SIEMENS

GAMMA instabus Application program description

Application program “07 B0 CO Presence Detector WIDE 9A1001”
Application program “07 B0 CO Presence Detector WIDE pro 9A1101”
Application program “07 B0 CO Presence Detector WIDE multi 9A1201”
Application program “07 B0 CO Presence Detector WIDE DualTech 9A0F01”

Presence Detector WIDE x UP 258Dx1

- Brightness, temperature, humidity and CO2 sensor
- Presence and motion detection up to 64 m² or 400 m² (PIR models) and 28 m² or 79 m² (ultrasound model)
- Mounted to the ceiling on a flush-mounting box with a diameter of 60 mm, in a separately ordered housing for surface mounting or mounting plate for 4 x 4 boxes
- Integrated IR receiver for IR remote control

Functions with configuration with ETS

- Integrated constant light control for main lighting group and up to four sub-lighting groups, including automatic calibration
- Integrated 2-point lighting controller (switching)
- Temperature, humidity, air quality controller and dew point calculation
- Three independent control outputs, each with four actions for presence detection
- Operation as single detector or as master/slave detector to cover larger areas
- Adjustable sensitivity and sectorization for presence detection
- Comparator, calculator and threshold monitoring
- Steady and/or 2-point temperature control for heating and cooling mode

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Using the application program

Product family: Physical sensors
Manufacturer: Siemens

This documentation describes all functions, although not all functions are available in all devices.

	Presence Detector WIDE UP 258D31	**Presence Detector WIDE pro UP 258D41**	**Presence Detector WIDE multi UP 258D51**	**Presence Detector WIDE DualTech UP 258D61**
Order number (MLFB)	5WG1 258-2DB31	5WG1 258-2DB41	5WG1 258-2DB51	5WG1 258-2DB61
Application	07 B0 CO Presence Detector WIDE 9A1001	07 B0 CO Presence Detector WIDE pro 9A1101	07 B0 CO Presence Detector WIDE multi 9A1201	07 B0 CO Presence Detector WIDE DualTech 9A0F01
Temperature sensor	•	•	•	•
Temperature controller	•	•	•	•
Humidity sensor		•	•	
Humidity controller		•	•	
CO2 sensor			•	
Air quality controller			•	
Presence detector	•	•	•	•
Brightness measuring	•	•	•	•
2-point dimmer	•	•	•	•
Constant light level controller	•	•	•	•
Calculator	•	•	•	•
Threshold monitoring	•	•	•	•
Dew point calculation		•	•	
Ultrasound				•
Comparator	•	•	•	•
IR decoder	•	•	•	•
Configurable sensitivity	•	•	•	•
Configurable sectorization	•	•	•	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Contents

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

1 Functional description

The application programs "07 B0 CO Presence Detector WIDE 9A1001," "07 B0 CO Presence Detector WIDE pro 9A1101," "07 B0 CO Presence Detector WIDE multi 9A1201," and "07 B0 CO Presence Detector WIDE DualTech 9A0F01" can be used for the respective corresponding KNX devices in the "Using the application program" section. These are briefly described below.

The presence detectors "WIDE UP 258D31," "WIDE pro UP 258D41," "WIDE multi UP 258D51" and "WIDE DualTech UP 258D61" are KNX devices that include several sensors and controllers. They use KNX to communicate with actuators or other KNX devices. They have been designed for installation on the ceiling.

The presence detectors are equipped with an integrated brightness sensor and, depending on the model, one or more HVAC sensors.

All variants record brightness and temperature and thus control not only the illumination systems but also ventilation and heating systems. Presence Detector WIDE pro UP 258D41 also controls the humidity in the room, and Presence Detector WIDE multi UP 258D51 additionally controls the air quality. Every HVAC sensor has its own controller.

Presence Detectors WIDE UP 258D31, WIDE pro UP 258D41 and WIDE multi UP 258D51 detect presence by means of PIR sensors, Presence Detector WIDE DualTech UP 258D61 detects presence via ultrasound.

Additional functions of the presence detectors of all variants are:

Sensors

Presence detectors WIDE UP 258D31, WIDE pro UP 258D41 and WIDE multi UP 258D51 contain 4 PIR sensors. The PIR sensors can be deactivated individually in order to reduce the capture area in a targeted manner.

Presence detector WIDE DualTech UP 258D61 offers presence detection by means of ultrasound and an additional PIR sensor.

The sensitivity of the presence detector can be configured using the ETS for both PIR and ultrasound in order to adapt it flexibly to different situations. This ensures reliable detection and avoids false positives.

How the presence detector works

The detector has three independent function blocks (evaluation units) with up to four output objects each. Depending on how the parameters are configured, these communication objects can be used to each send one or two telegrams on KNX at the start and at the end of a detected movement. The values of the communication objects are set via corresponding parameters for each function block (presence detector, presence detector (HVAC) or slave).

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

HVAC presence detector

The detector can be used to control HVAC applications.

This function can be used, for example, to switch systems that are used for heating, ventilation and air conditioning (HVAC) the room from "power saving mode" when the room is not used to "comfort mode" when the room is in use and back to "power saving mode" when the room is no longer being used. The evaluation is performed brightness-specifically and after a special evaluation of the recording.

Presence detector – master-slave

The detector can be used as a standalone device, master or secondary (slave) detector.

Depending on the requirements, additional presence detectors can be connected as to extend the presence capture area or as "slave detectors" to the "master detector" via KNX in order to cover larger areas. The "slave detectors" only supply motion information to the master detector.

Presence detector - blocking the sensor and output

There are two options for disabling the operating modes "presence detector" and "presence detector (HVAC):" Sensor and/or output. "Slave" mode only has one sensor block.

The difference is that the response of the channel to activating or deactivating the block can be configured for the output lock.

Brightness measuring – can be calibrated via KNX

The presence detector has a light sensor. The measured value for indirect measurement can be calibrated so that it can be adapted to the respective installation location. The brightness sensor can be calibrated in four different ways: with adjustment factor, with adjustment factor and offset, via object (mixed light, artificial light) or via two separate objects (artificial light and daylight).

Integrated 2-point brightness controller (switching)

If the brightness controller is activated (automatic mode), the lighting is switched on as soon as the brightness falls below the configured lower brightness limit. The lighting is switched off once the configured upper brightness limit is exceeded. The brightness limits can be set using parameters or communication objects.

Integrated steady constant lighting control (dimming)

The illuminance of daylight entering a room through the window decreases the deeper it enters into the room. In order to use the entering daylight in the best possible way with constant lighting control, the device offers the option to control a main lighting group directly and up to four additional sub-lighting groups each via a separate characteristic line and a separate controller (master/slave mode). All lighting groups are dimmed to the same setpoint (e.g. 500 Lux).

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Temperature sensor and temperature controller

The devices offer a room-oriented temperature controller for heating and/or cooling. Here, a room temperature controller sends a control value to an actuator by entering the actual value of the room temperature and specifying the setpoint with the corresponding control algorithm (2-point-lighting control, steady PI control or steady PI control with sequence control). This actuator controls a heating or cooling valve that changes the room temperature.

In addition, the room control device supports the fan control of fan convectors (fan coil units). A multi-stage fan blows warm or cool air into the room. This forced convection makes it possible to heat or cool the room more quickly.

Calculator

This module is used if external measured values are to be taken into account.

Threshold monitoring

For each of the measured values brightness, temperature, humidity and CO2, an upper limit and a lower limit can be defined and then monitored.

Comparator

The value comparator can be used to compare two similar analog values (e.g. temperature) with each other.

Infrared (IR) receiver

The IR receiver integrated in the devices makes it possible to control lighting and solar protection as well as storing and retrieving scenes via an IR remote control. The physical address can also be programmed with the IR remote control.

Humidity sensor and controller

The presence detector can measure and analyze the relative humidity.

Dew point calculation

The presence detector calculates the dew point temperature and transmits this via a communication object.

Air quality sensor and controller

The sensor can measure and analyze the CO2 content in the air.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

1.1 Delivery state

In the delivery state, the device can be tested without programming. A green LED lights up as long as a movement is detected.

1.2 Commissioning

After connecting the device to the bus voltage, the detector has to "start up" first, that is, the motion sensor is initialized for up to 40 s. No motion is detected during this time and no corresponding telegrams are sent. The "start-up delay" parameter can be used to shorten or extend this time. We recommend 40 s to ensure optimal functioning. In the delivery state, programming mode can also be activated and deactivated using the IR remote control S 255/11 5WG1 255-7AB11 (S3 = On/ S4 = Off), which is available as an accessory. Additional functions cannot be triggered with the IR remote control in the delivery state.

1.3 Behavior on unloading the application program

After "unloading" the application program with the ETS, the unloaded device has no functions.

1.4 Resetting the device to factory settings

A very long push of the programming button of more than 20 seconds resets the device to its factory settings. This is indicated by a uniform flashing of the programming LED with a duration of 8 seconds.
All configuration settings are deleted.

Pushing the button for longer (> 5 s to 20 s) selects the connection test for commissioning with Desigo. This mode can be terminated by briefly pushing the button.

1.5 Address mode

On bus voltage recovery, wait several seconds before pushing the learning button (not before booting is complete).

Briefly pressing the programming button (< 2 s) activates address mode. This is indicated through constant illumination of the programming LED.

Pressing it again deactivates address mode.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

2 Structure of configuration options

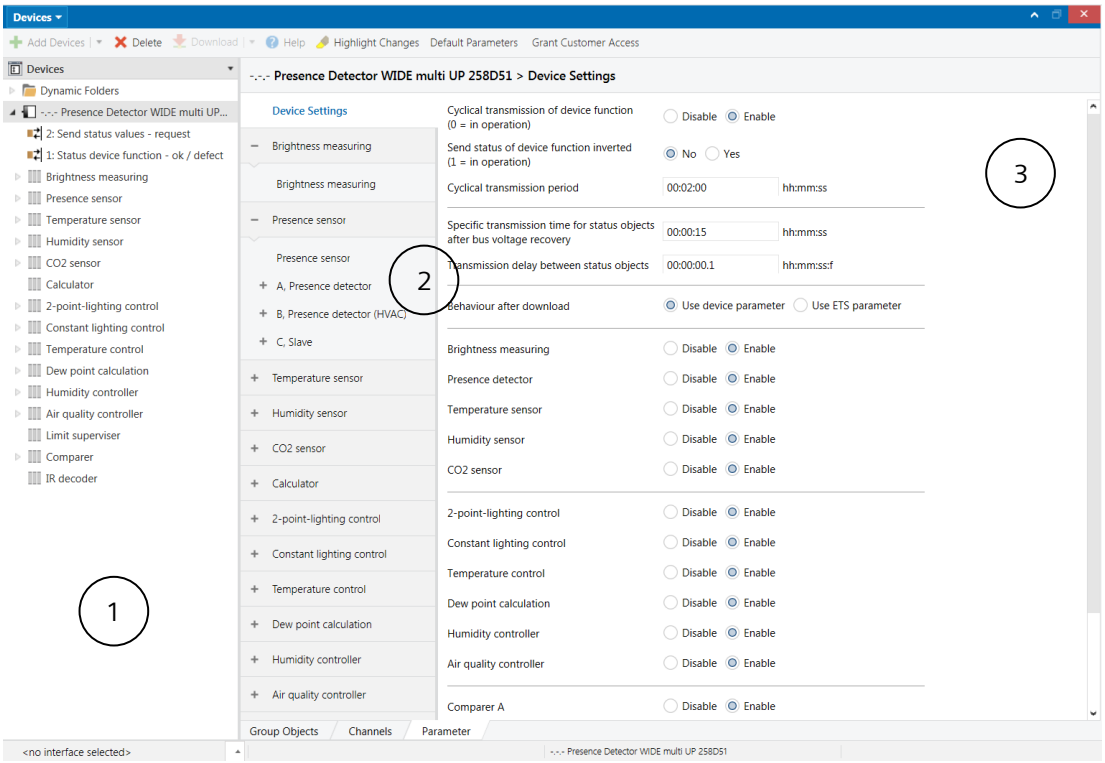


Fig. 1 Structure of configuration options

(1) Tree view of devices and channels

(2) Listing of parameter cards. Depending on which parameters have been set to “enable” in the parameter area (3), additional parameter cards are displayed here

(3) Parameter area. Parameters (value input, “enable” checkbox or “disable” checkbox) are set in this area. With some parameters, additional rows or additional parameter cards are displayed once these parameters have been enabled.

The default settings for the parameters are highlighted in the description of the parameters in this document in bold print.

A list of the currently active communication objects is separately displayed on the “communication objects” tab.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

3 Device settings

3.1 Parameter

This parameter window is used for cross-function specifications. You can also specify which functions are to be activated or deactivated for operation.

Parameter	Settings
Cyclical transmission of device function (0 = in operation)	**Disable** **Enable**
This parameter can be used to disable or enable the cyclical transmission of the device function. If the device is functioning properly, the value “0” is transmitted cyclically.	
Send inverted status of device function (1 = in operation)	**No** **Yes**
This parameter can also be used to transmit the status of the device function in inverted form. In this case, the value “1” is transmitted cyclically when the device is functioning properly. **Availability:** This parameter is only visible if the “cyclical transmission of device function (0 = in operation)” parameter is set to “enable.”	
Cyclical transmission period (hh:mm:ss)	**00:00:01...18:12:15**
This parameter can be used to select the time interval for cyclical transmission of the device function. **Note:** The device status is also transmitted for the first time after bus voltage failure/recovery after the time set here. **Availability:** This parameter is only visible if the “cyclical transmission of device function (0 = in operation)” parameter is set to “enable.”	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Specific transmission time for status objects after bus voltage recovery **(hh:mm:ss)**	**00:00:00...18:12:15**
This parameter is used to ensure that no unnecessary bus load is generated by status telegrams immediately after bus voltage recovery and after a re-start of the device. The time of transmission after bus voltage recovery must be set long enough that other KNX devices that have to receive and process the status have also already completed their initialization. The time of transmission applies to the stored status values after bus voltage recovery. If the status changes after bus voltage recovery, the respective status is transmitted immediately and once again after the elapse of the time set here. **Note:** The transmission time does not apply if a status request of all status objects is initiated via the “send status values” communication object. If a status request is initiated directly following bus voltage recovery and before this transmission time (e.g. via the “send status values” communication object), this request is discarded. A separate transmission of the status objects is possible only after the regular transmission of the status.	
Transmission delay between status objects **(hh:mm:ss.f)**	**00:00:00.1...00:01:00.0**
This parameter is used to set with which minimal wait time must be maintained between two successive status telegrams to ensure that no excessive bus load is generated by status telegrams sent in too quick a succession. **Note:** This transmission delay only applies after bus voltage recovery and with the “send status” function.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Behavior after download	**Use device parameters** **Use ETS parameters**
This parameter is used to set whether the parameters of the presence detector previously specified by the user via communication objects or the parameters of the ETS software are to be used after downloading the data from ETS software to the solar protection actuator. The following settings are possible: • **Use device parameters:** The settings of the individual functions are not re-initialized and the current settings are therefore retained. • **Use ETS parameters:** With this setting, the parameters stored in the device are overwritten and the parameters set in the ETS software are used. The behavior for bus voltage recovery configured in the ETS software is also executed. The calibration of the brightness sensor and constant lighting control is retained. **Recommendation:** If the presence detector does not behave as expected, set this parameter to “use ETS parameters.”	
Brightness measuring	**Disable** **Enable**
This parameter can be used to enable or disable the brightness measuring and analysis of the internal brightness sensor**.** If you select “enable,” the parameter card “brightness measuring” is displayed for configuring the brightness sensor.	
Presence detector	**Disable** **Enable**
This parameter can be used to enable or disable the presence detector. If you select “enable,” the parameter card “presence detector” is displayed for configuring the presence detector.	
Temperature sensor	**Disable** **Enable**
This parameter can be used to enable or disable the internal temperature sensor. If you select “enable,” the “temperature sensor” parameter card is displayed for configuring the temperature sensor.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Humidity sensor	**Disable** **Enable**
This parameter can be used to enable or disable the internal humidity sensor. If you select "enable," the "humidity sensor" parameter card is displayed for configuring the humidity sensor.	
CO2 sensor	**Disable** **Enable**
This parameter can be used to enable or disable the internal air quality sensor. If you select "enable," the "CO2 sensor" parameter card is displayed for configuring the air quality sensor.	
2-point-lighting control	**Disable** **Enable**
This parameter can be used to enable or disable the 2-point-lightning control. If you select "enable," the "2-point-lighting control" parameter card is displayed for configuring the 2-point-lighting controller.	
Constant lighting control	**Disable** **Enable**
This parameter can be used to enable or disable constant lighting control. If you select "enable," the "constant lighting control" parameter card is displayed for configuring the constant lighting control.	
Temperature control	**Disable** **Enable**
This parameter can be used to enable or disable temperature control. If you select "enable," the "temperature control" parameter card is displayed for configuring the temperature control.	
Dew point calculation	**Disable** **Enable**
This parameter can be used to enable or disable dew point calculation. If you select "enable," the "due point calculation" parameter card is displayed for configuring the dew point calculation.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Humidity controller	**Disable** **Enable**
This parameter can be used to enable or disable the humidity controller. If you select “enable,” the “humidity controller” parameter card is displayed for configuring the humidity controller.	
Air quality controller	**Disable** **Enable**
This parameter can be used to enable or disable the air quality controller (CO2 controller). If you select “enable,” the “air quality controller” parameter card is displayed for configuring the air quality controller.	
Comparator [A...D]	**Disable** **Enable**
This parameter can be used to enable or disable the four comparators If you select “enable,” the “comparator” parameter card is displayed for configuring the comparators.	
IR decoder	**Disable** **Enable**
This parameter can be used to enable or disable the IR decoder. If you select “enable,” the “IR decoder” parameter card is displayed where up to 6 IR channels can be configured.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

3.2 Communication objects

Obj	Object name	Function	Datapoint type	Object type
1	**Status device function**	OK/defect	1.005 alarm	Output
This object regularly transmits the value "0" when the device is functioning. If the device no longer transmits cyclically, this indicates a device failure. A higher-level system can monitor the cyclical transmission and trigger a warning or alarm message if the status message is not transmitted. The parameter "send inverted status for device function" can be used to set that this value is inverted. In this case the value "1" is transmitted cyclically when the device is functioning properly. **Note:** Transmission first takes place after the time configured in the "cyclical transmission period" parameter. **Availability:** The "status device function" communication object is only displayed if the parameter "cyclical transmission of device function (0 = in operation)" has been enabled.				
2	**Send status values**	request	1.017 trigger	Input
If a telegram with any value ("1" or "0") is received, this object is used to trigger the transmission of the current status values for all status objects for which the transmission is set to "on request" in the configuration.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

3.3 Parameters that are visible if the “status ...” parameter is set to “enable”

Parameter	Settings
Send status on request	**Disable** **Enable**
This parameter can be used to set whether the status of the communication object is sent upon request or whether requests for the status value will be rejected. The request is triggered via the communication object “send status values.”	
Send status on change of status	**Disable** **Enable**
This parameter can be used to set whether the value of the status object is automatically sent after each status change.	
Send status cyclically **(hh:mm:ss)**	**00:00:00...18:12:15**
This parameter can be used to set the time interval at which the value of the status object is sent cyclically. If this is set to “00:00:00,” cyclic sending is deactivated.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

3.4 Parameters that are visible if the “status ...(value)” parameter is set to “enable”

Parameter	Settings
Send value on request	**Disable** **Enable**
This parameter can be used to set whether the value is sent on request or whether requests for the value will be rejected. The request is triggered via the communication object “send status values.”	
Send value on change of value	**Disable** **Enable**
This parameter determines if the value is to be sent automatically for every change of value. If “enable” is selected, additional parameters are displayed that can be used to define which change of value (e.g. K or %) since the last transmission has to be exceeded and how much time must have passed since the last transmission for the value to be sent again.	
Value change since last sent (K) [%]	**0.00...670760.00 [0...100]**
This parameter is used to specify at which change of value compared to the last value sent the value of the corresponding communication object is sent again. Sending takes place if the minimum block time for sending of value has been exceeded.	
Block time for sending of value (hh:mm:ss)	**00:00:00...18:12:15**
This parameter is used to set which time since the last sending of the value has to be exceeded in order for it to be sent again. **Note:** The block time does not apply to cyclic sending. If the block time is greater than the cycle time, the value is nonetheless sent at the end of the cycle time.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Send value cyclically (hh:mm:ss)	**00:00:00...18:12:15**
This parameter determines if and in which intervals the object result is sent via the bus. If this is set to "00:00:00," cyclic sending is deactivated.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

4 Sensors

4.1 Function overview

Brightness measuring

The device receives its own light sensor. The signal measured there is available both internally and on the KNX bus via a communication object.

Since the light sensor measures directly, it can be calibrated for indirect measures so that it can be adapted to different installation locations. Quick fluctuations in illuminance are hidden. The regular maximum measurable value of the internal light sensor is 1000 lux; however, calibration can result in different maximum measurable values.

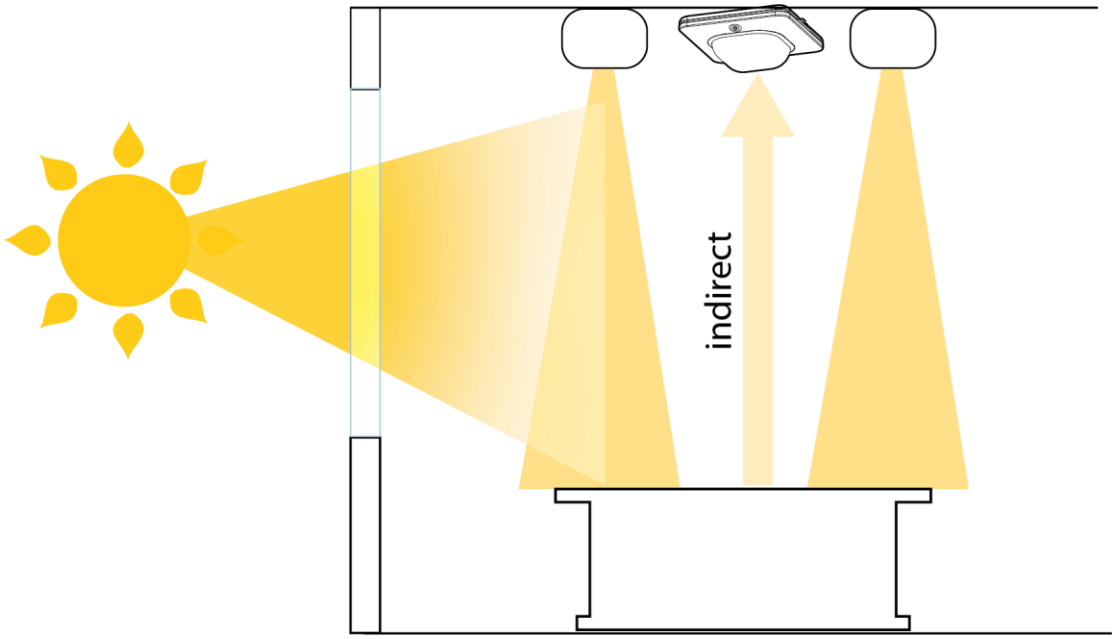


Fig. 2 Indirect measuring principle

A parameter is used to specify whether the brightness value determined by the device or an externally received brightness value is used for the other function blocks of the detector.
The device properties and basic calibration are intended for approx. 2.8 m (typical ceiling height of 3.5 m minus table height of 0.6 m to 0.8 m) ex works. For larger distances or special reflection properties of the reference area, a separate calibration must be performed with the respective reference area.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Calibration of the brightness sensor
In order to use the integrated brightness sensor optimally for measurement and light control, the sensor has to be calibrated because the portion of the reflected light that the sensor measures strongly depends on the reflecting area underneath the brightness sensor.

A calibration that has been performed once is retained after a download as long as no changes are made to the calibration type.

During the brightness measurement, the programming LED must be switched off because the light from the LED could falsify the measurement results.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

The brightness sensor can be calibrated in four different ways:

With adjustment factor

Using the indirect measuring method, the brightness sensor only records the reflected brightness that exists in the capture area underneath the detector. However, the integrated controller requires the actual brightness on the work surface. This can be adjusted using an adjustment factor (multiplier). Users can set/configure the thus determined correction factor themselves.

This method is preferably used in rooms without daylight.

Example:
If a lux meter records 500 lux on the work surface but only records 200 lux on the ceiling when pointed down, the factor can be easily calculated as 2.5. Only 40 % are reflected by the surface. You need to enter 2.5 in the "adjustment factor" parameter.

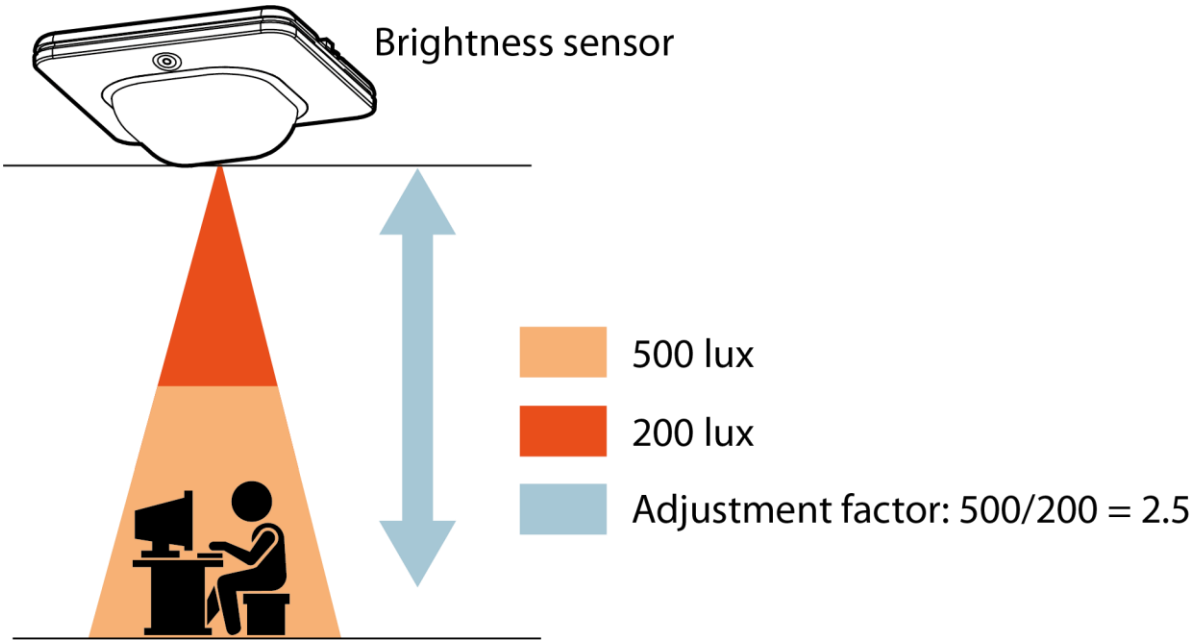


Fig. 3 Calibration with adjustment factor

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

With adjustment factor and offset

In his case, an additional offset (which is applied before the factor on the measured value) is directly available as a parameter in ETS.

The correction is made according to the following formula:
Corrected brightness value = (measured brightness value + offset) * (correction factor * 0.01)

This makes it possible to compensate, e.g. differences in brightness with different illuminances due to external influences (e.g. constant illumination for emergency lighting) within certain limits.

This method is preferably used in rooms without daylight.

Via object (mixed light, artificial light)

The calibration via object (mixed light, artificial light) is preferably used in rooms with artificial light and daylight where no massive changes in artificial light and daylight occur during the day.

The measured brightness value can be sent to the device via a communication object (74 brightness value (calibration)). Hence, the calculation of the correction factor can be performed by the device itself. A better lighting control result is achieved with a calibration with mixed light (50 % daylight and 50 % artificial light).

Follow these steps for calibration:

1. Switch off the lighting control and the lights. Daylight continues to light up the work surface.
2. Measure the brightness underneath the sensor on the floor or table or whatever is underneath this device/brightness sensor.
3. Set half of the brightness setpoint you want later by closing the blinds a little. However, avoid direct sunlight on the work surface.
4. Switch on the lighting (not the controller!) and manually dim to the target brightness value. Hence the setpoint of half daylight and half artificial light (mixed light) is achieved.
5. Use ETS to send the currently measured brightness value (lux) to the sensor via the object “brightness value (calibration)” (brightness value calibration).
6. The device is now calibrated. Check the brightness value. Close to the separate value, is should be close to the same value as on the brightness sensor. The best parallelism that you have during the calibration of the value should be the setpoint.

Example:
The brightness value of 500 lux measured on the workplace surface using the lux meter is sent to the enabled communication object “brightness value (calibration)” via ETS.

Note:
This type of calibration requires equal shares of natural and artificial light.
The internal adjustment factor is limited to a maximum of 20.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Via two separate objects (artificial light and natural light)

For regulating artificial and natural light, this method provides more precise brightness values than using a joint calibration object for mixed/artificial light.

Note:
For the calibration "via two objects (artificial light and daylight)," constant lighting control must be activated and one of these calibrations must be performed.

➲ *Recording the lighting characteristic for constant lighting control (calibration)*

In this method, the artificial light and the daylight are taken into account separately for the calibration of the sensor. The measured brightness values can be sent to the device via communication object 75 (brightness value daylight (calibration)) and 76 (brightness value artificial light (calibration)). Hence, the device can calculate the adjustment factor itself. During controlling, the daylight share applicable is calculated internally so that the actual brightness on the work surface is recorded and calculated must more precisely and can be regulated.

Follow these steps for calibration:

1. To calibrate the light sensor for daylight, start by switching off lighting control and lights. Daylight continues to light up the work surface.
2. Measure the brightness under the sensor (work surface or floor) using a lux meter.
3. Sufficient daylight (> 1/2 * setpoint) should be available to ensure subsequent controlling works better. You should avoid too high a portion of daylight (> setpoint). If necessary, use blinds to reduce daylight portion.
4. Use ETS to send the currently measured brightness value (lux) to the device via communication object 75 (brightness value daylight (calibration)).
5. For calibration using artificial light, darken the room so that no daylight enters.
6. Switch off the lighting control and turn on the lights (max. brightness). If the lighting system is too powerful and a brightness value is measured that is significantly higher than the setpoint, dim the lights a little.
7. Measure the brightness under the sensor (work surface or floor) using a lux meter.
8. Use ETS to send the current brightness value (Lux) to the device via communication object 76 (brightness value artificial light (calibration)).
9. Constant lighting control must be calibrated next. See ➲ *Recording the lighting characteristic for constant lighting control* (calibration)
10. The device is now calibrated. Check the brightness value. When the shutters are closed (artificial light only) and when the lights are switched off (daylight only), it should return a value that corresponds to that of the lux meter on the work surface.

Constant lighting control must remain activated even after recording the characteristic line of the artificial light so that brightness measuring returns correct values.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Example:
The setpoint is set as 500 lx. If the lighting is switched off, daylight of 800 lx is measured. The shutters are closed until the point where approx. 500 lx reach the work surface. Transfer this value to the device as daylight. Following that, close the shutters completely to ensure the daylight portion is as low as possible. Complete blackout would be ideal. Switch on the lighting and set the maximum brightness. Send the measured brightness value, e.g. 600 lx to the device for calibrating the brightness sensor. Then, with the shutters closed completely, start the calibration of constant lighting control.

Recording the lighting characteristic for constant lighting control (calibration)

For constant lighting control, a characteristic line profile of the brightness in the room must be recorded separately. Before this characteristic line can be learned, the above calibration of the brightness sensor must be performed.

Follow these steps for calibration:

1. For calibration, darken the room so that no daylight enters.
2. Communication object 170 (constant lighting control, main group dimming value status) must be linked to the status object of the dimming actuator.
3. Start the calibration via communication object 179 (constant lighting control, calibration).
4. If calibration is successful, communication object 169 (constant lighting control, main group dimming value) is used to send the value “50%” and then output the 16 measured values (lux values) via communication object 180 (constant lighting control, diagnostic values).

Calculation of average

To hide quick brightness fluctuations, a calculation of the average value is available. You can use an ETS parameter (number of values for calculation of average) to specify how many measured values are used to calculate the average. This makes it possible to somewhat compensate for short-term brightness fluctuations in daylight (passing clouds) or reflections on the work surface (white sheet of paper).

Temperature sensor

The device includes an inbuilt temperature sensor for recording the room temperature in the rage of 0 °C to 50 °C with a resolution of 0.08 K. The internal actual value can be adapted to environmental factors by means of a configurable offset. The adjusted value is used to determine the actual value.
The sensor values are sent via a separate communication object. The transmission interval can be set as a time or depending on changes in value.

A parameter is used to specify whether the temperature value determined by the device or an externally received temperature value is used for the other function blocks of the detector.

Humidity sensor

The presence detector records the relative humidity of the room by means of an integrated humidity sensor element. The internal actual value can be adapted to environmental factors by means of a configurable offset. The adjusted value is used to determine the actual value.
The sensor values are sent via a separate communication object (percentage (1 byte) or KNX float (2 bytes)). The transmission interval can be set as a time or depending on changes in value.

A parameter is used to specify whether the humidity value determined by the device or an externally received humidity value is used for the other function blocks of the detector.

CO2 sensor

The device enables recording of the CO2 concentration in the room in the range of 400 ppm to 10,000 ppm (± 30 ppm) with a resolution of 1 ppm. This internal actual value can be adapted to environmental influences by means of a configurable offset and an adjustment factor. The adjusted value is used to determine the actual value.
The sensor values are sent via a separate communication object (positive integer or KNXFloat). The transmission interval can be set as a time or depending on changes in value.

A parameter is used to specify whether the CO2 value determined by the device or an externally received CO2 value is used for the other function blocks of the detector.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Ultrasound sensor

Actively emitted by the sensor, ultrasound waves (40 kHz) spread through the respective room. They enclose objects that exist in the room and reach every last corner. This means that the sensor can even detect movements when there is no visual contact between it and the person. Ultrasound waves penetrate thin walls and are highly sensitive.

The sensitivity for setting the capture area can be configured.

Users can choose which sensor technologies (PIR and US) are to be used to initially trigger and then maintain presence detection.

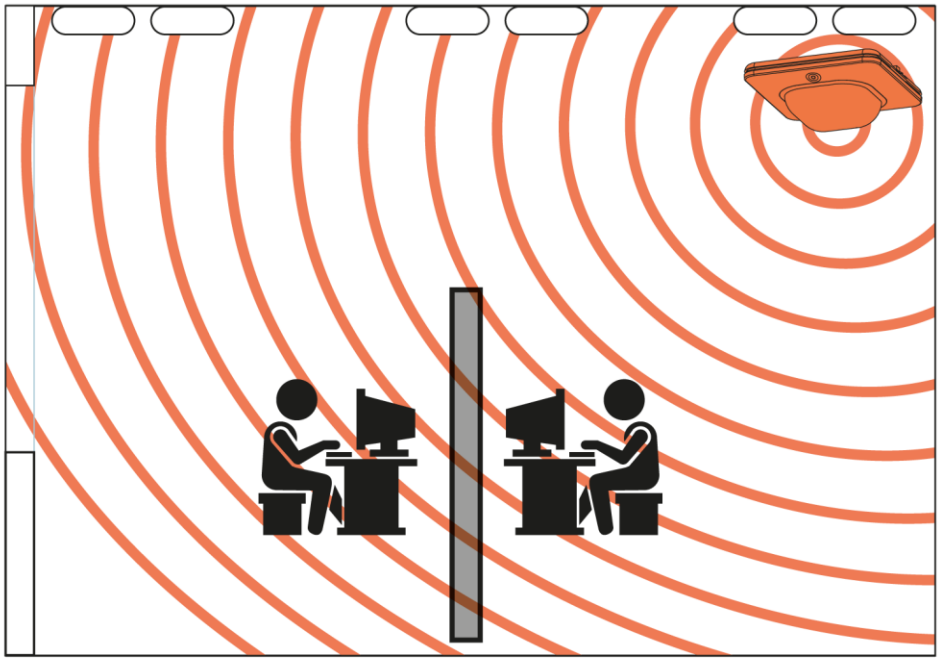


Fig. 4 Distribution of ultrasound waves in the room

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

4.2 Brightness measuring

4.2.1 Parameter

Parameter	Settings
Calibration	**With adjustment factor** **With adjustment factor and offset** **Via object (mixed light, artificial light)** **Via two objects (artificial light and natural light)**
This parameter can be used to set the type of light sensor calibration. Calibration takes place either via an adjustment factor, via an adjustment factor and offset, via an object or via two objects for artificial light and daylight. For the calibration "via two objects (artificial light and daylight)," constant lighting control must be activated and one of these calibrations must be performed. Constant lighting control must generally be activated. This process must also be applied if only brightness measuring is required and no constant lighting control. **More information:** ➲ *calibration via object (mixed light, artificial light)* ➲ *calibration "via two objects (artificial light and daylight),"* ➲ *Recording the lighting characteristic for constant lighting control (calibration)*	
Adjustment factor (x 0.01)	**1...2000**
The light measured by the light sensor is multiplied by 0.01 times the configured adjustment factor. **Availability:** This parameter is only visible if the "calibration" parameter is set to "with adjustment factor" or "with adjustment factor and offset."	
Offset (lx)	**-671088.60...670760.90**
The offset is an adjustment value for the light measured by the light sensor. It can be used to correct environmental factors. The correction is made according to the following formula: Corrected brightness value = (measured brightness value + offset) * (correction factor * 0.01) **Availability:** This parameter is only visible if the "calibration" parameter is set to "with adjustment factor and offset."	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Initial adjustment factor (x 0.01)	**1...2000**
The light measured by the light sensor is multiplied by 0.01 times the configured adjustment factor. The initial adjustment factor is valid until a value with which the adjustment factor is calculated is received via the communication object "brightness value (calibration)." **Availability:** This parameter is only visible if the "calibration" parameter is set to "via object (mixed light, artificial light)."	
Adjustment factor daylight (x 0.01)	**1...2000**
The light measured by the light sensor is multiplied by 0.01 times the configured adjustment factor. The adjustment factor for daylight is valid until a value with which the adjustment factor is calculated is received via the communication object "brightness value daylight (calibration)." **Availability:** This parameter is only visible if the "calibration" parameter is set to "via two objects (artificial light and natural light)."	
Adjustment factor artificial light (x 0.01)	**1...2000**
The light measured by the light sensor is multiplied by 0.01 times the configured adjustment factor. The adjustment factor for artificial light is valid until a value with which the adjustment factor is calculated is received via the communication object "brightness value artificial light (calibration)." **Availability:** This parameter is only visible if the "calibration" parameter is set to "via two objects (artificial light and natural light)."	
Number of values for calculation of average	**1...8**
The internal light sensor measures every 20 milliseconds. For brightness measuring, the average value can be calculated across several consecutively measured values. The above parameter is used to specify the number of values to be used to calculate the average.	
Object Brightness value (sensor)	**Disable** **Enable**
The parameter is used to set whether the object "brightness value (sensor)" is enabled or disabled. This can be used to output the current brightness value and query it via the bus.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Send status on request	**Disable** **Enable**
This parameter can be used to set whether the brightness value is sent on request or whether requests for the value will be rejected. The request is triggered via the communication object “send status values.”	
Send brightness value on change of value	**Disable** **Enable**
This parameter determines if the brightness value is to be sent automatically for every change of value. If “enable” is selected, additional parameters are displayed that can be used to define which change of value (absolute or percentage) since the last transmission has to be exceeded and how much time must have passed since the last transmission for the value to be sent again.	
Value change since last sent (lx)	**0.00...670760.00**
This parameter is used to specify at which change of value in lux compared to the last value sent the value of the communication object “brightness value (sensor)” is sent again. Sending takes place if the minimum block time for sending of status has been exceeded.	
Value change since last sent (%)	**0...100**
This parameter is used to specify at which change of value in percent compared to the last value sent the value of the communication object “brightness value (sensor)” is sent again. Sending takes place if the minimum block time for sending of status has been exceeded.	
Block time for sending the brightness value (hh:mm:ss)	**00:00:00...18:12:15**
This parameter is used to set which time since the last sending of the brightness value has to be exceeded in order for it to be sent again. **Note:** The block time does not apply to cyclic sending. If the block time is greater than the cycle time, the value is nonetheless sent at the end of the cycle time.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Send status cyclically (hh:mm:ss)	**00:00:00...18:12:15**
This parameter determines if and at which intervals the determined brightness value is sent via the bus. If this is set to "00:00:00," cyclic sending is deactivated.	

4.2.2 Communication objects

Obj	Object name	Function	Datapoint type	Object type
73	**Brightness value (sensor)**	Value in LUX	9.004 Lux (lux)	Output
The brightness sensor sends its brightness value via this object. The current value can be queried using a read request via the bus at any time. The measured range of the internal light sensor is 1000 lux max. This value can be changed by means of calibration.				
74	**Brightness value (calibration)**	Value in LUX	9.004 Lux (lux)	Input
Since the light sensor only measures the indirect light reflected from the desk, this must be calibrated in accordance with the environment and position. During calibration, the room in which the device has been installed should have about the same brightness value as the setpoint that is to be used for constant lighting control later on. ETS can be used to send the value in lux measured on the desk surface by an external lux meter to the device via the object above. The measured value is entered into the ETS input field as a decimal number. ETS encodes this value and sends it to the device. As soon as the value has been received, it is used to calculate the adjustment factor (brightness value = adjustment factor * measured value). **Availability:** This communication object is only displayed if "via object (mixed light, artificial light)" has been set as the calibration method. **Note:** If the value 0 lx is received via the object, the adjustment factor is set to the value of the parameter "initial adjustment factor (x 0.01)." If the value received via the object exceeds the value measured by the internal light sensor by more than a factor of 20, the adjustment factor is set to the value of the parameter "initial adjustment factor (x 0.01)."				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
75	**Brightness value daylight (calibration)**	Value in LUX	9.004 Lux (lux)	Input

This object is used to calibrate the light sensor for daylight.

During calibration, the room in which the device has been installed should have sufficient daylight (> 1/2 * setpoint) and artificial light should be switched off.

ETS can be used to send the value in lux measured on the desk surface by an external lux meter to the device via the object above. The measured value is entered into the ETS input field as a decimal number. ETS encodes this value and sends it to the device. As soon as the value has been received, it is used to calculate the adjustment factor (brightness value = adjustment factor * measured value).

