrMode
68	Air Conditioner 1	Auto Mode	1 Bit	--CT--	[1.11] DPT_State
69	Air Conditioner 1	Auto Mode Status	1 Bit	-WCTU-	[1.11] DPT_State
70	Air Conditioner 1	Heat Mode	1 Bit	--CT--	[1.11] DPT_State
71	Air Conditioner 1	Heat Mode Status	1 Bit	-WCTU-	[1.11] DPT_State
72	Air Conditioner 1	Cool Mode	1 Bit	--CT--	[1.11] DPT_State
73	Air Conditioner 1	Cool Mode Status	1 Bit	-WCTU-	[1.11] DPT_State
74	Air Conditioner 1	Fan Mode	1 Bit	--CT--	[1.11] DPT_State
75	Air Conditioner 1	Fan Mode Status	1 Bit	-WCTU-	[1.11] DPT_State
76	Air Conditioner 1	Dry Mode	1 Bit	--CT--	[1.11] DPT_State
77	Air Conditioner 1	Dry Mode Status	1 Bit	-WCTU-	[1.11] DPT_State
78	Air Conditioner 1	Fan Speed Enumerated	1 Byte	--CT--	[5.100] DPT_FanStage
79	Air Conditioner 1	Fan Speed Enumerated Status	1 Byte	-WCTU-	[5.100] DPT_FanStage
80	Air Conditioner 1	Fan Speed Scaling	1 Byte	--CT--	[5.1] DPT_Scaling
81	Air Conditioner 1	Fan Speed Scaling Status	1 Byte	-WCTU-	[5.1] DPT_Scaling
82	Air Conditioner 1	Fan 1	1 Bit	--CT--	[1.11] DPT_State
83	Air Conditioner 1	Fan 1 Status	1 Bit	-WCTU-	[1.11] DPT_State
84	Air Conditioner 1	Fan 2	1 Bit	--CT--	[1.11] DPT_State

85	Air Conditioner 1	Fan 2 Status	1 Bit	-WCTU-	[1.11] DPT_State
86	Air Conditioner 1	Fan 3	1 Bit	--CT--	[1.11] DPT_State
87	Air Conditioner 1	Fan 3 Status	1 Bit	-WCTU-	[1.11] DPT_State
88	Air Conditioner 1	Fan 4	1 Bit	--CT--	[1.11] DPT_State
89	Air Conditioner 1	Fan 4 Status	1 Bit	-WCTU-	[1.11] DPT_State
90	Air Conditioner 1	Fan 5	1 Bit	--CT--	[1.11] DPT_State
91	Air Conditioner 1	Fan 5 Status	1 Bit	-WCTU-	[1.11] DPT_State
92	Air Conditioner 1	Fan Auto/Manual (1-Auto)	1 Bit	--CT--	[1.3] DPT_Enable
93	Air Conditioner 1	Fan Auto/Manual Status (1-Auto)	1 Bit	-WCTU-	[1.3] DPT_Enable
94	Air Conditioner 1	Error 1 Bit (1-Error, 0-No Error)	1 Bit	-WCTU-	[1.5] DPT_Alarm
95	Air Conditioner 1	Window Contact	1 Bit	-WCTU-	[1.19] DPT_Window_Door
96	Air Conditioner 1	Disabling Function (1-Disable, 0=Enable)	1 Bit	-WC---	[1.2] DPT_Bool
97	Air Conditioner 1	Disabling Function Status (1-Disable, 0=Enable)	1 Bit	R-CT--	[1.2] DPT_Bool
98	RTC 2	Heating/Cooling Switchover	1 Bit	-WC-U-	[1.100] DPT_Heat_Cool
99	RTC 2	Heating/Cooling Switchover Status	1 Bit	R-CT--	[1.100] DPT_Heat_Cool
100	RTC 2	Heating Control Value [0,1,Percentage %]	1 Byte	R-CT--	[5.1] DPT_Scaling
101	RTC 2	Cooling Control Value [0,1,Percentage %]	1 Byte	R-CT--	[5.1] DPT_Scaling
102	RTC 2	Heating/Cooling Control Value [0,1,Percentage %]	1 Byte	R-CT--	[5.1] DPT_Scaling
103	RTC 2	Heating Indication (0-Inactive,1-Active)	1 Bit	R-CT--	[1.11] DPT_State
104	RTC 2	Cooling Indication (0-Inactive,1-Active)	1 Bit	R-CT--	[1.11] DPT_State
105	RTC 2	Additional Heating Controller Disable	1 Bit	-WC-U-	[1.3] DPT_Enable
106	RTC 2	Additional Heating Controller Status	1 Bit	R-CT--	[1.3] DPT_Enable
107	RTC 2	Additional Heating Control Value	1 Bit	R-CT--	[1.1] DPT_Switch
108	RTC 2	Additional Cooling Controller Disable	1 Bit	-WC-U-	[1.3] DPT_Enable
109	RTC 2	Additional Cooling Controller Status	1 Bit	R-CT--	[1.3] DPT_Enable
110	RTC 2	Additional Cooling Control Value	1 Bit	R-CT--	[1.1] DPT_Switch
111	RTC 2	Protection Mode	1 Bit	-WC-U-	[1.11] DPT_State