Availability:

This communication object is only displayed if “via two objects (artificial light and natural light)” has been set as the calibration method.

Note:

If the value 0 lx is received via the object, the adjustment factor is set to the value of the parameter “adjustment factor daylight (x 0.01).”

If the value received via the object exceeds the value measured by the internal light sensor by more than a factor of 20, the adjustment factor is set to the value of the parameter “adjustment factor daylight (x 0.01).”

Obj	Object name	Function	Datapoint type	Object type
76	**Brightness value artificial light (calibration)**	Value in LUX	9.004 Lux (lux)	Input

This object is used to calibrate the light sensor for artificial light.

During calibration, the blinds in the room in which the device has been installed should be closed completely and all lights should be switched on (max. brightness).

ETS can be used to send the value in lux measured on the desk surface by an external lux meter to the device via the object above. The measured value is entered into the ETS input field as a decimal number. ETS encodes this value and sends it to the device. As soon as the value has been received, it is used to calculate the adjustment factor (brightness value = adjustment factor * measured value).

Availability:

This communication object is only displayed if “via two objects (artificial light and natural light)” has been set as the calibration method.

Note:

If the value 0 lx is received via the object, the adjustment factor is set to the value of the parameter “adjustment factor artificial light (x 0.01).”

If the value received via the object exceeds the value measured by the internal light sensor by more than a factor of 20, the adjustment factor is set to the value of the parameter “adjustment factor artificial light (x 0.01).”

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

4.3 Temperature sensor

4.3.1 Parameter

Parameter	Settings
Offset (K)	**-671088.60...670760.90**
The offset is an adjustment value for the internally measured temperature. It can be used to correct environmental factors.	
Temperature value object	**Disable** **Enable**
The parameter is used to set whether the “temperature sensor, temperature value” object is enabled or disabled. This can be used to output the temperature value and query it via the bus.	
Send status on request	**Disable** **Enable**
This parameter can be used to set whether the temperature value is sent on request or whether requests for the temperature value will be rejected. The request is triggered via the communication object “send status values.”	
Send temperature value on change of value	**Disable** **Enable**
This parameter determines if the temperature value is to be sent automatically for every change of value. When “enable” is selected, additional parameters are displayed that can be used to define which change of value (in K) since the last transmission has to be exceeded and how much time must have passed since the last transmission for the value to be sent again.	
Value change since last sent (K)	**0.00...670760.00**
This parameter is used to specify at which change of value in K, compared to the last value sent, the value of the communication object “temperature sensor, temperature value” is sent again. Sending takes place if the minimum block time for sending of status has been exceeded.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Block time for sending of temperature value (hh:mm:ss)	**00:00:00...18:12:15**
This parameter is used to set which time since the last sending of the temperature value has to be exceeded in order for it to be sent again. **Note:** The block time does not apply to cyclic sending. If the block time is greater than the cycle time, the value is nonetheless sent at the end of the cycle time.	
Send temperature value cyclically (hh:mm:ss)	**00:00:00...18:12:15**
This parameter determines if and at which intervals the determined temperature value is sent via the bus. If this is set to "00:00:00," cyclic sending is deactivated.	
Object failure	**Disable** **Enable**
The parameter is used to set whether the object "temperature sensor, error" is enabled or disabled. If a hardware fault leads to a failure of the temperature sensor, this is sent as an error (logical 1) via this object. **Other parameters/parameter cards:** If the "object failure" parameter is set to "enable," parameters are displayed that enable you to set when a status is sent. ➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"*	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

4.3.2 Communication objects

Obj	Object name	Function	Datapoint type	Object type
79	**Temperature sensor, temperature value**	°C value	9.001 temperature (°C)	Output
The temperature sensor sends its temperature value via this object. The current value can be queried using a read request via the bus at any time. The measured range of the internal temperature sensor is between -45 and 130 °C.				
80	**Temperature sensor, failure**	1 = failure	1.005 alarm	Output
If a hardware fault leads to a failure of the temperature sensor, this is sent as "1= failure" via this object. **Availability:** This object is only visible if the "object failure" parameter is set to "enable."				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

4.4 Humidity sensor

4.4.1 Parameter

Parameter	Settings
Offset (% r.h.)	**-100...100**
The offset is an adjustment value for the internally measured relative humidity. It can be used to correct environmental factors.	
Object relative humidity	**Disable** **Enable**
The parameter is used to set whether the object "humidity sensor, relative humidity" is enabled or disabled. This can be used to output the current value of the relative humidity and query it via the bus.	
Data type	**DPT 9.007 (KnxFloat)** **DPT 5.004 (percentage)**
This parameter is used to set the data type in which the relative humidity value is output. This makes it possible to send the measured relative humidity via two different DPTs via the bus.	
Send relative humidity on request	**Disable** **Enable**
This parameter can be used to set whether the value of the relative humidity is sent on request or whether requests for the value will be rejected. The request is triggered via the communication object "send status values."	
Send relative humidity on change of value	**Disable** **Enable**
This parameter determines if the value of the relative humidity is to be sent automatically for every change of value. When "enable" is selected, additional parameters are displayed that can be used to define which change of value (in % r.h.) since the last transmission has to be exceeded and how much time must have passed since the last transmission for the value to be sent again.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Value change since last sent (% r.h.)	**0...100**
This parameter is used to specify at which value change in % r.h., compared to the last value sent, the value of the communication object "humidity sensor, relative humidity" is sent again. Sending takes place if the block time for sending of value for relative humidity has been exceeded.	
Block time for sending of relative humidity (hh:mm:ss)	**00:00:00...18:12:15**
This parameter is used to set which time since the last sending of the value of the relative humidity has to be exceeded in order for it to be sent again. **Note:** The block time does not apply to cyclic sending. If the block time is greater than the cycle time, the value is nonetheless sent at the end of the cycle time.	
Send relative humidity cyclically (hh:mm:ss)	**00:00:00...18:12:15**
This parameter determines if and at which intervals the determined relative humidity is sent via the bus. If this is set to "00:00:00," cyclic sending is deactivated.	
Object failure	**Disable** **Enable**
The parameter is used to set whether the object "humidity sensor, failure" is enabled or disabled. If a hardware fault leads to a failure of the humidity sensor, this is sent as an error (logical 1) via this object. **Other parameters/parameter cards:** If the parameter "object failure" is set to "enable," parameters are displayed that enable you to set when a status is sent. ➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"*	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

4.4.2 Communication objects

Obj	Object name	Function	Datapoint type	Object type
82	**Humidity sensor, relative humidity**	% r.h. value	5.004 percent (0...255 %)	Output
The humidity sensor sends its relative humidity via this object. The current value can be queried using a read request via the bus at any time. The measured range of the internal humidity sensor is between 0 and 100 % r.h. **Availability:** This object is only visible if the “data type” parameter is set to “DPT 5.004 (percentage).”				
83	**Humidity sensor, relative humidity**	% r.h. value	9.007 humidity (%)	Output
The humidity sensor sends its relative humidity via this object. The current value can be queried using a read request via the bus at any time. The measured range of the internal humidity sensor is between 0 and 100 % r.h. **Availability:** This object is only visible if the “data type” parameter is set to “DPT 9.007 (KnxFloat).”				
84	**Humidity sensor, fault**	1 = failure	1.005 alarm	Output
If a hardware fault leads to a failure of the humidity sensor, this is sent as “1= failure” via this object. **Availability:** This object is only visible if the “object failure” parameter is set to “enable.”				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

4.5 CO2 sensor

Notes on the CO2 sensor:

- The CO2 sensor determines the CO2 concentration by means of a non-dispersive infrared sensor (NDIR). Thanks to its inbuilt ABC (Automatic Baseline Correction) algorithm, the CO2 sensor is maintenance-free when operated in a normal environment. The algorithm stores the lowest measurement recorded within 8 days and corrects any measurement deviation that might occur. The CO2 sensor also includes auto-diagnostics for correct operation during its entire lifespan.
- Normal environments, such as offices, classrooms or other rooms that are not permanently occupied, typically reach the CO2 concentration of outdoor air (400 ppm) once a week. If the lowest CO2 concentration is not based on the outdoor air (400 ppm), this can lead to reduced precision and incorrect operation.
- Improper handling during transport, storage and assembly can affect the measurement during the initial operating period.
- The specified precision is reached after 25 days of continuous operation.
- The CO2 sensor is not suitable for safety applications, such as gas or smoke detectors.

4.5.1 Parameter

Parameter	Settings
Offset (ppm)	**-32768...32767**
The offset is an adjustment value for the internally measured CO2 value. It can be used to correct environmental factors.	
Adjustment factor (x 0.01)	**1...2000**
The CO2 measured by the CO2 sensor is multiplied by 0.01 times the configured adjustment factor.	
Object CO2 value	**Disable** **Enable**
The parameter is used to set whether the object "CO2 sensor, CO2 value" is enabled or disabled. This can be used to output the current CO2 value and query it via the bus.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Data type	**DPT 9.008 (KnxFloat)** **DPT 7.001 (positive integer)**
This parameter is used to set the data type in which the CO2 value is output. This makes it possible to send the measured CO2 value via two different DPTs via the bus.	
Send CO2 value on request	**Disable** **Enable**
This parameter can be used to set whether the CO2 value is sent on request or whether requests for the CO2 value will be rejected. The request is triggered via the communication object “send status values.”	
Send CO2 value on change of value	**Disable** **Enable**
This parameter determines if the CO2 value is to be sent automatically for every change of value. When “enable” is selected, additional parameters are displayed that can be used to define which change of value (in ppm) since the last transmission has to be exceeded and how much time must have passed since the last transmission for the value to be sent again.	
Value change since last sent (ppm)	**0...65535**
This parameter is used to specify at which change of value in ppm, compared to the last value sent, the value of the communication object “CO2 sensor, CO2 value” is sent again. Sending takes place if the minimum block time for sending of the CO2 value has been exceeded.	
Block time for sending of CO2 value (hh:mm:ss)	**00:00:00...18:12:15**
This parameter is used to set which time since the last sending of the CO2 value has to be exceeded in order for it to be sent again. **Note:** The block time does not apply to cyclic sending. If the block time is greater than the cycle time, the value is nonetheless sent at the end of the cycle time.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Send status cyclically (hh:mm:ss)	**00:00:00...18:12:15**
This parameter determines if and at which intervals the determined CO2 value is sent via the bus. If this is set to "00:00:00," cyclic sending is deactivated.	
Object failure	**Disable** **Enable**
The parameter is used to set whether the object "CO2 sensor, failure" is enabled or disabled. If a hardware fault leads to a failure of the CO2 sensor, this is sent as a failure (logical 1) via this object. **Other parameters/parameter cards:** If the parameter "object failure" is set to "enable," parameters are displayed that enable you to set when a status is sent. ➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"*	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

4.5.2 Communication objects

Obj	Object name	Function	Datapoint type	Object type
85	**CO2 sensor, CO2 value**	ppm value	7.001 pulse	Output
The CO2 sensor sends its CO2 value via this object. The current value can be queried using a read request via the bus at any time. The measured range of the internal CO2 sensor is between 400 and 10000 ppm. **Note:** For technical reasons, the measured values of the CO2 sensor that are output shortly after bus voltage recovery can be too high. **Availability:** This object is only visible if the “data type” parameter is set to “DPT 7.001 (positive integer).”				
86	**CO2 sensor, CO2 value**	ppm value	9.008 parts/million (ppm)	Output
The CO2 sensor sends its CO2 value via this object. The current value can be queried using a read request via the bus at any time. The measured range of the internal CO2 sensor is between 400 and 10000 ppm. **Note:** For technical reasons, the measured values of the CO2 sensor that are output shortly after bus voltage recovery can be too high. **Availability:** This object is only visible if the “data type” parameter is set to “DPT 9.008 (KnxFloat).”				
87	**CO2 sensor, failure**	1 = failure	1.005 alarm	Output
If a hardware fault leads to a failure of the CO2 sensor, this is sent as “1= failure” via this object. **Availability:** This object is only visible if the “object failure” parameter is set to “enable.”				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5 Functions

5.1 Presence detector

The detector detects the presence of a person and that no other person is in the detector's detection range. The evaluation of the detector signal can take place via three separate communication channels, called presence detector, presence detector (HVAC) and slave, whereby the capture area and PIR/US sensors are identical for all outputs. Each output channel can be disabled independently.

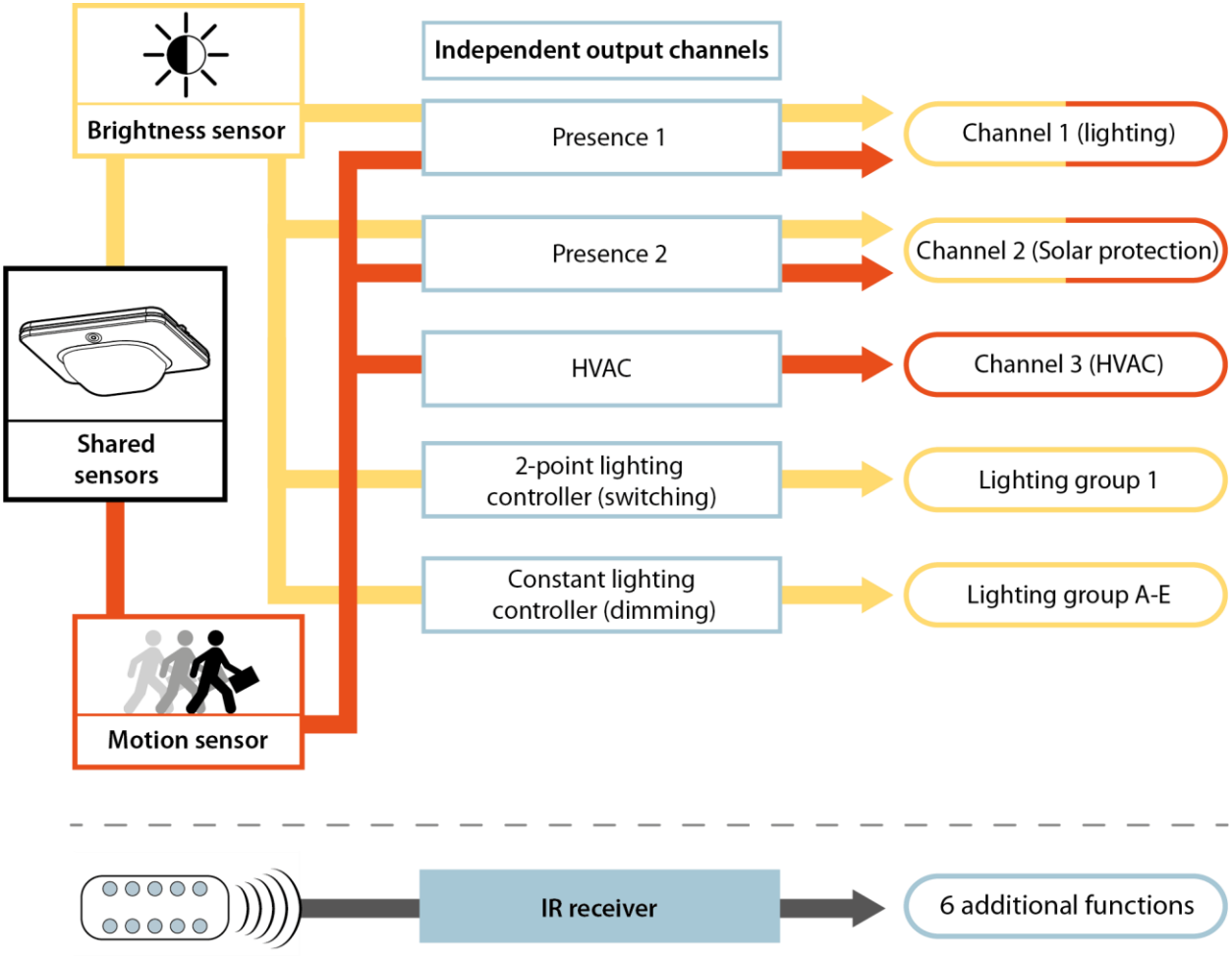


Fig. 5 Three independently configurable output channels for different applications

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

They way the presence detector and presence detector (HVAC) operate

Four communication objects are available for each channel. Depending on how the parameters are configured, these objects can be used to each send one or two telegrams to the bus at the start and at the end of a detected movement. The values of the communication objects are configured for each channel by means of appropriate parameters.

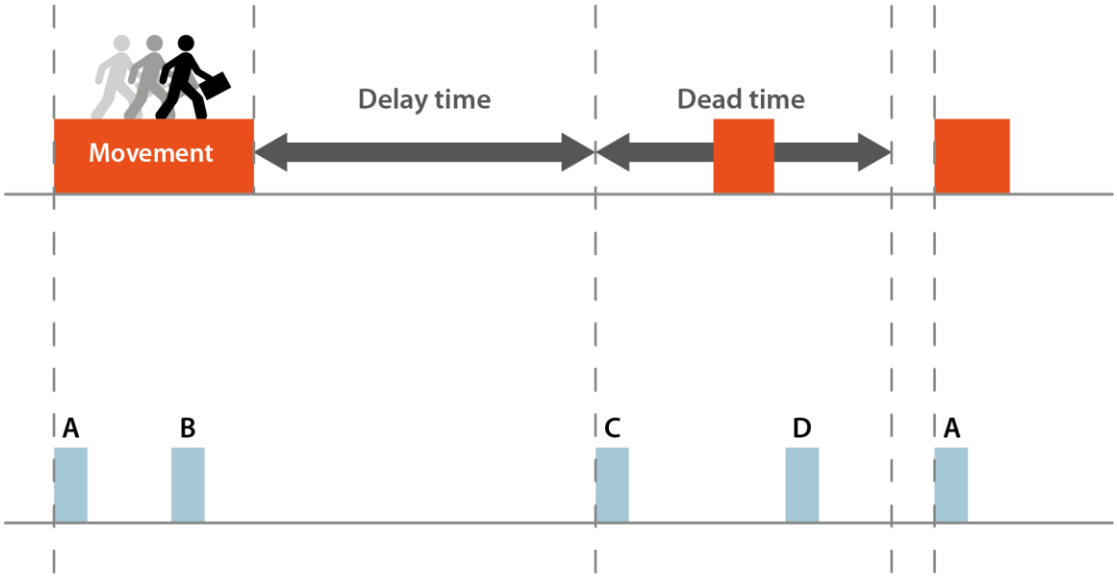


Fig. 6 Flowchart

Every time a movement is detected, the overshoot time is started; the duration of which can be configured for each channel. The end of a motion is reached at the end of the overshoot time.

The purpose of the dead time, the duration of which can also be configured for each channel, is to preserve the actuators that are connected to the detector. If a movement is detected during the dead time, telegrams are sent and the overshoot time is started either.

Below, the telegrams that are sent at the start of a movement are referred to as **A** and **B.** The telegrams that are sent at the end of a movement are referred to as **C** and **D**.

Process (example)
If the detector detects a movement, telegram **A** is sent. If the sending of a telegram **B** has also been configured, telegram **B** is sent after the configured delay time (possibly also cyclically). If no more movements take place any more, telegram **C** and (if configured) telegram **D** are also sent at the end of the overshoot time. Telegram **D** can also be sent cyclically.

If additional movements occur during the overshoot time, the overshoot time is restarted.

Presence detector (HVAC)

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

The detector has an additional control output with a monitoring timeframe for HVAC applications.
In this mode, a longer recording time is required for switching on. There must have been at least one detection in each of the configured observation timeframes in order to trigger the channel.

Slave

The detector can be used as an individual device, main (master) or secondary (slave) detector.

Depending on the requirements, additional presence detectors can be connected as “slaves” to the “master detector” via KNX in order to extend the presence capture area or cover larger areas. The “slaves” only supply motion information to the master detector.

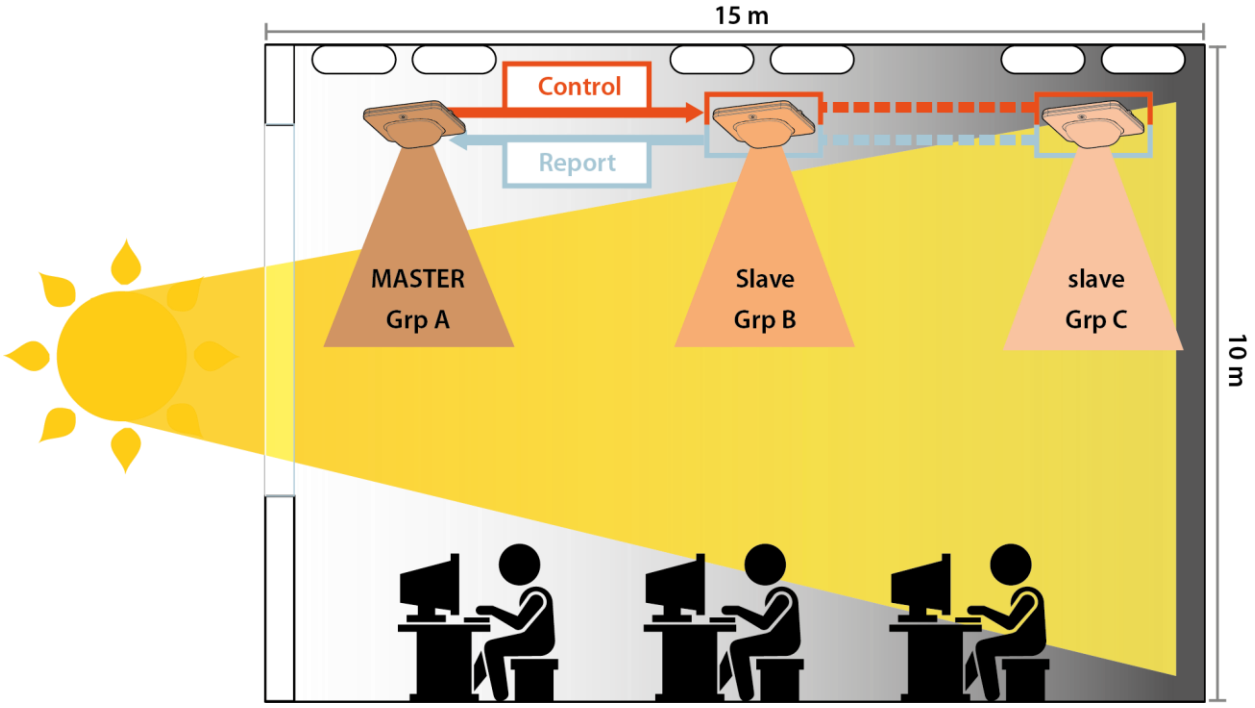


Fig. 7 Master-slave mode

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

The master detector responds depending on the brightness when it receives commands from the slave detectors. Telegrams that are received from communication object 8 (movement (external)), are treated as if the master detector has detected the presence. That is, this is a mode that depends on the measured brightness.

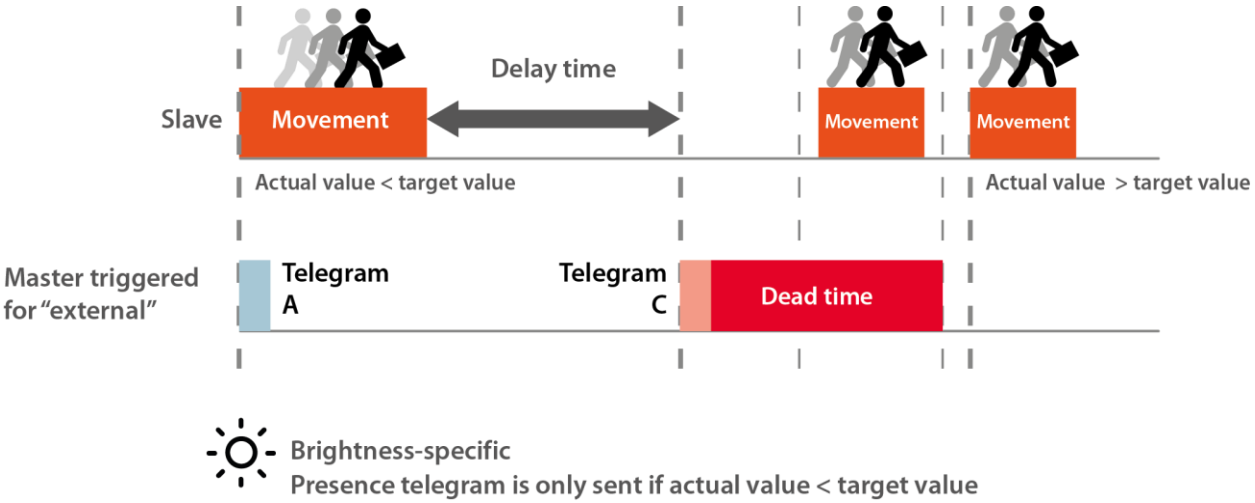


Fig. 8 Master modes after receiving commands from slave detectors

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Extension input

The extension inputs enable three use cases, for example, with an external button.
The telegrams received by communication objects 9 and 10 (extension On and Off) are always treated as presences irrespective of the brightness measured.
The aforementioned use cases are:

Semi-automatic (auto off)
Example: The light is switched on manually (e.g. via a button) and switched off automatically when a presence is no longer detected.
In this case, the presence detector only has to be connected to the actuator with the switch off command (C). The button is to be connected to the actuator and extension input (On) for switching on.

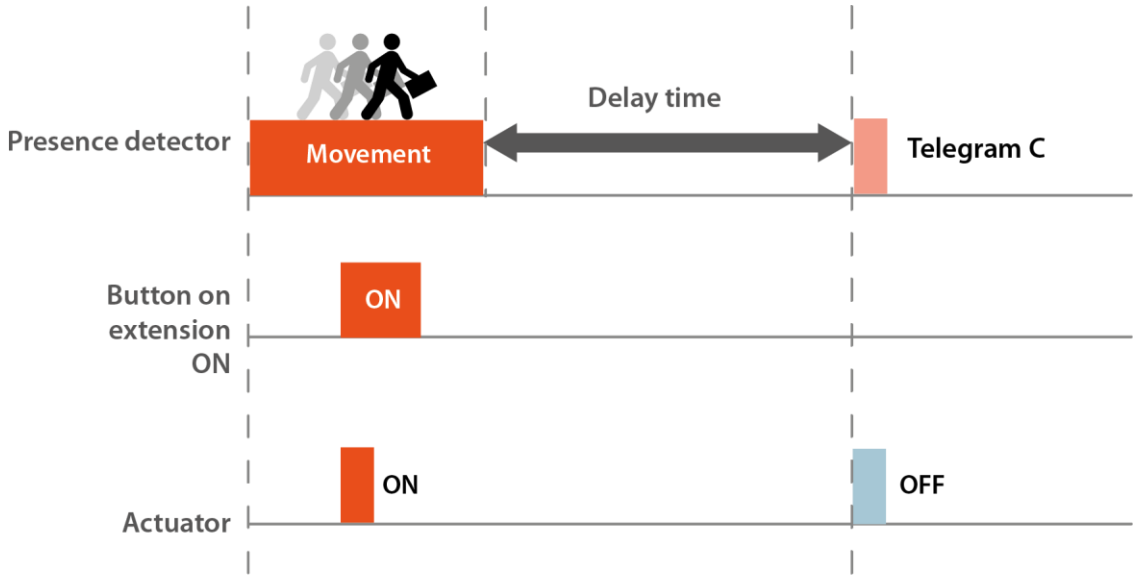


Fig. 9 Extension input "semi-automatic (auto off)"

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Semi-automatic (auto on)
The light is switched on automatically if a presence is detected and switched off manually (e.g. via a button).
In this case, the presence detector only has to be connected to the actuator with the switch on command (A) The button is to be connected to the actuator and extension input (Off) for switching off.

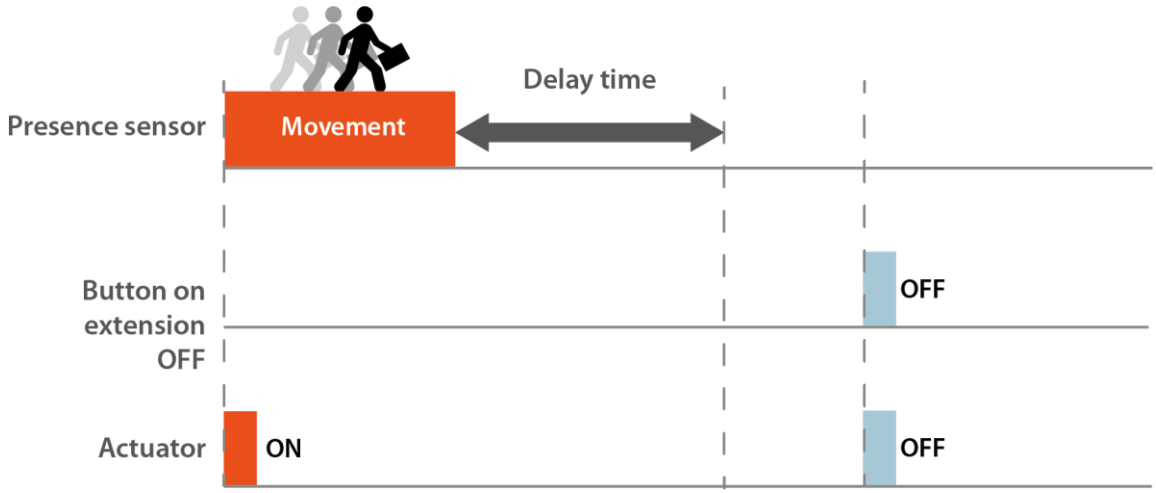


Fig. 10 Extension input "semi-automatic (auto on)"

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Switching on in spite of excessive brightness value
The extension input (On) can be used to switch on the light even though it does not fall below the brightness limit. Following that, the presence detector responds as in normal operation.

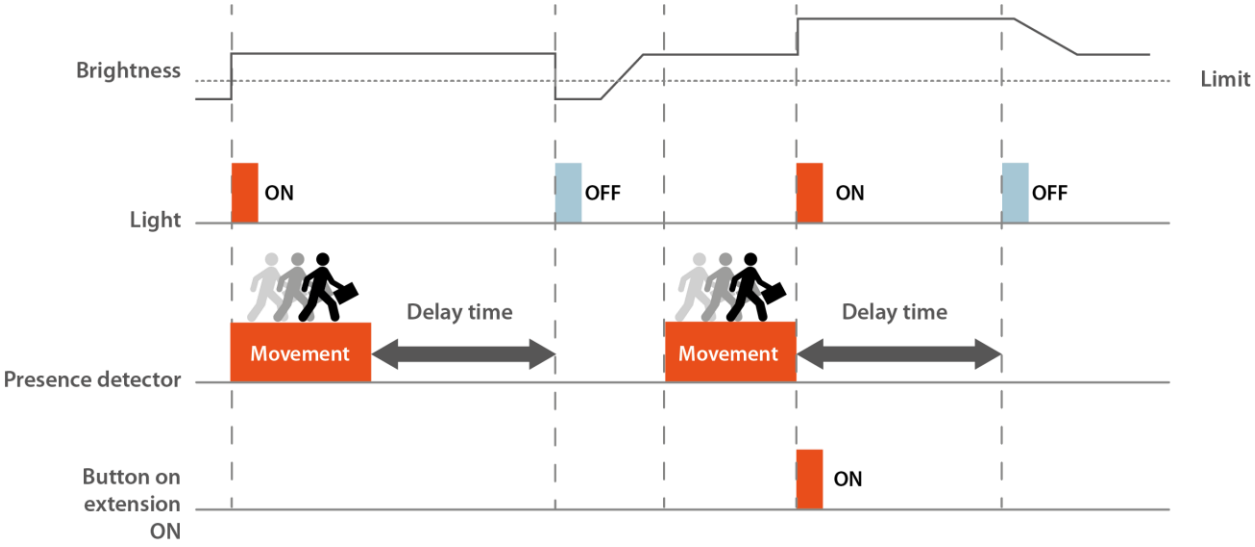


Fig. 11 Extension input "switching on in spite of excessive brightness value"

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Setting the sensitivity of the presence detector

You can use ETS to configure the sensitivity of the presence detector for both PIR and ultrasound in order to adapt it flexibly to different situations. This ensures reliable motion detection and avoids false positives.

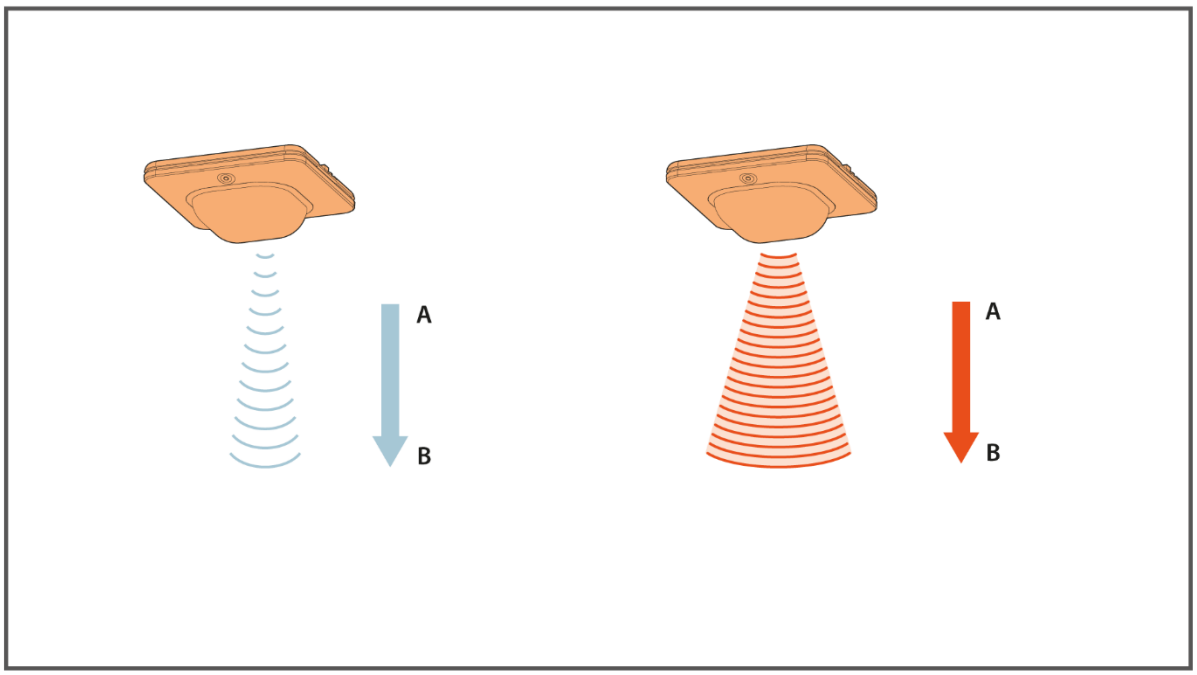


Fig. 12 The presence detector can respond with low (left) or high (right) sensitivity

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

The PIR sensor sensitivity can be set to high or low. There is also an automatic mode. Automatic mode can be used to ensure high sensitivity when someone is in the room (e.g. In an office during working hours). When the room is vacant (end of the working day), the detector automatically switches to a lower sensitivity to avoid false presence detections.
The duration of the high sensitivity can also be configured.

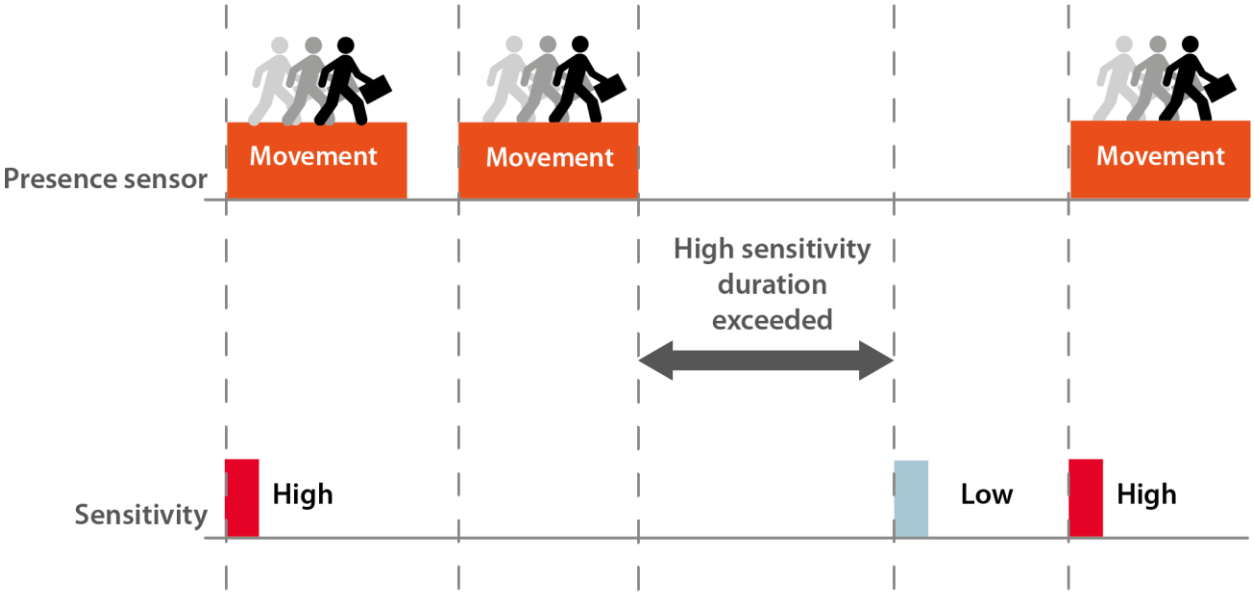


Fig. 13 Automatic adaptation of the sensitivity of the presence detector

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Locking the sensor and output

There are two options for disabling the operating modes “presence detector” and “presence detector (HVAC):” Sensor and/or output. “Slave” mode only has one sensor block.
The difference is that the response of the channel to activating or deactivating the block can be configured for the output lock.

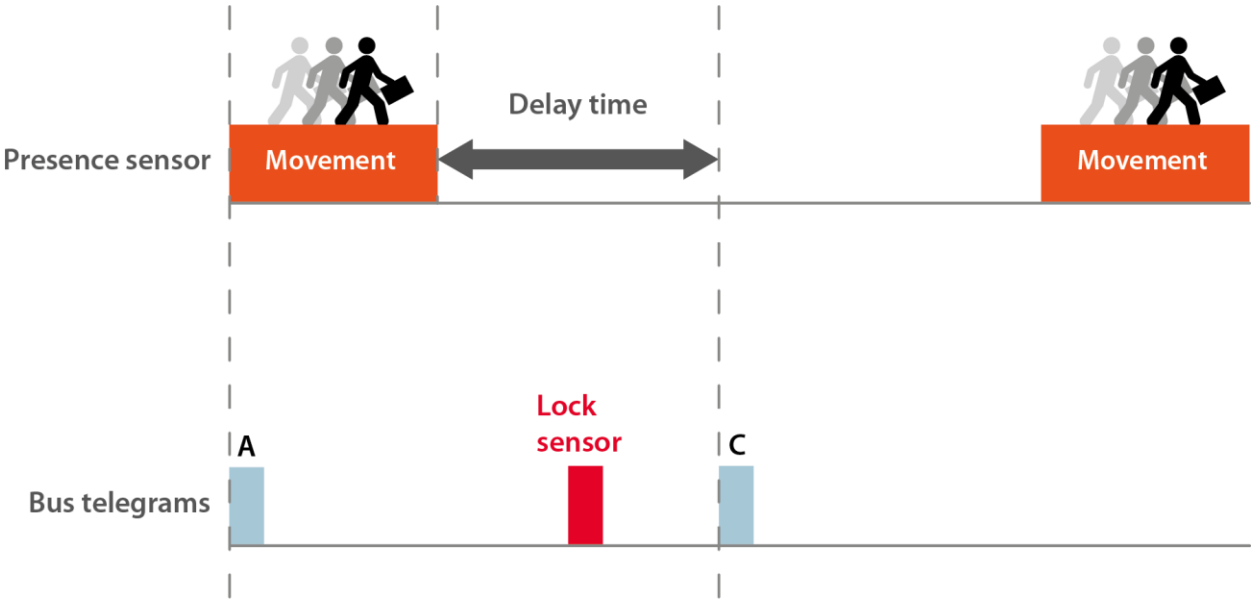


Fig. 14 Locking the sensor

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

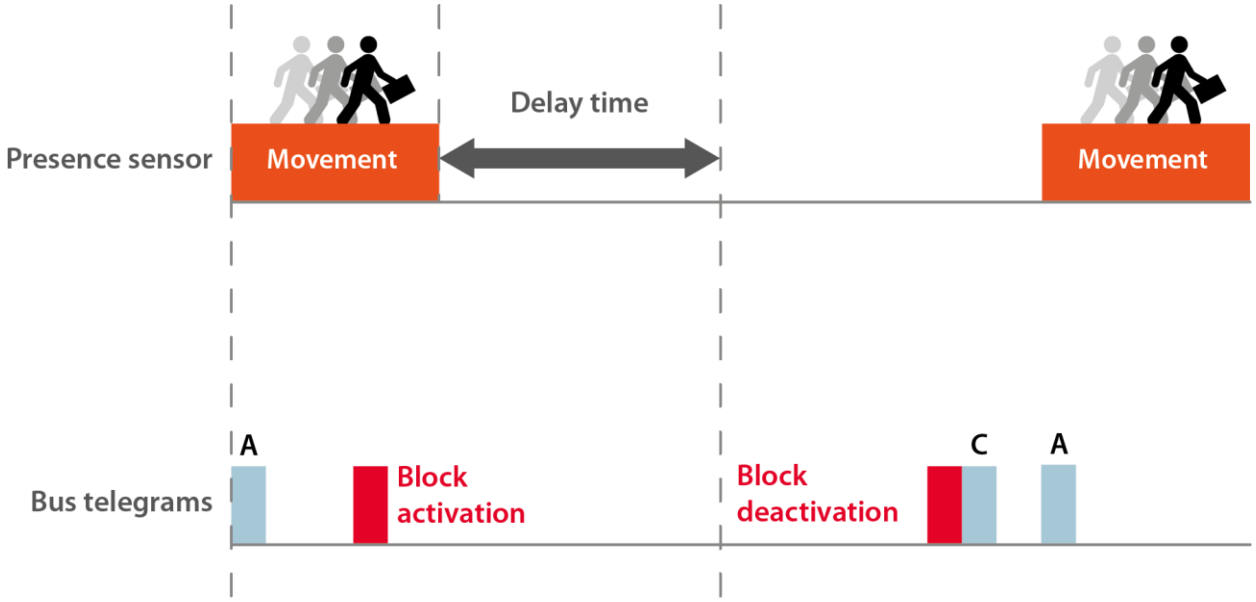


Fig. 15 Locking the output

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.1.1 Parameters of the “presence detector” parameter card

Parameter	Settings
Signal recognition with LED	**Disable** **Enable**
This parameter can be used to set whether an LED on the presence detector is to light up when a movement is detected.	
LES presence detector via object	**Disable** **Enable**
This parameter can be used to enable or disable the “movement LED” communication object. This object can be used to activate or deactivate the signaling of a movement via the LED on the presence detector. **Availability:** This parameter is only visible if the “signal recognition with LED” parameter is set to “enable.”	

Presence detectors WIDE UP 258D31, WIDE pro UP 258D41 and WIDE multi UP 258D51 have 4 PIR sensors. The PIR sensors can be deactivated individually to reduce the capture area in a targeted manner. Presence detector WIDE DualTech 258D61 only features 1 PIR sensor.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

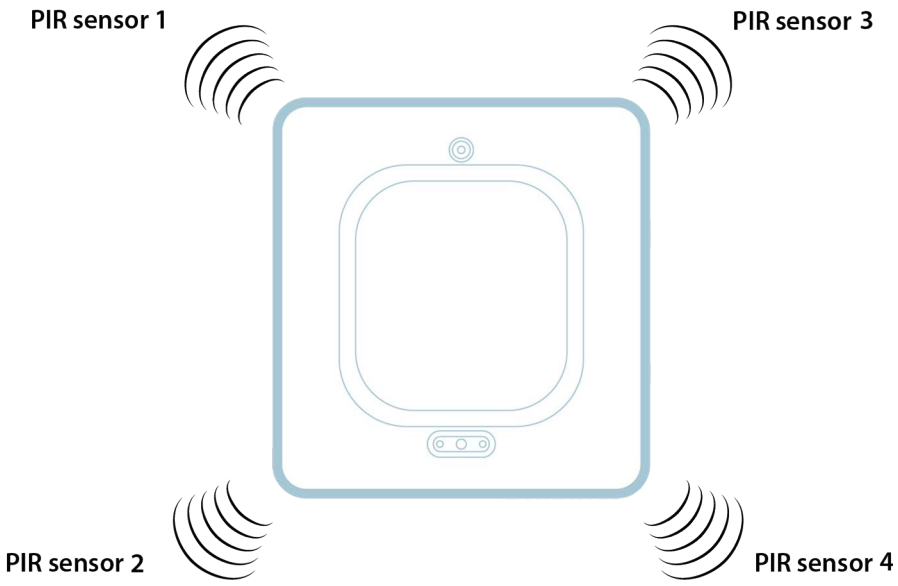


Fig. 16 PIR sensors

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Sensor 1	**Disable** **Enable**
This parameter can be used to disable or enable the PIR sensor 1. **Availability:** This parameter is only visible for devices without an ultrasound sensor: UP258/DB31, UP258/DB41 and UP258/DB51.	
Sensor 2	**Disable** **Enable**
This parameter can be used to disable or enable the PIR sensor 2. **Availability:** This parameter is only visible for devices without an ultrasound sensor: UP258/DB31, UP258/DB41 and UP258/DB51.	
Sensor 3	**Disable** **Enable**
This parameter can be used to disable or enable the PIR sensor 3. **Availability:** This parameter is only visible for devices without an ultrasound sensor: UP258/DB31, UP258/DB41 and UP258/DB51.	
Sensor 4	**Disable** **Enable**
This parameter can be used to disable or enable the PIR sensor 4. **Availability:** This parameter is only visible for devices without an ultrasound sensor: UP258/DB31, UP258/DB41 and UP258/DB51.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
PIR sensitivity	**Automatically** **Automatically with object** **High** **Low**
This parameter is used to set the sensitivity of the PIR sensors of the presence detector. • **Automatically:** The presence detector is set to low sensitivity until the first movement in the room. After the first movement it is set to highly sensitive. The presence detector responds in a highly sensitive manner in accordance with the configuration of the "high sensitivity duration" parameter. • **Automatically with object:** A 1-bit object can be used to switch between two sensitivity settings. If the value 0 is received, the presence detector responds as if "automatically" is set; if the value 1 is received, the presence detector is set to highly sensitive. • **High:** The presence detector responds highly sensitively to movements in the room. • **Low:** The presence detector responds to movements in the room with low sensitivity.	
Duration high sensitivity (hh:mm:ss)	**00:00:00...18:12:15**
This parameter is used to configure the duration of the high sensitivity. At the end of the period, the presence detector is switched back to low sensitivity. **Availability:** This parameter is only visible, if the "PIR sensitivity" parameter is set to "automatically" or "automatically with object."	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
First presence	**PIR** **US** **PIR AND US** **PIR OR US**

This parameter is used to set how the first presence detection (at the end of the overshoot time) is to be evaluated.

- **PIR:** Only the PIR signal is used for the first presence detection.
- **US:** Only the ultrasound signal is used for the first presence detection.
- **PIR AND US:** The PIR signal and the ultrasound signal are used for the first presence detection. Both signals must be present.
- **PIR OR US:** The PIR signal and the ultrasound signal are used for the first presence detection. One of the two signals must be present.

Availability:

This parameter is only visible for devices with an ultrasound sensor: UP258/DB61.

Parameter	Settings
Maintain presence	**PIR** **US** **PIR AND US** **PIR OR US**

This parameter is used to set how the keeping up of the presence is to be evaluated, i.e. how the triggered presence detector is to be retriggered to ensure the overshoot time does not expire.

- **PIR:** Only the PIR signal is used to maintain the presence.
- **US:** Only the ultrasound signal is used to maintain the presence.
- **PIR AND US:** The PIR signal and the ultrasound signal are used to maintain the presence. Both signals must be present.
- **PIR OR US:** The PIR signal and the ultrasound signal are used to maintain the presence. One of the two signals must be present.

Availability:

This parameter is only visible for devices with an ultrasound sensor: UP258/DB61.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Ultrasound sensitivity (%)	**0...100**
This parameter can be used to set the sensitivity of the ultrasound sensor. 0 % means that the sensitivity of the ultrasound is set to low. 100 % means that the sensitivity of the ultrasound is set to very high. **Note:** Values > 50 % make sense for the sensitivity of the ultrasound detector. **Availability:** This parameter is only visible for devices with an ultrasound sensor: UP258/DB61.	
Change ultrasound sensitivity via object	**Disable** **Enable**
This parameter is used to specify whether the sensitivity of the ultrasound sensor can be changed via a communication object via the bus at any time. The value received via the communication object immediately overwrites the parameter value set ex works and is stored permanently. **Availability:** This parameter is only visible for devices with an ultrasound sensor: UP258/DB61.	
Channel [A...C], mode	**Inactive** **Presence detector** **Presence detector (HVAC)** **Slave**
This parameter can be used to set the desired mode individually for each channel. Detailed settings for the selected mode can be made on the parameter card of the same name. The following modes can be set: • Presence detector • Presence detector (HVAC) • Slave **Other parameters:** The parameter card for the selected mode is displayed.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.1.2 Parameters of the “A (B, C), presence detector” parameter cards

Parameter	Settings
Brightness-dependent presence detection	**Disable** **Enable**
This parameter is used to disable or enable notification of a movement depending on the ambient brightness. If a movement was already detected (overshoot time is running), ambient brightness is not evaluated. That is, if additional movements occur during a detected movement, the overshoot time is restarted.	
Brightness limit (lx)	**0.00...670760.90**
This parameter is used to set the brightness limit up to which a movement is evaluated. **Availability:** This parameter is only visible if the “brightness-dependent presence detection” parameter is set to “enable.”	
Source for brightness value	**Internal value** **Calculated value**
This parameter is used to select the source for the brightness value. **Availability:** This parameter is only visible if the “brightness-dependent presence detection” parameter is set to “enable.”	
Index of calculator	**A...L**
This parameter is used to select the source for the calculated value. **Availability:** This parameter is only visible if the “source for brightness value” parameter is set to “enable.”	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Start behavior after bus voltage recovery	**Switch off, send (C) [and D]** **Switch on, send (A) [and B]** **No change** **As before bus voltage failure**
This parameter can be used to set the desired starting response of the presence detector when bus voltage is recovered. The following settings are possible: • **Switch off, send (C) [and D]:** The presence detector switches off after bus voltage recovery and, if configured, sends objects C and D. • **Switch on, send (A) [and B]:** The presence detector switches on (the overshoot time is started) after bus voltage recovery and, if configured, sends objects A and B. • **No change:** No telegram is sent after bus voltage recovery. If the presence detector was switched on prior to bus voltage failure and a movement is now detected, the overshoot time starts but objects A and B are not sent. If the presence detector was switched off prior to bus voltage failure and a movement is now detected, the overshoot time starts and objects A and B are sent. • **As before bus voltage failure:** When bus voltage is recovered, the state as before bus voltage failure is restored. If the presence detector was switched on, the overshoot time is started after bus voltage recovery and, if configured, objects A and B are sent. If the presence detector was switched off, it is switched off again after bus voltage recovery and, if configured, objects C and D are sent.	
Start-up delay	**00:00:00...18:12:15**
This parameter is used to configure the duration of the start-up delay after bus voltage recovery. During this time, the presence detector does not react to movements and does not send any telegrams either. This parameter can be used to make sure that other KNX devices have started up after bus voltage recovery before they are controlled by the presence detector. The parameter is also used to ensure the initialization time required by the hardware. The parameter should not be set to less than 40 seconds.	
Movement (external)	**Disable** **Enable**
This parameter can be used to set whether object “A, presence detector, movement (external)” is to be supplemented or not. This object can be used to record movements from external detectors.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Extension input On	**Disable** **Enable**
This parameter can be used to set whether the object “presence detector, extension [on]” is to be supplemented or not.	
Dead time also impacts extension	**Disable** **Enable**
If the dead time has been configured to also impact the extension, the extension “buffers” a trigger in the detector, and the corresponding telegrams A to D are only sent after the dead time. If the parameter is set to “locking,” the triggers of the extension take effect immediately. **Availability:** This parameter is only visible if the “extension input On” parameter is set to “enable.”	
Extension input Off	**Disable** **Enable**
This parameter can be used to set whether the object “presence detector, extension [off]” is to be supplemented.	
Evaluate status object [s] (0 = no evaluation) **(hh:mm:ss.f)**	**00:00:00.0...01:49:13.5**
When switching lights on and off in the detection range of a detector, the temperature change of the lamps can lead to a false motion being detected. To prevent this, the sensor can be deactivated for a certain time.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Dead time after end of detection (hh:mm:ss.f)	**00:00:00.0...01:49:13.5**
The purpose of the dead time is to preserve the actuator that is connected to the presence detector. The presence detector does not switch on if a movement occurs during the dead time. **Note:** The dead time must be longer than the delay time between the expiry of the overshoot time and telegram C or D, because telegram C or D would be omitted otherwise. Since the sensor is internally "active" for approx. 3 seconds after detecting a movement, a movement detected during the dead time can also trigger a telegram. This is the case if the movement is detected within the last 3 seconds of the dead time. To ensure that the dead time actually works, you should set as large a number as possible.	
Kind of overshoot time	**Fixed value** **Selectable value** **Variable value**
This parameter is used to set the type of overshoot time. The overshoot time is the time that the presence detector waits after the last movement until it reports that there is no more movement. The following settings are possible: • **Fixed value:** A fixed overshoot time is set. • **Selectable value:** Two overshoot times are set, which can be switched using a 1-bit object. • **Variable value:** A fixed overshoot time is set as a starting overshoot time. This overshoot time can then be changed via the object.	
Overshoot time 1 (hh:mm:ss)	**00:00:00...18:12:15**
This parameter can be used to set overshoot time 1.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Overshoot time 2 **(hh:mm:ss)**	**00:00:00...18:12:15**
This parameter can be used to set overshoot time 2. **Availability:** This parameter is only visible if the "kind of overshoot time" parameter is set to "selectable value."	
Object status overshoot time	**Disable** **Enable**
This parameter is used to define whether the communication object "A, presence detector, overshoot time status" is available. The presence detector uses this object to communicate its current overshoot time. **Other parameters/parameter cards:** If the parameter "object status overshoot time" is set to "enable," parameters are displayed that enable you to set when a status is sent. ➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"*	
Function [A...D]	**Disable** **Enable**
These parameters can be used to disable or enable the functions [A...D]. For each enabled function, a parameter card is displayed on which you can make the settings for the start of a movement (A and B) and the end of a movement (C and D).	
Lock sensor	**Disable** **Enable**
This parameter is used to specify whether the presence sensor can be locked or not. If locked, the presence sensor is deactivated. If the overshoot time is already active (detector has switched on), the remaining overshoot time expires and the detector switches off (C-D is sent). Switching on again via the presence sensor is not possible as long as the lock is active. Switching on/off via the extension is possible. The extension objects are evaluated during the lock phase, which can result in re-triggering. **Other parameters/parameter cards:** If the "lock sensor" parameter is set to "enable," the "lock presence sensor" parameter card is displayed.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Lock output	**Disable** **Enable**
This parameter is used to specify whether the output (that is, the sending of telegrams A – D) can be locked or not. **Other parameters/parameter cards:** If the "lock output" parameter is set to "enable," the "lock output" parameter card is displayed.	

5.1.2.1 Parameters of the parameter cards for functions [A...D]

The following parameters on the parameter cards "start, (A)," "start, 2nd telegram (B)," "end, (C)" and "end, 2nd telegram (D)" are identical and are therefore written only once. The parameter cards can be enabled using the "function [A...D]" parameters on the parameter card "A, (B, C), presence detector."

Parameter	Settings
Delay time **(hh:mm:ss.f)**	**00:00:00.0...01:49:13.5**
This parameter can be used to set a delay time for the start (movement detection) or the end (end of overshoot time) of presence detection.	
Cyclic sending **(hh:mm:ss)**	**00:00:00...18:12:15**
This parameter can be used to set the time interval at which the value of the communication object (objects A to D) is sent cyclically. If this is set to "00:00:00," cyclic sending is deactivated.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Data type	**Switching DPT 1.001** **Percentage (%) DPT 5.001** **Value (8-bit) DPT 5.010** **Value (16-bit) DPT 7.001** **Temperature (°C) DPT 9.001** **Illuminance (lx) DPT 9.004** **Humidity (% r.h.) DPT 9.007** **CO2 concentration (ppm) DPT 9.008** **Scene DPT 17.001**

This parameter is used to determine the datapoint types of the corresponding communication object (objects A to D).

The following datapoint types can be set:

- **Switching:** Corresponds to the datapoint type "1.001 switching"
- **Percentage (%):** Corresponds to the datapoint type "5.001 percent (0...100 %)"
- **Value (8-bit):** Corresponds to the datapoint type "5.010 counting impulses (0 ... 255)"
- **Value (16-bit):** Corresponds to the datapoint type "7.001 pulses"
- **Temperature (°C):** Corresponds to the datapoint type "9.001 temperature °C"
- **Illuminance (lx):** Corresponds to the datapoint type "9.004 lux (lux)"
- **Humidity (% r.h.):** Corresponds to the datapoint type "9.007 humidity (%)"
- **CO2 concentration (ppm):** Corresponds to the datapoint type "9.008 parts/million (ppm)"
- **Scene:** Corresponds to the datapoint type "17.001 scenes"

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Value	**Off** **On**
This parameter is used to set the value of the data type specified above. The permitted values depend on the selected data type.	
Selectable value	**Disable** **Enable**
This parameter can be used to set whether the value to be sent at the start or end of a movement is to be switchable via an object or not.	
Value 2	**Off** **On**
This parameter is used to set the value of the data type specified above, if the object "..., switching value" is used for switching. The permitted values depend on the selected data type. **Availability:** This parameter is only visible if the "selectable value" parameter is set to "enable."	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.1.2.2 Parameters of the “presence sensor” parameter card:

Note:

The parameter card “lock presence detector” is only visible if the “lock sensor” parameter of the parameter card “A (B, C), presence detector” is set to “enable.”

Parameter	Settings
Start value / behavior of lock input on bus voltage recovery	**Off** **On** **Deactivated** **Last value** **Query via bus**
This parameter is used to set the response of the lock object on bus voltage recovery. For the setting “query via bus,” the lock object is queried via “ValueRead” on bus voltage recovery; if there is no response, the lock object is set to the last value before bus voltage failure.	
Invert locking object	**Yes** **No**
This parameter is used to set whether the presence sensor is locked by receiving “logical 0” on the lock object.	
Monitoring time **(hh:mm:ss)**	**00:00:00...18:12:15**
This parameter defines whether the cyclical receipt of telegrams on the communication object for locking the sensor should be monitored and how long the monitoring time should be. With a parameter value of 00:00:00, no monitoring takes place. For all other parameter values, the cyclical input of deactivation telegrams is monitored. If the monitoring time is exceeded, the sensor is locked automatically.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Lock Duration **(hh:mm:ss)**	**00:00:00...18:12:15**
This parameter defines the desired ON time when the sensor is locked. The lock duration is then re-started with each incoming activation telegram. If the parameter value is set to 00:00:00, the lock duration is unlimited. **Note:** If the monitoring time is simultaneously set as not equal to 00:00:00, the following behavior will be observed: • **Monitoring time < lock duration:** The lock duration is triggered using a cyclically incoming activation telegram. The configured lock duration is not effective. • **Monitoring time > lock duration:** The lock of the sensor is deactivated at the end of the lock duration. With the next incoming activation telegram for monitoring, it is re-activated and the lock duration starts over.	
Status lock	**Disable** **Enable**
This parameter is used to define whether the communication object "A (B, C), presence detector, lock sensor active" is to be available. The lock communicates the status with this object. **Other parameters/parameter cards:** If the parameter "status lock" is set to "enable," parameters are displayed that enable you to set when a status is sent. ➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"*	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.1.2.3 Parameters of the "lock output" parameter card

Note:

The parameter card "lock output" is only visible if the "lock output" parameter of the parameter card "A (B, C), presence detector" is set to "enable."

Parameter	Settings
Start value / behavior of lock input on bus voltage recovery	**Off** **On** **Deactivated** **Last value** **Query via bus**
This parameter is used to set the response of the lock object on bus voltage recovery. For the setting "query via bus," the lock object is queried via "ValueRead" on bus voltage recovery; if there is no response, the lock object is set to the last value before bus voltage failure.	
Invert locking object	**Yes** **No**
This parameter is used to set whether the output is locked by receiving "logical 0" on the lock object.	
Monitoring time **(hh:mm:ss)**	**00:00:00...18:12:15**
This parameter defines whether the cyclical receipt of telegrams on the communication object for locking the output should be monitored and how long the monitoring time should be. With a parameter value of 00:00:00, no monitoring takes place. For all other parameter values, the cyclical input of deactivation telegrams is monitored. If the monitoring time is exceeded, the output is locked automatically.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Lock Duration **(hh:mm:ss)**	**00:00:00...18:12:15**

This parameter defines the desired ON time when the output is locked.

The lock duration is then re-started with each incoming activation telegram.

If the parameter value is set to 00:00:00, the lock duration is unlimited.

Note:

If the monitoring time is simultaneously set as not equal to 00:00:00, the following behavior will be observed:

- **Monitoring time < lock duration:** The lock duration is triggered using a cyclically incoming activation telegram. The configured lock duration is not effective.
- **Monitoring time > lock duration:** The lock of the output is deactivated at the end of the lock duration. With the next incoming activation telegram for monitoring, it is re-activated and the lock duration starts over.

Behavior on lock activation	**Switch off, send (C) [and D]** **Switch on, send (A) [and B]** **No change**

This parameter can be used to set the desired behavior on lock activation.

The following settings are possible:

- **Switch off, send (C) [and D]:** The presence detector switches off when the lock is activated and, if configured, sends objects C and D.
- **Switch on, send (A) [and B]:** On activation of the lock, the presence detector sends objects A and B (the overshoot time is not started), if configured.
- **No change:** If the lock is activated, no telegram is sent.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Behavior on lock deactivation	**Switch off, send (C) [and D]** **Switch on, send (A) [and B]** **No change** **Updated value**

This parameter can be used to set the desired behavior on lock deactivation.

The following settings are possible:

- **Switch off, send (C) [and D]:** The presence detector switches off when the lock is deactivated and, if configured, sends objects C and D.
- **Switch on, send (A) [and B]:** The presence detector switches on when the lock is deactivated (the overshoot time is started) and, if configured, sends objects A and B.
- **No change:** If the lock is deactivated, no telegram is sent. If the presence detector is switched on at the time of deactivation, the overshoot time starts but objects A and B are not sent. If the presence detector is switched off at the time of deactivation, nothing happens and it waits until a new movement is detected.
- **Updated value:** When the block is deactivated, the current state is established. If the presence detector is switched on at the time the lock is deactivated, the overshoot time is started and, if configured, objects A and B are sent. If the presence detector is switched off, the deactivation of the lock is lifted and, if configured, objects C and D are sent.

Status lock	**Disable** **Enable**

This parameter is used to define whether the communication object "A (B, C), presence detector, lock output active" is to be available. The lock communicates the status with this object.

Other parameters/parameter cards:

If the parameter "status lock" is set to "enable," parameters are displayed that enable you to set when a status is sent.

➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"*

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.1.3 Parameters of the “A (B, C), presence detector (HVAC)” parameter cards

Parameter	Settings
Interval time for HVAC-Presence detection (minutes)	**1...15**
This parameter determines the time interval in which the movement impulses are counted.	
Minimum number of detected motions during interval time	**1...255**
This parameter is used to specify the number of movements that have to be detected during the monitoring time in order to meet the criterion for the start of the HVAC presence. This ensures that an HVAC presence only starts if people have been within the capture area of the detector for an extended period of time.	
Start behavior after bus voltage recovery	**Switch off, send (C) [and D]** **Switch on, send (A) [and B]** **No change** **As before bus voltage failure**
This parameter can be used to set the desired starting response of the presence detector when bus voltage is recovered. The following settings are possible: • **Switch off, send (C) [and D]:** The presence detector switches off after bus voltage recovery and, if configured, sends objects C and D. • **Switch on, send (A) [and B]:** The presence detector switches on (the overshoot time is started) after bus voltage recovery and, if configured, sends objects A and B. • **No change:** No telegram is sent after bus voltage recovery. If the presence detector was switched on prior to bus voltage failure and a movement is now detected, the overshoot time starts but objects A and B are not sent. If the presence detector was switched off prior to bus voltage failure and a movement is now detected, the overshoot time starts and objects A and B are sent. • **As before bus voltage failure:** When bus voltage is recovered, the state as before bus voltage failure is restored. If the presence detector was switched on, the overshoot time is started after bus voltage recovery and, if configured, objects A and B are sent. If the presence detector was switched off, it is switched off again after bus voltage recovery and, if configured, objects C and D are sent.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Movement (external)	**Disable** **Enable**
The parameter can be used to set whether or not object "A, presence detector, movement (external)" is to be supplemented. This object can be used to record movements from external detectors.	
Extension input On	**Disable** **Enable**
The parameter can be used to set whether or not the object "presence detector, extension [on]" is to be supplemented or not.	
Dead time also impacts extension	**Disable** **Enable**
If the dead time has been configured to also impact the extension, the extension "buffers" a trigger in the detector, and the corresponding telegrams A to D are only sent after the dead time. If the parameter is set to "locking," the triggers of the extension take effect immediately. **Availability:** This parameter is only visible if the "extension input On" parameter is set to "enable."	
Extension input Off	**Disable** **Enable**
The parameter can be used to set whether or not the object "presence detector, extension [off]" is to be supplemented.	
Evaluate status object [s] (0 = no evaluation) **(hh:mm:ss.f)**	**00:00:00.0...01:49:13.5**
When switching lights on and off in the detection range of a detector, the temperature change of the lamps can lead to a false motion being detected. To prevent this, the sensor can be deactivated for a certain time.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Dead time after end of detection (hh:mm:ss.f)	**00:00:00.0...01:49:13.5**
The purpose of the dead time is to preserve the actuator that is connected to the presence detector. The presence detector does not switch on if a movement occurs during the dead time. **Note:** The dead time must be longer than the delay time between the expiry of the overshoot time and telegram C or D, because telegram C or D would be omitted otherwise. Since the sensor is internally "active" for approx. 3 seconds after detecting a movement, a movement detected during the dead time can also trigger a telegram. This is the case if the movement is detected within the last 3 seconds of the dead time. To ensure that the dead time actually works, you should set as large a number as possible.	
Kind of overshoot time	**Fixed value** **Selectable value** **Variable value**
This parameter is used to set the type of overshoot time. The overshoot time is the time that the presence detector waits after the last movement until it reports that there is no more movement. The following settings are possible: • **Fixed value:** A fixed overshoot time is set. • **Selectable value:** Two overshoot times are set, which can be switched using a 1-bit object. • **Variable value:** A fixed overshoot time is set as a starting overshoot time. This overshoot time can then be changed via an object.	
Overshoot time 1 (hh:mm:ss)	**00:00:00...18:12:15**
This parameter can be used to set overshoot time 1.	
Overshoot time 2 (hh:mm:ss)	**00:00:00...18:12:15**
This parameter can be used to set overshoot time 2. **Availability:** This parameter is only visible if the "kind of overshoot time" parameter is set to "selectable value."	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Object status overshoot time	**Disable** **Enable**
This parameter is used to define whether the communication object "A, presence detector, overshoot time status" is available. The presence detector uses this object to communicate its current overshoot time. **Other parameters/parameter cards:** If the parameter "object status overshoot time" is set to "enable," parameters are displayed that enable you to set when a status is sent. ➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"*	
Function [A...D]	**Disable** **Enable**
These parameters can be used to disable or enable the functions [A...D]. For each enabled function, a parameter card is displayed on which you can make the settings for the start of a movement (A and B) and the end of a movement (C and D).	
Lock sensor	**Disable** **Enable**
This parameter is used to specify whether the presence sensor can be locked or not. If locked, the presence sensor is deactivated. If the overshoot time is already active (detector has switched on), the remaining overshoot time expires and the detector switches off (C-D is sent). Switching on again via the presence sensor is not possible as long as the lock is active. Switching on/off via the extension is possible. The extension objects are evaluated during the lock phase, which can result in re-triggering. **Other parameters/parameter cards:** If the "lock sensor" parameter is set to "enable," the "lock presence sensor" parameter card is displayed.	
Lock output	**Disable** **Enable**
This parameter is used to specify whether the output (that is, the sending of telegrams A–D) can be locked or not. **Other parameters/parameter cards:** If the "lock output" parameter is set to "enable," the "lock output" parameter card is displayed.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.1.3.1 Parameters of the parameter cards for functions [A...D], "lock presence detector" and "lock output"

The sub-parameters of the "A (B, C), presence detector (HVAC)" parameter cards are identical to the sub-parameters of the "A (B, C), presence detector" parameter cards.

More information:

- ➲ *5.1.2.2 Parameters of the "presence sensor" parameter card:*
- ➲ *5.1.2.3 Parameters of the "lock output" parameter card*

5.1.4 Parameters of the "A (B, C), slave" parameter cards

Parameter	Settings
Brightness-dependent presence detection	**Disable** **Enable**
This parameter is used to disable or enable notification of a movement depending on the ambient brightness. If a movement was already detected (overshoot time is running), ambient brightness is not evaluated. That is, if additional movements occur during a detected movement, the overshoot time is restarted.	
Brightness limit (lx)	**0.00...670760.90**
This parameter is used to set the brightness limit up to which a movement is evaluated. **Availability:** This parameter is only visible if the "brightness-dependent presence detection" parameter is set to "enable."	
Source for brightness value	**Internal value** **Calculated value**
This parameter is used to select the source for the brightness value.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Index of calculator	**A...L**
This parameter is used to select the source for the calculated value. **Availability:** This parameter is only visible if the "source for brightness value" parameter is set to "enable."	
Evaluate status object [s] (0 = no evaluation) **(hh:mm:ss.f)**	**00:00:00.0...01:49:13.5**
When switching lights on and off in the detection range of a detector, the temperature change of the lamps can lead to a false motion being detected. To prevent this, the sensor can be deactivated for a certain time.	
Cyclic sending **(hh:mm:ss)**	**00:00:00...18:12:15**
This parameter determines at which intervals the object "A (B, C), slave, start, (A)" is sent via the bus. If this is set to "00:00:00," cyclic sending is deactivated.	
Lock sensor	**Disable** **Enable**
This parameter is used to specify whether the presence sensor can be locked or not. If locked, the presence sensor is deactivated. If the overshoot time is already active (detector has switched on), the remaining overshoot time continues. Switching on again via the presence sensor is not possible as long as the lock is active. **Other parameters/parameter cards:** If the "lock sensor" parameter is set to "enable," the "lock presence sensor" parameter card is displayed.	

5.1.4.1 Parameters of the "presence sensor" parameter card:

The parameter card "lock presence detector" of parameter cards "A (B, C), slave" is identical to the parameter cards "A (B, C), presence detector."

More information:

➲ *5.1.2.2 Parameters of the "presence sensor" parameter card:*

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.1.5 Communication objects

Note:

The communication objects and parameters are configured in the same way for all channels and are therefore just described once for channel A.

Obj	Object name	Function	Datapoint type	Object type
3	**Movement LED**	On / Off	1.003 enable	Input
This object can be used to activate or deactivate the signaling of a movement via the LED on the presence detector.				
5	**Ultrasound sensitivity**	Value	5.001 percent (0...100 %)	Input
This object can be used to set the sensitivity of the ultrasound sensor (only type UP 258/D61). 0 % means that the sensitivity of the ultrasound is set to low. 100 % means that the sensitivity of the ultrasound is set to very high. **Note:** Values > 50 % make sense for the sensitivity of the ultrasound detector.				
6	**PIR high sensitivity**	On / Off	1.001 switching	Input
This object can be used to set the sensitivity of the PIR sensors of the presence detector. The value "0" means that the presence detector is set to "automatic." The presence detector is set to low sensitivity until the first movement in the room. After the first movement it is set to highly sensitive. The presence detector responds in a highly sensitive manner in accordance with the configuration of the "high sensitivity duration" parameter. The value "1" means that the presence detector is set to highly sensitive.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
7	**A, presence detector, status object of actuator** **A, presence detector (HVAC), status object of actuator** **A, slave, status object of actuator**	On / Off	1.001 switching	Input
This object (confirmation object) is used to inform the detector that the actuator controlled by the detector has switched. If there was a change of state (1 to 0 or 0 to 1), the passive infrared sensor is not evaluated for an amount of time that can be configured. This prevents the detector from detecting the temperature drop on an incandescent lamp that has just been switched off as a movement.				
8	**Presence detector, movement (external)** **A, presence detector (HVAC), movement (external)**	On	1.010 start/stop	Input
This object is used to trigger the detector via an external presence detector. That is, as soon as the detector receives the value “1” via this object, this is interpreted as a movement, in the same way as if a movement was detected by the internal presence sensor. The object is evaluated during the lock phase (“lock sensor”).				
9	**Presence detector, extension** **A, presence detector (HVAC), extension**	On	1.001 switching	Input
This object is used to trigger the detector externally. That is, as soon as the detector receives the value “1” via this object, the telegrams A and B (objects 21 and 23) are sent depending on how the parameters are configured. The extension objects are evaluated during the lock phase (lock sensor).				
10	**Presence detector, extension** **A, presence detector (HVAC), extension**	Off	1.001 switching	Input
This object is used to switch off the detector in a defined manner. That is, as soon as the detector receives the value “0” via this object, the overshoot time ends and telegrams C and D (objects 25 and 27) are sent depending on how the parameters are configured. The extension objects are evaluated during the lock phase (lock sensor).				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
11	**A, presence detector, extension** **A, presence detector (HVAC), overshoot time**	Value	7.005 time (s)	Input
This object can be used to change the overshoot time of the detector via the bus. This time is set in seconds. This object is saved on bus voltage failure and restored when bus voltage is recovered.				
12	**A, presence detector, extension** **A, presence detector (HVAC), overshoot time**	Time 1 = 0 / Time 2 = 1	1.002 Boolean	Input
This object can be used to switch the overshoot time of the detector to one for the previously configured overshoot times (overshoot time 1 or overshoot time 2). This object is saved on bus voltage failure and restored when bus voltage is recovered.				
13	**A, presence detector, overshoot time status** **A, presence detector (HVAC), overshoot time status**	Value	7.005 time (s)	Output
This object is used to report the current overshoot time of the detector, alternatively, this time can be queried via the bus at any time.				
14	**A, presence detector, lock sensor** **A, presence detector (HVAC), lock sensor** **A, slave, lock sensor**	On / Off	1.003 enable	Input
This object can be used to lock and then unlock the presence sensor. The parameter "invert locking object" can be used to set whether the sensor is locked when a "0" or a "1" is received. The starting value after bus voltage recovery can be configured. **Note:** Movement detections via objects 7, 8 and 9 (movement (external) and extension) are also evaluated when the sensor is locked.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
15	**A, presence detector, lock sensor active** **A, presence detector (HVAC), lock sensor active** **A, slave, lock sensor active**	On / Off	1.002 Boolean	Output
This object is used to report whether or not the lock of the presence sensor is active; alternatively, this can be queried via the bus at any time.				
16	**A, presence detector, lock output** **A, presence detector (HVAC), lock output**	On / Off	1.003 enable	Input
This object can be used to disable the output (sending of telegrams A to D) of the detector and enable it again. The parameter "invert locking object" can be used to set whether the output is disabled when a "0" or a "1" is received. The starting value after bus voltage recovery can be configured.				
17	**A, presence detector, stop switching** **A, presence detector (HVAC), stop switching**	On / Off	1.001 switching	Input
This object can be used to lock the output (sending of telegrams A to D) of the detector when a switch command is received. This enables the user to control the actuator directly and block the detector at the same time. The lock is then removed again via object 15 "..., lock output."				
18	**A, presence detector, stop dimming** **A, presence detector (HVAC), stop dimming**	Brighter / darker	3.007 dimmer step	Input
This object can be used to lock the output (sending of telegrams A to D) of the detector when a dim command is received. This enables the user to control the actuator directly and block the detector at the same time. The lock is then removed again via object 15 "..., lock output."				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
19	**A, presence detector, stop dimming value** **A, presence detector (HVAC), stop dimming value**	Value	5.001 percent (0...100 %)	Input
This object can be used to lock the output (sending of telegrams A to D) of the detector when a dimming value command is received. This enables the user to control the actuator directly and block the detector at the same time. The lock is then removed again via object 15 "..., lock output."				
20	**A, presence detector, lock output active** **A, presence detector (HVAC), lock output active**	On / Off	1.002 Boolean	Output
This object is used to report whether or not the output lock (sending of telegrams A to D) is active; alternatively, this can be queried via the bus at any time.				
21	**Presence detector, start, (A), switching value** **A, presence detector (HVAC), start, (A), switching value**	Value 1 / Value 2	1.002 Boolean	Input
This object can be used to switch the value of the object (start A) to one of the two previously configured values. The detector sends the value 1 when receiving a "0" and the value 2 when receiving a "1." This object is saved on bus voltage failure and restored when bus voltage is recovered.				
22	**A, presence detector, start, (A), switching** **A, presence detector (HVAC), start, (A), switching** **A, slave, start, (A)**	On / Off	1.001 switching	Output
This object is used to send the corresponding value to the bus when a movement is detected or an external trigger received, depending on the configuration. The value depends on the selected data type.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
23	**A, presence detector, start, 2nd telegram (B), switching value** **A, presence detector (HVAC), start, 2nd telegram (B), switching value**	Value 1 / Value 2	1.002 Boolean	Input
This object can be used to switch the value of the object (start B) to one of the two previously configured values. The detector sends the value 1 when receiving a "0" and the value 2 when receiving a "1." This object is saved on bus voltage failure and restored when bus voltage is recovered.				
24	**A, presence detector, start, 2nd telegram (B), switching** **A, presence detector (HVAC), start, 2nd telegram (B), switching**	On / Off	1.001 switching	Output
This object is used to send the corresponding value to the bus when a movement is detected or an external trigger received, depending on the configuration. The value depends on the selected data type.				
25	**A, presence detector, end, (C), switching value** **A, presence detector (HVAC), end, (C), switching value**	Value 1 / Value 2	1.002 Boolean	Input
This object can be used to switch the value of the object (end C) to one of the two previously configured values. The detector sends the value 1 when receiving a "0" and the value 2 when receiving a "1." This object is saved on bus voltage failure and restored when bus voltage is recovered.				
26	**A, presence detector, end, (C), switching** **A, presence detector (HVAC), end, (C), switching**	On / Off	1.001 switching	Output
This object is used to send the corresponding value at the end of a movement (overshoot time expired), depending on the configuration. The value depends on the selected data type.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
27	**A, presence detector, end, 2nd telegram (D), switching value** **A, presence detector (HVAC), end, 2nd telegram (D), switching value**	Value 1 / Value 2	1.002 Boolean	Input
This object can be used to switch the value of the object (end D) to one of the two previously configured values. The detector sends the value 1 when receiving a "0" and the value 2 when receiving a "1." This object is saved on bus voltage failure and restored when bus voltage is recovered.				
28	**A, presence detector, end, 2nd telegram (D), switching** **A, presence detector (HVAC), end, 2nd telegram (D), switching**	On / Off	1.001 switching	Output
This object is used to send the corresponding value at the end of a movement (overshoot time expired), depending on the configuration. The value depends on the selected data type.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.2 2-point brightness controller (switching)

The 2-point controller is the simplest way to control the lighting. If the brightness controller is activated (automatic mode), the lighting is switched on as soon as the brightness falls below the configured lower brightness limit. The lighting is switched off once the configured upper brightness limit is exceeded. The brightness limits can be set using parameters or communication objects.

The split into two individual switching objects for above and below the limit means that the detector can also be operated semi-automatically. It can thus be switched “only On” or “only Off.”

If the controller receives a switching or dimming command via one of the corresponding communication objects via KNX, this is evaluated as an external override and the controller switches off automatic operation. At the same time, this change of state is sent to the bus via the “controller status” object, whereby the current status of the lighting is retained.

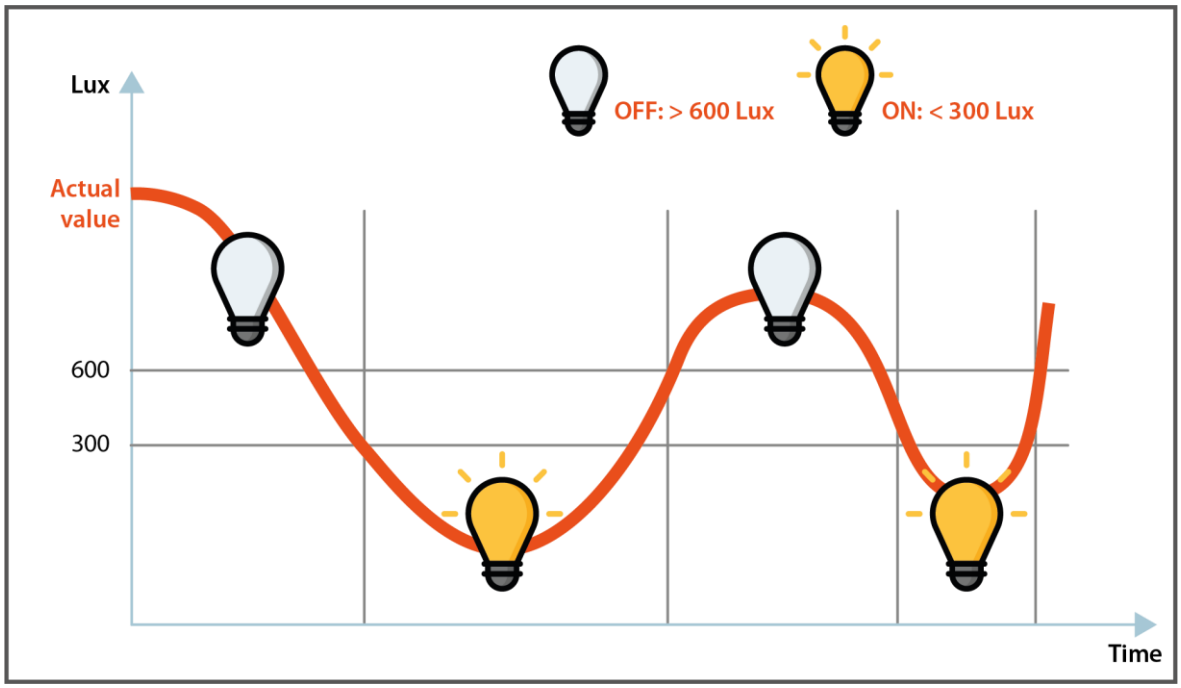


Fig. 17 2-point-lighting control in automatic operation

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

If you want to give the controller a value in the format of an external brightness measuring device, you have to use the calculation function.