112	RTC 2	Protection Mode Status	1 Bit	R-CT--	[1.11] DPT_State
113	RTC 2	Setpoint Control	2 Bytes	-WC-U-	[9.1] DPT_Value_Temp
114	RTC 2	Setpoint Status	2 Bytes	R-CT--	[9.1] DPT_Value_Temp
115	RTC 2	Setpoint (-/+)	1 Bit	-WC-U-	[1.7] DPT_Step
116	RTC 2	Fan Speed Manual Enumerated	1 Byte	-WC-U-	[5.100] DPT_FanStage
117	RTC 2	Fan Speed Manual Enumerated Status	1 Byte	R-CT--	[5.100] DPT_FanStage
118	RTC 2	Fan Speed Manual Scaling	1 Byte	-WC-U-	[5.1] DPT_Scaling
119	RTC 2	Fan Speed Manual Scaling Status	1 Byte	R-CT--	[5.1] DPT_Scaling
120	RTC 2	Fan Speed Status	1 Byte	R-CT--	[5.100] DPT_FanStage
121	RTC 2	Fan Speed Status	1 Byte	R-CT--	[5.1] DPT_Scaling
122	RTC 2	Fan 1	1 Bit	-WC-U-	[1.11] DPT_State
123	RTC 2	Fan 1 Status	1 Bit	R-CT--	[1.11] DPT_State
124	RTC 2	Fan 2	1 Bit	-WC-U-	[1.11] DPT_State
125	RTC 2	Fan 2 Status	1 Bit	R-CT--	[1.11] DPT_State
126	RTC 2	Fan 3	1 Bit	-WC-U-	[1.11] DPT_State
127	RTC 2	Fan 3 Status	1 Bit	R-CT--	[1.11] DPT_State

128	RTC 2	Fan 4	1 Bit	-WC-U-	[1.11] DPT_State
129	RTC 2	Fan 4 Status	1 Bit	R-CT--	[1.11] DPT_State
130	RTC 2	Fan 5	1 Bit	-WC-U-	[1.11] DPT_State
131	RTC 2	Fan 5 Status	1 Bit	R-CT--	[1.11] DPT_State
132	RTC 2	Fan Auto/Manual (1-Auto)	1 Bit	-WC-U-	[1.3] DPT_Enable
133	RTC 2	Fan Auto/Manual Status (1-Auto)	1 Bit	R-CT--	[1.3] DPT_Enable
134	RTC 2	Fan Off (1-Off)	1 Bit	-WC-U-	[1.11] DPT_State
135	RTC 2	Fan Off Status (1-Off)	1 Bit	R-CT--	[1.11] DPT_State
136	RTC 2	Fan Step (-/+)	1 Bit	-WC---	[1.7] DPT_Step
137	RTC 2	Thermostat On/Off	1 Bit	-WC-U-	[1.1] DPT_Switch
138	RTC 2	Thermostat On/Off Status	1 Bit	R-CT--	[1.1] DPT_Switch
139	RTC 2	Window Contact	1 Bit	-WCTU-	[1.19] DPT_Window_Door
140	RTC 2	Disabling Function (1-Disable, 0=Enable)	1 Bit	-WC---	[1.2] DPT_Bool
141	RTC 2	Disabling Function Status (1-Disable, 0=Enable)	1 Bit	R-CT--	[1.2] DPT_Bool
142	Air Conditioner 2	Control On/Off	1 Bit	--CT--	[1.1] DPT_Switch
143	Air Conditioner 2	Control On/Off Status	1 Bit	-WCTU-	[1.1] DPT_Switch
144	Air Conditioner 2	Setpoint Control	2 Bytes	--CT--	[9.1] DPT_Value_Temp
145	Air Conditioner 2	Setpoint Status	2 Bytes	-WCTU-	[9.1] DPT_Value_Temp
146	Air Conditioner 2	Setpoint (-/+)	1 Bit	-WCTU-	[1.7] DPT_Step
147	Air Conditioner 2	Control Mode Heat/Cool (1-Heat, 0-Cool)	1 Bit	--CT--	[1.100] DPT_Heat_Cool
148	Air Conditioner 2	Control Mode Heat/Cool Status (1-Heat, 0-Cool)	1 Bit	-WCTU-	[1.100] DPT_Heat_Cool
149	Air Conditioner 2	Control Modes (0-Auto, 1-Heat, 3-Cool, 9-Fan, 14-Dry)	1 Byte	--CT--	[20.105] DPT_HVACContrMode
150	Air Conditioner 2	Control Modes Status (0-Auto, 1-Heat, 3-Cool, 9-Fan, 14-Dry)	1 Byte	-WCTU-	[20.105] DPT_HVACContrMode
151	Air Conditioner 2	Auto Mode	1 Bit	--CT--	[1.11] DPT_State
152	Air Conditioner 2	Auto Mode Status	1 Bit	-WCTU-	[1.11] DPT_State
153	Air Conditioner 2	Heat Mode	1 Bit	--CT--	[1.11] DPT_State
154	Air Conditioner 2	Heat Mode Status	1 Bit	-WCTU-	[1.11] DPT_State
155	Air Conditioner 2	Cool Mode	1 Bit	--CT--	[1.11] DPT_State
156	Air Conditioner 2	Cool Mode Status	1 Bit	-WCTU-	[1.11] DPT_State
157	Air Conditioner 2	Fan Mode	1 Bit	--CT--	[1.11] DPT_State
158	Air Conditioner 2	Fan Mode Status	1 Bit	-WCTU-	[1.11] DPT_State
159	Air Conditioner 2	Dry Mode	1 Bit	--CT--	[1.11] DPT_State