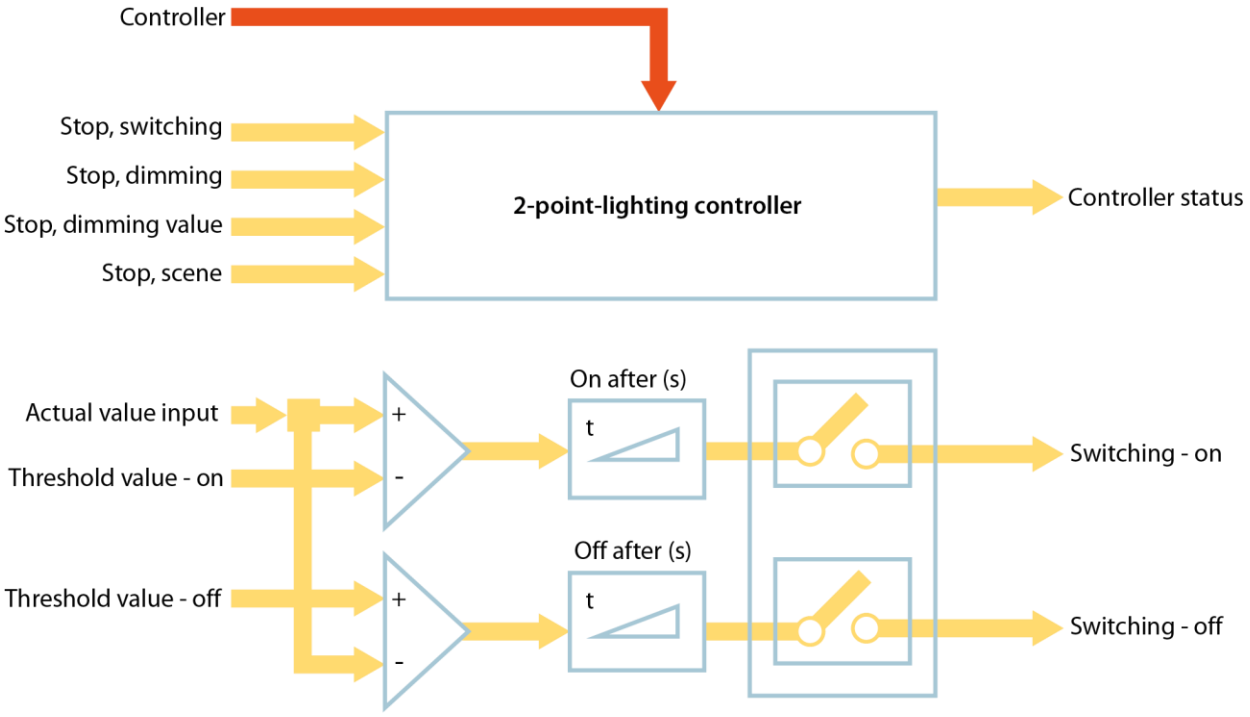


Fig 18 2-point-lighting control

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.2.1 Parameter

Parameter	Settings
Source for brightness value (actual value)	**Internal value** **Calculated value**
This parameter is used to select the source for the brightness value.	
Index of calculator	**A...L**
This parameter is used to select the source for the calculated value. **Availability:** This parameter is only visible if the "source for brightness value" parameter is set to "enable."	
Behavior controller at bus voltage recovery	**Off** **On** **As before bus voltage failure**
This parameter can be used to set how the controller is to behave after bus voltage recovery. • **Off:** After bus voltage recovery, the controller is off. • **On:** After bus voltage recovery, the controller is switched on and controlling is active. • **As before bus voltage failure:** The controller remains in the same state as before bus voltage failure.	
Behavior at controller off	**Off** **No change**
This parameter can be used to set whether the switching telegram "Off" is sent when switching off the controller (setting: Off) or not (setting: "no change").	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Setpoint changeable via object	**Disable** **Enable**
This parameter is used to specify whether the setpoints for controlling are to be set to a fixed value as parameters, which can only be changed by means of the ETS or whether the corresponding parameter values set ex works can be changed via communication objects via the bus at any time. The values received via the communication objects immediately overwrite the parameter value set ex works and are stored permanently.	
Controller stop for scenes	**Disable** **Enable**
This parameter enables the parameter card “scenes for controller stop” in which scene numbers can be selected that switch off the controller when receiving the object “2-p. lighting control, stop for scenes.” **Other parameters:** If this parameter is set to “enable,” the parameter card “scenes for controller stop” is displayed.	
Scene 1 (...64)	**Disable** **Enable**
This parameter can be used to enable the scene number that switches off the controller when receiving the object “2-p. lighting control, stop for scenes.” The controller can only be switched on again by receiving a “logical 1” on the object “2-p. lighting control, controller.” **Availability:** This parameter is only visible if the “controller stop for scenes” parameter is set to “enable.”	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Switch On

Parameter	Settings
If brightness value <= xx LUX	**20.00...670760.00**
This parameter is used to specify from which brightness value onwards the “switch on” telegram is sent. If the selected brightness value for switching on is greater than the brightness limit for switching off, the controller sets the value for switching on to the same value as for switching off; i.e. both values are identical. The consequence of this is that only one telegram for switching on is sent. In this case, switching off has to be done manually.	
not before **(hh:mm:ss.f)**	**00:00:00.0...01:49:13.5**
This parameter is used to set a delay after which the ON telegram is sent.	

Switch off

Parameter	Settings
If brightness value > = xx LUX	**20.00...670760.00**
This parameter is used to specify from which brightness value onwards the “switch off” telegram is sent.	
not before **(hh:mm:ss.f)**	**00:00:00.0...01:49:13.5**
This parameter is used to set a delay after which the OFF telegram is sent.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Controller status	**Disable** **Enable**
This parameter is used to define whether the communication object "2-p. lighting control, status controller" is available. The controller communicates the status via this object. It can either have the value "On," i.e. the controller runs in automatic mode, or the value "Off." **Other parameters/parameter cards:** If the parameter "controller status" is set to "enable," parameters are displayed that enable you to set when a status is sent. ➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"*	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.2.2 Communication objects

Obj	Object name	Function	Datapoint type	Object type
148	**2-p. lighting control, controller**	**On / Off**	1.001 switching	Input
This object can be used to switch the controller on and off. This information can come, for example, from a bus button or an outbound object of a presence detector.				
149	**2-p. lighting control, status controller**	**On / Off**	1.002 Boolean	Output
The controller communicates its internal status via this object. The status can either have the value “On,” i.e. the controller runs in automatic mode, or the value “Off.” No distinction is made as to whether the controller was switched off manually or via override (“stop” objects).				
150	**2-p. lighting control, stop when switching**	**Switching**	1.001 switching	Input
If a value is received via this object (logical 0 or 1), the controller switches off as it has been overridden externally. The controller can only be switched on again by receiving a “logical 1” on the object “2-p. lighting control, controller.”				
151	**2-p. lighting control, stop when dimming**	**Dimming**	3.007 dimmer step	Input
If a value is received via this object (4-bit dimming command), the controller switches off as it has been overridden externally. The controller can only be switched on again by receiving a “logical 1” on the object “2-p. lighting control, controller.”				
152	**2-p. lighting control, stop at dimming value**	**Dimming value**	5.001 percent (0...100 %)	Input
If a value is received via this object (8-bit dimming command), the controller switches off as it has been overridden externally. The controller can only be switched on again by receiving a “logical 1” on the object “2-p. lighting control, controller.”				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
153	**2-p. lighting control, stop for scenes**	**Scene**	18.001 scene control	Input
If a scene value (0...63) is received via this object, the controller switches off, if the corresponding scene number is enabled in the parameter card “scenes for controller off.” The controller can only be switched on again by receiving a “logical 1” on the object “2-p. lighting control, controller.” **Availability:** This object is only visible if the “controller off for scenes” parameter is set to “enable.”				
154	**2-p. lighting control, threshold - on**	**Value in LUX**	9.004 brightness (lux)	Input
Here, the threshold value for switching on for 2-point-lighting control is set externally. When a value is received for the first time, the value of the parameter “switch on, if brightness value < = xx LUX” is used as the default value. This object is saved on bus voltage failure and restored when bus voltage is recovered. **Availability:** This object is only visible if the “setpoint changeable via object” parameter is set to “enabled.”				
155	**2-p. lighting control, threshold - off**	**Value in LUX**	9.004 brightness (lux)	Input
Here, the threshold value for switching off for 2-point-lighting control is set externally. When a value is received for the first time, the value of the parameter “switch off, if brightness value > = xx LUX” is used as the default value. This object is saved on bus voltage failure and restored when bus voltage is recovered. **Availability:** This object is only visible if the “setpoint changeable via object” parameter is set to “enabled.”				
156	**2-p. lighting control, switching**	**On**	1.001 switching	Output
This object is one of the two outputs of the 2-point-lighting controller. It sends a value (On), if the brightness over a certain period falls below the configured or set brightness value.				
157	**2-p. lighting control, switching**	**Off**	1.001 switching	Output
This object is one of the two outputs of the 2-point-lighting controller. It sends a value (Off), if the brightness over a certain period exceeds the configured or set brightness value.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.3 Constant lighting control (steady)

Constant light control is an advanced form of lighting control. This control uses natural light to balance out artificial light output that is required to illuminate a room sufficiently, which reduces power consumption and its associated costs.

The illuminance of daylight entering a room through the window decreases the deeper it enters into the room.

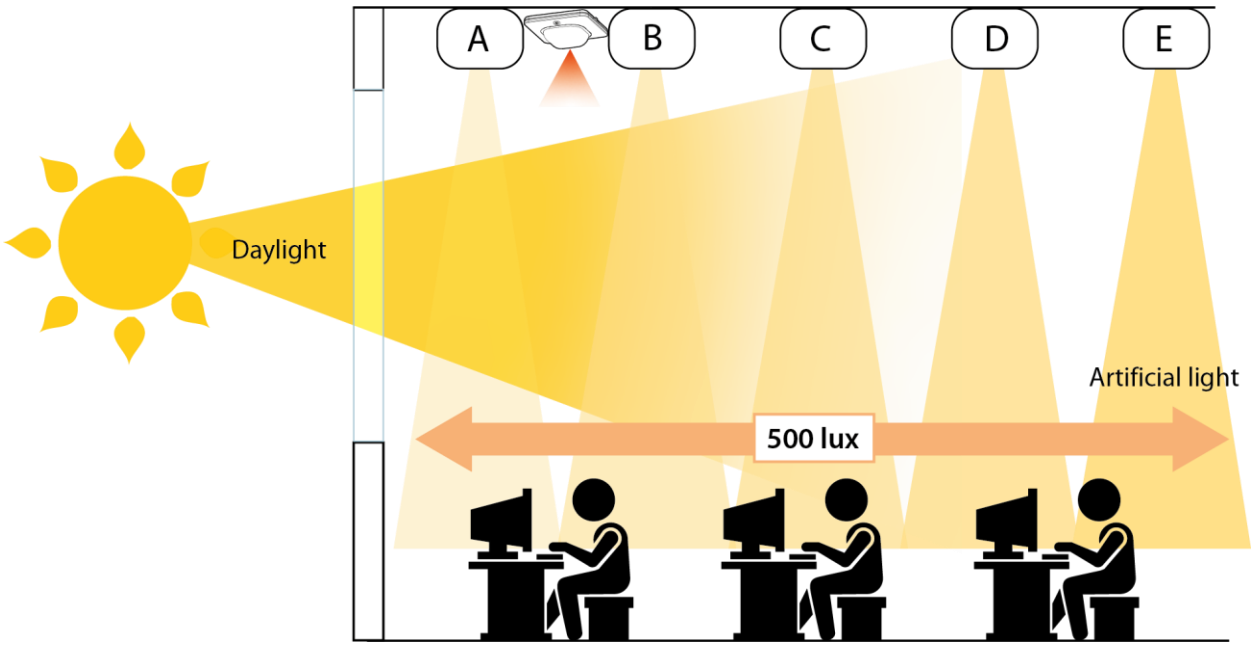


Fig. 19 Principle of constant lighting control for five groups of lights

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Depending on the lamps, lighting is regulated using dimming actuators or switching/dimming actuators to the specified target brightness value, whereby the setpoint can be selected as a parameter or as a communication object.

In order to use the entering daylight in the best possible way with constant lighting control, the presence detector offers the option to control a main lighting group directly and up to four additional sub lighting groups, each via a separate characteristic curve and a separate controller (master/slave mode).
All lighting groups are dimmed to the same setpoint (e.g. 500 lux). In this way, the brightness in a room can be regulated with a single presence detector with constant lighting control. Depending on whether the sub lighting groups are closer to or further away from the window than the main lighting group (“master”), the respective lighting group must be dimmed up or down accordingly.

To do so, you first need to determine where in the room the presence detector is installed. The presence detector can be installed in positions A–E on the ceiling. The position of the presence detector, which determines the main lighting group, can generally be selected as desired but should be as close to the window as possible to best capture the daylight.

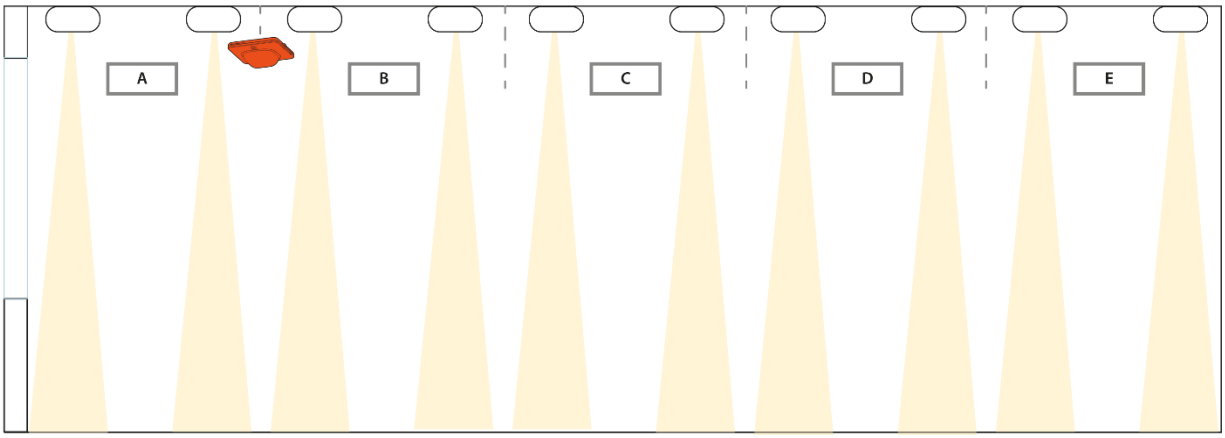


Fig. 20 Position of lighting groups A–E

For master/slave operation, the course of the daylight must be recorded under lighting groups A–E. To do this, the lighting in the room must be switched off completely so that the room is illuminated only by daylight. Ideally, the daylight is even (no shadow), bright and diffuse, e.g. on a bright day with clouds at mid-day. Under each of the lighting groups, the illuminance (lux) must then be measured manually and the values entered into the ETS. In this case, sub group 1 corresponds to lighting group B, sub group 2 to lighting group C and so on. Lighting group A is the main group as it is the closest to the window.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

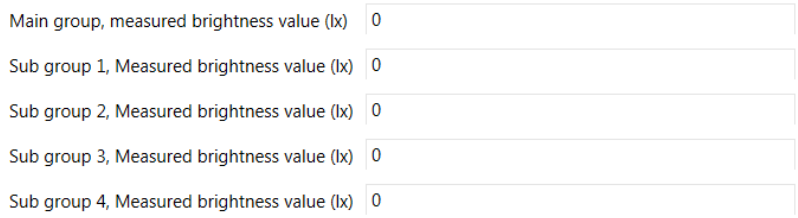


Fig. 21 Parameter window for measured brightness values

The control characteristic cover for the sub lighting groups must be determined without daylight. To do this, the room must be darkened completely or the characteristic curve must be recorded at night. When a start signal is sent to object 179, the recording of the characteristic curve starts. The presence detector independently creates 15 discrete control values in the range of 0 % to 100 % for the main lighting group and the sub lighting groups. The presence detector records the resulting illuminance. For the time between measurements, you can select between 10 and 60 seconds in order to allow the lamps to warm up optimally for each individual control value.

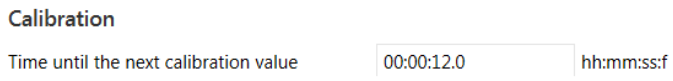


Fig. 22 Parameters for calibrating the control curve

After successful completion or termination of the calibration, the controller is in “inactive” state.
In case of successful completion, the light groups all light up with 50 % of the control value, in case of an error, they light up with 6 % of the control value.

During operation, constant lighting control can have four different states:

- **Active:** The actual controlling takes place in this state. That is, a comparison between target and actual value is performed at certain (configurable) intervals and, a control value is output depending on the deviation.
- **Inactive:** In this state, the controller behaves passively, that is, it is switched off and no longer performs any controlling activities.
- **Standby:** In this state, the controller also behaves passively. Unlike in “inactive” state, however, the actual value is still compared to the setpoint here. If there is a corresponding difference between target and actual value, the controller autonomously switches to its active state.
- **Off:** Controlling is stopped and the actuators (master & slaves) are switched off.

Behavior at bus voltage failure/recovery
The current setpoint is stored on bus voltage failure.
When bus voltage is recovered, the setpoint is restored or stored. This and the state of the controller can be configured.

If you want to give the controller a value in the format of an external brightness measuring device, you have to use the calculation function.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.3.1 Parameters of the “constant lighting control” parameter card

Parameter	Settings
Source for brightness value (actual value)	**Internal value** **Calculated value**
This parameter is used to select the source for the brightness value.	
Index of calculator	**A...L**
This parameter is used to select the source for the calculated value. **Availability:** This parameter is only visible if the “source for brightness value (actual value)” parameter is set to “calculated value.”	
Number of sub groups	**0...4**
This parameter is used to set the number of sub groups. **Availability:** The parameter is available on the “sub groups” parameter card.	

Setpoint

Parameter	Settings
Setpoint (lx)	**20.00...670760.00**
This parameter is used to set the target brightness value for constant lighting control. If the parameter “setpoint changeable over object” is set to “enable,” this parameter specifies the starting value if no valid value has been received via object yet.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Setpoint changeable over object	**Disable** **Enable**
This parameter is used to specify whether the setpoint for controlling is to be set to a fixed value as a parameter, which can only be changed by means of the ETS or whether the corresponding parameter value set ex works can be changed via communication objects via the bus at any time. The value received via the communication object immediately overwrites the parameter value set ex works and is stored permanently.	
Minimum setpoint (lx)	**20.00...670760.00**
This parameter is used to specify the lower limit that is above the set setpoint over the object. **Availability:** This parameter is only visible if the “setpoint changeable over object” parameter is set to “enable.”	
Maximal setpoint (lx)	**20.00...670760.00**
This parameter is used to specify the upper limit that is above the set setpoint over the object. **Availability:** This parameter is only visible if the “setpoint changeable over object” parameter is set to “enable.”	
Reset setpoint at controller OFF	**Disable** **Enable**
This parameter is used to set whether or not the setpoint set via object is to be reset when the controller is switched off. If the parameter is set to “enable,” the set is reset to the last setpoint received via the object “constant lighting control, setpoint - absolute” when the controller is switched off. **Note:** If no absolute setpoint has been received via the object, the setpoint is reset to the setpoint configured via ETS when the controller is switched off. **Availability:** This parameter is only visible if the “setpoint changeable over object” parameter is set to “enable.”	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Store current brightness value as setpoint via object	**Disable** **Enable**
This parameter can be used to set whether the current brightness value is to be stored as the new setpoint via the 1-bit object "constant lighting control, store setpoint." **Availability:** This parameter is only visible if the "setpoint changeable over object" parameter is set to "enable."	
Setpoint changes per dimming step by (%)	**1...50**
This parameter is used to specify by which value the brightness setpoint for constant lighting control is to be changed for each dimming step, if the object "constant lighting control, setpoint - relative" is used. **Availability:** This parameter is only visible if the "setpoint changeable over object" parameter is set to "enable."	
Status of setpoint	**Disable** **Enable**
This parameter is used to define whether the communication object "constant lighting control, setpoint status" is available. This object can be used to output or query the setpoint. **Availability:** This parameter is only visible if the "setpoint changeable over object" parameter is set to "enable." **Other parameters:** If the parameter "setpoint status" is set to "enable," parameters are displayed which can be used to specify when a status is to be sent. ➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"*	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Control on / off

Parameter	Settings
Behavior controller at bus voltage recovery	**Off** **On** **As before bus voltage failure**
This parameter can be used to set how the controller is to behave after bus voltage recovery. • **Off:** After bus voltage recovery, the controller is off. • **On:** After bus voltage recovery, the controller is switched on and controlling is active. • **As before bus voltage failure:** The controller remains in the same state as before bus voltage failure.	
Only switch on light at start of control when necessary	**Disable** **Enable**
This parameter can be used to set that the light is only switched on if necessary when the control is started. If the parameter is set to “enable,” the controller switches into “standby” mode, if the brightness is greater than the target range and the last received “status dimming value” of the actuator was 0 %. If there is a corresponding difference between target and actual value, the controller autonomously switches to active state.	
Behavior of light at controller off	**Off** **No change**
This parameter can be used to set whether the control value 0 % or the switching telegram “Off” is sent when switching off the controller (setting: Off) or not (setting: no change).	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Controller stop for scenes	**Disable** **Enable**
This parameter enables the parameter card “scenes for controller stop” in which scene numbers can be selected that switch off the controller when receiving the object “constant lighting control, stop for scene.” **Other parameters:** If this parameter is set to “enable,” the parameter card “scenes for controller stop” is displayed.	
Scene 1 (...64)	**Disable** **Enable**
This parameter can be used to enable the scene number that switches off the controller when receiving the object “constant lighting control, stop for scene.” The controller can only be switched on again by receiving a “logical 1” on the object “constant lighting control, controller.” **Availability:** This parameter is only visible if the “controller stop for scenes” parameter is set to “enable.” The parameter is available on the “scenes for controller stop” parameter card.	
Start controller with setpoint greater than 0	**Disable** **Enable**
This parameter specifies whether the controller is to switch to active state, if a setpoint greater than “0” is received via the communication object “constant lighting control, setpoint - absolute.” The specified value in lux is also the new setpoint.	
Switch off with setpoint = 0	**Disable** **Enable**
This parameter is used to specify whether, after receiving the controller setpoint “0 lx” via the object “constant lighting control, setpoint - absolute,” the controller is to switch to the “Off” state. This means the controller terminates its function and the actuators are also switched off with dimming value 0.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Controller status	**Disable** **Enable**
This parameter is used to specify whether the communication object "constant lighting control, controller status" is to be available. The controller communicates the status via this object. It can either have the value "On," i.e. the controller runs in automatic mode, or the value "Off." **Other parameters:** If the parameter "controller status" is set to "enable," parameters are displayed that enable you to set when a status is sent. ➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"*	

Regulation

Parameter	Settings
Maximum deviation from the setpoint (hysteresis) (+/- %)	**5...20**
This parameter is used to specify from which the difference between the actual value to the setpoint the controller starts controlling.	
Send dimming value after (control speed) (hh:mm:ss.f)	**00:00:00.1...00:00:20.0**
This parameter is used to specify at which intervals the controller outputs the calculated control values.	
Time until the controller automatically shuts off (0 = never) (hh:mm:ss)	**00:00:00...18:12:15**
If the control value of the controller has reached the minimal dimming value and the actual brightness value is greater than the target brightness value, the controller switches to "standby" state and, if configured accordingly, sends the switching telegram with the value "Off." The time to reach the conditions described above to switch to "standby" mode is specified using the parameter above. If the parameter is set to "0," the controller remains in "active" mode with its minimal control values.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Automatic reactivation of controller	**Disable** **Enable**
This parameter can be used to set whether or not automatic reactivation of the controller from “standby” mode is to be prevented. If this is set to “disable,” the controller is switched off when “standby” state is reached and can only be reactivated by receiving a “logical 1” on the object “constant lighting control, controller.” If this is set to “enable,” and there is a corresponding difference between target and actual value, the controller autonomously switches to active mode.	
Additional hysteresis for automatic reactivation of the controller (%)	**5...70**
In “standby” mode, if the actual value falls below the setpoint minus hysteresis minus additional hysteresis, the controller automatically switched to “active” mode.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Control output

Parameter	Settings
First dimming value, when the controller starts	**Adopt from parameter** **Request from status of dimming actuator** **Calculate start value** **Use last received value** **Calculate starting value considering last received value**

This parameter is used to specify how the first dimming value (start value) of control is determined.

- **Adopt from parameter:**

  With this setting, the controller starts with a fixed configured dimming value. This setting makes sense if the other options are not possible.

- **Query from actuator's status:**

  A status query is used to query the current control value from the dimming actuator, which is then used to start controlling. This is required because the settings of the dimming actuator were changed manually via a dimming command prior to control starting.

- **Calculate starting value:**

  Here, the current actual value is measured before the control process is started. This value represents the mixed light (artificial light of the lamp + daylight from outside). The measured room brightness value is then converted into a control value by using the characteristic curve and used as the starting value for controlling.

- **Use last received value:**

  This setting uses the last dimming value received via the object “constant lighting control, main group dimming value status” as the starting value when controlling starts. If no value is available, the value of the “first dimming value (%)” parameter is used.

- **Calculate starting value considering last received value:**

  Here, the current actual value is measured before the control process is started. This value represents the mixed light (artificial light of the lamp + daylight from outside). The last dimming value received via the object “constant lighting control, main group dimming value status” is used to calculate the external light portion. This value is then converted into a control value by using the characteristic curve and then used as the starting value for controlling.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
First dimming value (%)	**1...100**
This parameter is used to set the start value of the controller's control values. The setting "adopt from parameter" always uses this dimming value when starting control; the other settings (except for "calculate starting value") use this dimming value when no value is available. **Availability:** This parameter is only visible, if the parameter "first dimming value, when the controller starts" is set to "adopt from parameter," "query from actuator's status," "use last received value" or "calculate starting value considering last received value."	
Minimum dimming value (%)	**1...100**
This parameter is used to determine the minimum dimming value of the main group.	
Maximum dimming value (%)	**1...100**
This parameter is used to determine the maximum dimming value of the main group. **Note:** If the maximum dimming value is accidentally configured as lower than the minimum dimming value, both values are swapped internally.	
Max. increment when dimming (%)	**1...10**
This parameter is used to specify the maximum permissible increment for control value output. **Note:** The increment should be selected in such a way that a change in dimming value does not change the illuminance by more than the set hysteresis of the setpoint.	
Send additional switching telegram at start	**Disable** **Enable**
This parameter is used to specify whether or not an additional switch on telegram is to be sent at the start of controlling (switch to the "active" state).	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Send additional switching telegram at stop	**Disable** **Enable**
This parameter is used to specify whether or not an additional switch off telegram is to be sent at the end of controlling (leaving the "active" state).	

Calibration

Parameter	Settings
Time until the next calibration value **(hh:mm:ss.f)**	**00:00:10.0...00:01:00.0**
This parameter is used to specify the time between the individual brightness measurements of the controller for automatic calibration. **Note:** A higher value should be chosen for lamps that require longer to reach their full brightness.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.3.2 Parameters of the “sub groups” parameter card

Parameter	Settings
Number of sub groups	**0...4**
This parameter is used to set the number of sub groups. (0 = no sub group exists)	
Type of calculation	**Calculate with characteristic curve** **Calculate with offset**
This parameter determines which type of calculation is used to calculate the dimming control values of the lighting sub groups. • **Calculate with characteristic curve:** The dimming control values for the lighting sub groups are derived from the dimming control value of the main lighting group via calibration curves, which convert the measured (main) illuminance to a calculated illuminance at the position of each of the lighting sub groups. • **Calculate with offset:** The dimming control values are derived from the dimming control value of the main lighting group via an offset that is entered for each lighting sub group. **Availability:** This parameter is only visible if the “number of sub groups” parameter is set to a value greater than 0.	
Individually switch main/sub groups	**Disable** **Enable**
This parameter can be used to set whether or not the sub groups are to be switched separately from the main group for the calculation type “calculate with characteristic curve.” That is, if this is set to “enable,” a target-actual value comparison is performed for each sub group so that the lighting sub groups are switched on and off individually. **Availability:** This parameter is only visible if the “type of calculation” parameter is set to “calculate with characteristic curve.”	
Sub group 1 [2...4], minimum dimming value (%)	**1...100**
This parameter is used to determine the minimum dimming value of the sub group (1–4).	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Sub group 1 [2...4], maximum dimming value (%)	**1...100**
This parameter is used to determine the maximum dimming value of the sub group (1–4). **Note:** If the maximum dimming value is accidentally configured as lower than the minimum dimming value, both values are swapped internally.	
Sub group 1 [2...4], offset for the dimming value of the main group (%)	**-100...100**
This parameter is used to determine the offset dimming value of the sub group (1–4) to the main group. **Availability:** This parameter is only visible if the "type of calculation" parameter is set to "calculate with offset."	
Main group, measured brightness value (lx)	**0.00...670760.00**
This and the following parameters determine at which position the main lighting group and the sub groups are located. The brightness value measured using a lux meter on the main lighting groups is entered here. **Availability:** This parameter is only visible if the "type of calculation" parameter is set to "calculate with characteristic curve."	
Sub group 1 [2...4], measured brightness value (lx)	**0.00...670760.00**
This and the preceding parameters determine at which position the main lighting group and the sub groups are located. The brightness value measured using a lux meter on each of the lighting sub groups is entered here. **Availability:** This parameter is only visible if the "type of calculation" parameter is set to "calculate with characteristic curve."	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.3.3 Communication objects

Obj	Object name	Function	Datapoint type	Object type
158	**Constant lighting control, controller**	**On / Off**	1.001 switching	Input
This object can be used to switch the controller on and off. This information can come, for example, from a bus button or an outbound object of a presence detector.				
159	**Constant lighting control, controller status**	**On / Off**	1.002 Boolean	Output
The controller communicates its internal status via this object. The status can either have the value “On,” i.e. the controller runs in automatic mode, or the value “Off.” No distinction is made as to whether the controller was switched off manually or via override (“stop” objects).				
160	**Constant lighting control, stop when switching**	**Switching**	1.001 switching	Input
If a value is received via this object (logical 0 or 1), the controller switches off as it has been overridden externally. The controller can only be switched on again by receiving a “logical 1” on the object “constant lighting control, controller.”				
161	**Constant lighting control, stop when dimming**	**Dimming**	3.007 dimmer step	Input
If a value is received via this object (4-bit dimming command), the controller switches off as it has been overridden externally. The controller can only be switched on again by receiving a “logical 1” on the object “constant lighting control, controller.”				
162	**Constant lighting control, stop at dimming value**	**Dimming value**	5.001 percent (0...100 %)	Input
If a value is received via this object (8-bit dimming command), the controller switches off as it has been overridden externally. The controller can only be switched on again by receiving a “logical 1” on the object “constant lighting control, controller.”				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
163	**Constant lighting control, stop for scenes**	**Scene**	18.001 scene control	Input

If a scene value (0...63) is received via this object, the controller switches off, if the corresponding scene number is enabled on the parameter card "controller stop for scenes." The controller can only be switched on again by receiving a "logical 1" on the object "constant lighting control, controller."

Availability:

This object is only visible if the "controller off for scenes" parameter is set to "enable."

Obj	Object name	Function	Datapoint type	Object type
164	**Constant lighting control, setpoint - absolute**	**Value in LUX**	9.004 Lux (lux)	Input

This object is used to set the setpoint for constant lighting control. Until the first time a value is received, the value of the parameter "setpoint (lx)" is used as the original value.

Note 1:

Depending on the determined calibration guideline, a control process can also take place if the actual value is already with the range of the hysteresis of the new setpoint, when the setpoints is changed.

Note 2:

The setpoint is limited by the parameters "minimum setpoint" and "maximum setpoint."

Note 3:

If a 0 is received, the setpoint is not changed.

Availability:

This object is only visible if the "setpoint changeable over object" parameter is set to "enable."

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
165	**Constant lighting control, setpoint relative**	**Brighter / darker**	3.007 dimmer step	Input
This object can be used to change the setpoint. In doing so the controller raises or decreases by increments the internal setpoint at controller speed intervals, using a dimming step set via a parameter, if dimming with a stop telegram is used. **Note:** The setpoint is limited by the parameters “minimum setpoint” and “maximum setpoint.” **Availability:** This object is only visible if the “setpoint changeable over object” parameter is set to “enable.”				
166	**Constant lighting control, store setpoint**	**1 = save**	1.001 switching	Input
If “logical 1” is received via this object, the current brightness value is adopted as the new setpoint. **Note:** The setpoint is limited by the parameters “minimum setpoint” and “maximum setpoint.” **Availability:** This object is only visible if the “setpoint changeable over object” parameter is set to “enable.”				
167	**Constant lighting control, setpoint status**	**Value in LUX**	9.004 Lux (lux)	Output
The controller communicates its internal status to the outside via this object. If the setpoint is changed, it is sent via this object to the bus or can be queried at any time. **Availability:** This object is only visible if the “setpoint changeable over object” and “status of setpoint” parameters are set to “enable.”				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
168	**Constant lighting control, Main group switching**	**On / Off**	1.001 switching	Output
The controller uses this object to send the switch on and off commands for the main lighting group. It sends the value “On,” if the brightness falls below the defined brightness value of a defined period of timer. It sends the value “Off,” if the controller has received a logical “0” via the communication object “constant lighting control, controller” or if the controller switches from “active” mode to “standby” mode.				
169	**Constant lighting control, Main group dimming value**	**Dimming value**	5.001 percent (0...100 %)	Output
The controller uses this object to send the dimming values for the main lighting group.				
170	**Constant lighting control, Main group dimming value status**	**Dimming value**	5.001 percent (0...100 %)	Input
This object can be used to query the current dimming value of the dimming actuator of the main lighting group. This object should be connected to the “status dimming value” object of the dimming actuator.				
171	**Constant lighting control, sub group 1 switching**	**On / Off**	1.001 switching	Output
The controller uses this object to send the switch on and off commands for the first lighting sub group. **Availability:** This object is only visible if the “number of sub groups” parameter is set to a value greater than “0.”				
172	**Constant lighting control, sub group 1 dimming value**	**Dimming value**	5.001 percent (0...100 %)	Output
The controller uses this object to send the dimming values for the first lighting sub group. **Availability:** This object is only visible if the “number of sub groups” parameter is set to a value greater than “0.”				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
173	**Constant lighting control, sub group 2 switching**	**On / Off**	1.001 switching	Output
The controller uses this object to send the switch on and off commands for the second lighting sub group. **Availability:** This object is only visible if the “number of sub groups” parameter is set to a value greater than “1.”				
174	**Constant lighting control, sub group 2 dimming value**	**Dimming value**	5.001 percent (0...100 %)	Output
The controller uses this object to send the dimming values for the second lighting sub group. **Availability:** This object is only visible if the “number of sub groups” parameter is set to a value greater than “1.”				
175	**Constant lighting control, sub group 3 switching**	**On / Off**	1.001 switching	Output
The controller uses this object to send the switch on and off commands for the third lighting sub group. **Availability:** This object is only visible if the “number of sub groups” parameter is set to a value greater than 2.				
176	**Constant lighting control, sub group 3 dimming value**	**Dimming value**	5.001 percent (0...100 %)	Output
The controller uses this object to send the dimming values for the third lighting sub group. **Availability:** This object is only visible if the “number of sub groups” parameter is set to a value greater than 2.				
177	**Constant lighting control, sub group 4 switching**	**On / Off**	1.001 switching	Output
178	**Constant lighting control, sub group 4 dimming value**	**Dimming value**	5.001 percent (0...100 %)	Output
The controller uses this object to send the dimming values for the fourth lighting sub group.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
Availability: This object is only visible if the "number of sub groups" parameter is set to 4.				
179	**Constant lighting control, Calibration**	**1 = start / 0 = stop**	1.010 start/stop	Input
With a logical "1," this object is used to start the calibration run of the controller. After completion of the calibration, the controller is in "inactive" state. With a logical "0," this object can be used to stop the calibration run of the controller. **Note:** After successfully completed calibration, the actuators are dimmed to 50 %. After a failed calibration, the actuators are dimmed to 6 %. The criterion for successful calibration is that the measured brightness value also increases with every increase of the dimming value.				
180	**Constant lighting control, diagnostic values**	**Value in LUX**	9.004 Lux (lux)	Output
After completion of the calibration process started by the object "constant lighting control, calibration," this object is used to send the 16 determined brightness values.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.4 Calculator

This module is used if external measured values are to be taken into account for the sensor values.

For each of the values recorded via the sensors (brightness, temperature, relative humidity and CO2), the following values can be calculated from the internal value and up to four external values:

- Maximum of the values
- Minimum of the values
- Mixed values: Weighting of internal value and external values can be set using parameters

To do so, 12 calculators with up to 4 external values are available.
The value for the parameter setting "calculated value" is specified by the calculator.

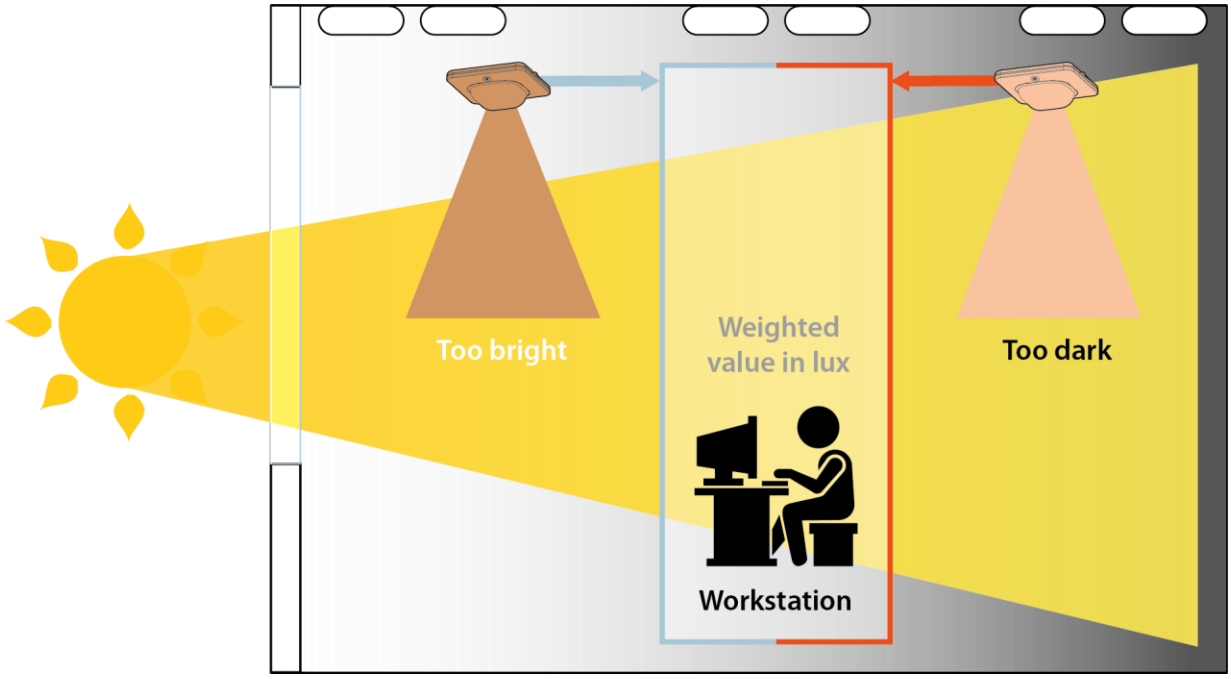


Fig. 23 Calculator

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.4.1 Parameters of the “calculator” parameter card

Note:
The communication objects and parameters are configured in the same way for all calculators and are therefore just described once for calculator A.

Parameter	Settings
Calculator A (...L)	**Deactivated** **Temperature (°C) DPT 9.001** **Illuminance (lx) DPT 9.004** **Humidity (% r.h.) DPT 9.007** **CO2 concentration (ppm) DPT 9.008**
These parameters can be used to enable up to 12 calculators with which internal and external sensor values are summarized using different calculation methods and can then be used for controllers and presence detectors.	

5.4.2 Parameters of the parameter cards “calculator A, temperature,” “calculator A, brightness,” “calculator A, humidity” and “calculator A, CO2”

Parameter	Settings
Type of calculation	**Maximal value** **Minimal value** **Weighted value**

This parameter can be used to set the calculation mode.

- **Maximal value:**
  With this method, the maximum value is determined using the internal and up to four external values.
- **Minimal value:**
  With this method, the minimum value is determined using the internal and up to four external values.
- **Weighted value:**
  With this method, the weighted value is determined using the internal and up to four external values via a configurable parameter.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Count of external values	**1...4**
This parameter is used to determine the number of external values.	
Use internal value	**Disable** **Enable**
This parameter is used to set whether or not the internal sensor value is to be used for the calculation.	
Weight of internal value	**1...255**
This parameter is used to set the weight of the internal value for the “weighted value” calculation mode. **Availability:** This parameter is only visible if the “calculation mode” parameter is set to “weighted value” and the “use internal value” parameter is set to “enable.”	
Offset of external value [1...4] (K)	**-671088.60...670760.90**
This parameter can be used to set an offset for each external temperature value received. It can be used to correct environmental factors.	
Offset of external value [1...4] (lx)	**-671088.60...670760.90**
This parameter can be used to set an offset for each external brightness value received. It can be used to correct environmental factors.	
Offset of external value [1...4] (% r.h.)	**-100.00...100.00**
This parameter can be used to set an offset for each external humidity values received. It can be used to correct environmental factors.	
Offset of external value [1...4] (ppm)	**-671088.60...670760.90**
This parameter can be used to set an offset for each external CO2 values received. It can be used to correct environmental factors.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Weight of external value [1...4]	**1...255**
These parameters are used to set the weight of the external values received for the "weighted value" calculation type. **Availability:** These parameters are only visible if the "calculation mode" parameter is set to "weighted value."	
Object result	**Disable** **Enable**
The parameter is used to set whether the object "calculator A, X, result" is enabled or disabled. This object is used to output the result of the calculation, but the result can also be queried via the bus at any time. **Other parameters:** If the "object result" parameter is set to "enable," the parameters "send value on request,", "send value on change of value" and "send value cyclically" are shown.	
Send value on request	**Disable** **Enable**
This parameter can be used to set whether the value is sent on request or whether requests for the value will be rejected. The request is triggered via the communication object "send status values."	
Send value on change of value	**Disable** **Enable**
This parameter determines if the value is to be sent automatically for every change of value. If "enable" is selected, additional parameters are displayed that can be used to define which change of value (e.g. K, lx, % r.h., ppm) since the last transmission has to be exceeded and how much time must have passed since the last transmission for the value to be sent again.	
Value change since last sent (K)	**0.00...670760.00**
This parameter is used to specify at which change of value compared to the last value sent the value of the corresponding communication object is sent again. Sending takes place if the minimum block time for sending of value has been exceeded.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Block time for sending of value (hh:mm:ss)	**00:00:00...18:12:15**
This parameter is used to set which time since the last sending of the value has to be exceeded in order for it to be sent again. **Note:** The block time does not apply to cyclic sending. If the block time is greater than the cycle time, the value is nonetheless sent at the end of the cycle time.	
Send value cyclically (hh:mm:ss)	**00:00:00...18:12:15**
This parameter determines if and in which intervals the object result is sent via the bus. If this is set to "00:00:00," cyclic sending is deactivated.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.4.3 Communication objects

Obj	Object name	Function	Datapoint type	Object type
88	**Calculator A, temperature value 1** **Calculator A, brightness value 1** **Calculator A, relative humidity 1** **Calculator A, CO2 value 1**	**°C value** **Value in LUX** **% r.h.** **ppm value**	9.001 temperature (°C) 9.004 Lux (lux) 9.007 humidity (%) 9.008 parts/million (ppm)	Input
This object is used to receive external value 1 with which the calculation is performed.				
89	**Calculator A, temperature value 2** **Calculator A, brightness value 2** **Calculator A, relative humidity 2** **Calculator A, CO2 value 2**	**°C value** **Value in LUX** **% r.h.** **ppm value**	9.001 temperature (°C) 9.004 Lux (lux) 9.007 humidity (%) 9.008 parts/million (ppm)	Input
This object is used to receive external value 2 with which the calculation is performed. **Availability:** This object is only visible if the “count of external values>” parameter is set to > 1.				
90	**Calculator A, temperature value 3** **Calculator A, brightness value 3** **Calculator A, relative humidity 3** **Calculator A, CO2 value 3**	**°C value** **Value in LUX** **% r.h.** **ppm value**	9.001 temperature (°C) 9.004 Lux (lux) 9.007 humidity (%) 9.008 parts/million (ppm)	Input
This object is used to receive external value 3 with which the calculation is performed. **Availability:** This object is only visible if the “count of external values>” parameter is set to > 2.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
91	**Calculator A, temperature value 4** **Calculator A, brightness value 4** **Calculator A, relative humidity 4** **Calculator A, CO2 value 4**	**°C value** **Value in LUX** **% r.h.** **ppm value**	9.001 temperature (°C) 9.004 Lux (lux) 9.007 humidity (%) 9.008 parts/million (ppm)	Input
This object is used to receive external value 4 with which the calculation is performed. **Availability:** This object is only visible if the “count of external values” parameter is set to 4.				
92	**Calculator A, temperature, result** **Calculator A, brightness, result** **Calculator A, relative humidity, result** **Calculator A, CO2, result**	**°C value** **Value in LUX** **% r.h.** **ppm value**	9.001 temperature (°C) 9.004 Lux (lux) 9.007 humidity (%) 9.008 parts/million (ppm)	Output
This object is used to send the result of the calculation. The current result of the calculation can be queried with a read request via the bus at any time. **Availability:** This object is only visible if the “object result” parameter is set to “enable.”				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.5 Threshold monitoring

For the measured values brightness, temperature, humidity and CO2, only 2 threshold values can be defined in up to 8 evaluation logics via parameter. Parameters for exceeding or falling below the limits with the evaluation time are available to this end.

In addition, the corresponding threshold values can also be received via communication objects.

Both internal and calculated values can be monitored for falling below or exceeding the limit. If you want to give the controller a value in the format of an external measuring device, you have to use the calculation function.

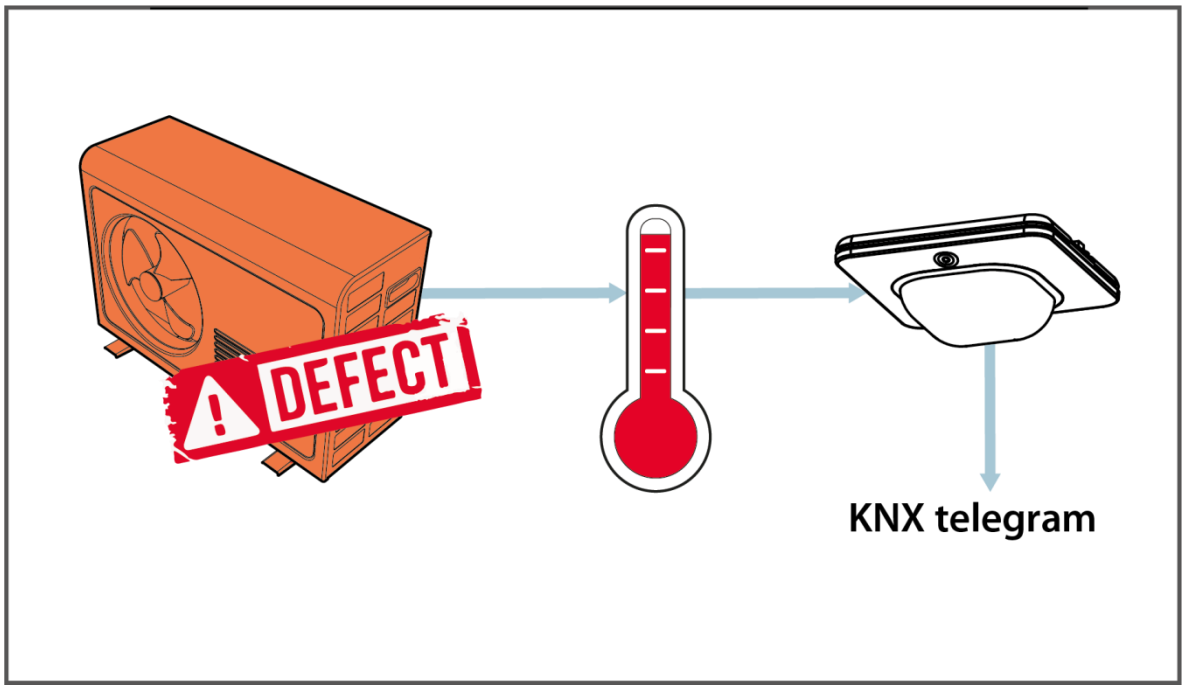


Fig. 24 Exceedance of the limit

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.5.1 Parameter

Note:
The communication objects and parameters are configured in the same way for all threshold monitoring and are therefore just described once for threshold monitoring A.

Parameter	Settings
Threshold monitoring A (...H)	**Deactivated** **Temperature (°C) DPT 9.001** **Illuminance (lx) DPT 9.004** **Humidity (% r.h.) DPT 9.007** **CO2 concentration (ppm) DPT 9.008**
These parameters can be used to enable up to 8 instances of threshold monitoring, which can be used to monitor internal and calculated values as to whether they exceed or fall below the respective limit.	

5.5.2 Parameters of the parameter cards “threshold monitoring A, temperature,” “threshold monitoring A, brightness,” “threshold monitoring A, humidity” and “threshold monitoring A, CO2”

Parameter	Settings
Source of measured value	**Internal value** **Calculated value**
This parameter is used to select the source for the measured value.	
Index of calculator	**A...L**
This parameter is used to select the source for the calculated value. **Availability:** This parameter is only visible if the “source for measured value” parameter is set to “enable.”	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Exceedance of load check limit value	**Disable** **Enable**
This parameter can be used to enable the exceedance of the limit. It can be used to monitor any exceedance of the upper limit of the measured value. **Other parameters:** If the parameter "threshold monitoring" is set to "enable," parameters are displayed that enable you to set when a status is sent. ➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"*	
Block time for sending of status (hh:mm:ss)	**00:00:00...18:12:15**
This parameter is used to set which time since the last sending of the status has to be exceeded in order for it to be sent again.	
Threshold above limit (°C)	**-273.00...670760.00**
This parameter is used to set the threshold for limit exceedance. This threshold can be changed via a communication object at a later time. **Availability:** This parameter is only visible if the parameter "threshold monitoring A" is set to "temperature (°C) DPT 9.001" and "limit exceedance" is set to "enable."	
Hysteresis above limit (K)	**0.00...670760.00**
This parameter is used to define by how many "K" the measured value has to fall below the upper limit of the allowed range so that the communication object "threshold monitoring A, limit exceedance" is set to "Off" once again. **Availability:** This parameter is only visible if the parameter "threshold monitoring A" is set to "temperature (°C) DPT 9.001" and "limit exceedance" is set to "enable."	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Threshold above limit (lx)	**0.00...670760.00**
This parameter is used to set the threshold for limit exceedance. This threshold can be changed via a communication object at a later time. **Availability:** This parameter is only visible if the parameter “threshold monitoring A” is set to “illuminance (lx) DPT 9.004” and “limit exceedance” is set to “enable.”	
Hysteresis above limit (lx)	**0.00...670760.00**
This parameter is used to define by how many “lx” the measured value has to fall below the upper limit of the allowed range so that the communication object “threshold monitoring A, limit exceedance” is set to “Off” once again. **Availability:** This parameter is only visible if the parameter “threshold monitoring A” is set to “illuminance (lx) DPT 9.004” and “limit exceedance” is set to “enable.”	
Threshold above limit (% r.h.)	**0.00...100.00**
This parameter is used to set the threshold for limit exceedance. This threshold can be changed via a communication object at a later time. **Availability:** This parameter is only visible if the parameter “threshold monitoring A” is set to “humidity (% r.h.) DPT 9.007” and “limit exceedance” is set to “enable.”	
Hysteresis above limit (% r.h.)	**0.00...100.00**
This parameter is used to define by how many “% r.h.” the measured value has to fall below the upper limit of the allowed range so that the communication object “Threshold monitoring A, limit exceedance” is set to “Off” once again. **Availability:** This parameter is only visible if the parameter “threshold monitoring A” is set to “humidity (% r.h.) DPT 9.007” and “limit exceedance” is set to “enable.”	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Threshold above limit (ppm)	**0.00...670760.00**
This parameter is used to set the threshold for limit exceedance. This threshold can be changed via a communication object at a later time. **Availability:** This parameter is only visible if the parameter "threshold monitoring A" is set to "CO2 concentration (ppm) DPT 9.008" and "limit exceedance" is set to "enable."	
Hysteresis above limit (%)	**0.00...670760.00**
This parameter is used to define by how many "ppm" the measured value has to fall below the upper limit of the allowed range so that the communication object "threshold monitoring A, limit exceedance" is set to "Off" once again. **Availability:** This parameter is only visible if the parameter "threshold monitoring A" is set to "CO2 concentration (ppm) DPT 9.008" and "limit exceedance" is set to "enable."	
Monitoring time above limit **(hh:mm:ss.f)**	**00:00:00.0...01:49:13.5**
This parameter is used to set a monitoring time for which the exceedance condition must be met in order for it to be deemed an exceedance. This time also applies to resetting the exceedance. **Availability:** This parameter is only visible if the "exceedance of limit" parameter is set to "enable."	
Below limit	**Disable** **Enable**
This parameter can be used to enable a fall to below limit. It can be used to monitor any shortfall of the lower limit of the measured value. **Other parameters:** If the parameter "below limit" is set to "enable," parameters are displayed that enable you to set when a status is sent. ➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"*	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Block time for sending of status (hh:mm:ss)	**00:00:00...18:12:15**
This parameter is used to set which time since the last sending of the status has to be exceeded in order for it to be sent again.	
Threshold below limit (°C)	**-273.00...670760.00**
This parameter is used to set the threshold for a shortfall of the limit. This threshold can be changed via a communication object at a later time. **Availability:** This parameter is only visible if the parameter "threshold monitoring A" is set to "temperature (°C) DPT 9.001" and "below limit" is set to "enable."	
Hysteresis below limit (K)	**0.00...670760.00**
This parameter is used to define by how many "K" the measured value has to exceed the lower limit of the allowed range so that the communication object "threshold monitoring A, below limit" is set to "Off" once again. **Availability:** This parameter is only visible if the parameter "threshold monitoring A" is set to "temperature (°C) DPT 9.001" and "below limit" is set to "enable."	
Threshold below limit (lx)	**0.00...670760.00**
This parameter is used to set the threshold for a shortfall of the limit. This threshold can be changed via a communication object at a later time. **Availability:** This parameter is only visible if the parameter "threshold monitoring A" is set to "illuminance (lx) DPT 9.004" and "below limit" is set to "enable."	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Hysteresis below limit (lx)	**0.00...670760.00**
This parameter is used to define by how many "lx" the measured value has to exceed the lower limit of the allowed range so that the communication object "threshold monitoring A, below limit" is set to "Off" once again. **Availability:** This parameter is only visible if the parameter "threshold monitoring A" is set to "illuminance (lx) DPT 9.004" and "below limit" is set to "enable."	
Threshold below limit (% r.h.)	**0.00...100.00**
This parameter is used to set the threshold for a shortfall of the limit. This threshold can be changed via a communication object at a later time. **Availability:** This parameter is only visible if the parameter "threshold monitoring A" is set to "humidity (% r.h.) DPT 9.007" and "below limit" is set to "enable."	
Hysteresis below limit (% r.h.)	**0.00...100.00**
This parameter is used to define by how many "% r.h." the measured value has to exceed the lower limit of the allowed range so that the communication object "threshold monitoring A, below limit" is set to "Off" once again. **Availability:** This parameter is only visible if the parameter "threshold monitoring A" is set to "humidity (% r.h.) DPT 9.007" and "below limit" is set to "enable."	
Threshold below limit (ppm)	**0.00...670760.00**
This parameter is used to set the threshold for a shortfall of the limit. This threshold can be changed via a communication object at a later time. **Availability:** This parameter is only visible if the parameter "threshold monitoring A" is set to "CO2 concentration (ppm) DPT 9.008" and "below limit" is set to "enable."	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Hysteresis below limit (ppm)	**0.00...670760.00**
This parameter is used to define by how many "ppm" the measured value has to exceed the lower limit of the allowed range so that the communication object "threshold monitoring A, below limit" is set to "Off" once again. **Availability:** This parameter is only visible if the parameter "threshold monitoring A" is set to "CO2 concentration (ppm) DPT 9.008" and "below limit" is set to "enable."	
Monitoring time below limit **(hh:mm:ss.f)**	**00:00:00.0...01:49:13.5**
This parameter is used to set a monitoring time for which the below limit condition must be met in order for it to be deemed a shortfall. This time also applies to resetting the shortfall. **Availability:** This parameter is only visible if the "below limit" parameter is set to "enable."	
Lock output	**Disable** **Enable**
This parameter can be used to enable a lock object with which the output of threshold monitoring, that is, the sending of the notification of the excess and shortfall can be blocked. When the lock is removed, the current states of excess and shortfall are sent, if configured.	
Start value / behavior of lock input on bus voltage recovery	**Off** **On** **Deactivated** **Last value** **Query via bus**
This parameter is used to set the response of the lock object on bus voltage recovery. For the setting "query via bus," the lock object is queried via "ValueRead" on bus voltage recovery; if there is no response, the lock object is set to the last value before bus voltage failure. **Availability:** This parameter is only visible if the "lock output" parameter is set to "enable."	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Invert lock input	**No** **Yes**
This parameter is used to set whether threshold monitoring is locked by receiving a “logical 0” on the lock object. **Availability:** This parameter is only visible if the “lock output” parameter is set to “enable.”	
Monitoring time **(hh:mm:ss)**	**00:00:00...18:12:15**
This parameter defines whether the cyclical receipt of telegrams on the communication object for locking the output should be monitored and how long the monitoring time should be. With a parameter value of 00:00:00, no monitoring takes place. For all other parameter values, the cyclical input of deactivation telegrams is monitored. If the monitoring time is exceeded, the output is locked automatically.	
Lock Duration **(hh:mm:ss)**	**00:00:00...18:12:15**
This parameter defines the desired ON time when the output is locked. The lock duration is then re-started with each incoming activation telegram. If the parameter value is set to 00:00:00, the lock duration is unlimited. **Note:** If the monitoring time is simultaneously set as not equal to 00:00:00, the following behavior will be observed: • **Monitoring time < lock duration:** The lock duration is triggered using a cyclically incoming activation telegram. The configured lock duration is not effective. • **Monitoring time > lock duration:** The lock of the output is deactivated at the end of the lock duration. With the next incoming activation telegram for monitoring, it is re-activated and the lock duration starts over.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Status lock	**Disable** **Enable**
This parameter is used to define whether the communication object "threshold monitoring A, lock output active" is to be available. This object is used to communicate the status of the lock. **Other parameters:** If the parameter "controller status" is set to "enable," parameters are displayed that enable you to set when a status is sent. ➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"*	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.5.3 Communication objects

Obj	Object name	Function	Datapoint type	Object type
181	**Threshold monitoring A, threshold above limit, temperature** **Threshold monitoring A, threshold above limit, brightness** **Threshold monitoring A, threshold above limit, humidity** **Threshold monitoring A, threshold above limit, CO2**	**°C value** **Value in LUX** **% r.h. value** **ppm value**	9.001 temperature 9.004 Lux (lux) 9.007 humidity (%) 9.008 parts/million (ppm)	Input
This object can be used to set the threshold for limit exceedance. The value is saved permanently.				
182	**Threshold monitoring A, threshold below limit, temperature** **Threshold monitoring A, threshold below limit, brightness** **Threshold monitoring A, threshold below limit, humidity** **Threshold monitoring A, threshold below limit, CO2**	**°C value** **Value in LUX** **% r.h. value** **ppm value**	9.001 temperature 9.004 Lux (lux) 9.007 humidity (%) 9.008 parts/million (ppm)	Input
This object can be used to set the threshold for a shortfall of the limit. The value is saved permanently.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
183	**Threshold monitoring A, above limit**	On / Off	1.002 Boolean	Output
This object is used to report the hitting or exceeding of the respective threshold value or to request via the bus whether the threshold value has been exceeded.				
184	**Threshold monitoring A, below limit**	On / Off	1.002 Boolean	Output
This object is used to report the hitting or shortfall of the respective threshold value or to request via the bus whether there has been a shortfall of the limit.				
185	**Threshold monitoring A, lock output**	On / Off	1.003 enable	Input
This object can be used to lock and then unlock threshold monitoring. The parameter “invert locking object” can be used to set whether threshold monitoring is locked when a “0” or a “1” is received. The starting value after bus voltage recovery can be configured.				
186	**Threshold monitoring A, lock output active**	On / Off	1.002 Boolean	Output
This object is used to report whether or not threshold monitoring output is active; alternatively, this can be queried via the bus at any time.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.6 Temperature control

Room temperature control (controller)

Room temperature control can be set separately for heating and cooling and can be either 2-point or PI.

2-point control

2-point control checks the current actual temperature value in discrete intervals (cycle time). Depending on whether the actual value is above or below the setpoint, heating/cooling is activated or deactivated.
The controller cycle period and the hysteresis of the 2-point controller can be adjusted.
2-point control can be configured easily and can be used for controllers where slight fluctuations in room temperature are permissible.

PI control

PI control calculates a control value from the input values actual value and setpoint. This control value can be transferred as a steady control value in the range of 0...100 % (fig. 25) or as a pulse width modulated On/Off command (fig. 26) via the KNX bus.

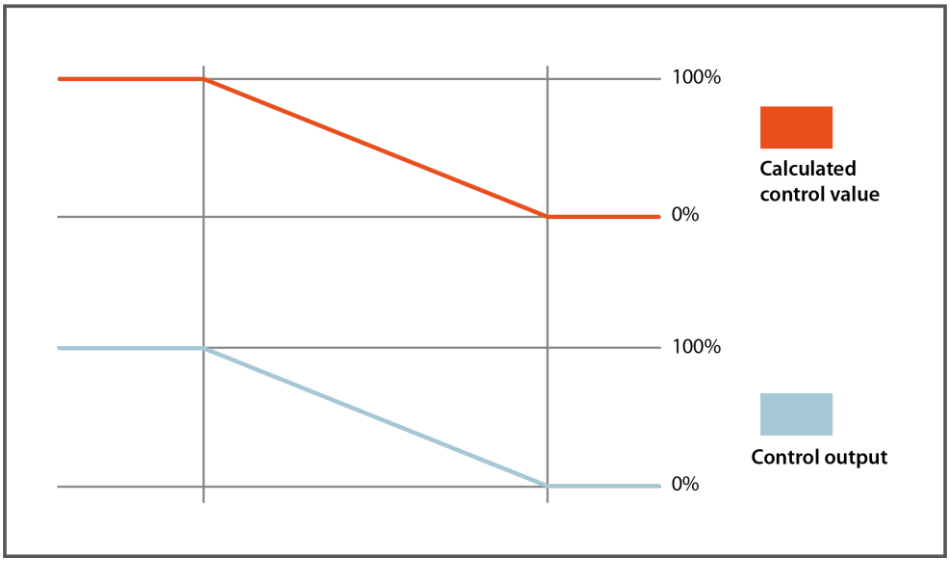


Fig. 25 PI control with steady control value

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

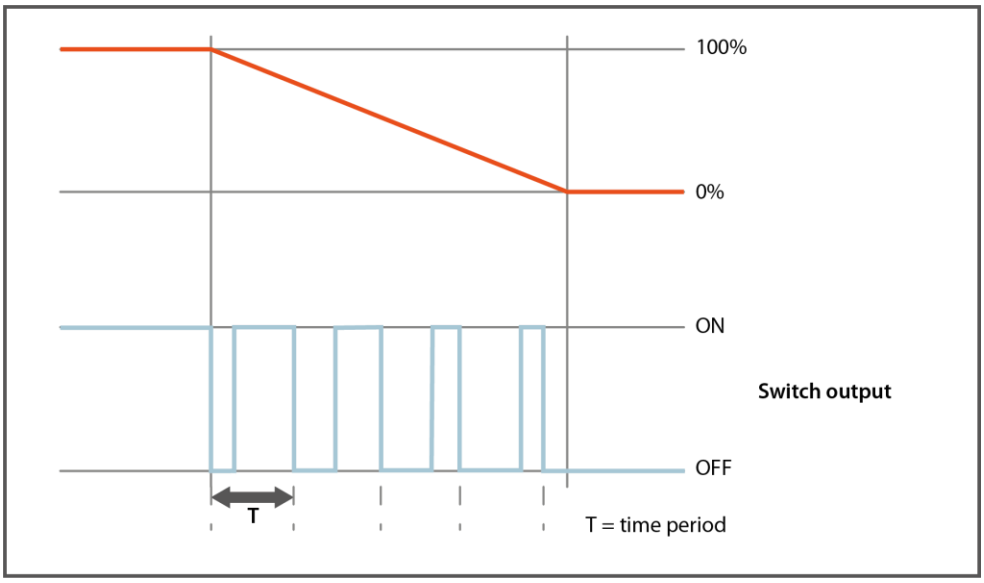


Fig. 26 PI control with On/Off command

The type of control value output, proportional area and delay time can be adjusted.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Sequence control

If a room can be heated or cooled in two different ways (e.g. via heating under the floor or radiators), sequential control makes sense. The two sources of heating/cooling are then controlled one after the other (in a sequence) rather than in parallel.
Example of heating with underfloor heating and radiator heating in one room:
- If the room temperature is below the setpoint, the valve on the underfloor heating is opened first (sequence 1).
- If the underfloor heating valve is open 100 % and it is still not warm enough, the valve on the radiator is opened (sequence 2).
- If it is too warm in the room, the radiator valve is closed first, and then the underfloor heating valve.

Sequence control converts the internal control value calculated by the PI controller into two values (control value sequence 1, control value sequence 2).
The value of the controller control value at which sequence 2 starts is adjustable. In addition, it can be set separately for each sequence from which change in control value the control value is supposed to be sent to the bus and at which intervals the control value is repeated cyclically.
The control values are output as a steady control value in the range of 0...100 % (1-byte) (fig. 27).

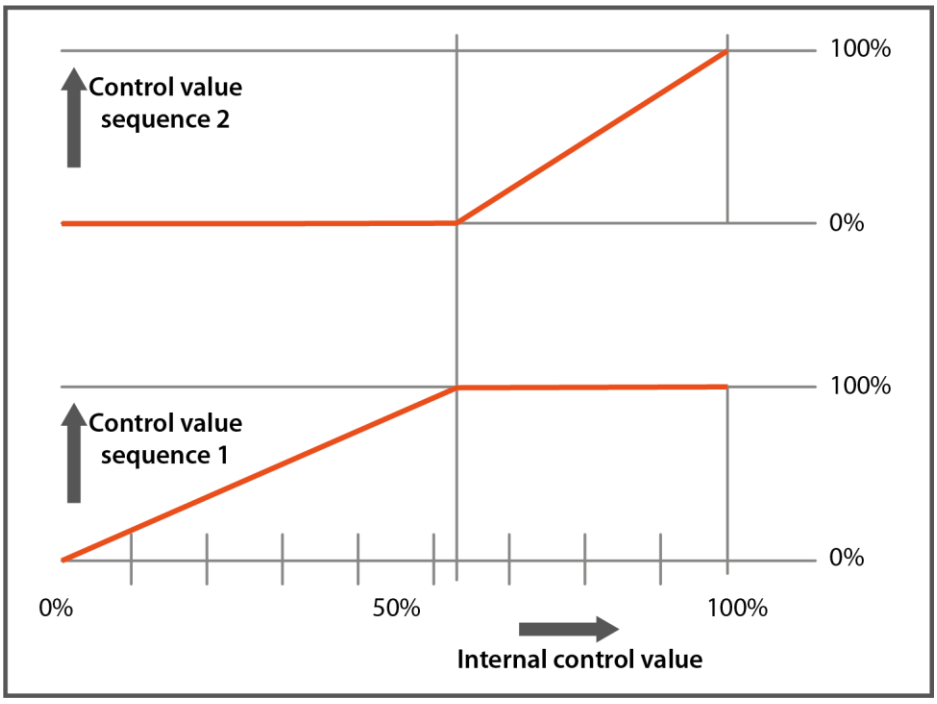


Fig. 27 Sequence control

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Actual value calculation

The device contains an inbuilt temperature sensor for recording the room temperature.

➲ *4.3 Temperature sensor*

If you want to give the temperature sensor a value in the format of an external measuring device, you have to use the calculation function.

Setting a setpoint

The current setpoint is determined from the current room mode and the corresponding absolute setpoint (method) or plus the base setpoint and a possible setpoint shift that has to be taken into account as well (method B). The base setpoint refers to comfort mode.
The base setpoint can either be set to a fixed value using the communication object “base setpoint (in °C)” or via the parameter “base setpoint, external temperature and external interior temperature when restarting.” If a base setpoint is received, the (entire) setpoint and setpoint shift are sent. When a new base setpoint is received, the setpoint shift remains unchanged.

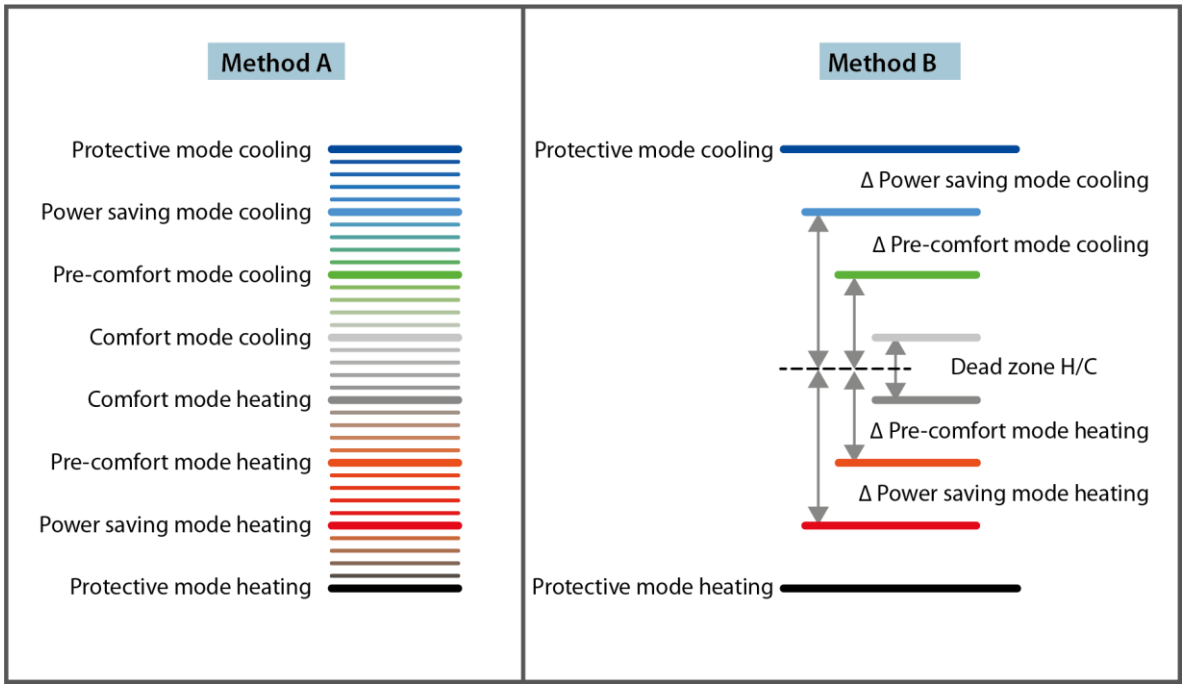


Fig. 28 Methods for setting a setpoint

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

The setpoints can be set to a fixed value either via communication objects or via parameters.

Room operating modes

Depending on the current use of the room, there can be different room temperature control requirements. To this end, several operating modes are available, with different setpoints assigned to each one.

- Comfort mode
- Pre-comfort mode
- Power saving mode
- Protective mode

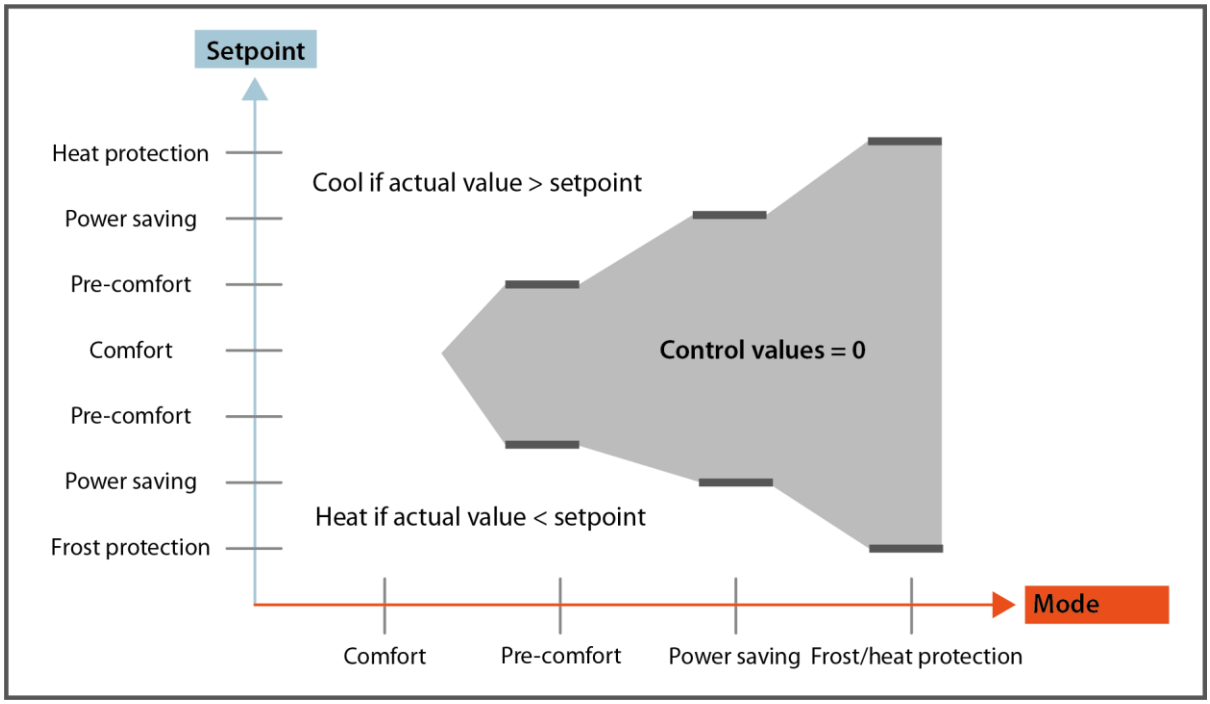


Fig. 29 Setpoint setting via base setpoint + setpoint shift

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

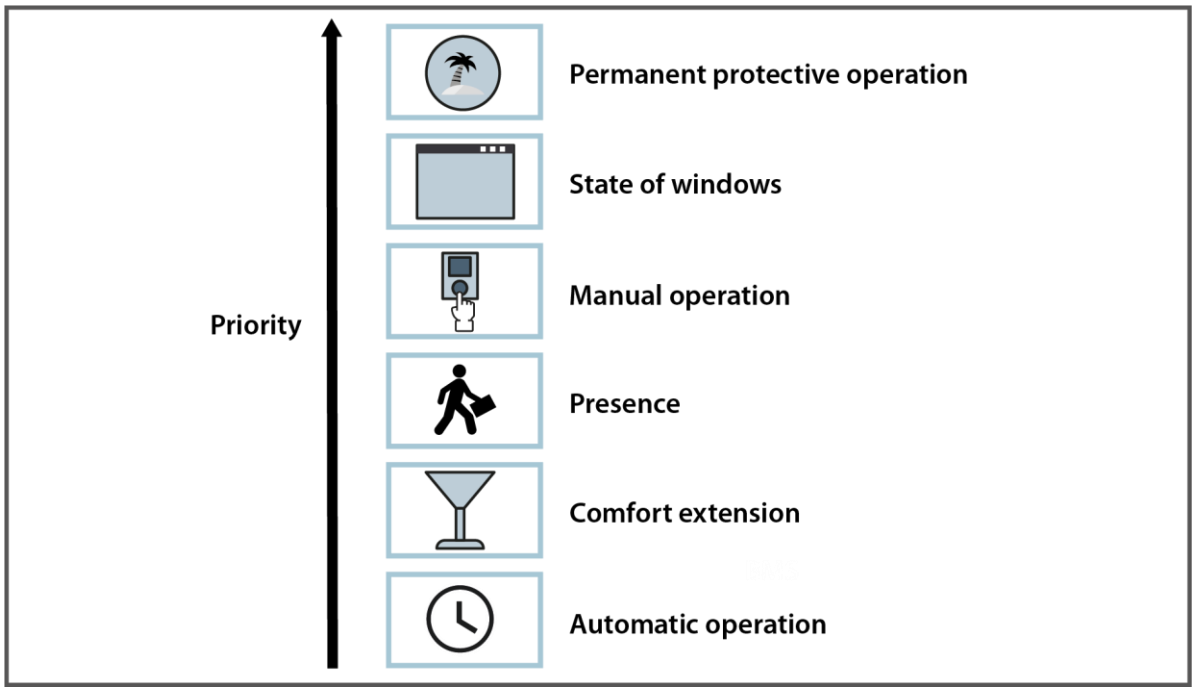


Fig. 30 Priorities of the room operating modes

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Automatic/manual mode:

The modes can be switched automatically (e.g. via a schedule) or manually (e.g. by an external operating element). In case of bus voltage failure/recovery, you can use a parameter to specify which operating mode is to be used when restarting. Whether the controller in automatic or manual mode is stored prior to the bus voltage failure and this state is restored after bus voltage recovery.

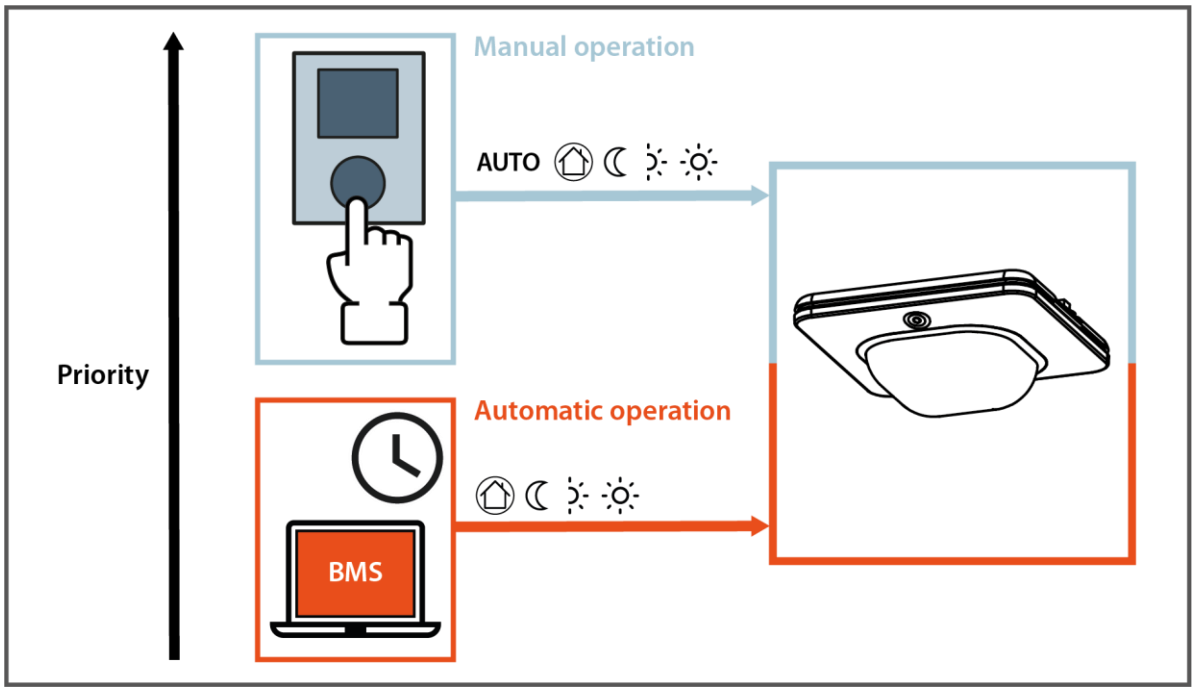


Fig. 31 Activation of the modes

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Comfort extension

If, during operation without a presence detector and with closed windows in automatic mode, pre-comfort mode, "power saving mode" or "protective mode" was activated, a communication object can be used to activate "comfort mode" for a limited period of time (the configurable "comfort extension").

A comfort extension should be regarded in the same way as a classic timer switch. That is, if the controller is not already in comfort mode, it is switched to comfort mode for a limited period of time by the comfort extension. This is also evaluated as a new (temporary) operating mode and thus sent accordingly.

Switching the mode via manual operation terminates the comfort extension.
The operating mode switch via automatic operation is stored and executed again after terminating the comfort extension.

Behavior after the current room mode

"Comfort:" The existing comfort mode is time limited.

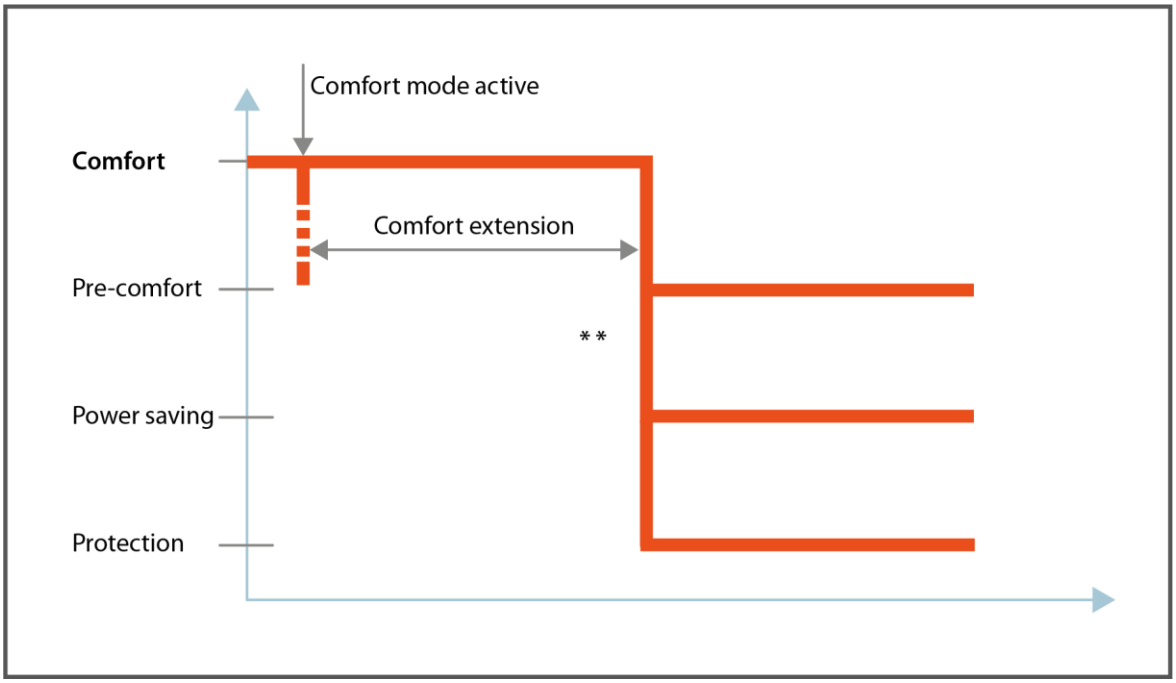


Fig. 32 Behavior in comfort mode

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

"Pre-comfort," "power saving" or "protective mode:" Comfort mode is started for a limited time

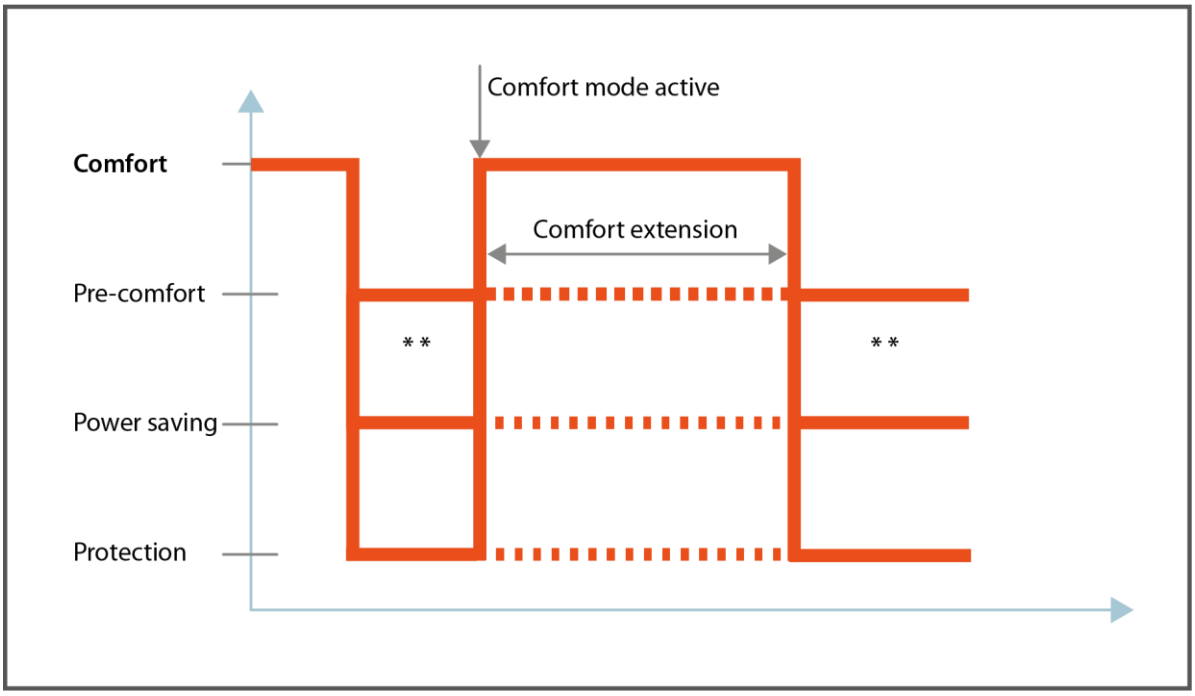


Fig. 33 Behavior when comfort mode is not set up

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Permanent protective operation

If you want to switch room temperature control to protective mode permanently (e.g. while you are on vacation), the special communication object “permanent protective mode” is available for this purpose. If this object is used to activate the room operating mode “protective mode,” this mode can only be deactivated again via this object.
Receipt of all telegrams or time switching commands that affect a switch between operating modes are buffered during protective mode.
If permanent protective mode in automatic mode is deactivated via a telegram and nothing else is active (e.g. presence or comfort extension), the controller switches to the room mode that is activated via the bus telegram for automatic operation at this time.
If permanent protective mode is deactivated in manual operation via a telegram, the controller switches to the room mode that is activated via the bus telegram for manual operation at this time.