160	Air Conditioner 2	Dry Mode Status	1 Bit	-WCTU-	[1.11] DPT_State
161	Air Conditioner 2	Fan 1	1 Bit	--CT--	[1.11] DPT_State
162	Air Conditioner 2	Fan 1 Status	1 Bit	-WCTU-	[1.11] DPT_State
163	Air Conditioner 2	Fan Speed Enumerated	1 Byte	--CT--	[5.100] DPT_FanStage
164	Air Conditioner 2	Fan Speed Enumerated Status	1 Byte	-WCTU-	[5.100] DPT_FanStage
165	Air Conditioner 2	Fan Speed Scaling	1 Byte	--CT--	[5.1] DPT_Scaling
166	Air Conditioner 2	Fan Speed Scaling Status	1 Byte	-WCTU-	[5.1] DPT_Scaling
167	Air Conditioner 2	Fan 2	1 Bit	--CT--	[1.11] DPT_State
168	Air Conditioner 2	Fan 2 Status	1 Bit	-WCTU-	[1.11] DPT_State
169	Air Conditioner 2	Fan 3	1 Bit	--CT--	[1.11] DPT_State
170	Air Conditioner 2	Fan 3 Status	1 Bit	-WCTU-	[1.11] DPT_State
171	Air Conditioner 2	Fan 4	1 Bit	--CT--	[1.11] DPT_State
172	Air Conditioner 2	Fan 4 Status	1 Bit	-WCTU-	[1.11] DPT_State
173	Air Conditioner 2	Fan 5	1 Bit	--CT--	[1.11] DPT_State
174	Air Conditioner 2	Fan 5 Status	1 Bit	-WCTU-	[1.11] DPT_State

175	Air Conditioner 2	Fan Auto/Manual (1-Auto)	1 Bit	--CT--	[1.3] DPT_Enable
176	Air Conditioner 2	Fan Auto/Manual Status (1-Auto)	1 Bit	-WCTU-	[1.3] DPT_Enable
177	Air Conditioner 2	Error 1 Bit (1-Error, 0-No Error)	1 Bit	-WCTU-	[1.5] DPT_Alarm
178	Air Conditioner 2	Window Contact	1 Bit	-WCTU-	[1.19] DPT_Window_Door
179	Air Conditioner 2	Disabling Function (1-Disable, 0=Enable)	1 Bit	-WC---	[1.2] DPT_Bool
180	Air Conditioner 2	Disabling Function Status (1-Disable, 0=Enable)	1 Bit	R-CT--	[1.2] DPT_Bool
181	Button 1	Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch
182	Button 1	Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
183	Button 1	Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch
184	Button 1	Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
185	Button 1	Long Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch
186	Button 1	Long Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
187	Button 1	LED	1 Bit	-WCTU-	[1.1] DPT_Switch
188	Button 1	Jamming	1 Bit	RWC-U-	[1.3] DPT_Enable
189	Button 1	Up/Down	1 Bit	--CT--	[1.8] DPT_UpDown
190	Button 1	Step/Stop	1 Bit	--CT--	[1.2] DPT_Bool
191	Button 1	Dimming	4 Bit	--CT--	[3.7] DPT_Control_Dimming
192	Button 1	Execute/Store	1 Byte	--CT--	[18.1] DPT_SceneControl
193	Button 1	Value (1 bit)	1 Bit	--CT--	[1.1] DPT_Switch
194	Button 1	Value (1 byte)	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
195	Button 1	Value (2 byte)	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
196	Button 1	Long Value (1 bit)	1 Bit	--CT--	[1.1] DPT_Switch
197	Button 1	Long Value (1 byte)	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
198	Button 1	Long Value (2 byte)	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
199	Button 2	Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch
200	Button 2	Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
201	Button 2	Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch
202	Button 2	Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
203	Button 2	Long Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch
204	Button 2	Long Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
205	Button 2	LED	1 Bit	-WCTU-	[1.1] DPT_Switch