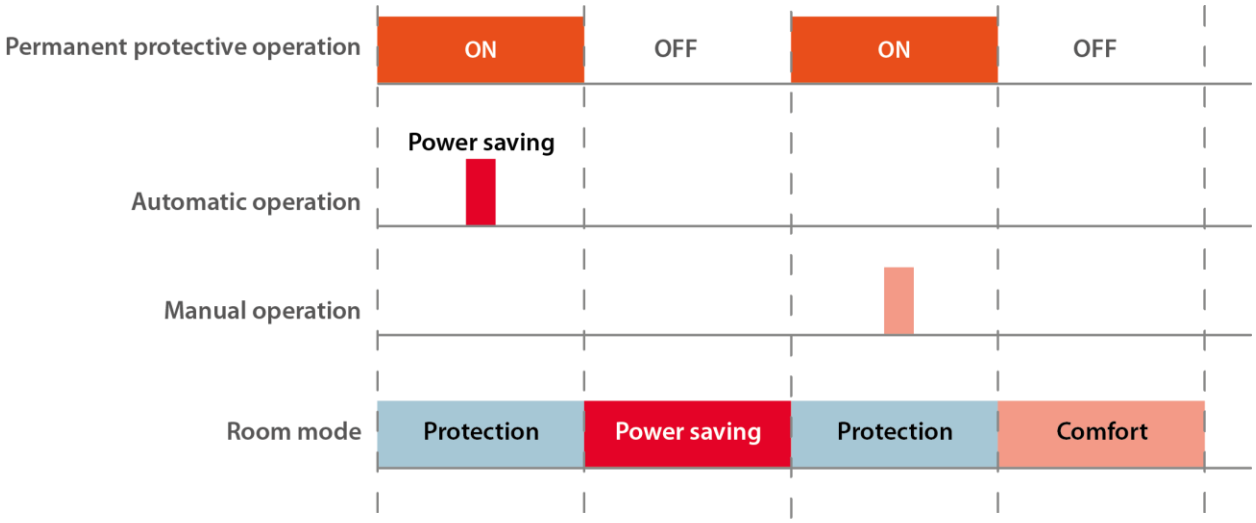


Fig. 34 Activating and deactivation permanent protective mode

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Presence

For use in rooms with a presence detector, the controller has an optional object for the “presence” state.
Messages via the communication object are evaluated for activating the room mode comfort mode.
If a presence telegram is received, comfort mode is activated.
In presence mode, if a presence = OFF telegram is received, the controller immediately switches to the room mode that is activated via bus telegram.
If a window is open during presence, this activates protective mode.
In manual mode, the telegrams of the presence detector are ignored but buffered.

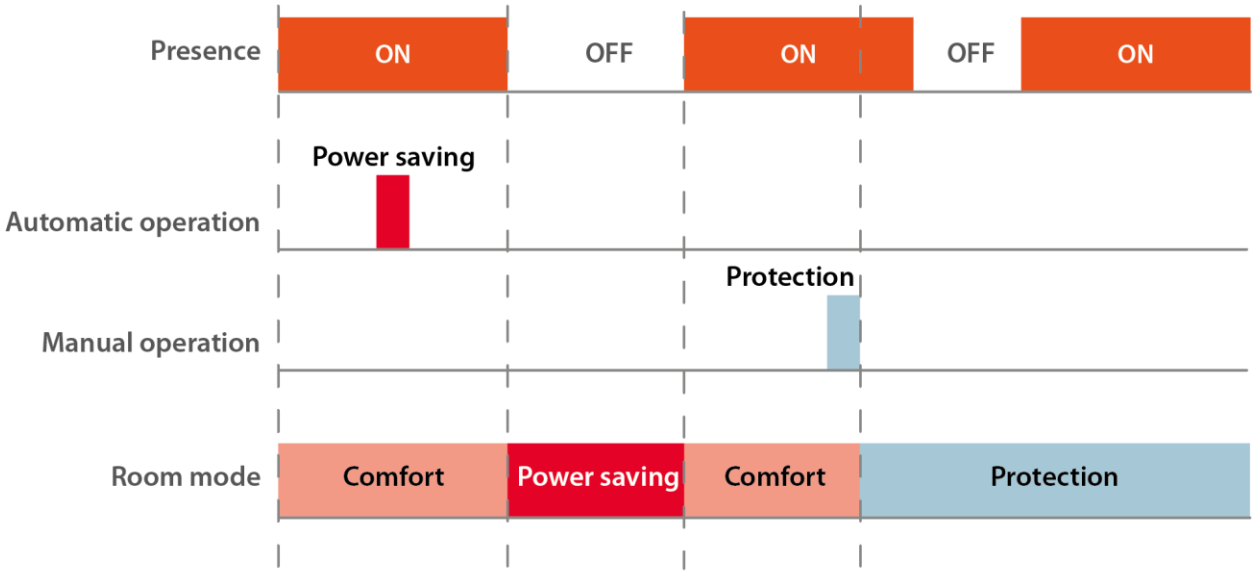
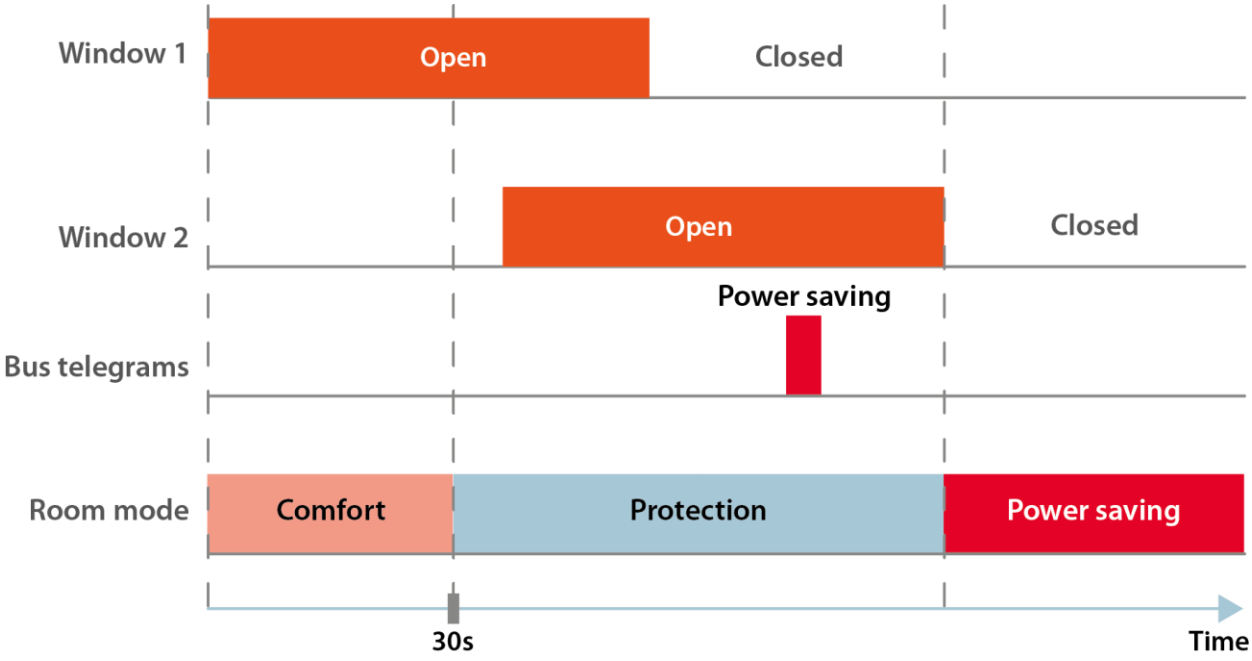


Fig. 35 Activating and deactivating the “presence” state

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

State of windows

The evaluation of window states enables the controller to respond to the opening of windows or doors.
To do this, the controller can be assigned up to four window objects that are linked to each other using a logical OR function in the controller. If one or more of the window objects are set to a logical 1 (window open), protective mode is activated.
If all windows are closed again (that is, all window objects are back on logical 0), a switch is made to the new operating mode received via the bus and buffered while the window or door was open. A parameter controls if the opening of a window is supposed to lead to protective mode immediately or only after a time delay (e.g. 15, 30 or 60 seconds) so that there is no response to briefly opening a window, if appropriate.



Parameter “delay of reaction to open windows” to “30 s”

Fig. 36 Evaluation of the window states

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Dew point mode

In cooling mode with a cooling ceiling, if the dew point monitor affixed to the ceiling engages, the controller internally switches to “due point mode.” In doing so, the cooling ceiling valve remains closed completely as long as the dew point alarm persists.
The dew point alarm signal is received by a dew point monitor via a corresponding communication object.

The presence detector can also trigger a dew point alarm itself by using the measured humidity value in combination with the “threshold monitoring” function to output as a dew point alarm.

Example: If the dew point value exceeds 80 %, a dew point alarm is to be triggered.

Another use case is the measurement with an external temperature sensor at a particularly cold spot in the room. In this case, the dew point is calculated in the presence detector via the measured values for temperature and humidity (dew point calculation). Following that, this threshold value that specifies the temperature from which condensation in the air is to be expected is compared to the current value of the external temperature sensor that is e.g. on a window or a thermal bridge in the room. This is done using the “comparator” function in the Multisensor. If the external temperature value falls below the calculated dew point, a dew point alarm is triggered.

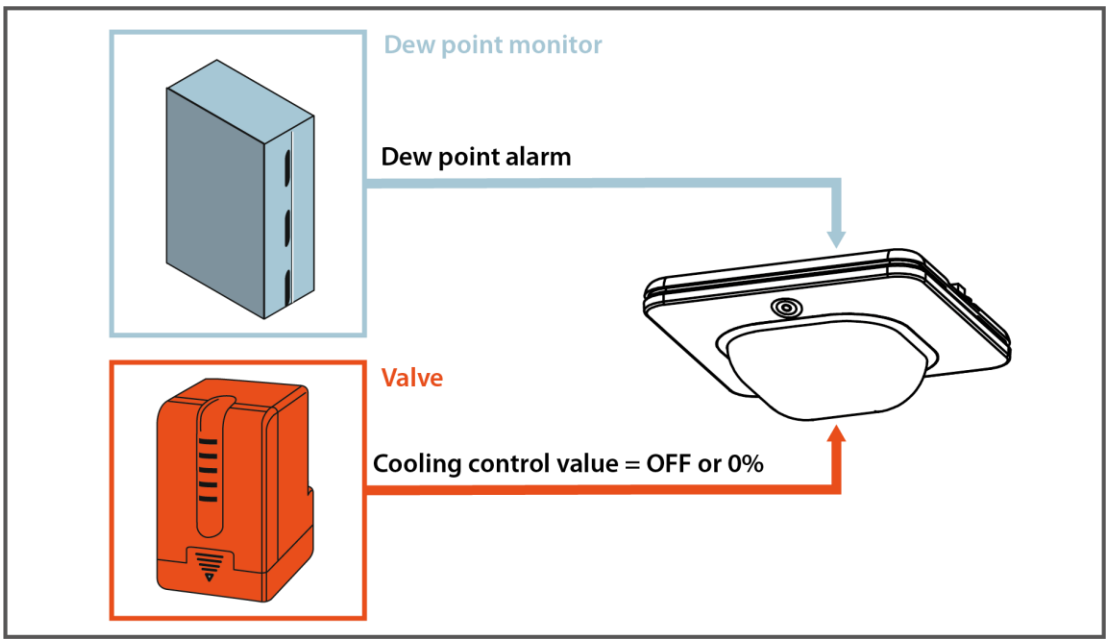


Fig. 37 Dew point mode

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Ventilator control

The controller is used for operating or controlling a fan coil unit or other similar actuator. Up to 3 ventilator levels are possible.

An 8-bit communication object is used to send the speed in % as a steady value. Figure 38 applies to the conversion of the ventilator speed to a steady value. The threshold values for levelling down can be configured. Example:
If there are three ventilator speeds, ventilator speed 2 corresponds to a speed of 67 %.

Ventilator speed	Number of configured ventilator levels		
	1	2	3
OFF	0 %	0 %	0 %
1	1 – 100 %	1 – 50 %	1 – 33 %
2	0	51 – 100 %	34 – 67 %
3	0		68 – 100 %

Fig. 38 Conversion of the ventilator speed to a steady value

In manual mode, it is possible to set a ventilator speed manually via a communication object.
If you manually switch to ventilator speed 0, the ventilator is switched off. Any open heating or cooling valve is closed.

This means the room is neither cooled nor heated in this case. If the setpoint for heat protection is subsequently exceeded or the value falls below the setpoint e.g. for frost protection, the controller responds as follows:

- The ventilator switches to automatic ventilator operating mode.
- The controller heats or cools until the frost or heat protection setpoint is reached.
- The ventilator remains in automatic operation even after these values are reached.
- The heating/cooling valve remains open until the active setpoint that was active prior to switching to ventilator speed 0 is reached.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Automatic activation of ventilator speeds

The ventilator switches to automatic operation if this has been set via the corresponding object.

When the ventilator speeds are controlled automatically with a steady controller, the ventilator levels are set depending on the heating or cooling control value. This percentage control value is output using the configured control values of the ventilator speeds 1 to 3.

Example:
According to figure 39, the control value 50 % corresponds to ventilator speed 2.

To automatically control the ventilator speeds with a 2-point controller, the ventilator speeds are set depending on the temperature difference to the current setpoint and can be set for every level.

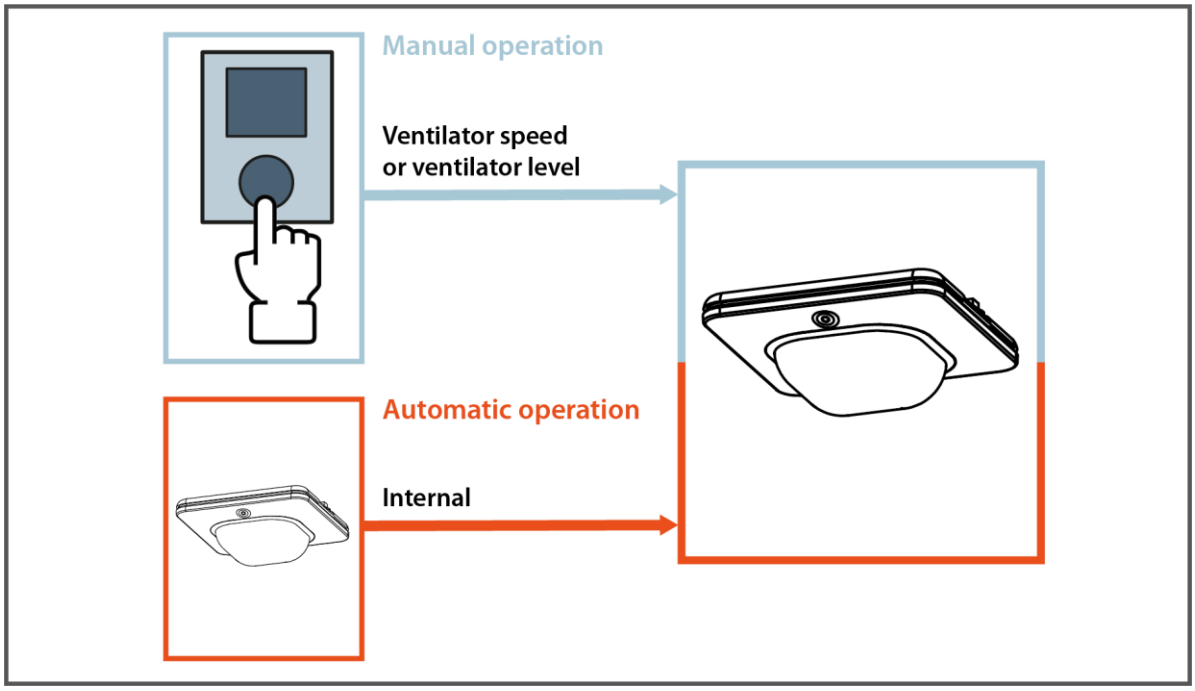


Fig. 39 Automatically activating ventilator speeds in manual and automatic operation

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.6.1 Parameter

5.6.1.1 Parameters of the “temperature control” parameter card

Parameter	Settings
Controller mode	**Heating** **Cooling** **Heating and cooling**
This parameter is used to set whether the room is heated and/or cooled.	
Switch heating/cooling	**Automatically** **Via object**
The controller calculates the operating mode “heating” or “cooling” via the “automatic” setting. The “via object” setting must be used to change to heating or cooling mode via the bus. For 2-conductor systems, this object can be used to switch the controller between heating and cooling operation via the bus. **Availability:** This parameter is only visible if the “controller mode” parameter is set to “heating and cooling.”	
Ventilator control	**Disable** **Enable**
This parameter can be used to enable or disable ventilator control. Communication objects for controlling the ventilator and for reporting ventilator status messages are supplemented. **Other parameters/parameter cards:** If the parameter “ventilator control” is set to “enable,” the parameter card “ventilator control” is displayed.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Controller status	**Disable** **Enable**
This parameter is used to specify whether the communication object "temperature control, controller status" is to be available. The controller communicates the status via this object. It can either have the value "On," i.e. the controller is switched on, or the value "Off." **Other parameters:** If the parameter "controller status" is set to "enable," parameters are displayed that enable you to set when a status is sent. ➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"*	
Status of current controller mode	**Disable** **Enable**
This parameter is used to specify whether the communication object "temperature control, status of controller mode" is to be available. The controller uses this object to communicate its current operating mode. This can either have the value "0" for cooling or the value "1" for heating. **Other parameters:** If the parameter "status of current controller mode" is set to "enable," parameters are displayed that enable you to set when a status is sent. ➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"*	
Collective status (RTSM)	**Disable** **Enable**
This parameter is used to set whether 8-bit communication object "temperature control, collective status (RTSM)" is to be supplemented. This object can be used to report different controller statuses. **Other parameters:** If the parameter "collective status (RTSM)" is set to "enable," parameters are displayed that enable you to set when a status is sent. ➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"* **More information:** ➲ *5.6.3 Communication objects (Description of communication object 275)*	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Collective status (RTC)	**Disable** **Enable**
This parameter is used to set whether 16-bit communication object "temperature control, collective status (RTC)" is to be supplemented. This object can be used to report different controller statuses. **Other parameters:** If the parameter "collective status (RTC)" is set to "enable," parameters are displayed that enable you to set when a status is sent. ➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"* **More information:** ➲ *5.6.3 Communication objects (Description of communication object 276)*	
Controller status (Eberle)	**Disable** **Enable**
This parameter is used to set whether 8-bit communication object "temperature control, controller status (Eberle)" is to be supplemented or not. This object can be used to report different controller statuses. **Other parameters:** If the parameter "controller status (Eberle)" is set to "enable," parameters are displayed that enable you to set when a status is sent. ➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"* **More information:** ➲ *5.6.3 Communication objects (Description of communication object 277)*	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Controller status (RHCC)	**Disable** **Enable**

This parameter is used to set whether 16-bit communication object "temperature control, controller status (RHCC)" is to be supplemented. This object can be used to report different controller statuses.

Other parameters:

If the parameter "controller status (RHCC)" is set to "enable," parameters are displayed that enable you to set when a status is sent.

➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"*

More information:

➲ *5.6.3 Communication objects (Description of communication object 278)*

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.6.1.2 Parameters of the "room mode setting" parameter card

Parameter	Settings
Initial value after bus voltage recovery	**As before bus voltage failure** **Comfort mode** **Pre-comfort mode** **Power saving mode** **Building protection mode**
This parameter is used to set which room mode is to be used upon starting after bus voltage recovery. If the setting "as before bus voltage failure" is selected, the room mode that is currently active at the time of bus voltage failure is saved and then restored on bus voltage recovery. The following applies to all settings: Whether the controller in automatic or manual mode is stored prior to the bus voltage failure and this state is restored after bus voltage recovery.	
Comfort extension object	**Disable** **Enable**
This parameter is used to set whether communication object "temperature control, comfort extension" is to be supplemented. This object can be used to time limit any comfort mode that is currently active or set a start time for comfort mode from a different room mode that is currently active. **Note:** The comfort extension function is only active in automatic operation.	
Time period comfort extension **(hh:mm)**	**00:00...23:59**
This parameter is used to configure the duration of the comfort extension. **Availability:** This object is only visible if the "comfort extension object" parameter is set to "enable."	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Permanent protective mode object	**Disable** **Enable**
This parameter is used to set whether the communication object “temperature control, permanent protective mode” is to be supplemented. This object can be used to permanently switch the controller to the “protective mode” room mode.	
Object presence	**Disable** **Enable**
This parameter is used to set whether the communication object “temperature control, presence” is to be supplemented. Messages (from a presence detector) via this communication object are evaluated for activating the “comfort mode” room mode. If a presence telegram is received, comfort mode is activated. In presence mode, if a presence = OFF telegram is received, the controller immediately switches to the room mode that is activated via bus telegram. In manual mode, the telegrams of the presence detector are ignored but buffered.	
Dew point alarm object	**Disable** **Enable**
This parameter is used to set whether or not the communication object “temperature control, dew point alarm” is to be supplemented. If a dew point monitor engages in cooling operation, the controller internally switches to “due point mode.” Here, the output is completely closed or deactivated as long as the dew point alarm is active. Heating is still possible though. If the dew point alarm is active, operating modes can still be switched nonetheless.	
Number of window contacts	**0...4**
This parameter is used to set the number of windows or doors equipped with a window contact that are in the room. The corresponding number of communication objects “temperature control, window [1-4]” are then added. The status of these windows is logically linked in the controller via an OR function.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Delay of reaction to open windows **(hh:mm:ss)**	**00:00:00...18:12:15**
This parameter is used to set the time for monitoring the window status. The status "window open" has the effect that the room temperature setpoint, depending on the setting, is set either immediately or after a certain delay time. For heating mode, it is set to the value for frost protection and for cooling mode, it is set to the value for heat protection. Protective mode is then activated. Setting a delay time has the effect that not every short opening of the window leads to a switch to protective mode. **Availability:** This parameter is only visible if the "number of window contacts" parameter is set to a number > 0.	
Invert window contacts	**No** **Yes**
This parameter can be used to invert the object value of the windows (applies to all window contacts together).	
Status of room mode (manual operation)	**Disable** **Enable**
This parameter is used to set whether or not the communication object "temperature control, status of room mode (manual operation)" is to be supplemented. This object can be used to output or query the current room mode in manual operation. **Other parameters:** If the parameter "status of room mode (manual operation)" is set to "enable," parameters are displayed which can be used to specify when a status is to be sent. ➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"*	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Status of current room mode	**Disable** **Enable**
This parameter is used to set whether the communication object "temperature control, status of room mode" is to be supplemented. This object can be used to output or query the current room mode. **Other parameters**: If the parameter "status of current room mode" is set to "enable," parameters are displayed that enable you to set when a status is sent. ➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"*	
Dew point alarm status	**Disable** **Enable**
This parameter is used to specify whether the communication object "temperature control, dew point alarm status" is to be available. This object can be used to output or query the dew point alarm (0 = no alarm, 1 = alarm). **Availability:** This object is only visible if the "dew point alarm object" parameter is set to "enable." **Other parameters**: If the parameter "dew point alarm status" is set to "enable," parameters are displayed which can be used to specify when a status is to be sent. ➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"*	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Window status	**Disable** **Enable**
This parameter is used to specify whether the communication object "temperature control, window status" is to be available. This object is used to communicate the status of all windows. This can either have either the value "0," meaning that all windows are closed, or as soon as a window is opened, the value "1," meaning that at least one window is open. **Availability:** This parameter is only visible if the "number of window contacts" parameter is set to a value > 0. **Other parameters**: If the parameter "window status" is set to "enable," parameters are displayed which can be used to specify when a status is to be sent. ➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"*	

5.6.1.3 Parameters of the "temperature setting" parameter card

Parameter	Settings
Source of actual temperature value	**Internal value** **Calculated value**
This parameter is used to select the source for the temperature value.	
Index of calculator	**A...L**
This parameter is used to select the source for the calculated value. **Availability:** This parameter is only visible if the "source for actual temperature value" parameter is set to "enable."	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Setpoint setting via	**Absolute setpoints** **Base setpoint + setpoint shift**
This parameter is used to set whether the setting of the temperature control setpoints is to take place using absolute setpoints (method A) or a base setpoint and setpoint shifts (method B).	

The following parameters are shown if the parameter “setpoint setting” is set to “absolute setpoints” (method A):

Parameter	Settings
Comfort mode: Heating setpoint (°C)	**-273.00...670760.00**
This parameter is used to set the setpoint for the “heating” operating mode in comfort mode.	
Pre-comfort mode: Heating setpoint (°C)	**-273.00...670760.00**
This parameter is used to set the setpoint for the “heating” operating mode in pre-comfort mode.	
Power saving mode: Heating setpoint (°C)	**-273.00...670760.00**
This parameter is used to set the setpoint for the “heating” operating mode in power saving mode.	
Protective mode: Heating setpoint (°C)	**-273.00...670760.00**
This parameter is used to set the setpoint for the “heating” operating mode in protective mode.	
Comfort mode: Cooling setpoint (°C)	**-273.00...670760.00**
This parameter is used to set the setpoint for the “cooling” operating mode in comfort mode.	
Pre-comfort mode: Cooling setpoint (°C)	**-273.00...670760.00**
This parameter is used to set the setpoint for the “cooling” operating mode in pre-comfort mode.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Power saving mode: Cooling setpoint (°C)	**-273.00...670760.00**
This parameter is used to set the setpoint for the "cooling" operating mode in power saving mode.	
Protective mode: Cooling setpoint (°C)	**-273.00...670760.00**
This parameter is used to set the setpoint for the "cooling" operating mode in protective mode.	
Heating setpoints object	**Disable** **Enable**
This parameter is used to set whether the communication object "heating setpoints (°C)" is to be supplemented or not. This object can be used to change the respective setpoints for the four room modes in heating mode via the bus at any time. The value received via the communication object immediately overwrites the parameter values set ex works and is stored permanently.	
Cooling setpoints object	**Disable** **Enable**
This parameter is used to set whether or not the communication object "temperature control, cooling setpoint (°C)" is to be supplemented. This object can be used to change the respective setpoints for the four room modes in cooling mode via the bus at any time. The value received via the communication object immediately overwrites the parameter values set ex works and is stored permanently.	
Setpoint offset object	**Disable** **Enable**
This parameter is used to set whether or not the communication object "temperature control, setpoint offset (K)" is to be supplemented. This object can be used to set a setpoint offset via the bus at any time. This offset is then applied to the setpoints of all four room modes.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

The following parameters are shown if the parameter “setpoint setting” is set to “base setpoint + setpoint shift” (method B):

Parameter	Settings
Base setpoint (°C)	**-273.00...670760.00**
This parameter is used to set the setpoint for comfort mode. The setpoints of the other room modes (pre-comfort mode and power saving mode) are then calculated by using the respective setpoint shifts via this value.	
Pre-comfort mode: Heating setpoint shift (K)	**-670760.00...0.00**
This parameter is used to set the setpoint shift for the “heating” operating mode in pre-comfort mode. It is thus set by which value the setpoint is to be lowered from the base setpoint if the operating mode is switched to “pre-comfort mode” while in heating mode.	
Pre-comfort mode: Cooling setpoint shift (K)	**0.00...670760.00**
This parameter is used to set the setpoint shift for the “cooling” operating mode in pre-comfort mode. It is thus set by which value the setpoint is to be increased from the base setpoint if the operating mode is switched to “pre-comfort mode” while in cooling mode.	
Power saving mode: Heating setpoint shift (K)	**-670760.00...0.00**
This parameter is used to set the setpoint shift for the “heating” operating mode in power saving mode. It is thus set by which value the setpoint is to be lowered from the base setpoint if the operating mode is switched to “power saving mode” while in heating mode.	
Power saving mode: Cooling setpoint shift (K)	**0.00...670760.00**
This parameter is used to set the setpoint shift for the “cooling” operating mode in power saving mode. It is thus set by which value the setpoint is to be increased from the base setpoint if the operating mode is switched to “power saving mode” while in cooling mode.	
Protective mode: Heating setpoint (°C)	**-273.00...670760.00**
This parameter is used to set the setpoint for the “heating” operating mode in protective mode.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Protective mode: Cooling setpoint (°C)	**-273.00...670760.00**
This parameter is used to set the setpoint for the "cooling" operating mode in protective mode.	
Base setpoint object	**Disable** **Enable**
This parameter is used to set whether or not the communication object "temperature control, base setpoint (°C)" is to be supplemented. This object can be used to change the base setpoint at any time.	
Setpoint offset object	**Disable** **Enable**
This parameter is used to set whether or not the communication object "temperature control, setpoint offset (K)" is to be supplemented. This object can be used to set a setpoint offset via the bus at any time. This offset is then applied to the setpoints of all four room modes.	
Dead zone between heating and cooling (+K)	**0.00...670760.00**
This parameter is used to set the dead zone between heating and cooling. The respective dead zone is above and below the respective setpoints for the base setpoint (comfort mode). The purpose of this is to prevent constant switching between heating and cooling operation when there are slight fluctuations in temperature.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

The following parameters apply for both setpoint setting methods:

Parameter	Settings
Minimum possible setpoint (°C)	**-273.00...670760.00**
This parameter is used to specify the lower limit that is possible for the setpoint set via parameter and object.	
Maximum possible setpoint (°C)	**-273.00...670760.00**
This parameter is used to specify the upper limit that is possible for the setpoint set via parameter and object.	
Update cooling setpoint dependent on outside temperature	**Disable** **Enable**
This parameter is used to set whether the target temperature in cooling mode is to be set according to the outside temperature. If you select “enable,” the object “temperature control, outside temperature” is created and the target temperature is adjusted according to the outside temperature, if this exceeds 26 °C and is 6 K above the preselected comfort target temperature. In this case, the new target temperature is always 6 K below the outside temperature.	
Status of current setpoint	**Disable** **Enable**
This parameter is used to set whether the communication object “temperature control, status of current setpoint (°C)” is to be supplemented. This object can be used to output or query the current setpoint. **Other parameters**: If the parameter “status of current setpoint” is set to “enable,” parameters are displayed that enable you to set when a status value is sent. ➲ *3.4 Parameters that are visible if the “status ...(value)” parameter is set to “enable”*	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Status of setpoint offset	**Disable** **Enable**
This parameter is used to set whether the communication object “temperature control, status of setpoint offset (K)” is to be supplemented. This object can be used to output or query the setpoint offset. **Other parameters**: If the parameter “status of setpoint offset” is set to “enable,” parameters are displayed that enable you to set when a status value is sent. ➲ *3.4 Parameters that are visible if the “status ...(value)” parameter is set to “enable”*	
Status of effective cooling setpoint	**Disable** **Enable**
This parameter is used to set whether the communication object “temperature control, status of effective cooling setpoint (°C)” is to be supplemented. This object can be used to output or query the effective cooling setpoint. **Other parameters**: If the parameter “status of effective cooling setpoint” is set to “enable,” parameters are displayed that enable you to set when a status value is sent. ➲ *3.4 Parameters that are visible if the “status ...(value)” parameter is set to “enable”*	
Status of effective heating setpoint	**Disable** **Enable**
This parameter is used to set whether the communication object “temperature control, status of effective heating setpoint (°C)” is to be supplemented. This object can be used to output or query the effective heating setpoint. **Other parameters**: If the parameter “status of effective heating setpoint” is set to “enable,” parameters are displayed that enable you to set when a status value is sent. ➲ *3.4 Parameters that are visible if the “status ...(value)” parameter is set to “enable”*	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Status of effective cooling setpoints	**Disable** **Enable**
This parameter is used to set whether the communication object "temperature control, status of effective cooling setpoints (°C)" is to be supplemented. This object can be used to output or query the current effective cooling setpoints and it contains all temperature setpoints for the four different operating modes. **Other parameters**: If the parameter "status of effective cooling setpoints" is set to "enable," parameters are displayed that enable you to set when a status value is sent. ➲ *3.4 Parameters that are visible if the "status ...(value)" parameter is set to "enable"*	
Status of effective heating setpoints	**Disable** **Enable**
This parameter is used to set whether the communication object "temperature control, status of effective heating setpoints (°C)" is to be supplemented. This object can be used to output or query the current effective heating setpoints and it contains all temperature setpoints for the four different operating modes. **Other parameters**: If the parameter "status of effective heating setpoints" is set to "enable," parameters are displayed that enable you to set when a status value is sent. ➲ *3.4 Parameters that are visible if the "status ...(value)" parameter is set to "enable"*	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.6.1.4 Parameters of the "output" parameter card

Note:

The parameters of the "heating" sub-parameter card are identical to the parameters of the "cooling" sub-parameter card and are therefore only described once.

Parameter	Settings
Control behavior	**2-point control** **PI control**
This parameter is used to set how heating or cooling is to be controlled.	

The following parameters are shown if the parameter "control behavior" is set to "PI control:"

Parameter	Settings
Proportional range (K)	**1.00...10.00**
This parameter is used to set the proportional range of the PI controller for heating/cooling operation. **Example:** A proportional range of 3 K means that the standard deviation between actual value and setpoint of 3 K results in a 100 % change in control value.	
Reset time **(hh:mm)**	**00:05...02:00**
This parameter is used to set the delay time (I portion) of the PI controller for heating/cooling operation. **Example:** A delay time of 30 minutes means that the I portion is identical to the P portion during this time. Minor deviations between the actual temperature and the target temperature increase over the course of the operating time and result in the readjustment of the valve.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Sequence control	**Disable** **Enable**
This parameter can be used to set whether sequence control (sequence 1 control value and sequence 2 control value) is to take effect.	
Value of control value at which sequence 2 starts (%)	**0...100**
This parameter is used to set from which calculated control value of the controller output for heating or cooling sequence 2 is supposed to start. **Availability:** This parameter is only visible if the “sequence control” parameter is set to “enable.”	

Note:
The parameters of the sequence 1 and 2 are identical to the parameters without sequence control and are therefore only described once.

Parameter	Settings
Type of control value output	**Switching (1-bit)** **Steady (8-bit)**
This parameter is used to set whether the control value is output using a 1-bit object (PWM) or an 8-bit object.	
Invert control value	**No** **Yes**
This parameter determines whether the control value is supposed to be output in inverted form. The setting for this parameter depends on the valve type used (if opened or closed without electricity) or the actuator.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Valve always closed if control value lower than (%)	**1...100**
This parameter is used to set the percentage of the control value up to which the control value output is always set to "OFF." To reduce the frequency of switching, this can result in an adjustment to the valve characteristics. **Availability:** This parameter is only visible if the "type of control value output" parameter is set to "switching (1-bit)."	
Valve always open if control value greater than (%)	**0...99**
This parameter is used to set the percentage of the control value up to which the control value output is always set to "ON." To reduce the frequency of switching, this can result in an adjustment to the valve characteristics. **Availability:** This parameter is only visible if the "type of control value output" parameter is set to "switching (1-bit)."	
Period duration of pulse width modulation (hh:mm)	**00:00...23:59**
This parameter is used to set the period duration for the pulse width modulation of the switching control value output. The control value corresponds to the test ratio (time ratio) between "ON (1)" and "OFF (0)" within a period. **Note:** For thermal drives, you need to make sure that the pulse width modulation selected is not shorter than the sum of the heat up and cool down time of the thermal drives. **Availability:** This parameter is only visible if the "type of control value output" parameter is set to "switching (1-bit)."	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Scaling of control value (%)	**1...100**
This parameter is used to set in which form the control value is supposed to be output. By reducing the percentage, the control value is compressed (scaled). This setting depends on the valve type or actuator used. **Availability:** This parameter is only visible if the “type of control value output” parameter is set to “steady (8-bit).”	
Maximum control value (%)	**0...100**
This parameter can be used to set an upper limit for the calculated control value for heating or cooling. Above this value, the maximum control value is retained. **Availability:** This parameter is only visible if the “type of control value output” parameter is set to “steady (8-bit).”	
Minimum control value (%)	**0...100**
This parameter can be used to set a lower limit for the calculated control value for heating or cooling. Below this value, the maximum control value is retained. If controller is switched off, control value 0 % is output. **Availability:** This parameter is only visible if the “type of control value output” parameter is set to “steady (8-bit).”	
Send control value on request	**Disable** **Enable**
This parameter can be used to set whether the control value is sent on request or whether requests for the control value will be rejected. The request is triggered via the communication object “send status values.” **Availability:** This parameter is only visible if the “type of control value output” parameter is set to “steady (8-bit).”	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Send control value on change	**Disable** **Enable**
This parameter determines if the control value is to be sent automatically for every change of value. When "enable" is selected, additional parameters are displayed that can be used to define which change of value (in %) since the last transmission has to be exceeded and how much time must have passed since the last transmission for the control value to be sent again. **Availability:** This parameter is only visible if the "type of control value output" parameter is set to "steady (8-bit)."	
Change of control value since last sent (%)	**0...100**
This parameter is used to specify at which change of value compared to the last value sent the control value is sent again. Sending takes place if the minimum block time for sending of the control value has been exceeded. **Availability:** This parameter is only visible if the "type of control value output" parameter is set to "steady (8-bit)."	
Block time for sending of control value (hh:mm:ss)	**00:00:00...18:12:15**
This parameter is used to set which time since the last sending of the control value has to be exceeded in order for it to be sent again. **Availability:** This parameter is only visible if the "type of control value output" parameter is set to "steady (8-bit)." **Note:** The block time does not apply to cyclic sending. If the block time is greater than the cycle time, the value is nonetheless sent at the end of the cycle time.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Send control value cyclically (hh:mm:ss)	**00:00:00...18:12:15**
This parameter determines if and at which intervals the determined control value is sent via the bus. If this is set to "00:00:00," cyclic sending is deactivated. **Availability:** This parameter is only visible if the "type of control value output" parameter is set to "steady (8-bit)."	

The following parameters are shown if the parameter "control behavior" is set to "2-point control:"

Parameter	Settings
Hysteresis (K)	**0.00...670760.00**
This parameter is used to set the switching hysteresis of the 2-point controller range of the PI controller for heating/cooling operation. The smaller the value of the hysteresis, the more precisely the setpoint of the room temperature is complied with; however, this also increases the controller's switching frequency. **Example:** Setpoint on 23 °C and hysteresis on 0.5 K Actual value rises to 23.4. Control value switching still on "OFF." Actual value rises to 23.5. Control value switching to "ON." Actual value drops to 23.1. Control value switching still on "ON." Actual value drops to 23.0. Control value switch to "OFF."	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Double hysteresis in power saving/protective mode	**Disable** **Enable**
This parameter can be used to set that, for energy and protective operation, fluctuations (hysteresis) of the room temperature that are twice as large are permissible to preserve further heating/cooling energy or to reduce the frequency of switching.	
Cycle time **(hh:mm)**	**00:00...23:59**
This parameter is used to set a time interval and the minimum time interval of which the outputs are switched. For example, if after switching on the output, the setpoint is already achieved after 2 minutes even though a time of 5 minutes has been configured, the output remains switched off until the 5 minutes are up. This parameter prevents increased wear on thermo valves.	
Invert control value	**No** **Yes**
This parameter determines whether the control value is supposed to be output in inverted form. The setting for this parameter depends on the valve type used (if opened or closed without electricity) or the actuator.	
Send control value on request	**Disable** **Enable**
This parameter can be used to set whether the control value is sent on request or whether requests for the control value will be rejected. The request is triggered via the communication object “send status values.”	
Send control value on change	**Disable** **Enable**
This parameter determines if the control value is to be sent automatically for every change of value. If “enabled” is selected, an additional parameter is displayed through which it can be defined how much time has to have passed since the last transmission for the control value to be sent again.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Block time for sending of control value **(hh:mm:ss)**	**00:00:00...18:12:15**
This parameter is used to set which time since the last sending of the control value has to be exceeded in order for it to be sent again. **Note:** The block time does not apply to cyclic sending. If the block time is greater than the cycle time, the value is nonetheless sent at the end of the cycle time.	
Send control value cyclically **(hh:mm:ss)**	**00:00:00...18:12:15**
This parameter determines if and at which intervals the determined control value is sent via the bus. If this is set to "00:00:00," cyclic sending is deactivated.	

5.6.2 Parameters of the "ventilator control" parameter card

Parameter	Settings
Ventilator mode	**Heating** **Cooling** **Heating and cooling**
This parameter is used to set whether a ventilator exists in heating and/or cooling mode. **Note:** This parameter depends on the "controller mode" parameter on the "temperature control" parameter card.	
Number of speeds	**1...3**
This parameter is used to set how many ventilator speeds can be set.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Ventilator speed at level [1...3] (%)	**0...100**
This parameter is used to set the desired relative speed at level 1 [2, 3] as a value between 1 and 100 %, whereby the value 100 % corresponds to the max. possible speed. This is also the conversion of the ventilator speed to a steady value.	
Difference between temperature setpoint and actual value for level [1...3] (K) (cooling/heating)	**0.00...670760.00**
This parameter is used to set the temperature difference between setpoint and actual value for every level in cooling/heating operation. To automatically control the ventilator speeds with a 2-point controller, the ventilator speeds are set depending on the temperature difference to the current setpoint. **Availability:** These parameters are only visible if the "control behavior" [heating/cooling] parameter is set to "2-point control."	
Status of ventilator mode (automatic / manual operation)	**Disable** **Enable**
This parameter is used to specify whether or not the communication object "temperature control, ventilator mode status" is to be available. The controller uses this object to communicate the ventilator's current operating mode. This can either have the value "0" for automatic operation or the value "1" for manual operation. **Other parameters:** If the parameter "controller status" is set to "enable," parameters are displayed that enable you to set when a status is sent. ➲ *3.3 Parameters that are visible if the "status ..." parameter is set to "enable"*	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Ventilator control value (manual operation)	**Disable** **Enable**
This parameter is used to set whether or not the communication object “temperature control, ventilator control value (manual operation)” is to be supplemented. This object is used to output the control value of the ventilator in manual operation. **Other parameters:** If the parameter “control value of ventilator (manual operation)” is set to “enable,” parameters are displayed which can be used to specify when a status value is to be sent. ➲ *3.4 Parameters that are visible if the “status ...(value)” parameter is set to “enable”*	
Ventilator control value (automatic operation)	**Disable** **Enable**
This parameter is used to set whether or not the communication object “temperature control, ventilator control value (automatic operation)” is to be supplemented. This object is used to output the control value of the ventilator in automatic operation. **Other parameters:** If the parameter “control value of ventilator (automatic operation)” is set to “enable,” parameters are displayed which can be used to specify when a status value is to be sent. ➲ *3.4 Parameters that are visible if the “status ...(value)” parameter is set to “enable”*	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.6.3 Communication objects

Obj	Object name	Function	Datapoint type	Object type
229	**Temperature control, controller**	On/Off	1.003 enable	Input
This object can be used to switch the temperature controller on or off. If the temperature control is set to “heating and cooling,” both controls are activated and deactivated together.				
230	**Temperature control, controller status**	On/Off	1.002 Boolean	Output
The controller communicates its internal status via this object. The status can have the value “On” or “Off.” **Availability:** This object is only visible if the “controller status” parameter on the “temperature control” parameter card is set to “enable.”				
231	**Temperature control, room mode (automatic operation)**	1...4	20.102 HVAC mode	Input
This object is used to set the room mode in automatic operation depending on the value received. If the controller is in manual mode, the operating modes of automatic operation specified via this object are buffered. The following assignments apply: 1 = comfort mode 2 = pre-comfort mode 3 = power saving mode 4 = protective mode If the controller receives a telegram with a value other than 1...4 via this 8-bit object, the telegram is discarded as faulty.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
232	**Temperature control, room mode (manual operation)**	0...4	20.102 HVAC mode	Input

This object is used to set the room mode in manual operation depending on the value received, and activate/deactivate automatic operation. The following assignments apply:

0 = automatic operation

1 = comfort mode

2 = pre-comfort mode

3 = power saving mode

4 = protective mode

An incoming "0" activates automatic operation. This also sets the operating mode that is specified or buffered for automatic operation. For all other values, automatic operation is terminated, manual operation is activated and the specified operating mode set.

If the controller receives a telegram with a value other than 0...4 via this 8-bit object, the telegram is discarded as faulty.

Obj	Object name	Function	Datapoint type	Object type
233	**Temperature control, status of room mode (manual operation)**	0...4	20.102 HVAC mode	Output

This object is used to report the set room mode that was set via the object "temperature control, room mode (manual operation)." The following assignments apply:

0 = automatic operation

1 = comfort mode

2 = pre-comfort mode

3 = power saving mode

4 = protective mode

Availability:

This communication object is only visible if the "status of room mode (manual operation)" parameter on the "room mode setting" parameter card is set to "enable."

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
234	**Temperature control, room mode status**	1...4	20.102 HVAC mode	Output
This object is used to report the current room mode, irrespective of whether or not the controller is in automatic or manual operation. The following assignments apply: 1 = comfort mode 2 = pre-comfort mode 3 = power saving mode 4 = protective mode **Availability:** This communication object is only visible if the "status of current room mode" parameter on the "room mode setting" parameter card is set to "enable."				
235	**Temperature control, comfort extension**	0 = Stop / 1 = Start	1.010 start/stop	Input
This object can be used to start (value "1") or stop (value "0") the comfort extension in automatic operation. That is, this object can be used to activate/deactivate the time-restricted activation of comfort mode or to activate/deactivate comfort mode for a limited time. Switching the mode via manual operation terminates the comfort extension. The operating mode switch via automatic operation is stored and executed again after ending the comfort extension. After bus voltage failure/recovery, the comfort extension is deactivated but this object is queried using "ValueRead" after bus voltage recovery. **Availability:** This communication object is only visible if the "comfort extension object" parameter on the "room mode setting" parameter card is set to "enable."				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
236	**Temperature control, comfort extension status**	On/Off	1.002 Boolean	Output
The controller uses this object to report whether the comfort extension is switched on or off. **Availability:** This communication object is only visible if the “status of comfort extension” parameter on the “room mode setting” parameter card is set to “enable.”				
237	**Temperature control, permanent protective mode**	On/Off	1.003 enable	Input
This object can be used to permanently switch the controller to the “protective mode” operating mode. The second operating mode remains buffered so that it can be reactivated once permanent protective mode is deactivated (value “0” via this object). Incoming telegrams for other operating mode switches are buffered and, if appropriate, activated after deactivating permanent protective mode. After bus voltage failure/recovery, permanent protective mode is deactivated but this object is queried using “ValueRead” after bus voltage recovery. **Availability:** This communication object is only visible if the “permanent protective mode object” parameter on the “room mode setting” parameter card is set to “enable.”				
238	**Temperature control, presence**	On/Off	1.018 occupancy	Input
This object is used to receive the status of a presence detector. In automatic operation, an “On” received via this object leads to a switch to the “comfort mode” room mode. When an “Off” is received, the operating mode that is activated via the bus telegram is set. In manual operation, this object is ignored but buffered. After bus voltage failure/recovery, the presence is deactivated but this object is queried using “ValueRead” after bus voltage recovery. **Availability:** This communication object is only visible if the “presence object” parameter on the “room mode setting” parameter card is set to “enable.”				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
239 **240** **241** **242**	**Temperature control, window 1** **Temperature control, window 2** **Temperature control, window 3** **Temperature control, window 4**	0 = closed/ 1 = open	1.019 window/door	Input
This object is used to receive the status of a window. The value "0" means that the window is closed. The value "1" means that the window is open. A parameter can be used to invert the object value of the window. In this case, the value "1" means that the window is closed and the value "0" means that the window is open. **Availability:** These communication objects are only visible if the "number of window contacts" parameter on the "room mode setting" parameter card is set to "1," "2," "3," or "4."				
243	**Temperature control, window status**	0 = closed/ 1 = open	1.019 window/door	Input
This object is used to report the joint status of all windows (OR function). As soon as a window is open, this object reports "1" (= open). **Availability:** This communication object is only visible if the "window status" parameter on the "room mode setting" parameter card is set to "enable."				
244	**Temperature control, dew point alert**	0 = No alarm 1 = Alarm	1.005 alarm	Input
In cooling mode, this object can be used to receive a dew point alarm sent by a dew point monitor. A dew point alarm leads to the deactivation of cooling mode. Here, the output is completely closed or deactivated as long as the dew point alarm is active. Heating is still possible though. After bus voltage failure/recovery, the dew point alarm is deactivated (and hence no alarm triggered) but this object is queried using "ValueRead" after bus voltage recovery. **Availability:** This communication object is only visible if the "dew point alarm" parameter on the "room mode setting" parameter card is set to "enable."				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
245	**Temperature control, dew point alert status**	0 = No alarm 1 = Alarm	1.005 alarm	Output
This object is used to report the dew point alarm. The value “0” means “no alarm” and the value “1” means “alarm.” **Availability:** This communication object is only visible if the “dew point alarm status” parameter on the “room mode setting” parameter card is set to “enable.”				
246	**Temperature control, outside temperature (°C)**	°C value	9.001 temperature (°C)	Input
This object can be used to receive the current outside temperature so that the target temperature for cooling mode can be adjusted accordingly. The target temperature is then set according to the received outside temperature if this is above 26 °C and more than 6 K above the pre-selected comfort target temperature. In this case, the new target temperature is always 6 K below the outside temperature. **Availability:** This communication object is only visible if the parameter “cooling setpoint dependent on outside temperature” on the “temperature setting” parameter card is set to “enable.”				
247	**Temperature control, controller mode**	0 = cooling/ 1 = heating	1.100 heating/cooling	Input
This object is used to specify the controller operating mode “heating” or “cooling” via the bus via a separate heating controller or another room temperature controller. **Availability:** This object is only visible if the “switch heating/cooling” parameter on the “temperature control” parameter card is set to “via object.”				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
248	**Temperature control, setpoint offset (K)**	K value	9.002 temperature difference (K)	Input
This object can be used to change the setpoint offset. **Availability:** This communication object is only visible if the “setpoint offset object” parameter on the “temperature setting” parameter card is set to “enable.”				
249	**Temperature control, base setpoint (°C)**	°C value	9.001 temperature (°C)	Input
This object can be used to change the base setpoint at any time. The value is saved permanently. **Availability:** This communication object is only visible if the “base setpoint object” parameter on the “temperature setting” parameter card is set to “enable.”				
250	**Temperature control, cooling setpoint (°C)**	°C value	-	Input
This 8-byte object can be used to change the setpoints of the “cooling” operating mode by means of a telegram via the bus. They are stored permanently. Datapoint type: DPT_TempRoomSetpSetF16[4](275.100) > 4 x 9.001 temperature (°C) Datapoint format: $F_{16}F_{16}F_{16}F_{16}$ Setpoint comfort mode/setpoint pre-comfort mode/setpoint power saving mode/setpoint protective mode **Availability:** This communication object is only visible if the “cooling setpoints object” parameter on the “temperature setting” parameter card is set to “enable.”				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
251	**Temperature control, heating setpoints (°C)**	°C value	-	Input
This 8-byte object can be used to change the setpoints of the "heating" operating mode by means of a telegram via the bus. They are stored permanently. Datapoint type: DPT_TempRoomSetpSetF16[4](275.100) -> 4 x 9.001 temperature (°C) Datapoint format: $F_{16}F_{16}F_{16}F_{16}$ Setpoint comfort mode/setpoint pre-comfort mode/setpoint power saving mode/setpoint protective mode **Availability:** This communication object is only visible if the "cooling setpoints object" parameter on the "temperature setting" parameter card is set to "enable."				
254	**Temperature control, setpoint offset status (K)**	K value	9.002 temperature difference (K)	Output
This object is used to report the current setpoint offset in Kelvin, which can be specified using the object "temperature control, setpoint offset (K)." **Availability:** This communication object is only visible if the "status of setpoint offset" parameter on the "room mode setting" parameter card is set to "enable."				
255	**Temperature control, status of current setpoint (°C)**	Send	9.001 temperature (°C)	Output
This object is used to report the current setpoint as a temperature value, which is either a result of the base setpoint, the setpoint offset and the setpoint shift due to the operating mode (method B) or an absolute setpoint with offset value. (Method A) **Availability:** This communication object is only visible if the "status of current setpoint" parameter on the "room mode setting" parameter card is set to "enable."				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
256	**Temperature control, status of effective cooling setpoint (°C)**	Send	9.001 temperature (°C)	Output
This object is used to report the status of the effective setpoint in cooling mode as a temperature value. **Availability:** This communication object is only visible if the “status of effective cooling setpoint” parameter on the “temperature setting” parameter card is set to “enable.”				
257	**Temperature control, status of effective heating setpoint (°C)**	Send	9.001 temperature (°C)	Output
This object is used to report the status of the effective setpoint in heating mode as a temperature value. **Availability:** This communication object is only visible if the “status of effective heating setpoint” parameter on the “temperature setting” parameter card is set to “enable.”				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
258	**Temperature control, status of effective cooling setpoints (°C)**	°C value	-	Output
This object can be used to send the current effective cooling setpoints and it contains all temperature setpoints for the four different operating modes. Datapoint type: DPT_TempRoomSetpSetF16[4](275.100) -> 4 x 9.001 temperature (°C) Datapoint format: $F_{16}F_{16}F_{16}F_{16}$ Setpoint comfort mode/setpoint pre-comfort mode/setpoint power saving mode/setpoint protective mode **Availability:** This communication object is only visible if the “status of effective cooling setpoints” parameter on the “temperature setting” parameter card is set to “enable.”				
259	**Temperature control, status of effective heating setpoints (°C)**	°C value	-	Output
This object can be used to send the current effective heating setpoints and it contains all temperature setpoints for the four different operating modes. Datapoint type: DPT_TempRoomSetpSetF16[4](275.100) -> 4 x 9.001 temperature (°C) Datapoint format: $F_{16}F_{16}F_{16}F_{16}$ Setpoint comfort mode/setpoint pre-comfort mode/setpoint power saving mode/setpoint protective mode **Availability:** This communication object is only visible if the “status of effective heating setpoints” parameter on the “temperature setting” parameter card is set to “enable.”				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
260	**Temperature control, cooling, control value switching**	On/Off	1.001 switching	Output

This communication object is used to send the control value as an On/Off switch command in cooling mode.

Availability:

This communication object is only visible if the “controller operating mode” parameter on the “temperature control” parameter card is set to “cooling” or “heating and cooling” and the “controller behavior” parameter on the “output” parameter card is set to “2-point control” or, if the “controller behavior” parameter is set to “PI control” and the “type of control value output” is set to “switching (1-bit)” on the “output” parameter card.

Obj	Object name	Function	Datapoint type	Object type
261	**Temperature control, cooling, control value switching (sequence 2)**	On/Off	1.001 switching	Output

This communication object is used to send the control value for sequence 2 in sequence control as an On/Off switch command in cooling mode.

Availability:

This communication object is only visible if the “controller operating mode” parameter on the “temperature control” parameter card is set to “cooling” or “heating and cooling” and the “controller behavior” parameter on the “output” parameter card is set to “PI control,” “sequence control” is set to “enable” and the “type of control value output” is set to “switching (1-bit)” for sequence 2 on the “output” parameter card.

Obj	Object name	Function	Datapoint type	Object type
262	**Temperature control, heating, control value switching**	On/Off	1.001 switching	Output

This communication object is used to send the control value as an On/Off switch command in heating mode.

Availability:

This communication object is only visible if the “controller operating mode” parameter on the “temperature control” parameter card is set to “heating” or “heating and cooling” and the “controller behavior” parameter on the “output” parameter card is set to “2-point control” or, if the “controller behavior” parameter is set to “PI control” and the “type of control value output” is set to “switching (1-bit)” on the “output” parameter card.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
263	**Temperature control, heating, control value switching (sequence 2)**	On/Off	1.001 switching	Output

This communication object is used to send the control value for sequence 2 in sequence control as an On/Off switch command in heating mode.

Availability:

This communication object is only visible if the “controller operating mode” parameter on the “temperature control” parameter card is set to “heating” or “heating and cooling” and the “controller behavior” parameter on the “output” parameter card is set to “PI control,” “sequence control” is set to “enable” and the “type of control value output” is set to “switching (1-bit)” for sequence 2 on the “output” parameter card.

Obj	Object name	Function	Datapoint type	Object type
264	**Temperature control, cooling, control value steady**	0...100 %	5.001 percent (0...100 %)	Output

This communication object is used to send the control value as a percentage in cooling mode.

Availability:

This communication object is only visible if the “controller operating mode” parameter on the “temperature control” parameter card is set to “cooling” or “heating and cooling” and the “controller behavior” parameter on the “output” parameter card is set to “PI control” and the “type of control value output” is set to “steady (8-bit)” on the “output” parameter card.

Obj	Object name	Function	Datapoint type	Object type
265	**Temperature control, cooling, control value steady (sequence 2)**	0...100 %	5.001 percent (0...100 %)	Output

This communication object is used to send the control value for sequence 2 in sequence control as a percentage in cooling mode.

Availability:

This communication object is only visible if the “controller operating mode” parameter on the “temperature control” parameter card is set to “cooling” or “heating and cooling” and the “controller behavior” parameter on the “output” parameter card is set to “PI control,” “sequence control” is set to “enable” and the “type of control value output” is set to “steady (8-bit)” for sequence 2 on the “output” parameter card.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
266	**Temperature control, heating, control value steady**	0...100 %	5.001 percent (0...100 %)	Output
This communication object is used to send the control value as a percentage in heating mode. **Availability:** This communication object is only visible if the “controller operating mode” parameter on the “temperature control” parameter card is set to “heating” or “heating and cooling” and the “controller behavior” parameter on the “output” parameter card is set to “PI control” and the “type of control value output” is set to “steady (8-bit)” on the “output” parameter card.				
267	**Temperature control, heating, control value steady (sequence 2)**	0...100 %	5.001 percent (0...100 %)	Output
This communication object is used to send the control value for sequence 2 in sequence control as a percentage in heating mode. **Availability:** This communication object is only visible if the “controller operating mode” parameter on the “temperature control” parameter card is set to “heating” or “heating and cooling” and the “controller behavior” parameter on the “output” parameter card is set to “PI control,” “sequence control” is set to “enable” and the “type of control value output” is set to “steady (8-bit)” for sequence 2 on the “output” parameter card.				
268	**Temperature control, ventilator mode**	0 = automatic operation / 1 = manual operation	1.003 enable	Input
This object can be used to set the ventilator mode. The value “0” means that the ventilator is in automatic operation. The value “1” means that the ventilator is in manual operation. **Availability:** This communication object is only visible if the “ventilator control” parameter on the “temperature control” parameter card is set to “enable.”				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
269	**Temperature control, ventilator speed (manual operation)**	0...100 %	5.001 percent (0...100 %)	Input

This object is used to receive the current ventilator speed in manual operation from an actuator as a status and then directly forward it to the output where it is output as a control value. Hence, this object can be used to control the ventilator manually.

Availability:

This communication object is only visible if the “ventilator control” parameter on the “temperature control” parameter card is set to “enable.”

Obj	Object name	Function	Datapoint type	Object type
270	**Temperature control, ventilator level (manual operation)**	0...3	-	Input

This object can be used to control the ventilator manually (manual operation) via the current ventilator speed. When a ventilator speed is received via this object, the control value is accordingly output with the value of the configured speed for each ventilator speed.

The following assignments apply:

0 = ventilator off

1 = switch on ventilator speed 1

2 = switch on ventilator speed 2

3 = switch on ventilator speed 3

Availability:

This communication object is only visible if the “ventilator control” parameter on the “temperature control” parameter card is set to “enable.”

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
271	**Temperature control, ventilator mode status**	0 = automatic operation / 1 = manual operation	1.003 enable	Output

The controller uses this object to report which ventilator mode is active.

The value "0" means that the ventilator is in automatic operation.

The value "1" means that the ventilator is in manual operation.

Availability:

This communication object is only visible if the "status of ventilator mode (automatic/manual operation)" parameter on the "ventilator control" parameter card is set to "enable."

Obj	Object name	Function	Datapoint type	Object type
272	**Temperature control, ventilation, control value for manual operation**	0...100 %	5.001 percent (0...100 %)	Output

This communication object is used to send the ventilator control value as a percentage for manual control (manual operation).

Availability:

This communication object is only visible if the "control value for manual operation" parameter on the "ventilator control" parameter card is set to "enable."

Obj	Object name	Function	Datapoint type	Object type
273	**Temperature control, ventilation, current control value**	0...100 %	5.001 percent (0...100 %)	Output

This communication object is used to send the ventilator control value as a percentage irrespective of automatic/manual operation.

Availability:

This communication object is only visible if the "current control value" parameter on the "ventilator control" parameter card is set to "enable."

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
274	**Temperature control, controller mode status**	0 = cooling / 1 = heating	1.100 heating/cooling	Output

The controller uses this object to report the current operating mode. The value "0" means that the "cooling" operating mode is switched on. The value "1" means that the "heating" operating mode is switched on.

Availability:

This object is only visible if the "status of current controller mode" parameter on the "temperature control" parameter card is set to "enable."

Obj	Object name	Function	Datapoint type	Object type
275	**Temperature control, collective status (RTSM)**	8-bit status	-	Output

This object is used to report various pieces of controller status information. The individual bits have the following meaning:

Bit 0: Window status; 0 = window closed, 1 = window open

Bit 1: Presence status; 0 = no presence, 1 = presence

Bit 2: Comfort mode trigger status; 0 = no trigger, 1 = trigger

Bit 3: Comfort extension status, 0 = not active, 1 = active

Bit 4: Room mode status; 0 = automatic operation, 1 = manual operation

Bit 5: reserved

Bit 6: reserved

Bit 7: reserved

Bit 8: reserved

Note:

Behavior as per description in KNX manual, DPT 21.107

Availability:

This communication object is only visible if the "collective status (RTSM)" parameter on the "temperature control" parameter card is set to "enable."

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
276	**Temperature control, collective status (RTC)**	16-bit status	-	Output

This object is used to report controller status information. The individual bits have the following meaning:

Bit 0: General failure information; 0 = no error, 1 = failure

Bit 1: Room mode controller status; 0 = cooling, 1 = heating

Bit 2: Dew point alarm status; 0 = no alarm, 1 = alarm

Bit 3: Frost alarm status; 0 = no alarm, 1 = alarm

Bit 4: Heat alarm status; 0 = no alarm, 1 = alarm

Bit 5: Control inactive; 0 = false, 1 = true

Bit 6: Sequence 2; 0 = inactive, 1 = active

Bit 7: Heating operation enabled; 0 = false, 1 = true

Bit 8: Cooling operation enabled; 0 = false, 1 = true

Bits 9–15: reserved

Availability:

This communication object is only visible if the “collective status (RTC)” parameter on the “temperature control” parameter card is set to “enable.”

Note:

Behavior as per description in KNX manual, DPT 22.103

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
277	**Temperature control, controller status (Eberle)**	8-bit status		Output

This object is used to report controller status information. The individual bits have the following meaning:

Bit 0: Comfort mode active; 0 = false, 1 = true

Bit 1: Pre-comfort mode active; 0 = false, 1 = true

Bit 2: Power saving mode; 0 = false, 1 = true

Bit 3: Protective mode active; 0 = false, 1 = true

Bit 4: Dew point alarm active; 0 = false, 1 = true

Bit 5: Room mode controller; 0 = cooling, 1 = heating

Bit 6: Controller status; 0 = active, 1 = inactive

Bit 7: Frost alarm status; 0 = no alarm, 1 = alarm

Availability:

This communication object is only visible if the “controller status (Eberle)” parameter on the “temperature control” parameter card is set to “enable.”

Obj	Object name	Function	Datapoint type	Object type
278	**Temperature control, controller Status (RHCC)**	16-bit status	-	Output

This object is used to report controller status information. The individual bits have the following meaning:

Bit 0: General failure information; 0 = no failure, 1 = failure

Bit 8: Room mode controller; 0 = cooling, 1 = heating

Bit 12: Dew point alarm status; 0 = no alarm, 1 = alarm

Bit 15: reserved

Availability:

This communication object is only visible if the “controller status (RHCC)” parameter on the “temperature control” parameter card is set to “enable.”

Note:

Behavior as per description in KNX manual, DPT 22.101

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.7 Dew point calculation

This block calculates the dew point temperature and transmits this via object.

The dew point temperature is the temperature below which the temperature must fall so that air with a specific humidity and a constant pressure can condense water vapor as dew. At the dew point the relative humidity is 100%, and the air is (just barely) saturated with water vapor. The more water vapor the air contains, the higher the dew point temperature will be.

The dew point is calculated according to the following formula:

$$\tau(\varphi,\vartheta) = K_3 \left(\frac{\left(\frac{K_2\,\vartheta}{K_3+\vartheta}\right) + \ln\varphi}{\left(\frac{K_2 K_3}{K_3+\vartheta}\right) - \ln\varphi} \right)$$

with
$K_2 = 17{,}62$
$K_3 = 243{,}12\ °C$
$\vartheta \quad = Raumtemperatur\ in\ °C$
$\varphi \quad = Luftfeuchtigkeit\ in\ \%$

If you want to give the controller a value in the format of an external humidity sensor, you have to use the calculation function.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.7.1 Parameter

Parameter	Settings
Source of temperature value	**Internal value** **Calculated value**
This parameter is used to select the source for the temperature value.	
Index of calculator	**A...L**
This parameter is used to select the source for the calculated value. **Availability**: This parameter is only visible if the “source for temperature value” parameter is set to “calculated value.”	
Source of relative humidity value	**Internal value** **Calculated value**
This parameter is used to select the source for the measured value.	
Index of calculator	**A...L**
This parameter is used to select the source for the calculated value. **Availability**: This parameter is only visible if the “source for relative humidity value” parameter is set to “calculated value.”	
Send dew point on request	**Disable** **Enable**
This parameter can be used to set whether the dew point is sent on request or whether requests for the dew point will be rejected. The request is triggered via the communication object “send status values.”	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Send dew point on change of value	**Disable** **Enable**
This parameter determines if the dew point is to be sent automatically for every change of value. When “enable” is selected, additional parameters are displayed that can be used to define which change of value (in K) since the last transmission has to be exceeded and how much time must have passed since the last transmission for the value to be sent again.	
Value change since last sent (K)	**0.00...670760.00**
This parameter is used to specify at which change of value in K, compared to the last value sent, the value of the communication object “dew point” is sent again. Sending takes place if the minimum block time for sending of the dew point has been exceeded.	
Block time for sending of dew point **(hh:mm:ss)**	**00:00:00...18:12:15**
This parameter is used to set which time since the last sending of the dew point has to be exceeded in order for it to be sent again. **Note:** The block time does not apply to cyclic sending. If the block time is greater than the cycle time, the value is nonetheless sent at the end of the cycle time.	
Send dew point cyclically **(hh:mm:ss)**	**00:00:00...18:12:15**
This parameter determines if and in which intervals the determined dew point is sent via the bus. If this is set to “00:00:00,” cyclic sending is deactivated.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.7.2 Communication objects

Obj	Object name	Function	Datapoint type	Object type
279	**Dew point**	°C value	9.001 temperature (°C)	Output
This object is used to send the dew point. The current value can be queried using a read request via the bus at any time.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.8 Humidity controller

The humidity controller allows up to 5 control signal levels.
The type of control value output can be either switching (1/bit) or steady (8-bit).

Switching (1-bit): The "control levels sequentially" setting
If the humidity in the room exceeds a switching point for r.h. the r.h. control signal belonging to this level is switched on and all other levels are switched off at the same time. The r.h. control signal is switched off again when the humidity in the room is < switching point r.h. – hysteresis. Only one level can be switched on at a time.

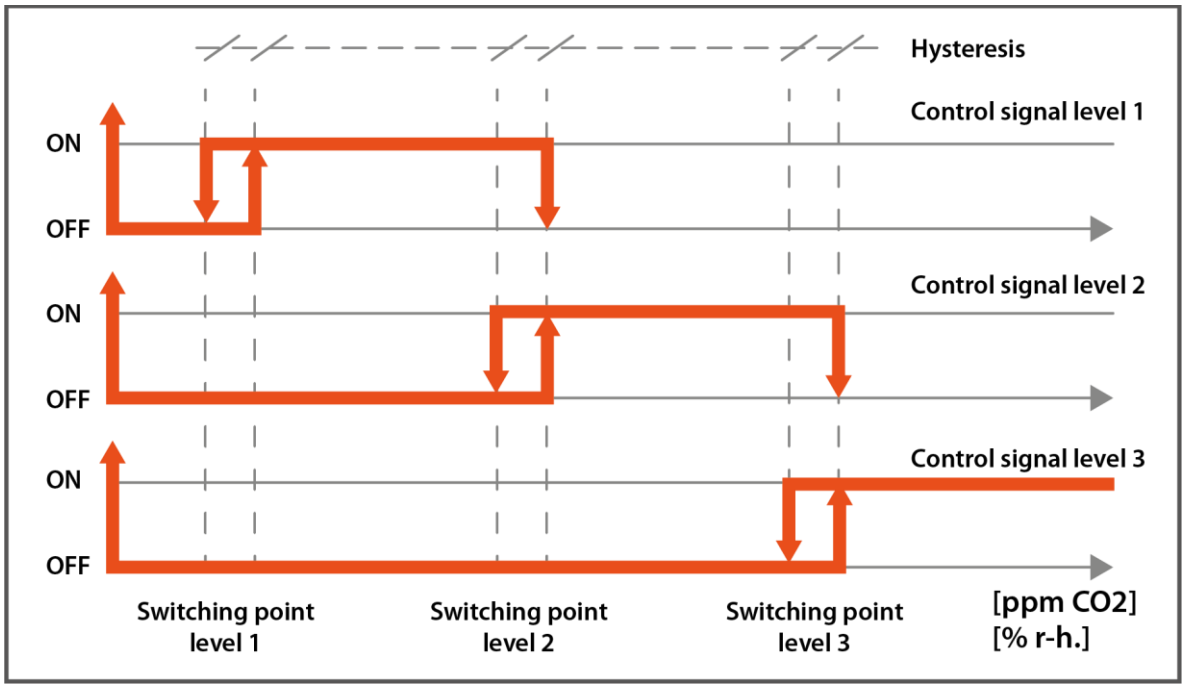


Fig. 40 Control value output switching, setting "control levels sequentially" (max. 3 levels)

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Switching (1-bit): The “control levels additively” setting
If the humidity in the room exceeds a switching point for r.h. the r.h. control signal belonging to the level is switched on. The r.h. control signal is switched off again when the humidity in the room is < switching point r.h. – hysteresis.

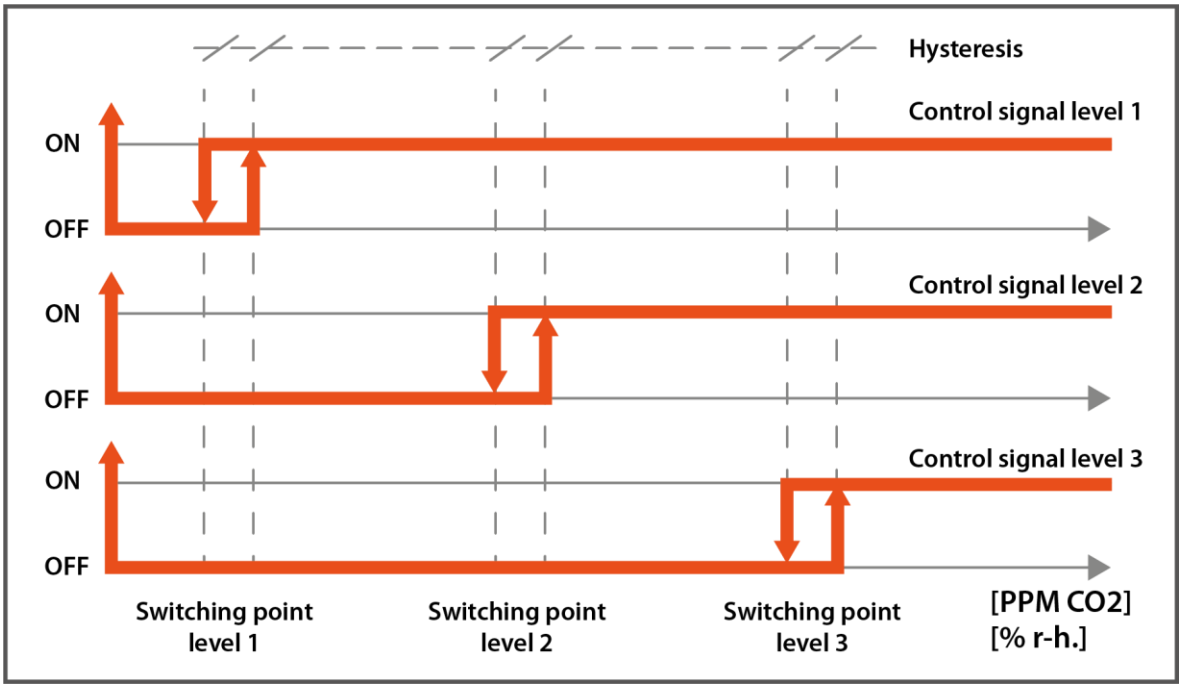


Fig. 41 Control value output switching, setting “control levels additively” (max. 3 levels)

Steady (8-bit)

If the humidity in the room exceeds a switching point for r.h. the control signal configured for the level is output. The control signal outputs the value of the next level down if the room humidity < switching point for r.h. – hysteresis.
If you want to give the controller a value in the format of an external humidity sensor, you have to use the “calculation” function.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.8.1 Parameter

Parameter	Settings
Source of relative humidity value	**Internal value** **Calculated value**
This parameter is used to select the source for the relative humidity value.	
Index of calculator	**A...L**
This parameter is used to select the source for the calculated value. **Availability:** This parameter is only visible if the “source for relative humidity value” parameter is set to “calculated value.”	
Number of levels	**1...5**
This parameter is used to set how many levels can be set. **Note:** For the “steady control value output,” up to 5 levels are possible and for “switching control value output,” up to 3 levels are possible	
Type of control value output	**Switching (1-bit)** **Steady (8-bit)**
This parameter is used to set whether the control value is output using a 1-bit object or an 8-bit object.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Type of 1-bit control	**Control levels sequentially** **Control levels additively**
This parameter is used to set how the control value is to be output using 1-bit objects. • **Control levels sequentially:** Only one level at a time is switched on with this control. That is, when a switching point is exceeded, the control signal belonging to this level is switched on and the control signal of the other levels is switched off at the same time (see Fig. 40). • **Control levels additively:** With this control, the levels are switched on in a row. That is, when a switching point is exceeded, the control signal belonging to the level is switched on. When the next switching point is exceeded, the control signal belonging to this level is switched on while the previous level remains switched on (see Fig. 41). **Availability**: This parameter is only visible if the "type of 1-bit control" parameter is set to "switching (1-bit)."	
Change switching points via object	**Disable** **Enable**
This parameter is used to specify whether the switching points for controlling are to be set to fixed values as parameters, which can only be changed by means of the ETS, or whether the corresponding parameter values set ex works can be changed via the communication objects "humidity controller, switching point level [1...5]" via the bus at any time. The value received via the communication object immediately overwrites the parameter value set ex works.	
Standard switching point level [1...5] (% r.h.)	**0.00...100.00**
These parameters are set to configure the standard switching points of the individual levels that apply until, if configured, a new value is received by the bus.	
Hysteresis (% r.h.)	**0.00...100.00**
The value defines the lower switching point and prevents frequent switching of the level in case of minor changes in value. The control signal outputs the value of the next level down if the room humidity < switching point for r.h. – hysteresis.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Reset switching points at controller OFF	**Disable** **Enable**
This parameter is used to set whether the switching points stored via an object are to be reset when the controller is switched off. If the parameter is set to “enable,” the switching points are reset to the switching points configured via ETS when the controller is switched off. **Availability:** This parameter is only visible if the “switching points via object” parameter is set to “enable.”	
Control signal level [1...5] (%)	**0...100**
These parameters are used to specify the values of the control signal for the individual levels (switching point) that are sent via the communication object “humidity controller, steady control signal” when the respective level is reached. **Availability:** This parameter is only visible if the “type of control value output” parameter is set to “steady (8-bit).”	
Active level if overridden	**0...5**
This parameter is used to specify the level that is activated when the controller is overridden. **Notes:** The controller can be overridden even when it is off. The setting options depend on the number of levels.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.8.2 Communication objects

Obj	Object name	Function	Datapoint type	Object type
280	**Humidity controller, controller**	On / Off	1.001 switching	Input / output
This object can be used to switch the controller on and off. This information can come, for example, from a bus button or an outbound object of a presence detector.				
281	**Humidity controller, steady control signal – manual setpoint**	0...100 %	5.001 percent (0...100 %)	Input / output
In manual mode, this object is used to receive a setpoint and output it directly as a steady control signal (communication object "humidity controller, steady control signal"). **Availability:** This object is only visible if the "type of control value output" parameter is set to "steady (8-bit)."				
282	**Humidity controller, steady control signal – manual mode**	0 = automatic / 1 = manual	1.003 enable	Input / output
Switching to manual mode makes it possible to receive a manual setpoint for the steady control signal. Otherwise, the configured control signals of the respective level are output. The default state is "automatic." The value "0" means that automatic mode is switched on. The value "1" means that manual mode is switched on. **Availability:** This object is only visible if the "type of control value output" parameter is set to "steady (8-bit)."				
283	**Humidity controller, override**	0 = normal / 1 = overridden	1.003 enable	Input / output
If the humidity controller is overridden, the level defined in the "active level if overridden" parameter is activated. Override has the highest priority, meaning that the controller can be overridden even if it is off.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
284 **285** **286** **287** **288**	**Humidity controller, switching point level 1** **Humidity controller, switching point level 2** **Humidity controller, switching point level 3** **Humidity controller, switching point level 4** **Humidity controller, switching point level 5**	% r.h. value	9.007 humidity (%)	Input / output
These objects can be used to change the switching points of the individual levels via the bus. **Availability:** These objects are only visible if the “change switching points via object” parameter is set to “enable.”				
289	**Humidity controller, steady control signal**	% value	5.001 percent (0...100 %)	Output
If the humidity in the room exceeds a switching point for r.h. the control signal configured for the level is output via this object. The control signal outputs the value of the next level down if the room humidity < switching point for r.h. – hysteresis.				
290 **291** **292**	**Humidity controller, control signal level 1** **Humidity controller, control signal level 2** **Humidity controller, control signal level 3**	On / Off	1.001 percent switching	Output
If the humidity in the room exceeds a switching point for r.h. the r.h. control signal belonging to the level is switched on. The control signal is switched off again when the humidity in the room < switching point r.h. – hysteresis.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.9 Air quality controller

The air quality controller allows up to 5 control signal levels.
The type of control value output can be either switching (1 bit) or steady (8 bit).

Switching (1-bit): The “control levels sequentially” setting
If the CO2 concentration exceeds a CO2 switching point, the CO2 control signal belonging to the level is switched on and all other levels are switched off at the same time. The CO2 control signal is switched off again when the CO2 level in the room < CO2 switching point – hysteresis. Only one level can be switched on at a time.

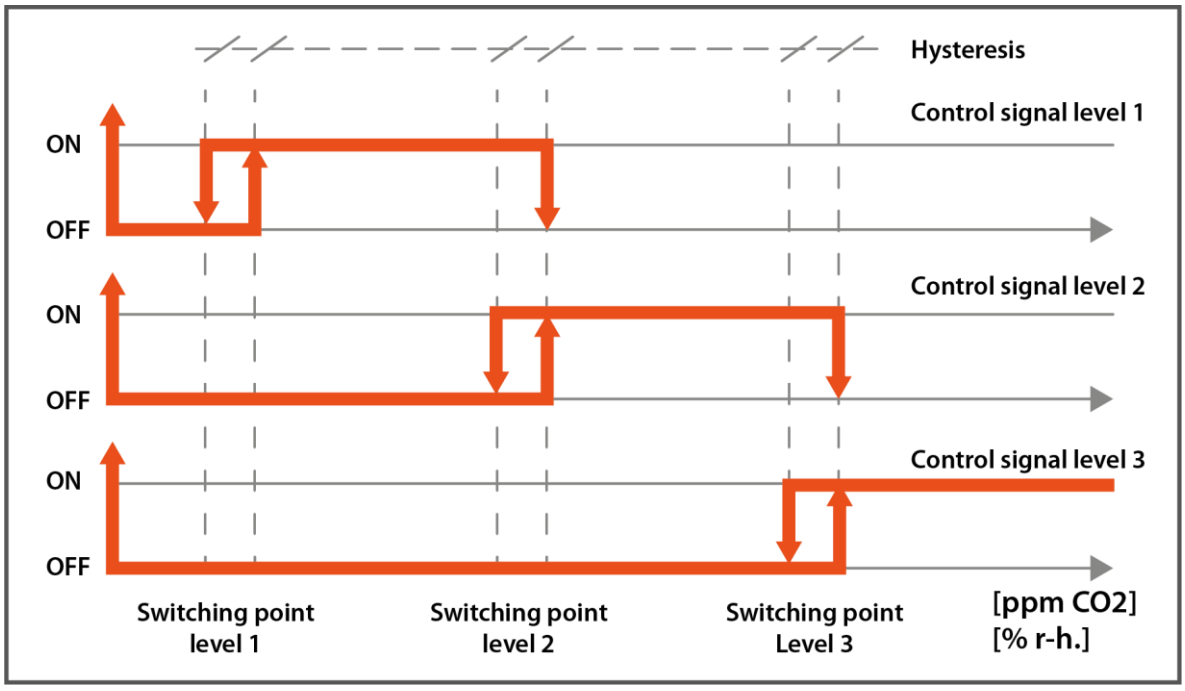


Fig. 42 Control value output switching, setting “control levels sequentially” (max. 3 levels)

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Switching (1-bit): The “control levels additively” setting
If the CO2 concentration in the room exceeds a CO2 switching point, the CO2 control signal belonging to this level is switched on. The CO2 control signal is switched off again when the CO2 level in the room < CO2 switching point – hysteresis.