206	Button 2	Jamming	1 Bit	RWC-U-	[1.3] DPT_Enable
207	Button 2	Up/Down	1 Bit	--CT--	[1.8] DPT_UpDown
208	Button 2	Step/Stop	1 Bit	--CT--	[1.2] DPT_Bool
209	Button 2	Dimming	4 Bit	--CT--	[3.7] DPT_Control_Dimming
210	Button 2	Execute/Store	1 Byte	--CT--	[18.1] DPT_SceneControl
211	Button 2	Value (1 bit)	1 Bit	--CT--	[1.1] DPT_Switch
212	Button 2	Value (1 byte)	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
213	Button 2	Value (2 byte)	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
214	Button 2	Long Value (1 bit)	1 Bit	--CT--	[1.1] DPT_Switch
215	Button 2	Long Value (1 byte)	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
216	Button 2	Long Value (2 byte)	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
217	Button 3	Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch
218	Button 3	Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
219	Button 3	Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch
220	Button 3	Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
221	Button 3	Long Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch

222	Button 3	Long Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
223	Button 3	LED	1 Bit	-WCTU-	[1.1] DPT_Switch
224	Button 3	Jamming	1 Bit	RWC-U-	[1.3] DPT_Enable
225	Button 3	Up/Down	1 Bit	--CT--	[1.8] DPT_UpDown
226	Button 3	Step/Stop	1 Bit	--CT--	[1.2] DPT_Bool
227	Button 3	Dimming	4 Bit	--CT--	[3.7] DPT_Control_Dimming
228	Button 3	Execute/Store	1 Byte	--CT--	[18.1] DPT_SceneControl
229	Button 3	Value (1 bit)	1 Bit	--CT--	[1.1] DPT_Switch
230	Button 3	Value (1 byte)	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
231	Button 3	Value (2 byte)	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
232	Button 3	Long Value (1 bit)	1 Bit	--CT--	[1.1] DPT_Switch
233	Button 3	Long Value (1 byte)	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
234	Button 3	Long Value (2 byte)	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
235	Button 4	Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch
236	Button 4	Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
237	Button 4	Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch
238	Button 4	Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
239	Button 4	Long Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch
240	Button 4	Long Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
241	Button 4	LED	1 Bit	-WCTU-	[1.1] DPT_Switch
242	Button 4	Jamming	1 Bit	RWC-U-	[1.3] DPT_Enable
243	Button 4	Up/Down	1 Bit	--CT--	[1.8] DPT_UpDown
244	Button 4	Step/Stop	1 Bit	--CT--	[1.2] DPT_Bool
245	Button 4	Dimming	4 Bit	--CT--	[3.7] DPT_Control_Dimming
246	Button 4	Execute/Store	1 Byte	--CT--	[18.1] DPT_SceneControl
247	Button 4	Value (1 bit)	1 Bit	--CT--	[1.1] DPT_Switch
248	Button 4	Value (1 byte)	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
249	Button 4	Value (2 byte)	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
250	Button 4	Long Value (1 bit)	1 Bit	--CT--	[1.1] DPT_Switch
251	Button 4	Long Value (1 byte)	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
252	Button 4	Long Value (2 byte)	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