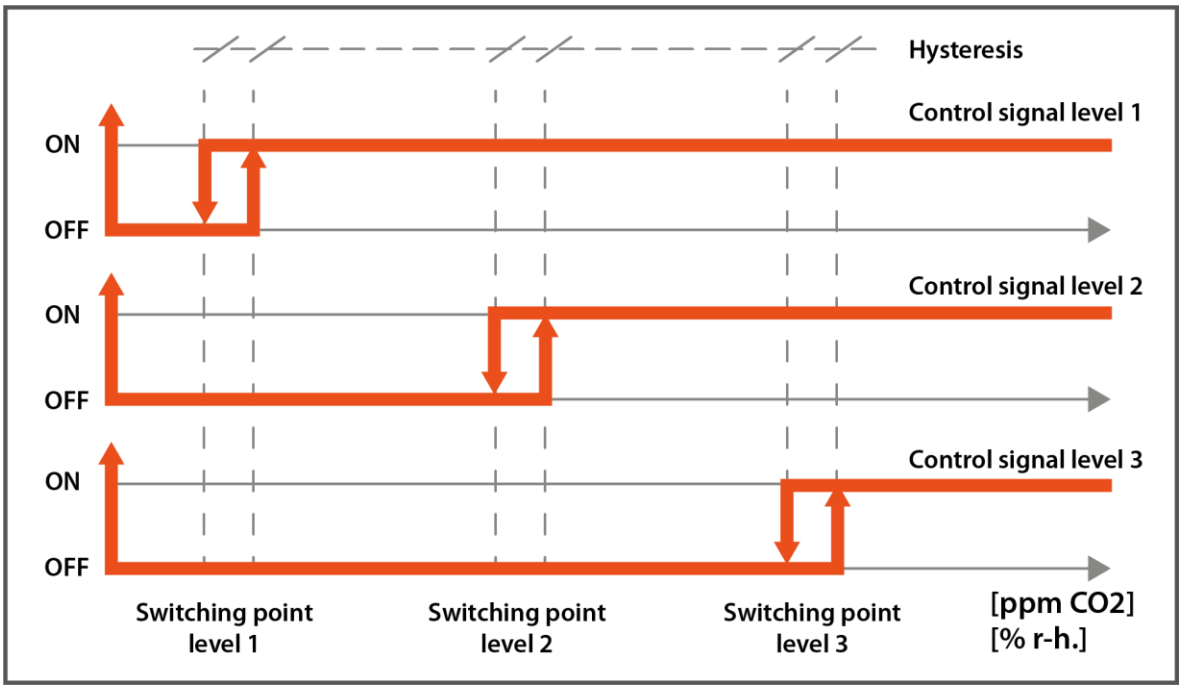


Fig. 43 Control value output switching, setting “control levels additively” (max. 3 levels)

Steady (8-bit)
If the CO2 concentration exceeds a CO2 switching point, the control signal configured for the level is output. The control signal again outputs the value of the next level down if the CO2 level < CO2 switching point – hysteresis.
If you want to give the temperature sensor a value in the format of an external CO2 measuring device, you have to use the calculation function.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.9.1 Parameter

Parameter	Settings
Source of air quality value	**Internal value** **Calculated value**
This parameter is used to select the source for the air quality value.	
Index of calculator	**A...L**
This parameter is used to select the source for the calculated value. **Availability:** This parameter is only visible if the "source for air quality value" parameter is set to "enable."	
Number of levels	**1...5**
This parameter is used to set how many levels can be set. **Note:** For the "steady control value output," up to 5 levels are possible and for "switching control value output," up to 3 levels are possible	
Type of control value output	**Switching (1-bit)** **Steady (8-bit)**
This parameter is used to set whether the control value is output using a 1-bit object or an 8-bit object.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Type of 1-bit control	**Control levels sequentially** **Control levels additively**
This parameter is used to set how the control value is to be output using 1-bit objects. • **Control levels sequentially:** Only one level at a time is switched on with this control. That is, when a switching point is exceeded, the control signal belonging to this level is switched on and the control signal of the other levels is switched off at the same time (see Fig. 42). • **Control levels additively:** With this control, the levels are switched on in a row. That is, when a switching point is exceeded, the control signal belonging to the level is switched on. When the next switching point is exceeded, the control signal belonging to this level is switched on when the previous level remains switched on (see Fig. 43). **Availability:** This parameter is only visible if the “type of 1-bit control” parameter is set to “switching (1-bit).”	
Change switching points via object	**Disable** **Enable**
This parameter is used to specify whether the switching points for controlling are to be set to fixed values as parameters, which can only be changed by means of the ETS or whether the corresponding parameter values set ex works can be changed via the communication objects “air quality controller, switching point level [1...5]” via the bus at any time. The value received via the communication object immediately overwrites the parameter value set ex works.	
Standard switching point level [1...5] (ppm)	**0.00...670760.00**
These parameters are set to configure the standard switching points of the individual levels that apply until, if configured, a new value is received by the bus.	
Hysteresis (ppm)	**0.00...670760.00**
The value defines the lower switching point and prevents frequent switching of the level in case of minor changes in value. The control signal outputs the value of the next level down if the CO2 concentration < ppm switching point – hysteresis.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Reset switching points at controller OFF	**Disable** **Enable**
This parameter is used to set whether the switching points stored via an object are to be reset when the controller is switched off. If the parameter is set to "enable," the switching points are reset to the switching points configured via ETS when the controller is switched off. **Availability:** This parameter is only visible if the "switching points via object" parameter is set to "enable."	
Control signal level [1...5] (%)	**0...100**
These parameters are used to specify the values of the control signal for the individual levels (switching points) that are sent via the communication object "air quality controller, steady control signal" when the respective level is reached. **Availability:** This parameter is only visible if the "type of control value output" parameter is set to "steady (8-bit)."	
Active level if overridden	**0...5**
This parameter is used to specify the level that is activated when the controller is overridden. **Notes:** The controller can be overridden even when it is off. The setting options depend on the number of levels.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.9.2 Communication objects

Obj	Object name	Function	Datapoint type	Object type
293	**Air quality controller, controller**	On / Off	1.001 switching	Input / output
This object can be used to switch the CO2 controller on and off. This information can come, for example, from a bus button or an outbound object of a presence detector.				
294	**Air quality controller, steady control signal – manual setpoint**	0...100 %	5.001 percent (0...100 %)	Input / output
In manual mode, this object is used to receive a setpoint and output it directly as a steady control signal (communication object "air quality controller, steady control signal"). **Availability:** This object is only visible if the "type of control value output" parameter is set to "steady (8-bit)."				
295	**Air quality controller, steady control signal – manual mode**	0 = automatic / 1 = manual	1.003 enable	Input / output
Switching to manual mode makes it possible to receive a manual setpoint for the steady control signal. Otherwise, the configured control signals of the respective level are output. The default state is "automatic." The value "0" means that automatic mode is switched on. The value "1" means that manual mode is switched on. **Availability:** This object is only visible if the "type of control value output" parameter is set to "steady (8-bit)."				
296	**Air quality controller, override**	0 = normal / 1 = overridden	1.003 enable	Input / output
If the air quality controller is overridden, the level defined in the "active level if overridden" parameter is activated. Override has the highest priority, meaning that the controller can be overridden even if it is off.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Object type
297 **298** **299** **300** **301**	**Air quality controller, switching point level 1** **Air quality controller, switching point level 2** **Air quality controller, switching point level 3** **Air quality controller, switching point level 4** **Air quality controller, switching point level 5**	ppm value	9.008 parts/million (ppm)	Input / output
These objects can be used to change the switching points of the individual levels via the bus. **Availability:** These objects are only visible if the “change switching points via object” parameter is set to “enable.”				
302	**Air quality controller, steady control signal**	% value	5.001 percent (0...100 %)	Output
If the CO2 concentration in the room exceeds a switching point for ppm, the control signal configured for the level is output via this object. The control signal outputs the value of the next level down if the concentration < ppm switching point – hysteresis.				
303 **304** **305**	**Air quality controller, control signal level 1** **Air quality controller, control signal level 2** **Air quality controller, control signal level 3**	On / Off	1.001 percent switching	Output
If the CO2 concentration in the room exceeds a ppm switching point, the control signal belonging to this level is switched on. The control signal is switched off again when the CO2 concentration < ppm switching point – hysteresis.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.10 Comparator

The value comparator can be used to compare two similar analog values (e.g. temperature) to each other. The input values can be internal and calculated values, external values (received via communication objects) as well as constant values
The result is output in binary form.

There are 4 comparators and the following operations can be used.

Fig. 44 Operations

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.10.1 Parameters of the “device settings” parameter card

Note:

The communication objects and parameters are configured in the same way for all comparators and are therefore just described once for comparator A.

Parameter	Settings
Comparator [A...D]	**Disable** **Enable**
These parameters can be used to enable up to 4 comparators, which can be used to monitor internal, external and calculated values by means of different operations. **Other parameters:** If the parameter “comparator A” is set to “enable,” parameters are displayed on the parameter card “comparator A”. These can be used to set when a status is sent. ➲ *3.3 Parameters that are visible if the “status ...” parameter is set to “enable”* ➲ *3.4 Parameters that are visible if the “status ...(value)” parameter is set to “enable”*	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.10.2 Parameters of the “comparator A” parameter card

Parameter	Settings
Operation	**W1 == W2** **W1 > W2** **W1 >= W2** **W1 < W2** **W1 <= W2** **W1 != W2**

This parameter determines the operation with which the two measured values W1 and W2 can be compared. The object result is true (logical 1), if the operation is met. The following operations can be set:

- **W1 == W2:** Check if measured value W1 is “equal to” W2. For this operation, a tolerance range can be set within which the operation is still met.
- **W1 > W2:** Check if measured value W1 is “greater than” W2.
- **W1 >= W2** Check if measured value W1 is “greater than or equal to” W2.
- **W1 < W2:** Check if measured value W1 is “smaller than” W2.
- **W1 <= W2:** Check if measured value W1 is “smaller than or equal to” W2.
- **W1 != W2** Check if measured value W1 is “unequal to” W2. For this operation, a tolerance range can be set within which the operation is still met.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Data type	**Percentage (%) DPT 5.001** **Value (8-bit) DPT 5.010** **Value (16-bit) DPT 7.001** **Temperature (°C) DPT 9.001** **Illuminance (lx) DPT 9.004** **Humidity (% r.h.) DPT 9.007** **CO2 concentration (ppm) DPT 9.008** **Value (32-bit) DPT 12.001**
This parameter determines the datapoint types of the measured values. The following datapoint types can be set: • **Percentage (%):** Corresponds to the datapoint type "5.001 percent (0...100 %)" • **Value (8-bit):** Corresponds to the datapoint type "5.010 counting impulses (0 ... 255)" • **Value (16-bit):** Corresponds to the datapoint type "7.001 pulses" • **Temperature (°C):** Corresponds to the datapoint type "9.001 temperature °C" • **Illuminance (lx):** Corresponds to the datapoint type "9.004 lux (lux)" • **Humidity (% r.h.):** Corresponds to the datapoint type "9.007 humidity (%)" • **CO2 concentration (ppm):** Corresponds to the datapoint type "9.008 parts/million (ppm)" • **Value (32-bit):** Corresponds to the datapoint type "12.001 counting impulses (without prefix)"	
Source of value W1	**Internal value** **External value** **Calculated value** **Constant value**
This parameter specifies the source of measured value W1. **Note:** The settings "internal value" and "calculated value" are only visible if "temperature (°C) DPT 9.001," "illuminance (lx) DPT 9.004," "humidity (% r.h.) DPT 9.007" or "CO2 concentration (ppm) DPT 9.008" are set for the "data type" parameter. These are the values that the presence detector can measure itself.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Index of calculator	**A...L**
This parameter is used to select the source for the calculated value. **Availability:** This parameter is only visible if the "source for value W1" parameter is set to "calculated value."	
Starting value of W1 (%)	**0...100**
This parameter is used to set the starting value for measured value W1. This is valid until a new value is received or measured. For the "constant value" source, this parameter is used to set the fixed value. The permitted values for the starting value depend on the selected data type.	
Source of value W2	**Internal value** **External value** **Calculated value** **Constant value**
This parameter specifies the source of measured value W2. **Note:** The settings "internal value" and "calculated value" are only visible if "temperature (°C) DPT 9.001," "illuminance (lx) DPT 9.004," "humidity (% r.h.) DPT 9.007" or "CO2 concentration (ppm) DPT 9.008" are set for the "data type" parameter. These are the values that the presence detector can measure.	
Index of calculator	**A...L**
This parameter is used to select the source for the calculated value. **Availability:** This parameter is only visible if the "source for value W2" parameter is set to "calculated value."	
Starting value of W2 (%)	**0...100**
This parameter is used to set the starting value for measured value W2. This is valid until a new value is received or measured. For the "constant value" source, this parameter is used to set the fixed value. The permitted values for the starting value depend on the selected data type.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Tolerance for comparison (%)	**0...100**
This parameter can be used to set a tolerance range in which the operations are still "true" or "false" for operations "W1 == W2" and "W1 != W2." The permitted values for the tolerance range depend on the selected data type. **Availability:** This parameter is only visible if the "operations" parameter is set to "W1 == W2" or "W1 != W2."	
Start value external measured value on bus voltage recovery	**Value according to parameter** **As before bus voltage failure**
This parameter is used to set the starting value of the external value when bus voltage is recovered. • **Value according to parameter:** When bus voltage is recovered, the external values W1 and W2 are prefilled with the values from the parameters "starting value of W1" and "starting value of W2." • **As before bus voltage failure:** When bus voltage is recovered, the external values W1 and W2 are prefilled with the last values received prior to bus voltage failure. **Availability:** This parameter is only visible if the "source for W1" or "source for W2" parameter is set to "calculated value."	
Block time for sending of status (hh:mm:ss)	**00:00:00...18:12:15**
This parameter is used to set which time since the last sending of the status has to be exceeded in order for it to be sent again.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

5.10.3 Communication objects

Obj	Object name	Function	Datapoint type	Object type
306	**Comparator A, external value W1**	% value 8-bit value 16-bit value °C value Value in LUX % r.h. value ppm value 32-bit value	5.001 percent (0...100 %) 5.010 counting impulses (0 ... 255) 7.001 pulse 9.001 temperature (°C) 9.004 Lux (lux) 9.007 humidity (%) 9.008 parts/million (ppm) 12.001 counting impulses (without prefix)	Input
This object is used to receive external value W1 with which the comparison is performed. **Availability:** This parameter is only visible if the “source for value W1” parameter is set to “external value.”				
307	**Comparator A, external value W2**	% value 8-bit value 16-bit value °C value Value in LUX % r.h. value ppm value 32-bit value	5.001 percent (0...100 %) 5.010 counting impulses (0 ... 255) 7.001 pulse 9.001 temperature (°C) 9.004 Lux (lux) 9.007 humidity (%) 9.008 parts/million (ppm) 12.001 counting impulses (without prefix)	Input
This object is used to receive external value W2 with which the comparison is performed. **Availability:** This parameter is only visible if the “source for value W2” parameter is set to “external value.”				
308	**Comparator A, result**	True / false	1.002 Boolean	Output
This object is used to report the result of the comparison, alternatively, this result can be queried via the bus at any time.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

6 IR remote control (IR receiver)

The IR receiver integrated into the presence detector enables you to control lighting and shading, to save and retrieve scenes and to change values, e.g. temperatures and brightness values via an IR remote control.
The implemented IR commands can be combined with other function blocks via communication objects or be used to control other devices.
The integrated IR decoder can be controlled via the Siemens IR remote control (MLFB: 5WG1 255-7AB11) or compatible IR remote controls.
The functions of the button pairs A to F are configured using the ETS.
Each button pair can be used optionally to activate/deactivate programming mode.
Each IR function to be configured can be locked or unlocked via an object as required. If the lock is set while a button is being pushed on the IR transmitter, this has the same effect as letting go of this button.

6.1 Parameter

Since the parameters for the 6 IR channels (A–F) are identical, the parameters of IR channel A are described below.

Parameter	Settings
Function IR channel A	**Disabled** **Button pair** **Single buttons**
This parameter is used to select whether the functions are assigned jointly or individually to this button pair. Alternatively, the button pair can also be disabled completely.	

The following parameters are only visible if the functioning of the IR channel has been set to “button pair.”

Parameter	Settings
Function	**Disabled** **Dimming** **Scene** **Sunblind** **Programming mode** **Send value, variable**
This parameter is used to select the function for the buttons on the remote control.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

The following parameters are only visible if the “function” parameter has been set to “dimming.” The parameter card “IR channel A, dimming” is displayed.

Parameter	Settings
Swap left and right button	**Disable** **Enable**
This parameter can be used to swap the preassigned functions of the left and right button. **Note:** In the ETS display, the two text blocks of the parameters for the left button and right button are swapped.	
Toggle function	**Disable** **Enable**
This parameter can be used to set whether the inverse object value of the switching object is to be sent every time a button is pushed briefly (toggle).	
Detect long key press after (hh:mm:ss.f)	**00:00:00.3...01:49:13.5**
This parameter is used to set the duration from which the pushing of a button is deemed to be a long key press.	
Lock IR-buttons via comm-object	**Disable** **Enable**
This parameter is used to set whether or not the button pair is supposed to be lockable via an additional lock object. If the button pair is disabled (lock object = “logical 1”), status changes are no longer evaluated.	
Invert locking object	**No** **Yes**
This parameter is used to set whether the button pair is locked by receiving a “logical 0” on the lock object. **Availability:** This parameter is only visible if the “lock IR-buttons via comm-object” parameter is set to “enable.”	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Value of locking object after bus voltage recovery	**Off** **On** **Deactivated** **Last value** **Query via bus**
This parameter is used to set the response of the lock object on bus voltage recovery. For the setting "query via bus," the lock object is queried via "ValueRead" on bus voltage recovery; if there is no response, the lock object is set to the last value before bus voltage failure. **Availability:** This parameter is only visible if the "lock IR-buttons via comm-object" parameter is set to "enable."	

The following parameters are only visible if the "function" parameter has been set to "scene." The parameter card "IR channel A, scene" is displayed.

Parameter	Settings
Swap left and right button	**Disable** **Enable**
This parameter can be used to swap the preassigned functions of the left and right button. **Note:** In the ETS display, the two text blocks of the parameters for the left button and right button are swapped.	
Scene number	**1...64**
This parameter is used to set the scene number sent when the left (or right) button is pushed. If the button is pushed briefly, the corresponding scene is retrieved.	
Learning	**Disable** **Enable**
This parameter is used to set whether or not the corresponding scene is to be stored in case of a long key press.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Detect long key press after (hh:mm:ss.f)	**00:00:00.3...01:49:13.5**
This parameter is used to set the duration from which the pushing of a button is deemed to be a long key press. **Availability:** This parameter is only visible if the “learning” parameter is set to “enable.”	
Lock IR-buttons via comm-object	**Disable** **Enable**
This parameter is used to set whether or not the button pair is supposed to be lockable via an additional lock object. If the button pair is disabled (lock object = “logical 1”), status changes are no longer evaluated.	
Invert locking object	**No** **Yes**
This parameter is used to set whether the button pair is locked by receiving a “logical 0” on the lock object. **Availability:** This parameter is only visible if the “lock IR-buttons via comm-object” parameter is set to “enable.”	
Value of locking object after bus voltage recovery	**Off** **On** **Deactivated** **Last value** **Query via bus**
This parameter is used to set the response of the lock object on bus voltage recovery. For the setting “query via bus,” the lock object is queried via “ValueRead” on bus voltage recovery; if there is no response, the lock object is set to the last value before bus voltage failure. **Availability:** This parameter is only visible if the “lock IR-buttons via comm-object” parameter is set to “enable.”	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

The following parameters are only visible if the “function” parameter has been set to “solar protection.” The parameter card “IR channel A, solar protection” is displayed.

Parameter	Settings
Swap left and right button	**Disable** **Enable**
This parameter can be used to swap the preassigned functions of the left and right button. **Note:** In the ETS display, the two text blocks of the parameters for the left button and right button are swapped.	
Detect long key press after (hh:mm:ss.f)	**00:00:00.3...01:49:13.5**
This parameter is used to set the duration from which the pushing of a button is deemed to be a long key press.	
Lock IR-buttons via comm-object	**Disable** **Enable**
This parameter is used to set whether or not the button pair is supposed to be lockable via an additional lock object. If the button pair is disabled (lock object = “logical 1”), status changes are no longer evaluated.	
Invert locking object	**No** **Yes**
This parameter is used to set whether the button pair is locked by receiving a “logical 0” on the lock object. **Availability:** This parameter is only visible if the “lock IR-buttons via comm-object” parameter is set to “enable.”	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Value of locking object after bus voltage recovery	**Off** **On** **Deactivated** **Last value** **Query via bus**
This parameter is used to set the response of the lock object on bus voltage recovery. For the setting "query via bus," the lock object is queried via "ValueRead" on bus voltage recovery; if there is no response, the lock object is set to the last value before bus voltage failure. **Availability:** This parameter is only visible if the "lock IR-buttons via comm-object" parameter is set to "enable."	

The following parameters are only visible if the "function" parameter has been set to "send value, variable." The parameter card "IR channel A, send value" is displayed.

Parameter	Settings
Swap left and right button	**Disable** **Enable**
This parameter can be used to swap the preassigned functions of the left and right button. **Note:** In the ETS display, the two text blocks of the parameters for the left button and right button are swapped.	
Data type	**Percentage (%) DPT 5.001** **Value (8-bit) DPT 5.010** **Signed value (8-bit) DPT 6.010** **2-byte floating point number DPT 9.x** **Temperature (°C) DPT 9.001** **Illuminance (lx) DPT 9.004**
This parameter is used to set the data type for the "send value, variable" function.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Lower limit	**0...100**
This parameter is used to set the lower limit below which the “send value, variable” value must not fall. The permitted values for the lower limit depend on the selected data type. **Note:** If the “lower limit” parameter is selected in such a way that it is greater than the “upper limit” parameter, the two threshold values are swapped internally.	
Upper limit	**0...100**
This parameter is used to set the upper limit that must not be exceeded for “send value, variable.” If the upper limit is reached, the upper limit is sent upon each short key press. The permitted values for the upper limit depend on the selected data type. **Note:** If the “lower limit” parameter is selected in such a way that it is greater than the “upper limit” parameter, the two threshold values are swapped internally.	
Step value (decrease)	**0...100**
This parameter is used to set the step value that reduces the current stats value by the set value when the right button is pushed. If the lower limit is reached, the lower limit is sent upon each short key press. The permitted values for the step value depend on the selected data type.	
Step value (increase)	**0...100**
This parameter is used to set the step value that increases the current stats value by the set value when the left button is pushed. If the upper limit is reached, the upper limit is sent again upon each short key press. The permitted values for the step value depend on the selected data type.	
Detect long key press after (hh:mm:ss.f)	**00:00:00.3...01:49:13.5**
This parameter is used to set the duration from which the pushing of a button is deemed to be a long key press.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Cyclic sending (hh:mm:ss.f)	**00:00:00.3...01:49:13.5**
This parameter specifies the cycle time after which a value increased or decreased by the step value is sent after a long key press.	
Lock IR-buttons via comm-object	**Disable** **Enable**
This parameter is used to set whether or not the button pair is supposed to be lockable via an additional lock object. If the button pair is disabled (lock object = "logical 1"), status changes are no longer evaluated.	
Invert locking object	**No** **Yes**
This parameter is used to set whether the button pair is locked by receiving a "logical 0" on the lock object. **Availability:** This parameter is only visible if the "lock IR-buttons via comm-object" parameter is set to "enable."	
Value of locking object after bus voltage recovery	**Off** **On** **Deactivated** **Last value** **Query via bus**
This parameter is used to set the response of the lock object on bus voltage recovery. For the setting "query via bus," the lock object is queried via "ValueRead" on bus voltage recovery; if there is no response, the lock object is set to the last value before bus voltage failure. **Availability:** This parameter is only visible if the "lock IR-buttons via comm-object" parameter is set to "enable."	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

The following parameters are only visible if the functioning of the IR channel has been set to “single buttons.”

Parameter	Settings
Function left button	**Disabled** **Switching edge** **Dimming** **Scene** **Sunblind** **Switching short/long** **Send value**
This parameter is used to select the function for the buttons on the remote control.	
Function right button	**Disabled** **Switching edge** **Dimming** **Scene** **Sunblind** **Switching short/long** **Send value**
This parameter is used to select the function for the buttons on the remote control.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Since the parameters for the left and right buttons are identical in the “single buttons” function mode, the parameters of IR channel A – left button are described below.

The following parameters are only visible if the “function left button” parameter has been set to “switching edge.” The parameter card “IR channel A, left button, switching edge” is displayed.

Parameter	Settings
Reaction on rising edge	**No action** **Off** **On** **Toggle**
This parameter is used to set which switching value is to be sent after a rising edge of the inbound signal. The rising edge corresponds to a push of the button. • **No action:** A change of edge on the input does not lead to the sending of a telegram. • **On:** In case of a rising edge, the switching value “ON” is sent. • **Off:** In case of a rising edge, the switching value “OFF” is sent. • **Toggle:** In case of a rising edge, the last value sent is inverted and the new value is sent.	
Reaction on falling edge	**No action** **Off** **On** **Toggle**
This parameter is used to set which switching value is to be sent after a falling edge of the inbound signal. The falling edge corresponds to letting go of the button. • **No action:** A change of edge on the input does not lead to the sending of a telegram. • **On:** In case of a falling edge, the switching value “ON” is sent. • **Off:** In case of a falling edge, the switching value “OFF” is sent. • **Toggle:** In case of a falling edge, the last value sent is inverted and the new value is sent.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Lock IR-button via comm-object	**Disable** **Enable**
This parameter is used to set whether or not the button is supposed to be lockable via an additional lock object. If the button is disabled (lock object = "logical 1"), status changes are no longer evaluated. Example: **Note:** The deleted lock function is affecting the falling edge. Example: 1. Push the button: the value "1" is sent. 2. Let go of the button: the value "0" is sent. 3. Activate the lock. 4. Push the button: due to the activated lock, no telegram is sent. 5. Deactivate the lock. 6. Let go of the button: no telegram is sent.	
Invert locking object	**No** **Yes**
This parameter is used to set whether the button is locked by receiving a "logical 0" on the lock object. **Availability:** This parameter is only visible if the "lock IR-button via comm-object" parameter is set to "enable."	
Value of locking object after bus voltage recovery	**Off** **On** **Deactivated** **Last value** **Query via bus**
This parameter is used to set the response of the lock object on bus voltage recovery. For the setting "query via bus," the lock object is queried via "ValueRead" on bus voltage recovery; if there is no response, the lock object is set to the last value before bus voltage failure. **Availability:** This parameter is only visible if the "lock IR-button via comm-object" parameter is set to "enable."	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

The following parameters are only visible if the "function left button" parameter has been set to "dimming." The parameter card "IR channel A, left button, dimming" is displayed.

Parameter	Settings
Function	**1 button dimming** **1/2 button dimming On/Brighter** **1/2 button dimming Off/Darker**

- **1 button dimming:**

  This function makes it possible to switch a light/lighting group on and off and dim it brighter/darker with just one button. A distinction is made between a short and a long key press here.

  Switching toggle (short key press)

  For a short key press, the current value of the switching object (switching toggle) is inverted and the ON or OFF telegram is sent when you let go of the button.

  Dimming brighter/darker (long key press)

  Depending on the object value and the last controlled dimming direction, a long key press results in dimming brighter or darker. If the dimming actuator was switched off, a long key press results in switching on and dimming brighter. If the actuator was switched on by means of a short key press beforehand, the first long key press results in it being dimmed darker. Another long key press has the effect that the activated dimming direction is inverted, followed by dimming in the new direction. In case of a long key press, the command "dimming 100 %" is sent via the dimming object and the "stop" command is sent via the same object when you let go.
- **1/2 button dimming On/Brighter:**

  The function enables 2-button dimming with any two buttons. With this function, a short key press results in an ON telegram being sent; a long key press results in the command "dimming brighter 100 %" and letting go results in the "stop" command.
- **1/2 button dimming Off/Darker:**

  The function enables 2-button dimming with any two buttons. With this function, a short key press results in an OFF telegram being sent; a long key press results in the command "dimming darker 100 %" and letting go results in the "stop" command.

Detect long key press after (hh:mm:ss.f)	**00:00:00.3...01:49:13.5**

This parameter is used to set the duration from which the pushing of a button is deemed to be a long key press.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Lock IR-button via comm-object	**Disable** **Enable**
This parameter is used to set whether or not the button is supposed to be lockable via an additional lock object. If the button is disabled (lock object = "logical 1"), status changes are no longer evaluated.	
Invert locking object	**No** **Yes**
This parameter is used to set whether the button is locked by receiving a "logical 0" on the lock object. **Availability:** This parameter is only visible if the "lock IR-button via comm-object" parameter is set to "enable."	
Value of locking object after bus voltage recovery	**Off** **On** **Deactivated** **Last value** **Query via bus**
This parameter is used to set the response of the lock object on bus voltage recovery. For the setting "query via bus," the lock object is queried via "ValueRead" on bus voltage recovery; if there is no response, the lock object is set to the last value before bus voltage failure. **Availability:** This parameter is only visible if the "lock IR-button via comm-object" parameter is set to "enable."	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

The following parameters are only visible if the “function left button” parameter has been set to “scene.” The parameter card “IR channel A, left button, scene” is displayed.

Parameter	Settings
Scene number	**1...64**
This parameter is used to set the sent scene number that is supposed to be retrieved on a short key press and stored on a long key press.	
Learning	**Disable** **Enable**
This parameter is used to set whether or not the corresponding scene is to be stored in case of a long key press.	
Detect long key press after (hh:mm:ss.f)	**00:00:00.3...01:49:13.5**
This parameter is used to set the duration from which the pushing of a button is deemed to be a long key press. **Availability:** This parameter is only visible if the “learning” parameter is set to “enable.”	
Lock IR-button via comm-object	**Disable** **Enable**
This parameter is used to set whether or not the button is supposed to be lockable via an additional lock object. If the button is disabled (lock object = “logical 1”), status changes are no longer evaluated.	
Invert locking object	**No** **Yes**
This parameter is used to set whether the button is locked by receiving a “logical 0” on the lock object. **Availability:** This parameter is only visible if the “lock IR-button via comm-object” parameter is set to “enable.”	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Value of locking object after bus voltage recovery	**Off** **On** **Deactivated** **Last value** **Query via bus**
This parameter is used to set the response of the lock object on bus voltage recovery. For the setting "query via bus," the lock object is queried via "ValueRead" on bus voltage recovery; if there is no response, the lock object is set to the last value before bus voltage failure. **Availability:** This parameter is only visible if the "lock IR-button via comm-object" parameter is set to "enable."	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

The following parameters are only visible if the “function left button” parameter has been set to “shutter.” The parameter card “IR channel A, left button, shutter” is displayed.

Parameter	Settings
Function	**1 button shutter** **1/2 button shutter Up, slat open** **1/2 button shutter Down, slat closed**

- **1 button shutter:**

  This function makes it possible to move the shutters up and down, stop the movement and open and close the slats with just one button. A distinction is made between a short and a long key press here.

  Shutter Up / Down (long key press)

  The travel direction last stored in the “shutter up/down” object is inverted on a long key press, and depending in which direction this was the shutter is moved up or down until the respective final position is reached and the drive is deactivated via the limit switch. If a stop command is received before the final position is reached and the limit switch engages, the movement is stopped immediately, the position reached is retained and the last travel direction is stored.

  Stop or slats open/close (short key press)

  In case of a short key press, a telegram is sent which, if the shutter is moving, results in the drive being stopped and, if the shutter is stationary, results in a short move in the direction opposite the previous travel direction (which is stored in the travel object). If the shutter slats are closed, for example, this would lead to the slats being opened one step. The stop or slats open or close telegram is only generated when you release the key. Every other short key press will result in another “slats open/close” telegram being sent without a change of travel direction.

- **1/2 button shutter Up, slat open:**

  This function enables you to execute 2-button shutters with any two buttons. With this function, a short key press stops the movement or the slats are opened one step; a long key press results in the shutter being moved up.

- **1/2 button shutter Down, slat closed:**

  This function enables you to execute 2-button shutters with any two buttons. With this function, a short key press stops the movement or the slats are closed one step; a long key press results in the shutter being moved down.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Detect long key press after (hh:mm:ss.f)	**00:00:00.3...01:49:13.5**
This parameter is used to set the duration from which the pushing of a button is deemed to be a long key press.	
Lock IR-button via comm-object	**Disable** **Enable**
This parameter is used to set whether or not the button is supposed to be lockable via an additional lock object. If the button is disabled (lock object = “logical 1”), status changes are no longer evaluated.	
Invert locking object	**No** **Yes**
This parameter is used to set whether the button is locked by receiving a “logical 0” on the lock object. **Availability:** This parameter is only visible if the “lock IR-button via comm-object” parameter is set to “enable.”	
Value of locking object after bus voltage recovery	**Off** **On** **Deactivated** **Last value** **Query via bus**
This parameter is used to set the response of the lock object on bus voltage recovery. For the setting “query via bus,” the lock object is queried via “ValueRead” on bus voltage recovery; if there is no response, the lock object is set to the last value before bus voltage failure. **Availability:** This parameter is only visible if the “lock IR-button via comm-object” parameter is set to “enable.”	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

The following parameters are only visible if the “function left button” parameter has been set to “switching short/long.” The parameter card “IR channel A, left button, switching short/long” is displayed.

Parameter	Settings
Reaction on short press	**No action** **Off** **On** **Toggle**

This parameter is used to set which switching value is to be sent after a short key press.

- **No action:**
  A short key press does not lead to the sending of a telegram.
- **On:**
  After a short key press, the switching value “ON” is sent.
- **Off:**
  After a short key press, the switching value “OFF” is sent.
- **Toggle:**
  After a short key press, the last switching value sent is inverted and the new value is sent.

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Reachtion on long press	**No action** **Off** **On** **Toggle**
This parameter is used to set which switching value is to be sent after a long key press. • **No action:** A long key press does not lead to the sending of a telegram. • **On:** After a long key press, the switching value “ON” is sent. • **Off:** After a long key press, the switching value “OFF” is sent. • **Toggle:** After a long key press, the last switching value sent is inverted and the new value is sent.	
Detect long key press after (hh:mm:ss.f)	**00:00:00.3...01:49:13.5**
This parameter is used to set the duration from which the pushing of a button is deemed to be a long key press.	
Lock IR-button via comm-object	**Disable** **Enable**
This parameter is used to set whether or not the button is supposed to be lockable via an additional lock object. If the button is disabled (lock object = “logical 1”), status changes are no longer evaluated.	
Invert locking object	**No** **Yes**
This parameter is used to set whether the button is locked by receiving a “logical 0” on the lock object. **Availability:** This parameter is only visible if the “lock IR-button via comm-object” parameter is set to “enable.”	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Value of locking object after bus voltage recovery	**Off** **On** **Deactivated** **Last value** **Query via bus**
This parameter is used to set the response of the lock object on bus voltage recovery. For the setting "query via bus," the lock object is queried via "ValueRead" on bus voltage recovery; if there is no response, the lock object is set to the last value before bus voltage failure. **Availability:** This parameter is only visible if the "lock IR-button via comm-object" parameter is set to "enable."	

The following parameters are only visible if the "function left button" parameter has been set to "send value." The parameter card "IR channel A, left button, value" is displayed.

Parameter	Settings
Data type	**Percentage (%) DPT 5.001** **Value (8-bit) DPT 5.010** **Value (16-bit) DPT 7.001** **2-byte floating point number DPT 9.x** **Temperature (°C) DPT 9.001** **Illuminance (lx) DPT 9.004** **Humidity (% r.h.) DPT 9.007** **CO2 concentration (ppm) DPT 9.008**
This parameter is used to set the data type for the "send value" function.	
Value	**0...100**
This parameter is used to set the value to be sent. The permitted values depend on the selected data type.	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Parameter	Settings
Lock IR-button via comm-object	**Disable** **Enable**
This parameter is used to set whether or not the button is supposed to be lockable via an additional lock object. If the button is disabled (lock object = "logical 1"), status changes are no longer evaluated.	
Invert locking object	**No** **Yes**
This parameter is used to set whether the button is locked by receiving a "logical 0" on the lock object. **Availability:** This parameter is only visible if the "lock IR-button via comm-object" parameter is set to "enable."	
Value of locking object after bus voltage recovery	**Off** **On** **Deactivated** **Last value** **Query via bus**
This parameter is used to set the response of the lock object on bus voltage recovery. For the setting "query via bus," the lock object is queried via "ValueRead" on bus voltage recovery; if there is no response, the lock object is set to the last value before bus voltage failure. **Availability:** This parameter is only visible if the "lock IR-button via comm-object" parameter is set to "enable."	

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

6.2 Communication objects

6.2.1 Communication objects for the “button pair” function mode

Obj	Object name	Function	Datapoint type	Flag
318 **338** **358** **378** **398** **418**	**IR channel A [B...F], switching**	On / Off	1.001 switching	Input, output
These objects are used to send the switching telegrams.				
319 **339** **359** **379** **399** **419**	**IR channel A [B...F], dimming**	Brighter / darker	3.007 dimmer step	Input
These objects are used to send the dimming telegrams.				
321 **341** **361** **381** **401** **421**	**IR channel A [B...F], shutter**	Up / Down	1.008 up/down	Input, output
These objects are used to send the shutter telegrams.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Flag
322 **342** **362** **382** **402** **422**	**IR channel A [B...F], slat**	Stop, Open / Close	1.007 step	Input
These objects are used to send the slat telegrams.				
324 **344** **364** **384** **404** **424**	**IR channel A [B...F], change value**	Value	5.001 percent (0...100 %) 5.010 counting impulses (0 ... 255) 6.010 counting impulses (-128 ... 127) 9** 2-byte floating point value 9.001 temperature (°C) 9.004 illuminance (lx)	Input
This object is used to send the value telegrams. This object is saved on bus voltage failure and restored when bus voltage is recovered.				
325 **345** **365** **385** **405** **425**	**IR channel A [B...F], receive value**	Value	5.001 percent (0...100 %) 5.010 counting impulses (0 ... 255) 6.010 counting impulses (-128 ... 127) 9** 2-byte floating point value 9.001 temperature (°C) 9.004 illuminance (lx)	Output
These objects can be used to specify a status value for the “send value, variable” function. Starting from this set status value, the value is then increased or decreased by the step value. **Note:** If a status value is received that is lower than the lower limit, the lower limit is set. If a status value is received that is higher than the upper limit, the upper limit is set.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Flag
327 **347** **367** **387** **407** **427**	**IR channel A [B...F], scene**	recall / store	18.001 scene control	Input
This object is used to send the scene telegrams.				
328 **348** **368** **388** **408** **428**	**IR channel A [B...F], lock object**	Disable	1.003 enable	Input, output
These objects can be used to disable and then re-enable individual button pairs on the IR remote control. The parameter "invert locking object" can be used to set whether the respective button pair on the IR remote control is locked when a "0" or a "1" is received. The starting value after bus voltage recovery can be configured.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

6.2.2 Communication object for the “single buttons” function mode

Obj	Object name	Function	Datapoint type	Flag
318 **338** **358** **378** **398** **418**	**IR channel A [B...F], left button, switching**	On / Off	1.001 switching	Input, output
These objects are used to send the switching telegrams.				
319 **339** **359** **379** **399** **419**	**IR channel A [B...F], left button, dimming**	Brighter / darker	3.007 dimmer step	Input
These objects are used to send the dimming telegrams.				
321 **341** **361** **381** **401** **421**	**IR channel A [B...F], left button, shutter**	Up / Down	1.008 up/down	Input, output
These objects are used to send the shutter telegrams.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Flag
322 **342** **362** **382** **402** **422**	**IR channel A [B...F], left button, slat**	Stop, Open / Close	1.007 step	Input
These objects are used to send the slat telegrams.				
326 **346** **366** **386** **406** **426**	**IR channel A [B...F], left button, value**	Value	5.001 percent (0...100 %) 5.010 counting impulses (0 ... 255) 7.001 counting impulses (0 ... 65535) 9** 2-byte floating point value 9.001 temperature (°C) 9.004 illuminance (lx) 9.007 humidity (% r.h.) 9.008 CO2 concentration (ppm)	Input
This object is used to send the value telegrams.				
327 **347** **367** **387** **407** **427**	**IR channel A [B...F], left button, scene**	recall / store	18.001 scene control	Input
This object is used to send the scene telegrams.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Flag
328 **348** **368** **388** **408** **428**	**IR channel A [B...F], left button, lock object**	Disable	1.003 enable	Input, output
These objects can be used to lock and then unlock individual buttons on the IR remote control. The parameter "invert locking object" can be used to set whether the respective button pair on the IR remote control is locked when a "0" or a "1" is received. The starting value after bus voltage recovery can be configured.				
329 **349** **369** **389** **409** **429**	**IR channel A [B...F], right button, switching**	On / Off	1.001 switching	Input, output
These objects are used to send the switching telegrams.				
330 **350** **370** **390** **410** **430**	**IR channel A [B...F], right button, dimming**	Brighter / darker	3.007 dimmer step	Input
These objects are used to send the dimming telegrams.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Flag
332 **352** **372** **392** **412** **432**	**IR channel A [B...F], right button, shutter**	Up / Down	1.008 up/down	Input, output
These objects are used to send the shutter telegrams.				
333 **353** **373** **393** **413** **433**	**IR channel A [B...F], right button, slat**	Stop, Open / Close	1.007 step	Input
These objects are used to send the slat telegrams.				
335 **355** **375** **395** **415** **435**	**IR channel A [B...F], right button, value**	Value	5.001 percent (0...100 %) 5.010 counting impulses (0 ... 255) 7.001 counting impulses (0 ... 65535) 9.* 2-byte floating point value 9.001 temperature (°C) 9.004 illuminance (lx) 9.007 humidity (% r.h.) 9.008 CO2 concentration (ppm)	Input
This object is used to send the value telegrams.				

07 B0 CO Presence Detector WIDE 9A1001
07 B0 CO Presence Detector WIDE pro 9A1101
07 B0 CO Presence Detector WIDE multi 9A1201
07 B0 CO Presence Detector WIDE DualTech 9A0F01

Obj	Object name	Function	Datapoint type	Flag
336 **356** **376** **396** **416** **436**	**IR channel A [B...F], right button, scene**	Recall / store	18.001 scene control	Input
This object is used to send the scene telegrams.				
337 **357** **377** **397** **417** **437**	**IR channel A [B...F], right button, lock object**	Disable	1.003 enable	Input
These objects can be used to lock and then unlock individual buttons on the IR remote control. The parameter "invert locking object" can be used to set whether the respective button pair on the IR remote control is locked when a "0" or a "1" is received. The starting value after bus voltage recovery can be configured.				