253	Button 5	Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch
254	Button 5	Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
255	Button 5	Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch
256	Button 5	Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
257	Button 5	Long Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch
258	Button 5	Long Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
259	Button 5	LED	1 Bit	-WCTU-	[1.1] DPT_Switch
260	Button 5	Jamming	1 Bit	RWC-U-	[1.3] DPT_Enable
261	Button 5	Up/Down	1 Bit	--CT--	[1.8] DPT_UpDown
262	Button 5	Step/Stop	1 Bit	--CT--	[1.2] DPT_Bool
263	Button 5	Dimming	4 Bit	--CT--	[3.7] DPT_Control_Dimming
264	Button 5	Execute/Store	1 Byte	--CT--	[18.1] DPT_SceneControl
265	Button 5	Value (1 bit)	1 Bit	--CT--	[1.1] DPT_Switch
266	Button 5	Value (1 byte)	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
267	Button 5	Value (2 byte)	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
268	Button 5	Long Value (1 bit)	1 Bit	--CT--	[1.1] DPT_Switch

269	Button 5	Long Value (1 byte)	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
270	Button 5	Long Value (2 byte)	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
271	Button 6	Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch
272	Button 6	Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
273	Button 6	Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch
274	Button 6	Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
275	Button 6	Long Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch
276	Button 6	Long Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
277	Button 6	LED	1 Bit	-WCTU-	[1.1] DPT_Switch
278	Button 6	Jamming	1 Bit	RWC-U-	[1.3] DPT_Enable
279	Button 6	Up/Down	1 Bit	--CT--	[1.8] DPT_UpDown
280	Button 6	Step/Stop	1 Bit	--CT--	[1.2] DPT_Bool
281	Button 6	Dimming	4 Bit	--CT--	[3.7] DPT_Control_Dimming
282	Button 6	Execute/Store	1 Byte	--CT--	[18.1] DPT_SceneControl
283	Button 6	Value (1 bit)	1 Bit	--CT--	[1.1] DPT_Switch
284	Button 6	Value (1 byte)	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
285	Button 6	Value (2 byte)	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
286	Button 6	Long Value (1 bit)	1 Bit	--CT--	[1.1] DPT_Switch
287	Button 6	Long Value (1 byte)	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
288	Button 6	Long Value (2 byte)	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
289	Button 7	Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch
290	Button 7	Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
291	Button 7	Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch
292	Button 7	Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
293	Button 7	Long Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch
294	Button 7	Long Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
295	Button 7	LED	1 Bit	-WCTU-	[1.1] DPT_Switch
296	Button 7	Jamming	1 Bit	RWC-U-	[1.3] DPT_Enable
297	Button 7	Up/Down	1 Bit	--CT--	[1.8] DPT_UpDown
298	Button 7	Step/Stop	1 Bit	--CT--	[1.2] DPT_Bool
299	Button 7	Dimming	4 Bit	--CT--	[3.7] DPT_Control_Dimming
300	Button 7	Execute/Store	1 Byte	--CT--	[18.1] DPT_SceneControl
301	Button 7	Value (1 bit)	1 Bit	--CT--	[1.1] DPT_Switch
302	Button 7	Value (1 byte)	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
303	Button 7	Value (2 byte)	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
304	Button 7	Long Value (1 bit)	1 Bit	--CT--	[1.1] DPT_Switch
305	Button 7	Long Value (1 byte)	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
306	Button 7	Long Value (2 byte)	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
307	Button 8	Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch
308	Button 8	Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
309	Button 8	Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch
310	Button 8	Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
311	Button 8	Long Switch Status	1 Bit	-WCTU-	[1.1] DPT_Switch
312	Button 8	Long Switch On/Off	1 Bit	--CT--	[1.1] DPT_Switch
313	Button 8	LED	1 Bit	-WCTU-	[1.1] DPT_Switch
314	Button 8	Jamming	1 Bit	RWC-U-	[1.3] DPT_Enable
315	Button 8	Up/Down	1 Bit	--CT--	[1.8] DPT_UpDown
316	Button 8	Step/Stop	1 Bit	--CT--	[1.2] DPT_Bool

317	Button 8	Dimming	4 Bit	--CT--	[3.7] DPT_Control_Dimming
318	Button 8	Execute/Store	1 Byte	--CT--	[18.1] DPT_SceneControl
319	Button 8	Value (1 bit)	1 Bit	--CT--	[1.1] DPT_Switch
320	Button 8	Value (1 byte)	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
321	Button 8	Value (2 byte)	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
322	Button 8	Long Value (1 bit)	1 Bit	--CT--	[1.1] DPT_Switch
323	Button 8	Long Value (1 byte)	1 Byte	--CT--	[5.10] DPT_Value_1_Ucount
324	Button 8	Long Value (2 byte)	2 Bytes	--CT--	[7.1] DPT_Value_2_Ucount
325	Scene	Call	1 Byte	-WC---	[18.1] DPT_SceneControl
326	Logic 1	Output (1 bit)	1 Bit	R-CT--	[1.1] DPT_Switch
327	Logic 1	Output (1 Byte)	1 Byte	R-CT--	[5.10] DPT_Value_1_Ucount
328	Logic 1	Output (2 Bytes)	2 Bytes	R-CT--	[7.1] DPT_Value_2_Ucount
329	Logic 1	Input 1	1 Bit	-WCTU-	[1.2] DPT_Bool
330	Logic 1	Input 2	1 Bit	-WCTU-	[1.2] DPT_Bool
331	Logic 1	Input 3	1 Bit	-WCTU-	[1.2] DPT_Bool
332	Logic 1	Input 4	1 Bit	-WCTU-	[1.2] DPT_Bool
333	Logic 2	Output (1 bit)	1 Bit	R-CT--	[1.1] DPT_Switch
334	Logic 2	Output (1 Byte)	1 Byte	R-CT--	[5.10] DPT_Value_1_Ucount
335	Logic 2	Output (2 Bytes)	2 Bytes	R-CT--	[7.1] DPT_Value_2_Ucount
336	Logic 2	Input 1	1 Bit	-WCTU-	[1.2] DPT_Bool
337	Logic 2	Input 2	1 Bit	-WCTU-	[1.2] DPT_Bool
338	Logic 2	Input 3	1 Bit	-WCTU-	[1.2] DPT_Bool
339	Logic 2	Input 4	1 Bit	-WCTU-	[1.2] DPT_Bool
340	Logic 3	Output (1 bit)	1 Bit	R-CT--	[1.1] DPT_Switch
341	Logic 3	Output (1 Byte)	1 Byte	R-CT--	[5.10] DPT_Value_1_Ucount
342	Logic 3	Output (2 Bytes)	2 Bytes	R-CT--	[7.1] DPT_Value_2_Ucount
343	Logic 3	Input 1	1 Bit	-WCTU-	[1.2] DPT_Bool
344	Logic 3	Input 2	1 Bit	-WCTU-	[1.2] DPT_Bool
345	Logic 3	Input 3	1 Bit	-WCTU-	[1.2] DPT_Bool
346	Logic 3	Input 4	1 Bit	-WCTU-	[1.2] DPT_Bool
347	Logic 4	Output (1 bit)	1 Bit	R-CT--	[1.1] DPT_Switch
348	Logic 4	Output (1 Byte)	1 Byte	R-CT--	[5.10] DPT_Value_1_Ucount
349	Logic 4	Output (2 Bytes)	2 Bytes	R-CT--	[7.1] DPT_Value_2_Ucount
350	Logic 4	Input 1	1 Bit	-WCTU-	[1.2] DPT_Bool
351	Logic 4	Input 2	1 Bit	-WCTU-	[1.2] DPT_Bool
352	Logic 4	Input 3	1 Bit	-WCTU-	[1.2] DPT_Bool
353	Logic 4	Input 4	1 Bit	-WCTU-	[1.2] DPT_Bool